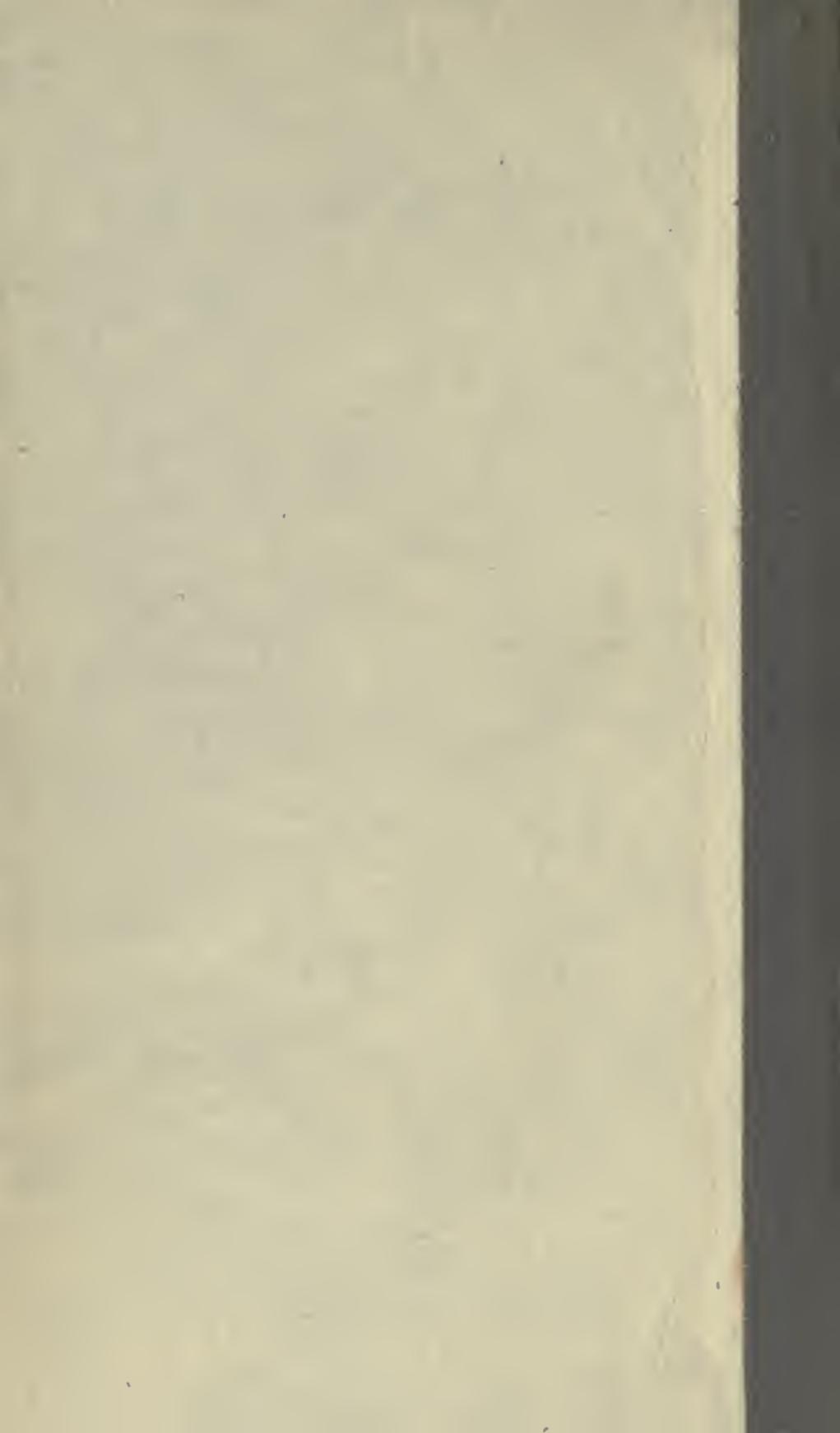
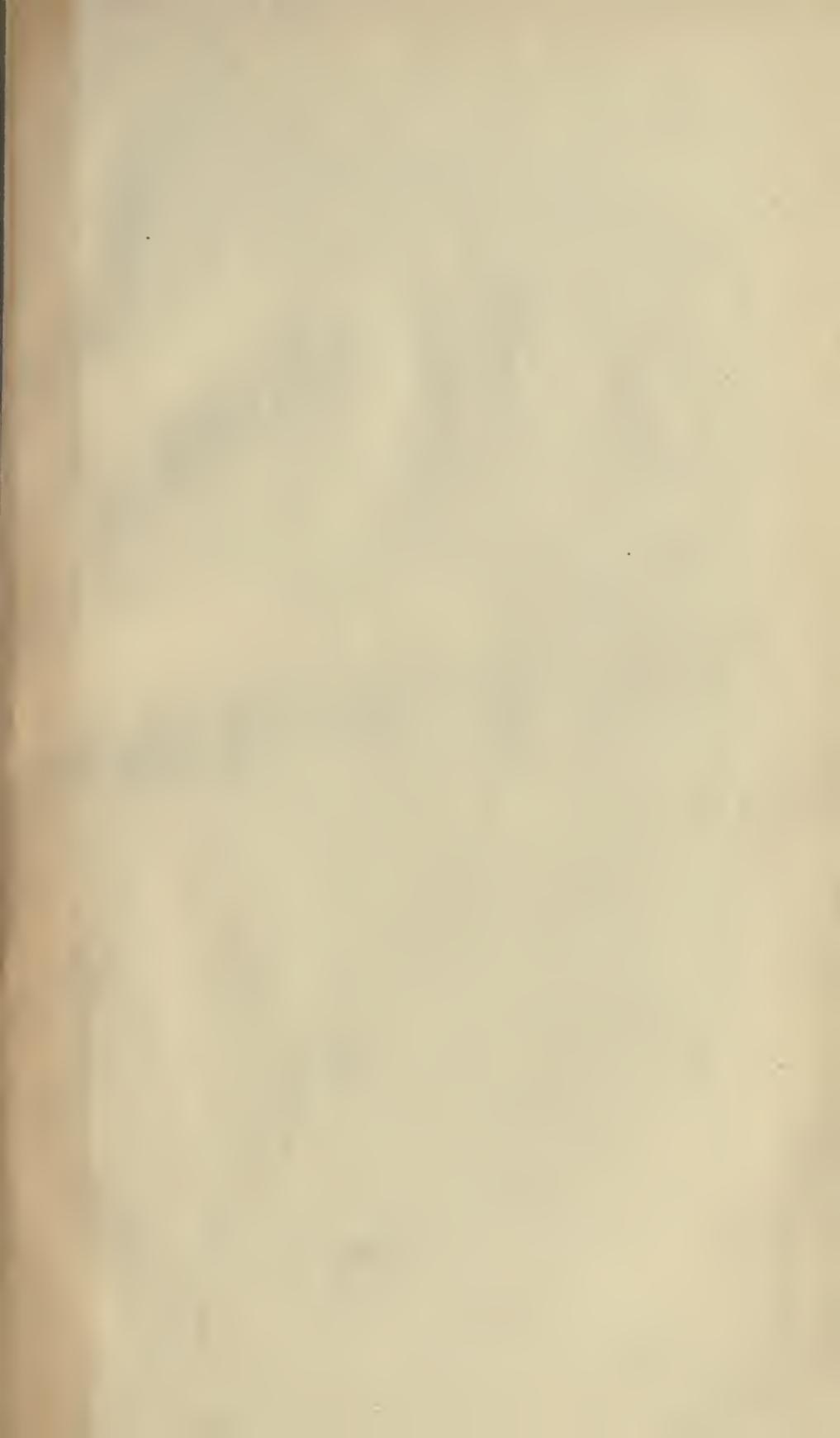
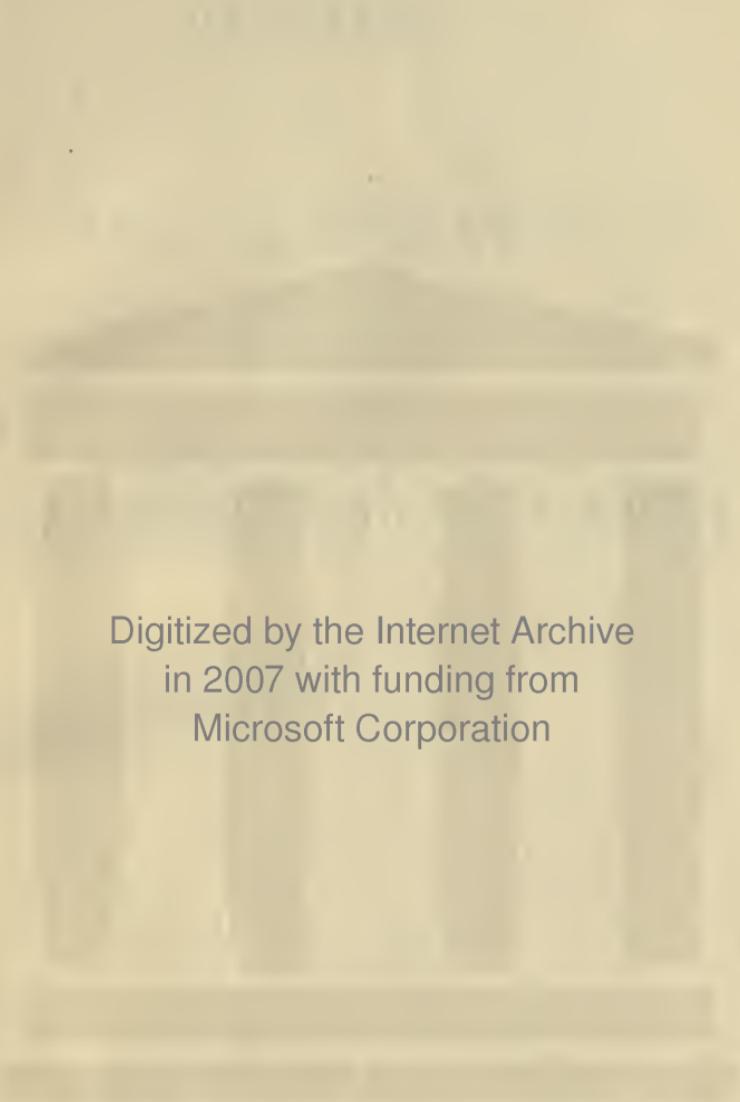


UNIV. OF
TORONTO
LIBRARY







Digitized by the Internet Archive
in 2007 with funding from
Microsoft Corporation

~~As. B6
R~~

CATALOGUE
OF THE LIBRARY
ROYAL ASTRONOMICAL SOCIETY

COMPILED TO JUNE 1884

LONDON
ROYAL ASTRONOMICAL SOCIETY
BURLINGTON HOUSE

1886

Z
5156
R88

PRINTED BY
SPOTTISWOODE AND CO., NEW-STREET SQUARE
LONDON

6355

PREFACE.

THE Library of the Royal Astronomical Society consists of about 9,000 volumes, more than half of these being bound volumes of serial publications. The tiers of shelves are numbered 1 to 71, the separate shelves on each tier being distinguished by the letters of the alphabet.

As far as the sizes of the books will permit, they are arranged on the shelves according to subjects. The following table shows the general arrangement at present adopted. This will be liable to change, as the increase of the Library may necessitate the removal of certain subjects to other shelves.

Tier.	Shelf.	Subject.
1	A-K	Astronomical Works, 17th and 18th Cent.
2	C-I	
2	A,B	Popular Astronomy.
3	A-I	
3	K,L	Theoretical and Practical Astronomy, &c.
4	A-L	
5		Observations of Sun, Moon, Planets, Comets, and Meteors.
6		Observations and Catalogues of Stars, &c.
7	A-H	History of Astronomy; Scientific Bibliography.
7	I,K	Star Charts.
8	A, H-K	Dictionaries, Encyclopædias, &c.
8	B-F	
9	A-K	Ephemerides.
10	A-F	
10	G-K	Astronomical and Logarithmic Tables, &c.
11	F-K	
11	A-C	Chronology, the Calendar, &c.
11	E	Mechanics.
12	C-G	Collected Works.
12	H-K	Differential and Integral Calculus, &c.
13	A-E	Bound volumes of Astronomical Tracts.
13	F-H	Instruments, &c.
13	I, K	Spectroscopic Works.

Tier.	Shelf.	Subject.
14	A-E	Physics, Natural Philosophy, &c.
14	F-I	Optics.
15, 16		Reports of English, Colonial and American Observatories.
17-23		Transactions of English, Colonial and American Societies, and other Serial Works.
24-31	A-H	Transactions of Continental Societies, and other Serials.
25-31	I, K	Reports of Continental Observatories.
32		Manuscripts.
33		Early printed Astronomical Works.
34		Paradoxical Works, &c.
35		Geography; Voyages and Travels.
36	A-D	Navigation.
36	E, F	Meteorology and Terrestrial Magnetism.
37-40		{ Figure of the Earth, Geodesy, Surveys.
41	A-D	
42	D, E	Mathematics—Miscellaneous.
43		Geometry and Trigonometry.
44		Arithmetic and Algebra.
45		Astrology; Fluxions; Probabilities.
46		Mathematical Serials, &c.
47		Natural Philosophy, &c.
48, 49		Catalogues of Libraries.
50		Transactions of Societies, and other Serials, English and Foreign.
52-71		

* * Tiers 34 to 71 are in the gallery.

The Catalogue contains nearly 7,000 titles, exclusive of cross references and lists of contents of some important series of Reports of Observatories, which it has been thought desirable to insert. The following subject headings have also been given:—

Bibliographies
Dictionaries

Ephemerides
Star Charts

Papers published in Transactions of Societies, &c., of which the Library possesses separate copies, have been catalogued in most cases—such titles being marked by an asterisk.

The Manuscript Catalogue, which is placed in the Library for reference, is written upon cards, each title bearing the number of the tier and the letter of the shelf.

The Catalogue has been prepared under the direction of the Library Committee, by the Assistant Secretary, Mr. W. H. Wesley.

CATALOGUE.

Abbadie (Antoine d'):

- : *Éclipse totale du Soleil observée le 28 Juillet 1851 en Norvège. 4to. Paris, 1854
- : Sur le Tonnerre en Éthiopie. 4to. Paris, 1858
- : Résumé Géodésique des positions déterminées en Éthiopie. 4to. Leipzig, 1859
- : *Éclipse totale du 18 Juillet 1860. 4to. Paris, 1860
- : *Description d'un Instrument pour la pratique de la Géodésie expédition [Aba]. 4to. Paris, 1863
- : *Sur la division décimale de l'angle et du temps. 4to. Paris, 1870
- : Géodésie d'Éthiopie, ou triangulation d'une partie de la Haute Éthiopie, exécutée selon des méthodes nouvelles. 4to. Paris, 1873
- : *Études sur la Verticale. 8vo. Bordeaux, 1872
- : Observations relatives à la physique du globe, faites au Brésil et en Éthiopie. Rédigées par R. Radau. 4to. Paris, 1873
- : *Sur la latitude d'Abbadie, près de Hendaye (Basses-Pyrénées). 4to. Paris, 1875
- : *Instruments à employer en voyage et manière de s'en servir. 8vo. Paris, 1878
- : *Recherches sur la Verticale. 8vo. Bruxelles, 1881

Abbatt (Richard):

- : The elements of plane and spherical trigonometry, and its application to astronomy, dialling, and trigonometrical surveying. 8vo. London, 1832
- : Orthographic projection of the globe. 8vo. London, 1857
- : The elements of physical astronomy. 8vo. London, 1870
- : Ditto. Second edition. 8vo. London, 1871
- : Remarks on the infinitesimal calculus. (Appendix to the elements of physical astronomy.) 8vo. London, 1876

Abbe (Cleveland):

Report on the Solar Eclipse of July, 1878. (Professional papers of the Signal Service, No. 1.) 4to. Washington, 1881

Abbott (Francis):

- : *Meteorological observations taken at Hobart Town, Tasmania, 1856-59. 4to. Hobart Town, 1859
- : Results of twenty-five years' meteorological observations. 4to. Hobart Town, 1866
- : Results of five years' meteorological observations for Hobart

Abbott (Francis)—continued.

Town, with which are incorporated the results of twenty-five years' observations previously published.
4to. Hobart Town, 1872

Abdilazus, see Alchabitius.**Abotti (Antonio):**

- : Cenni storici sul successivo sviluppo della meteorologia e su alcune sue importanti applicazioni. 8vo. Padova, 1872
- : *Il passaggio di Venere sul Sole osservato a Muddapur il 9 Dicembre 1874. 4to. Palermo, 1875
- : *Osservazioni e calcoli eseguiti sulla Cometa Swift. 8vo. Venezia, 1880
- : *Sulla determinazione del Tempo coll' osservazione dei passaggi delle stelle pel verticale della polare. 8vo. Venezia, 1880
- : Sugli elementi dell' orbita del pianeta (170) Maria. 4to. Kiel, 1882

Abney (William de W.):

- : Instruction in photography. Third edition. 8vo. London, 1876
- : Photography with emulsions : a treatise on the theory and practical working of the collodion and gelatine emulsion processes. 8vo. London, 1882

Åbo:

- : Observationes astronomicae in Specula Universitatis Literariae Fenniae factae . . . instituit F. G. A. Argelander. Tomus 1-3. 1824-28. fol. Helsingforsiae, 1830-32
- : See also Argelander (F. W. A.).

Aboul Hhassan Ali de Maroc :

- : Traité des Instruments Astronomiques des Arabes composé au treizième siècle . . . traduit de l'Arabe . . . par J. J. Sébillot. 2 vols. 4to. Paris, 1834-35

Abraham Judæus :

- : Tractatus de nativitatibus, per Lucam Gauricum Geophonensem castigatus, & in ordinem redactus atque recognitus, eum infinitis prope modūm annotationibus. 4to. Romæ, 1545

Abulfeda (Ismael) :

- : Chorasmie et Mawaralnahre; hoc est regionum extra fluvium Oxum descriptio (ed. J. Gravius). 4to. Londini, 1650

Academy (the). Record of literature, learning, science and art. Vol. 1-6, 8. 4to. London, 1870-75**Adams (George) :**

- : Astronomical and Geographical essays : containing, I. The general principles of Astronomy ; II. The use of the celestial and terrestrial globes ; III. The description and use of the Armillary sphere, planetarium, tellurian, and lunarian ; IV. An introduction to practical astronomy . . . Second edition. 8vo. London, 1790
- : Geometrical and graphical essays, containing a general description of the mathematical instruments used in geometry, surveying, levelling and perspective. Second edition, corrected and enlarged by William Jones (with vol. of plates, 4to.). 8vo. London, 1797

Adams (George)—continued.

- : Lectures on natural and experimental philosophy, considered in its present state of improvement. Vol. 1, 3.
8vo. London, 1794-99

Adams (John):

- : The mathematician's companion, or a table of logarithms from 1 to 10,860. 8vo. London, 1782
— : Extracts from a meteorological Journal kept at Edmonton, Middlesex (1792-96, 1811). 12mo. London, 1814

Adams (John Couch):

- : *An explanation of the observed irregularities in the motion of Uranus on the hypothesis of disturbances caused by a more distant planet. 8vo. London, 1846
— : On new tables of the Moon's parallax, to be substituted for those of Burckhardt. 8vo. London, 1853
— : *On the secular variation of the Moon's mean motion. 4to. London, 1853
— : *See also Cambridge Observatory.*

Adelaide, Government Observatory:

Meteorological Observations made . . . during the years 1859-61, 1863-65, 1869-70, 1876, 1878-80, under the direction of Charles Todd. fol. Adelaide, 1860-82

Adelaide, Royal Society of South Australia:

- : Transactions and Proceedings and Report of the Philosophical Society of Adelaide, 1877-79. Vol. 1-2.
8vo. Adelaide, 1878-79
— : Transactions and Proceedings and Report of the Royal Society of South Australia, 1879-83. Vol. 3-6.
8vo. Adelaide, 1880-83

The title of the Society was changed in 1880.

Adler (Marcus N.):

*Memoir of the late Benjamin Gompertz. 8vo.

Adolph (G. H. W. Carl):

Bahnbestimmung der Mnemosyne und Ableitung der Jupitermasse aus den Mnemosyne-Beobachtungen seit 1859. Erster Theil. Inaugural-Dissertation. 4to. Carlsruhe, 1874

Adolph (William):

- : The simplicity of the creation, or the astronomical monument of the Blessed Virgin : a new theory of the solar system. 8vo. London, 1859
— : Ditto. Second edition. 8vo. London, 1864
— : The simplicity of the creation : concise view of a new theory of the solar system, the tides, &c. 12mo. London, 1861
Aeolus. A retrospect of the weather of the twelvemonth past, 1844, and prognostication for that of the coming 1845.
8vo. London, 1845

Agardh (Joh. Mort.):

- : De motu systematis solaris progressivo disputatio astronomica [inauguralis]. 2 parts. 8vo. Lundæ, 1841
— : Observationes Eclipsis Solis quæ erat die xxviii Julii MDCCCLVI calculatae a J. M. Agardh. 4to. Lundæ, 1853

Agolet Joseph (Lepaute d'):

*Reduction of the observations of fixed stars made by J. L. D'Agolet at Paris in 1783-85, with a catalogue of the corresponding mean places, referred to the equinox of 1800.
By B. A. Gould. 4to. Washington [1866]

Agnesi (Maria Gaetana):

— : Traité élémentaire de calcul différentiel et de calcul intégral. 8vo. Paris, 1775
— : Analytical institutions in four books. Translated into English by the late Rev. John Colson . . . [edited by] the Rev. John Hellins. 2 vols. 4to. London, 1801

Agnew (H. C.):

A letter from Alexandria on the evidence of the practical application of the quadrature of the circle in the configuration of the great pyramids of Gizeh. 4to. London, 1838

Agrippa (Henricus Cornelius):

Three books of occult philosophy . . . translated out of the Latin into the English tongue by J. F. 4to. London, 1651

Aguilar (Antonio):

*Breve reseña de la Historia y Progresos de la Astronomía. 4to. Madrid, 1855

Aimé (Georges):

*Mémoire sur les variations de niveau de la Méditerranée. 8vo. Paris [1844]

Ainslie (John):

A treatise on land surveying : new and enlarged edition by William Galbraith. 8vo. Edinburgh, 1849

[Air.] Thoughts on the properties and formation of the different kinds of air. 8vo. London, 1785

Airy (George Biddell):

- : *On the longitude of the Cambridge Observatory. 4to. Cambridge, 1828
- : *On the correction requisite to be applied to the length of a pendulum consisting of a ball suspended by a fine wire. 4to. [Cambridge, 1829]
- : *On certain conditions under which a perpetual motion is possible. 4to. Cambridge [1829]
- : Mathematical tracts on the lunar and planetary theories, the figure of the earth, precession and nutation, the calculus of variations, and the undulatory theory of optics. Second edition. 8vo. Cambridge, 1831
- : *On an inequality of long period in the motions of the Earth and Venus. 4to. London, 1832
- : Gravitation : an elementary explanation of the principal perturbations in the Solar System. 12mo. London, 1834
- : Populäre physische Astronomie. Aus dem Englischen übersetzt von K. L. von Littrow. 8vo. Stuttgart, 1839
- : Extracts of papers printed and manuscript, laid before the Commission appointed to consider the steps to be taken for restoration of the standards of weight and measure. 4to. London, 1840

Airy (George Biddell)—continued.

- : Account of the Northumberland equatoreal and dome, attached to the Cambridge Observatory. 4to. Cambridge, 1844
- : *On the laws of the tides on the coasts of Ireland. 4to. London, 1845
- : *Account of the measurement of the astronomical difference of longitude on the arc of parallel extending from Greenwich to the Island of Valentia in the south-west of Ireland. 4to. London [1846]
- : Tides and Waves [from the Encyclopaedia Metropolitana]. 4to. [London, 1848]
- : Six lectures on Astronomy, delivered at . . . Ipswich, in the month of March, 1848. 8vo. London [1849]
- : *On the Eclipses of Agathocles, Thales, and Xerxes. 4to. London [1853]
- : Lecture on the pendulum-experiments at Harton pit . . . together with a letter containing the results of the experiments. 8vo. London, 1855
- : *Account of the construction of the new national standard of length, and of its principal copies. 4to. London, 1858
- : On the algebraical and numerical theory of errors of observations and the combination of observations. 8vo. Cambridge, 1861
- : An elementary treatise on partial differential equations, designed for the use of students in the University. 8vo. Cambridge, 1866
- : On sound and atmospheric vibrations, with the mathematical elements of music. 8vo. London and Cambridge, 1868
- : A treatise on magnetism, designed for the use of students in the University. 8vo. London, 1870
- : Copy of the Report by the Astronomer Royal . . . on the telescopic observations of the Transit of Venus, 1874, made in the expedition of the British Government, and on the conclusion derived from those observations. fol. London, 1877
- : On the undulatory theory of optics, designed for the use of students in the University. New edition. 8vo. London, 1877
- : Account of observations of the Transit of Venus, 1874, December 8, made under the authority of the British Government, and of the reduction of the observations. 4to. London, 1881
- : A new method of clearing the lunar distance. 8vo. London, 1881
- : *See also* Weyer (G. D. E.)
- : *Logarithms of the values of all vulgar fractions with numerator and denominator not exceeding 100, arranged in order of magnitude. 8vo. London, 1881
- : *On a systematic interruption in the order of numerical values of vulgar fractions, when arranged in a series of consecutive magnitudes. 8vo. London, 1881
- : *Monthly means of the highest and lowest diurnal tempe-

Airy (George Biddell)—continued.

ratures of the water of the Thames, and comparison with the corresponding temperatures of the air at the Royal Observatory, Greenwich. 8vo. London, 1882
 — : See also Cambridge Observatory; Greenwich, Royal Observatory.

Albany, Dudley Observatory :

— : The Dudley Observatory and the Scientific Council. Statement of the Trustees. 8vo. Albany, 1858
 — : See also Gould (B. A.)
 — : Defence of Dr. Gould by the Scientific Council. Second edition. 8vo. Albany, 1858
 — : Annals, Vol. 1, 2. 8vo. Albany, 1866-71
 — : Annual Report of the Astronomer for 1877. 8vo. Albany, 1878
 — : See also Boss (L.)

Albèri (Eugenio) :

— : De Galilei Galileii circa Jovis satellites lucubrationibus . . . brevis disquisitio. 8vo. Florentiae [1843]
 — : Risposta . . . ad uno scritto pubblicato in Bologna . . . intitolato lettera dell' Abate Pietro Pillori . . . sul preteso ritrovamento delle effemeridi Galileiane dei Satelliti di Giove. 8vo. Marsilia
 — : Ultime parole di E . . . A . . . a' suoi avversari in materia dei lavori Galileiani sui satelliti di Giove. 8vo.

Albohali :

— : De iudicijs Natuitatum liber unus, antehac non editus. Cum priuilegio D. Ioanni Schonero concesso. 4to. Noribergæ, 1546
 — : De iudiciis Natinitatū liber unus, antehac non editus. Epistola nuncupatoria Ioachimi Helleri. 4to. Noribergæ, 1549

Albohazen Haly filius Abenragel :

— : Preclarissim' Liber cōplet' in iudicijs astrorum . . . (bene reuisus & fideli studio emēdatus p. dominū Bartolomeum de Alten de Nusia). fol. Venetiis (E. Ratdolt), 1485
 — : Preclarissimus Liber completus in iudicijs astrorum . . . (bene reuisus . . . B. de Alten de Nusia). fol. [Venetiis], J. B. Sessa, 1503
 — : Preclarissimus Liber cōpletus in iudicijs astrorum . . . (bene reuisus . . . B. de Alten de Nusia). fol. Venetiis, 1523

Albubather :

Liber Genethliacvs, siue De natuitatibus, non solum ingenti rerum scitu dignarum copia, uerum etiam iucundissimo illarum ordine conspicuus. 4to. Norimbergæ, 1540

Albumasar :

— : Introductorium in astronomiam Albumasaris abalachi octo continens libros partiales. 4to. Auguste Vindelicorum (E. Ratdolt), 1489
 — : Flores Albumasaris. (Tractatus . . . florum astrologie.) 4to. Augustæ Vindelicorum (E. Ratdolt), 1495

Alcalá-Galiano (Dionisio):

Memoria sobre las observaciones de latitud y longitud en el mar.
4to. [Madrid], 1796

Alchabitius:

- : Libellus ysagogic' abdilazi. i. serui gloriōsi dei : q' dr alchabit' ad magisteriū iudiciorum astrorum : iterpretat' a ioāne hispalēsi. 4to. Venetiis (E. Ratdolt), 1482
- : Libellus isagogicus abdlazi. id est serui gloriōsi gei. Qui dicitur alchabitius, ad magisterium iudiciorū astrorum interpretatus a Joanne hispalensi, scriptumque in eūdem Joanne saxonie editum (anno 1331). 4to. Venetiis (M. Sessa), 1512
- : Opus ad scrutanda Stellarum Magisteria isagogicū . . . restitutū ab . . . Antonio de Fantis, qui notabilē eiusdē Auctoris Libellū de Planetarum Cōiunctionib' . . . addidit & pleraque scitu dignissima cū castigatissimo Joannis de Saxonia Cōmētario. 4to. Venetiis (M. Sessa), 1521

Alembert (Jean le Rond D') :

- : Traité de dynamique. 4to. Paris, 1742
- : Réflexions sur la Cause générale des Vents. 4to. Berlin, 1747
- : Essai d'une nouvelle théorie de la résistance des fluides. 4to. Paris, 1752
- : Recherches sur différens points importans du système du monde. 3 parts in 2 vols. 4to. Paris, 1754-56
- : Opuscules mathématiques, ou mémoires sur différens sujets de géométrie, de méchanique, d'optique, d'astronomie, &c. 8 vols. 4to. Paris, 1761-80
- : *Recherches sur les mouvemens de l'axe d'une planète quelconque dans l'hypothèse de la dissimilitude des mériadiens. 4to. Paris, 1768

Alexander (John):

A synopsis of Algebra. . . . To which is added an appendix by Humfrey Ditton. Done from the Latin by Samuel Cobb. 2 parts in 1 vol. 8vo. London, 1709

Alexander (Stephen):

- : *Observation of the Annular Eclipse of May 26 [1854], in the suburbs of Ogdensburg, N.Y. 4to. [1856]
- : See also United States Coast Survey.

Alfonso X. (of Castile):

- : Tabule astronomice Alfonsi Regis (necnon stellarū fixarum longitudines ac latitudines). [Edidit Johannes Lucilius Sanritter.] 4to. Venetiis, 1492
In the colophon the Tables are said to be 'Opera et arte mirifica viri solertiae Johannis Hamman de Landoia, dictus Herzog.'
- : Tabule astronomice Divi Alfonsi Regis . . . nuper quam diligentissime cum additionibus emendate. 4to. Venetiis (P. Liechtenstein), 1518 (1521)
The first date is that of the title; the second of the colophon.
- : Astronomicæ tabulæ, in propriam integritatem restitutæ, ad calcem adiectis tabulis . . . cum plurimorū locorū

Alfonso X.—continued.

- correctione, & accessione variarū tabellarū ex diversis auctoribus . . . Qua in re P. Hamellius . . . sedulā operam suam præsttit. 4to. Parisiis, 1545
 — : Libros del saber de astronomia, copilados, anotados y comentados por Manuel Rico y Sinobas. Tomo 1—5, parte 1. fol. Madrid, 1863—67

Alfonsus de Corduba :

- Tabule Astronomice Elisabeth Regine. 2 parts.
 4to. Venetiis (P. Liechtensteyn), 1503

Alfraganus (Muhamed) :

- : Brevis ac perytialis compilatio Alfragani Astronomorum peritissimi, totum id cōtinens, quod ad rudimenta Astronomica est opportunum. 4to. Norimbergæ, 1537
 — : Chronologica et Astronomica elementa . . . additus est commentarius, qui rationem calendarii Romani, Ægyptiaci, Arabici, Persici, Syriaci & Hebræi explicat . . . autore J. Christmanno. 8vo. Francofurdi, 1590

Algarotti (Francesco) :

- Sir Isaac Newton's philosophy explain'd for the use of the ladies, in six dialogues on light and colours. From the Italian. 2 vols. 12mo. London, 1739

Algebra :

- Elements of Algebra, for the use of students in Universities. Third edition. 2 parts in 1 vol. 8vo. Edinburgh, 1789

Algöwer (David) :

- Schrift- und Vernunft-mässige Anzeige, dass man sich vor innstehender grossen Sonnen-Finsterniss welche den 3 Maji, 1715, eintreffen wird, weder fürchten noch selbige für ein ausserordentliches Göttliches Zorn- und Straff-Zeichen halten. 4to. Ulm

Alhazen :

- Opticæ Thesavrus . . . libri septem, nunc primū editi ; eivsdem liber de Crepvscvlis & Nubium ascensionibus. Item Vitellonis Thvringopoloni libri x. Omnes instaurati, figuris illustrati & aucti ; adiectis etiam in Alhazenum commentarijs à Federico Risnero. fol. Basileæ, 1572

Aliacus (Petrus de) [Cardinal d'Ailly] :

- : Cōcordātia astronomie cū theologia ; Cōcordātia astronomie cū hystorica narratione, et elucidariū duorum precedentium. 4to. Augustæ Vindelicorum (E. Ratdolt), 1490
 — : Tractatus . . . sup. libros Metheororū, de impressionib⁹ aeris. Ac de hijs quæ in prima, secunda, atque tertia regionibus aeris fiunt ; sicut sunt Sydera cadentia, Stellæ, Cometæ . . . deque generatis infra terram. 4to. Argentinæ, 1504

Allé (Moriz) :

- : *Opposition der Calliope vom Jahre 1857. 8vo. Wien, 1856
 — : *Ueber die Bahn der Laetitia. 8vo. Wien, 1857
 — : *Ueber die Bahn der Nemausa. 8vo. Wien, 1860

[Allen (William)]:

Companion to the transit instrument, containing the right ascension and declination of stars from the first to the fourth magnitude, with the places of some of the most interesting double stars. 8vo. London, 1815

Allgemeine Geographische Ephemeriden:

- : Verfasset von einer Gesellschaft Gelehrter, und herausgegeben von F. von Zach (A. C. Gaspari, C. G. Reichard, F. J. Bertuch). Band 1-51. 8vo. Weimar, 1798-1816
- : Neue allgemeine geographische Ephemeriden . . . herausgegeben von F. J. Bertuch. Band 1-10. 8vo. Weimar, 1817-22
- : Neue allgemeine geographische und statistische Ephemeriden. Verfasset von einer Gesellschaft von Gelehrten, und herausgegeben von dem Geographischen Institute. Band 11-23. 8vo. Weimar, 1822-27

Almanac for the year 1386. Transcribed, verbatim, from the original antique illuminated manuscript in the black letter. 12mo. London, 1812

Almanac:

Allmanach und Prognosticon auff das Jahr 1670 durch Jo-hannem Mejerum. 12mo. Hamburg

Almanacs:

[A collection of 14 astrological almanacks from 1752, 1760-61.]
3 vols. 12mo. London, 1752-61

Al-Sūfi (Abd-al-Rahman):

Description des étoiles fixes composée au milieu du dixième siècle de notre ère par l'astronome persan A . . . S . . . Traduction . . . avec des notes par H. C. F. C. Schjellerup. 4to. St.-Pétersbourg, 1874

Altenburg, Kunst- und Handwerks-Verein:

Naturforschende Gesellschaft. Mittheilungen aus dem Osterlande. Band 15, 16. 8vo. Altenburg, 1861-63

Amante (Fedele):

- : *Considerazioni sulle formole adoperate comunemente dai geografi per calcolare le posizioni geografiche dei vertici dei triangoli geodetici. 4to. Napoli, 1837
- : *Sulle formole da usarsi ne' calcoli geodetici per la riduzione degli angoli all' orizzonte della stazione. 4to. Napoli, 1837

American Academy of Arts and Sciences:

- : Memoirs, Vol. 1-4. 4to. Boston and Cambridge, 1785-1818
New series, Vol. 1-11, Part 1. Cambridge, 1833-82
- : Proceedings, 1846-73. Vol. 1-8. 8vo. Boston and Cambridge, 1848-73
New series, 1873-83. Vol. 1-10 (whole series, Vol. 9-18). 8vo. Boston, 1874-83

American Almanac, and Repository of Useful Knowledge, 1834-42, 1848. 12mo. Boston, 1833-47

American Association for the Advancement of Science:

- : Proceedings, Fourth meeting, 1850, to Twenty-first meeting, 1872. 8vo. Washington and Cambridge, 1851-73
 — : *Address . . . by S. P. Langley, 1879. 8vo. Salem, 1879
 — : *Address . . . by Asaph Hall, 1880. 8vo. Cambridge, 1880

American Journal of Mathematics pure and applied:

- Edited by J. J. Sylvester [and others]. Published under the auspices of the Johns Hopkins University. Vol. 1-6.
 4to. Baltimore, 1878-84

American Journal of Science, more especially of mineralogy, geology, and the other branches of natural history; including also agriculture and the ornamental as well as useful arts. Conducted by Benjamin Silliman. Vol. 1.
 8vo. New York, 1818**American Journal of Science and Arts.** Conducted by Benjamin Silliman. Vol. 2-15. 8vo. New Haven, 1820-29

- : Second series, conducted by B. Silliman, B. Silliman, jun., J. D. Dana [and others]. Vol. 29-50.
 8vo. New Haven, 1860-70
 — : Third series, edited by J. D. (and E. S.) Dana, B. Silliman [and others]. Vol. 1-27.
 8vo. New Haven, 1871-84

General index in every 10th vol. of 2nd and 3rd series.

American Philosophical Society, held at Philadelphia for promoting useful knowledge.

- : Transactions, Vol. 1-6. 4to. Philadelphia, 1789-1809
 New series, Vol. 1-15. 4to. Philadelphia, 1818-81
 — : Proceedings, 1838-82. Vol. 1-20. 8vo. Philadelphia, 1840-83
 — : Catalogue of the Library. Part 1-3.
 8vo. Philadelphia, 1868-78

Amici (Giovanni Battista):

- *Descrizione di alcuni strumenti da misurare gli angoli per riflessione. 4to. Modena, 1836

Ampère (André-Marie):

- Théorie des phénomènes électro-dynamiques, uniquement déduite de l'expérience. 4to. Paris, 1826

Amsterdam, Koninklijke Akademie van Wetenschappen:

- : Verhandelingen. Afdeeling Natuurkunde. Deel 1-23.
 4to. Amsterdam, 1854-83
 — : Verslagen en Mededeelingen. Afdeeling Natuurkunde.
 17 vols. 8vo. Amsterdam, 1853-65
 — : — tweede Reeks. Deel 1-18. 8vo. Amsterdam, 1866-83
 — : Jaarboek, 1862-82. 8vo. Amsterdam
 — : Processen-Verbaal van de gewone Vergaderingen, Afdeeling Natuurkunde, 1865-83. 8vo. Amsterdam
 — : Rapport . . . section physique. 8vo. Amsterdam, 1868
 — : Catalogus van de Boekerij. 2 vols. 8vo. Amsterdam, 1857-81

Analekten für Erd- und Himmelskunde:

- Herausgegeben von Fr. v. P. Gruithuisen. Band 1, Heft 1-7.
 8vo. München, 1828-31

- Analekten (Neue) für Erd- und Himmelskunde :**
 Band 1, 2 (Heft 8-15). 8vo. München, 1834-36
- Analogy (a new) for determining the distances of the planets from the Sun, and of the satellites from their primaries.**
 By the author of 'a new introduction to the mathematics,' &c. 8vo. London, 1842
- Anderson (Fredrik) :**
 — : *Bestämning af Planeten (92) Undinas Bana. 4to. Lund, 1870
 — : *Bestämning af Planeten (86) Semeles Bana. 4to. Lund, 1872
- Anderson (Richard) :**
 Lightning conductors; their history, nature, and mode of application. 4to. London, 1880
- André (Charles) :**
 — : Étude de la diffraction dans les instruments d'optique; son influence dans les observations astronomiques. (Paris, Thèses Fac. Sci. no. 376.) 4to. Paris, 1876
 — : *Rapport sur le passage de Mercure sur le Soleil, observé à Ogden (Utah) le 6 Mai 1878. 8vo. Paris, 1881
 — : *Mission de Nouméa. Rapport sur le passage de Vénus du 9 Décembre, 1874. 4to Paris, 1881
- André (Charles), G. Rayet, et A. Angot :**
 L'astronomie pratique et les observatoires en Europe et en Amérique, depuis le milieu du XVII^e siècle jusqu'à nos jours. Partie 1-5. 8vo. Paris, 1874-81, 1878
- [**André (Noel).] Chrysologue de Gy :**
 Abrégé d'astronomie pour l'usage des planisphères. 8vo. Paris, 1778
- Andrew (James) :**
 Astronomical and nautical tables, with precepts, for finding the latitude and longitude of places by lunar distances, double altitudes, &c. 8vo. London, 1805
- Andrew (William) :**
 Constitution of nature. Theories intended to unfold nature and her operations. 8vo. Milwaukee, 1864
- Ångström (A. J.) :**
 Recherches sur le spectre solaire . . . Spectre normal du soleil: atlas de six planches. 4to. [Atlas in folio], Uppsala, 1868
- Anguiano (Angel) :**
 Viaje á Europa en comision astronómica. 4to. México, 1882
- Ann Arbor, Detroit Observatory of the University of Michigan :**
 Report of the Director for 1879-81. 8vo. Ann Arbor, 1881
- Annales de Mathématiques pures et appliquées, recueil périodique, rédigé par J. D. Gergonne.** Tome 21, 22. 4to. Nismes, 1830-32

Annals of Philosophy, or Magazine of Chemistry, Mineralogy, Mechanics, Natural History, Agriculture and the Arts:

- : By Thomas Thomson. 16 vols. 8vo. London, 1813-20
 New series. Vol. I-12. 8vo. London, 1821-26
 — : See Philosophical Magazine.

Annelly (Bernard):

- A theory of the winds, shewing by a new Hypothesis, the physical causes of all winds in general. 8vo. London, 1729

Anquetil (J. P.):

- : Questions on astronomy, and a new system proposed. 8vo. Paris, 1833
 — : Questions sur l'astronomie, suivies de la proposition d'un nouveau système. 8vo. Paris, 1833

Anton (Ferdinand):

- *Bestimmung der Bahn des Planeten (114) Cassandra. 8vo. Wien, 1883

Aoust (l'Abbé):

- Analyse infinitésimale des courbes tracées sur une surface quelconque. 8vo. Paris, 1869

Apelt (Ernst Friedrich):

- : Johann Kepler's astronomische Weltansicht. 4to. Leipzig, 1849
 — : Die Reformation der Sternkunde. Ein Beitrag zur deutschen Culturgeschichte. 8vo. Jena, 1852

Apianus (Petrus):

- : Quadrans Apiani astronomicus et jam recens inventus et nunc primum editus. fol. Ingolstadii, 1532
 — : Folium populi: Instrumentum hoc a Petro Apiano jam recens inventum, et in figuram folii populi redactam. fol. Ingolstadij, 1533
 — : Instrumentum Primi Mobilis, a Petro Apiano nunc primum et inventum et in lucem editum . . . accedunt ijs Gebri Filii Affla Hispalensis . . . libri ix de Astronomia. fol. Norimbergæ, 1534
 — : Astronomicum Cæsareum. (Meteoroscopion planum; observationes cometarum quinque; Compositio Torqueti.) fol. Ingolstadii, 1540

Apianus (Petrus) et Gemma Frisius:

- Cosmographia . . . per Gemmam Frisiū . . . jam demum ab omnibus vindicata mendis, ac nonnullis quoque locis aucta. Additis ejusdem argumenti libellis ipsius Gemmæ Frisiij. 4to. Antverpiæ, 1564

Apollonius Pergæus:

- : Willebrodi Snelli Apollonius Batavus, seu exsuscitata Apollonii Pergæi περὶ Διωρισμένης τομῆς geometria. 4to. Lugodini, 1608
 — : Conicorum libri octo (lib. iv. priores cum Pappi Alexandrini lemmatis, et Eutocii Ascalonitæ commentariis [Gr. & Lat.]; lib. v., vi., vii. ex Arabico in Latinum conversi cum Pappi lemmatis; subjicitur liber conicorum octavus

Apollonius Pergaeus—continued.

- restitutus). Sereni Antissensis de sectione cylindri et coni libri duo. (Edidit E. Halleius.) 3 parts in 1 vol. fol. Oxoniae, 1710
- : Locorum planorum libri II., restituti a Roberto Simson. 4to. Glasguæ, 1749
- : Inclinationum libri duo, restituebat Samuel Horsley. 4to. Oxonii, 1770
- : *See also* Burrow (R.)
- : The two books of . . . concerning tangencies, as they have been restored by Franciscus Vieta and Marinus Ghetaldus. With a supplement by John Lawson. Second edition, to which is now added a second supplement, being M. Fermat's treatise on spherical tangencies. 4to. London, 1771
- : The two books of . . . concerning determinate section, as they have been restored by Willebrordus Snellius, by John Lawson. To which are added the same two books, by William Wales, being an entire new work. 4to. London, 1772
- : Opuscula, e tenebris eruta ac restituta (ab E. Halleio). 8vo.

Arago (Dominique François Jean):

- : *Rapport . . . sur un mémoire de M. Fresnel relatif aux couleurs des lames cristallisées douées de la double réfraction. 8vo. Paris [1821]
- : *Éloge historique du docteur Thomas Young. 4to. Paris, 1832
- : Betrachtungen über die Bewegung und die Natur der Kometen, nebst ihrer Einwirkung auf unsere Erde im Allgemeinen und insbesondere über den Kometen, welcher im Jahre 1832 erscheint und eine Umlaufszeit von 9½ Jahren hat. 8vo. Brünn, 1832
- : The Comet. Scientific notices of comets in general, and in particular of the comet of 1832. . . . Translated from the French, by Colonel Charles Gold. 8vo. London, 1833
- : Populäre Vorlesungen über die Astronomie. . . . Aus dem Französischen übersetzt von C. H. Schnuse. 8vo. Weimar, 1838
- : Leçons d'Astronomie professées à l'Observatoire Royal . . . Recueillies par un de ses élèves. Troisième édition. 8vo. Paris, 1840
- : *Biographie de Jean Sylvain Bailly. 4to. Paris, 1844
- : Popular Astronomy: . . . Translated from the original, and edited by Admiral W. H. Smyth and Robert Grant. 2 vols. 8vo. London, 1855–58
- : Astronomie populaire . . . publiée d'après son ordre sous la direction de J. A. Barral. . . . Œuvre posthume. 4 vols. 8vo. Paris, 1857–60
- : Œuvres complètes . . . publiées . . . sous la direction de J. A. Barral. Tables. 8vo. Paris, 1862
The index volume only.
- : Kosmische Meteore. . . . Anhang zu der Schrift 'Die Sonne brennt.' 8vo. Leipzig, 1865
- : Étoiles doubles, *see* Grandsagne.
- : Recueil d'Observations, *see* Biot et Arago.

Aratus Solensis :

- : De siderum natura & motu, *see Valderus, Sphæra.*
 — : Les phénomènes d'Aratus de Soles, et de Germanicus César, avec les scholies de Théon, les catastérismes d'Ératosthène, et la sphère de Leontius. Traduits pour la première fois en Français . . . par l'Abbé Halma. [Greek and French.] 4to. Paris, 1821
 Prefixed to Vol. 2 of Halma's edition of the 'Commentaires de Théon.'
 — : Des Aratos Sternerscheinungen und Wetterzeichen, übersetzt und erklärt von J. H. Voss [Greek and German]. 8vo. Heidelberg, 1824
 — : *Observations on a manuscript in the British Museum . . . containing Cicero's translation of the astronomical poem by Aratus, accompanied by drawings of the constellations. By W. Y. Ottley. 4to. London, 1835
 — : *See also Petavius.*

Arbogast (L. F. A.) :

Du calcul des dérivations. 4to. Strasbourg, An VIII (1800)

Archimedes :

- : De insidentibus aquæ liber primus (et secundus). 2 vols. 4to. Venetiis, 1565
 — : Archimedis quæ supersunt omnia, cum Eutocii Ascalonitæ commentariis, ex recensione J. Torelli, cum nova versione Latina. [Gr. & Lat.] Accedunt lectiones variantes (C. Sibiliati de Vita ac Studiis J. Torelli commentarium). fol. Oxonii, 1792
 — : Arenarius, *see Rigaud.*

Arctic Expedition, 1875 (Manual for the use of). Natural history, geology and physics of Greenland and the neighbouring regions. . . . Edited by T. Rupert Jones. 8vo. London, 1875

Argelander (Friedrich Wilhelm August) :

- : De Observationibus astronomicis a Flamsteedio institutis dissertatio. [Inaugural Dissertation.] 4to. Regiomonti Borussorum, 1822
 — : Untersuchungen über die Bahn des grossen Cometen vom Jahre 1811. 4to. Königsberg, 1822
 — : Observationes astronomicæ in Specula Universitatis Litterariorum Fennicæ factæ. Aboæ, 1824–1828.
 Tomus 1–3. fol. Helsingforsiae, 1830–32
 — : DLX Stellarum fixarum positiones mediæ ineunte anno 1830. Ex observationibus Aboæ habitis. 4to. Helsingforsiae, 1835
 — : De fide Uranometriae Bayeri dissertatio academica. 4to. Bonnæ, 1842
 — : Uranometria Nova. Stellæ per medium Europam solis oculis conspicuæ secundum veras lucis magnitudines e coelo ipso descriptæ. obl. fol. Berlin, 1843
 — : Catalogus Stellarum. 8vo. Berlin, 1843
 — : De stella β Lyrae variabili disquisitio. [Inaugural Dissertation.] 4to. Bonnæ, 1844

Argelander (Friedrich Wilhelm August) —continued.

- : Zonen-Beobachtungen vom 45. bis 80. Grade nördlicher Declination, in mittleren Positionen für 1842°, nach gerader Aufsteigung geordnet von Wilhelm Oeltzen.
8vo. Wien, 1851-52
Vols. 1 and 2 of Series 3 of 'Annalen der k. k. Sternwarte in Wien.'
- : Zonen-Beobachtungen vom -15° bis -31° Decl. in mittleren Positionen für 1853, von W. Oeltzen. 8vo. Wien, 1857-58
In Vienna 'Sitzungsberichte,' Bl. 26, 27, 29, 31.
- : Anzeige von einer auf der Königlichen Universitäts-Sternwarte zu Bonn unternommenen Durchmusterung des nördlichen Himmels. 8vo. Bonn, 1856
- : De stella β Lyrae variabili commentatio altera.
4to. Bonnæ, 1859
- : Atlas des nördlichen gestirnten Himmels für den Anfang des Jahres 1855, unter Mitwirkung der Herren E. Schönfeld und A. Krueger. fol. Bonn, 1863
- : Bonn, Beobachtungen, *see* Bonn, Sternwarte.
- : Life, *see* Krueger (A.), Schönfeld (E.)

Argoli (Andreas):

- : Ephemerides . . . ad longitudinem almæ urbis Romæ, ab anno incarnationis Dominicæ MDCXXI usque ad MDCXL, ex Prutenicis Tabulis concinnè suppeditatæ.
4to. Venetiis, 1623
- : Ephemerides annorum L., iuxta Tychonis Hypotheses, et accuratè e coelo deductas obseruationes. Ab anno 1630 ad annum 1680. 3 vols. 4to. Venetiis et Patavii, 1638
- : Tabulae Primi Mobilis. Tabulæ Ascensionum obliquarum ad latitud. gr. 31 usque ad 60. Vol. 2. 4to. Patavii, 1644
- : Ptolemaeus parvus in genethliacis junctus Arabibus.
4to. Lugduni, 1652
- : Ephemerides exactissimæ cælestium motuum ad longitudinem Almae Urbis, et Tychonis Brahe hypotheses, ac deductas e coelo accuratè observationes, ab anno 1641 ad annum 1700. Vol. 1, 3. 4to. Lugduni, 1659

Arguelles (José Reguero):

Astronomía Física. Nociones de esta ciencia sublime, dirigidas á ponerla al alcance de todos, y á preparar al estudio elemental de la misma. 3 vols. 8vo. Madrid, 1850-51

Aristarchus Samius:

- : De magnitudinibus et distantiis Solis et Lunæ liber; cum Pappi Alexandrini explicationibus quibusdam, à F. Commandino . . . in Latinum conversus ac commentarijs illustratus.
4to. Pisauri, 1572
- : Liber de magnitudinibus et distantiis Solis et Lunæ. Nunc primum Graece editus. Cum Latina versione F. Commandini. Accurante Johanne Wallis. 8vo. Oxoniæ, 1688

Aristotle:

Ἡερὶ Κοσμοῦ. Curavit editionem J. Chr. Kappius.
8vo. Altenburgi, 1792

Arithmetic :

Six lectures on arithmetic, containing a familiar explanation
of the principles and rationale of the general rules of arith-
metic.
12mo. London, 1842

Armagh Observatory :

- : Astronomical Observations made . . . by T. R. Robinson.
Vol. 1, Parts 1-3. London, 1829-32
- : Report made at the annual visitation . . . by T. R.
Robinson. 8vo. Armagh, 1842
- : Places of 5,345 stars observed from 1828 to 1854 . . . by
T. R. Robinson. 8vo. Dublin, 1859
- : *Places of one thousand stars observed at the Armagh
Observatory. By T. R. Robinson. 4to. Dublin, 1879

Armellini (Tito) :

* Di alcune proprietà del Barometro-Idrargiro Statico.
8vo. Roma, 1862

Arndtsen (Adam) :

Physikalske meddelelser . . . udgivne af C. Hansteen.
Universitets-Program 1858. 4to. Christiania, 1858

Arnold (J.), see Earnshaw and Arnold.**Arnott (Neil) :**

- : Elements of physics, or natural philosophy, general and
medical. Second edition. 8vo. London, 1827
- : Elements of physics, or natural philosophy, general and
medical, explained independently of technical mathe-
matics. In two volumes: Vol. 2, Part 1, comprehending
the subjects of heat and light. 8vo. London, 1829
- : Elements of physics, or natural philosophy, general and
medical. . . . New edition with additions, by Isaac Hays.
8vo. Philadelphia, 1841

Arrest (Heinrich Louis d') :

- : * Resultate aus Beobachtungen der Nebelflecken und Stern-
haufen. . . Erste Reihe. 8vo. Leipzig, 1856
- : Instrumentum magnum æquatoreum in Specula Universi-
tatis Hauniensis nuper erectum. [Inaugural Dissertation.]
4to. Hauniæ, 1861
- : Siderum nebulosorum observationes Havnienses institutae
in Specula Universitatis per tubum sedecimpedalem Mer-
zianum ab anno 1861 ad annum 1867. 4to. Havniæ, 1867
- : Undersøgelser over de nebulose stjerner i henseende til
deres spektralanalytiske egenskaber. (Indbydelsesskrift til
Kjöbenhavns Universitets Aarsfest.) 4to. Kjöbenhavn, 1872
- : Life, *see* Dreyer (J. L. E.)

**Art (l') de vérifier les dates des faits historiques, des inscriptions,
des chroniques, et autres anciens monuments . . . par un
relieux de la congrégation de Saint-Maur.**

42 vols. 8vo. Paris, 1819-30

Arthur (Gothard) :

Cometa orientalis. Kurtze und eygentliche Beschreibung
dess newen Cometen . . . 1618.
4to. Franckfurt am Mayn, 1619

Ashby (Samuel):

The young analyst's exercise.

12mo. London, 1737

Ashe (E. D.):— : On the longitude of some of the principal places in Canada,
as determined by electric telegraph. 8vo. 1858— : The motions of the top, teetotum, and gyroscope explained.
8vo. Quebec, 1864— : The proceedings of the Canadian eclipse party, 1869.
fol. Quebec, 1870**Asiatic Society of Bengal, see Calcutta.****Assemanus (Simon):**Globus caelestis Cufico-Arabicus Veliterni Musei Borgiani
. . . illustratus: præmissa ejusdem de Arabum astronomia
dissertatione et adjectis duabus epistolis Josephi Toaldi.
4to. Patavii, 1790**Associazione Italiana per le osservazioni delle Meteore
luminose:**

— : Osservazioni, 1874-77, 1881-83. 12mo. Torino

— : See also Moncalieri, R. Collegio Carlo Alberto.

Asten (Friedrich Emil von):— : Determinatio orbitæ grandis cometæ anni 1858 e cunctis
observationibus. [Inaugural Dissertation.]
4to. Bonnæ, 1865— : *Neue Hülftaseln zur Reduction der in der Histoire Céleste
Française enthaltenen Beobachtungen. 8vo. Leipzig, 1868— : * Resultate aus Otto von Struve's Beobachtungen der
Uranustrabanten. 4to. St. Pétersbourg, 1872— : * Untersuchungen über die Theorie des Encke'schen Come-
ten. I. Berechnung eines wichtigen Theiles der absoluten
Jupitersstörungen. II. Resultate aus den Erscheinungen
1819-1875. 4to. St. Pétersbourg, 1872-78— : *Ephemeride des Eneke'schen Cometen für das Jahr 1875.
4to. [St. Petersburg]**Åstrand (Joh. Julius):**— : Om astronomiska og geodetiske observationer i sommeren
1861. 8vo. Christiania, 1863— : Let og nøiagttig methode for bestemmelse af den paakom-
mende bredde og længde om middagen samt compassets mis-
visning, uden hjælp af logarithmer. 4to. Bergen, 1864— : Indberetning om astronomiske og geodetiske observationer
anstillede paa en reise i Søndre Bergenhus Amt i Som-
meren 1863. 8vo. Christiania, 1864— : *Enkel approximations method för tids- och longituds-
bestämningar. 8vo. Stockholm, 1865— : *Neue einfache Methode für Zeit- und Längenbestimmung.
Mit Vorbemerkungen von K. von Littrow. 8vo. Wien, 1867

— : *Ny Interpolationsmethode. 8vo. Christiania, 1871

— : *Neue Interpolationsmethode. 8vo. Leipzig

— : *Om 'Archibald Smith's method' för beräkning af kompas-
sens lokaldeviationer, samt ett par enklare och noggrannare
methoder för samma ändamål. 8vo. Stockholm, 1875

Astrand (Joh. Julius) – continued.

- : *Ny method för lösning af trinomiska equationer.
8vo. Stockholm, 1877
- : *Two short and easy methods for correcting lunar distances.
8vo. London, 1879
- : See also Petrosemolo (G.)
- : Om en ny methode for løsning af trinomisk eligninger af n^{te}
Grad. 8vo. Kristiania
- : See also Christiania, Universitet.

Astrolabe :

- L'usage de l'un et l'autre astrolabe particulier et universel.
8vo. Paris, 1625

Astrologer (the). Nos. 8–16. 8vo. London [1830–31]

Astrologer (the) of the nineteenth century, or the master key of futurity By the members of the Mercurii
Seventh edition. 8vo. London, 1825

Astrology :

- Several cases of conscience concerning astrologie, and seekers unto astrologers, answered. By a Friend to the truth.
8vo. London, 1659

Astrology and Astronomy [from the Encyclopædia Britannica]. 4to.

Astronomical Journal (the) :

- Edited by Benjamin Apthorp Gould. Vol. 1–6.
4to. Cambridge and Albany, 1851–61

Astronomical Notices, by F. Brünnow. Nos. 1–24, 26–28.
8vo. Ann Arbor, 1858–61

Astronomical Register (the) :

- : A medium of communication for amateur observers, and all others interested in the science of astronomy. Vols. 1–21.
8vo. London, 1864–83
- : General Index to the first twenty volumes, by F. W. Leverdander.
8vo. London, 1883

Astronomie (Geschichte der) von den ältesten Zeiten bis zu dem Ende des siebzehnten Jahrhunderts. Neue Ausgabe.
8vo. Chemnitz, 1819

Astronomie (l') :

- Révue d'astronomie populaire, de météorologie et de physique du globe. Publiée par Camille Flammarion. Années 1–3. 1882–84. 8vo. Paris, 1883–84

Astronomische Abhandlungen :

- Herausgegeben von H. C. Schumacher. Heft 1–3.
4to. Altona, 1823–25

Astronomische Gesellschaft, Leipzig :

- : Publicationen, 1–17. 4to. Leipzig, 1865–83
- : Vierteljahrsschrift. Jahrgang, 1–18. 8vo. Leipzig, 1866–83

Astronomische Nachrichten :

- : Herausgegeben von H. C. Schumacher. Band 1–31.
4to. Altona, 1823–51

Astronomische Nachrichten—*continued.*

- : Begründet von H. C. Schumacher, fortgesetzt von A. C. Petersen (P. A. Hansen, C. A. F. Peters, C. F. W. Peters). Band 32–99. 4to. Altona, Kiel, 1851–81
- : Begründet von H. C. Schumacher, unter Mitwirkung des Vorstandes der Astronomischen Gesellschaft, herausgegeben von A. Krueger. Band 100–108. 4to. Kiel, 1881–84
- : General-Register der Bände 1–20. Ausgearbeitet von G. A. Jahn. 4to. Hamburg, 1851
- : General-Register der Bände 21–40. Ausgearbeitet von G. A. Jahn. 4to. Hamburg, 1856
- : General-Register der Bände 41–60. Ausgearbeitet von C. F. W. Peters. 4to. Hamburg, 1866
- : General-Register der Bände 61–80. Ausgearbeitet von C. F. W. Peters. 4to. Leipzig, 1875

Astronomisches Jahrbuch, *see* Berlin.

Astronomisches Jahrbuch für physische und naturhistorische Himmelsforscher Herausgegeben von Fr. v. P. Gruithuisen. Band 1–11. 8vo. München, 1838–51

Astronomy (a new theory of), deduced from the latest discoveries 16mo. Dublin, 1857

- : (Syllabus of an elementary system of). 8vo. Cambridge
- : (the new system of) : or, is the earth a fixed star or a planet? 8vo. London, 1869

Athenæum:

Journal of Literature, Science, and the fine arts. 4to. London, 1831–84

Athenæum Library:

Catalogue [with supplement]. 8vo. London, 1845–51

Athens, Observatoire:

- : Publications 1re Série, Tome 1. Astronomische Beobachtungen über Cometen, von J. F. J. Schmidt. 4to. Athen, 1863
- : 2me Série, Tome 1. Beiträge zur physikalischen Geographie von Griechenland, von J. F. J. Schmidt. 4to. Athen, 1861

Atkinson (Henry):

- : *On astronomical and other refractions. 4to. London, 1826
- : A new method of extracting the roots of equations. 4to. Newcastle, 1831

Atkinson (James):

Epitome of the art of navigation, or a short, easy, and methodical way to become a compleat Navigator. 8vo. London, 1753

Atwood (George):

- : An essay on the arithmetic of factors, applied to various computations which occur in the practice of numbers. 4to. London, 1786
- : An analysis of a course of lectures on the principles of natural philosophy. 8vo. London, 1784
- : A treatise on the rectilinear motion and rotation of bodies,

Atwood (George)—continued.

with a description of original experiments relative to the subject.
8vo. Cambridge, 1784

August (E. F.):

Vollständige logarithmische und trigonometrische Tafeln, zum Theil in neuer Anordnung, durch Zusätze erweitert und mit ausführlichen Erläuterungen versehen. . . .
Sechste Auflage. 8vo. Leipzig, 1865

Autier (—):

Extrait de l'astronomie physique (ouvrage en préparation).
8vo. Paris, 1877

Auwers (G. F. J. Arthur):

De motu proprio Procyonis variabili. Dissertatio Inauguralis Astronomica. 4to. Regimonti Prussorum, 1862

— : *William Herschel's Verzeichnisse von Nebelflecken und Sterruhaufen. fol. Königsberg, 1862

— : *Parallaxen-Bestimmungen mit dem Königsberger Heliometer. 4to. Altona, 1863

— : Reduction der Beobachtungen der Fundamentalsterne am Passageninstrument der Sternwarte zu Palermo, 1803–5.
4to. Leipzig, 1866

— : *Bestimmung der Bahn des Cometen III, 1860.
4to. Berlin, 1867

— : *Bestimmung der Parallaxe des Sterns 34 Groombridge durch chronographische Beobachtungen am Aequatoreal der Gothaer Sternwarte. 4to. Berlin, 1867

— : Untersuchungen über veränderliche Eigenbewegungen. Erster Theil. Bestimmung der Elemente der Procyonbahn [etc.]. Inaugural-Dissertation. 4to. Königsberg, 1862

— : *Zweiter Theil. Bestimmung der Elemente der Siriusbahn.
4to. Leipzig, 1868

— : *Untersuchungen über die Beobachtungen von Bessel und Schlüter am Königsberger Heliometer zur Bestimmung der Parallaxe von 61 Cygni. 4to. Berlin, 1868

— : *Über den Werth der Aberrations-Constante, nach den Beobachtungen von Molyneux. 8vo. Berlin, 1869

— : *Über eine angebliche Veränderlichkeit des Sonnen-durchmessers. 8vo. Berlin, 1873

— : *Nachtrag zu den Untersuchungen über die veränderliche Eigenbewegung des Procyon. 8vo. Berlin, 1873

— : *Über der Parallaxe die Sterns 1830 Groombridge nach Johnson's Beobachtungen am Oxford Heliometer.
8vo. Berlin, 1874

— : *Bericht über die Beobachtung des Venus-Durchgangs vom 8. December 1874 in Luxor. 4to. Berlin, 1878

— : Fundamental-Catalogue für die Zonen-Beobachtungen am nördlichen Himmel. 4to. Leipzig, 1879

— : See also Herz und Strobl.

— : *Mittlere Örter von 83 südlichen Sternen für 1875.
4to. Leipzig, 1883

— : Neue Reduction der Bradley'schen Beobachtungen aus den Jahren 1750 bis 1762. Band 2. 4to. St. Petersburg, 1882

Babbage (Charles):

- : A letter to Sir Humphry Davy on the application of machinery to the purpose of calculating and printing mathematical Tables. 4to. London, 1822
- : *On the influence of signs in mathematical reasoning. 4to. Cambridge, 1826
- : Table of the logarithms of the natural numbers from 1 to 108,000 Second edition. 8vo. London, 1831
- : Observations on the temple of Serapis at Pozzuoli near Naples. . . . With a supplement: conjectures on the physical condition of the surface of the Moon. 8vo. London, 1847
- : Observations addressed, at the last anniversary, to the President and Fellows of the Royal Society. [On the Swedish tabulating machine.] 8vo. London, 1856
- : Examples of the solutions of functional equations. 8vo. With Peacock and Herschel's Examples of the calculus.
- : Life, *see* Quetelet (L. A. J.)

[Babbage, Charles : Calculating Machine]:

- *The eleventh chapter of the History of the Royal Society, by C. R. Weld, with Prof. De Morgan's review from the 'Athenæum,' Oct. 14 & Dec. 16, 1848. 8vo. London, 1848

Bach (—):

- Calcul des éclipses de soleil par la méthode des projections. 8vo. Paris, 1860

Bache (Alexander Dallas):

- : *On the tides of the western coast of the United States : Tides of San Francisco Bay, California. 8vo. New Haven, 1856
- : *On the heights of the tides of the United States, from observations in the Coast Survey. 8vo. New Haven, 1858
- : *Discussion of the magnetic and meteorological observations made at the Girard College Observatory, Philadelphia, in 1840-45. 4to. Washington, 1859-62
- : *Lecture on the Gulf Stream. 8vo. New Haven, 1860
- : *General account of the results of Part 2 of the discussion of the declinometer observations made at the Girard College, Philadelphia, between 1840 and 1845, with special reference to the solar diurnal variation and its annual inequality. 8vo. New Haven, 1861
- : *Records and results of a magnetic survey of Pennsylvania and parts of the adjacent States. 4to. Washington, 1863
- : Tide tables for the use of navigators ; prepared from the Coast Survey Observations. 8vo. [1857]

Backlund (J. O.):

- *Beräkning af relativa störingar för planeten (112) Iphigenia. 8vo. Stockholm, 1874

Backlund (O.):

- : *Elemente und Ephemeride des Encke'schen Cometen für das Jahr 1881. 4to. St. Pétersbourg, 1881
- : *Zur Theorie des Encke'schen Cometen. 4to. St. Pétersbourg, 1881

Bäcklund (Albert Victor):

*Bestämning af Polhöjden för Lund's Observatorium medelst
observationer i första vertikalen. 4to. Lund, 1867

Bacon (Francis):

— : *Sylva sylvarum, or a Naturall Historie.* In ten centuries . . . published by William Rawley. Third edition [to which is added] *New Atlantis.* 2 parts in 1 vol.
fol. London, 1631

— : *Resuscitatio, or bringing into publick light several pieces of the works . . . hitherto sleeping, of . . . Francis Bacon . . . together with his lordship's life;* second edition. By William Rawley, [to which is added] several letters, written by this honourable authour. 2 parts in 1 vol.
fol. London, 1661-57

— : *Baconiana, or certain genuine remains of Sr. F. B . . . , in arguments civil and moral, natural, medical, theological, and bibliographical.* 8vo. London, 1679

— : *Novum organum scientiarum,* in two parts.
2 vols. 8vo. London, 1802
Vols. 3 and 4 of collected works.

— : Works. 12 vols. 8vo. London, 1815

Bacon (Roger):

Opus majus . . . ex MS. codice Dubliniensi, cum aliis quibusdam collato, nunc primum edidit S. Jebb.
fol. Londini, 1733

Baden Powell, see Powell (Baden).

Baeyer (J. J.):

Die Küstenvermessung und ihre Verbindung mit der Berliner Grundlinie, ausgeführt von der trigonometrischen Abtheilung des Generalstabes. 4to. Berlin, 1849

— : See also Berlin, K. preuss. geodät. Institut; Bessel und Baeyer.

Bagay (V.):

Nouvelles tables astronomiques et hydrographiques, contenant un traité des cercles de la sphère; la description des instruments à réflexion; diverses méthodes pour obtenir les latitudes et les longitudes terrestres; une nouvelle table des logarithmes, des sinus, cosinus, tangentes et cotangentes de seconde en seconde pour les 90 degrés du quart du cercle.
4to. Paris, 1829

Bailly (Jean Sylvain):

— : Essai sur la théorie des satellites de Jupiter, suivi des tables de leurs mouvemens, déduits du principe de la gravitation universelle . . . avec les tables de Jupiter, par M. Jeaurat.
4to. Paris, 1766

— : Histoire de l'Astronomie ancienne, depuis son origine jusqu'à l'établissement de l'École d'Alexandrie. 4to. Paris, 1775

— : Geschichte der Sternkunde des Alterthums bis auf die Errichtung der Schule zu Alexandrien [übersetzt von C. E. Wünsch]. 2 vols. 8vo. Leipzig, 1777

— : Lettres sur l'origine des sciences, et sur celle des peuples de l'Asie, adressées à M. de Voltaire. 8vo. Paris, 1777

Bailly (Jean Sylvain)—continued.

- : Histoire de l'Astronomie ancienne, depuis son origine jusqu'à l'établissement de l'école d'Alexandrie. Seconde Édition. 4to. Paris, 1781
- : Traité de l'Astronomie indienne et orientale; ouvrage qui peut servir de suite à l'histoire de l'astronomie ancienne. 4to. Paris, 1787
- : Geschichte der neuern Astronomie. 2 vols. 8vo. Leipzig, 1796
- Vol. 1. Von der Stiftung der alexandrinischen Schule bis zu ihrem Untergange.
- Vol. 2. Vom Untergange der alexandrinischen Schule bis Kepler.
- : Histoire de l'Astronomie Ancienne et Moderne . . . dans laquelle on a conservé littéralement le texte historique de l'Auteur, en supprimant les détails scientifiques, les calculs abstraits [&c.] par V. C. [Victor Comeyras]. 2 vols. 8vo. Paris, 1805
- : Manuel d'Astronomie, ou traité élémentaire de cette science d'après l'état actuel de nos connaissances. 8vo. Paris, 1825
- : Biography, *see Arago.*

Baily (Francis):

- : The doctrine of interest and annuities analytically investigated and explained, together with several useful tables connected with the subject. 4to. London, 1808
- : The doctrine of life-annuities and assurances, analytically investigated and practically explained, together with several useful tables connected with the subject; to which is now added an appendix. 2 vols in 1. 8vo. London, 1813
- : Memoir relative to the annular eclipse of the sun which will happen on September 7, 1820. 8vo. London, 1818
- : Astronomical Tables and remarks for the year 1822. 8vo. London, 1822
- : *On some new tables of Aberration and Nutation. 8vo. London, 1822
- : Remarks on the present defective state of the Nautical Almanac. 8vo. London, 1822
- : An address delivered at a Special General Meeting of the Astronomical Society of London, on presenting the Gold medals to J. F. W. Herschel, J. South, and Professor Struve. 8vo. London, 1826
- : *A list of moon-culminating stars for 1827. 8vo. London, 1827
- : Astronomical tables and formulæ, together with a variety of problems explanatory of their use and application. To which are prefixed the elements of the solar system. 8vo. London, 1827
- : *On some new auxiliary tables for determining the apparent places of the Greenwich stars. 8vo. London, 1827
- [—] : *On the Royal Observatory at Palermo. 8vo. London, 1827
- : Catalogue of Zodiacal stars. 8vo. London [1827]
- : Further remarks on the present defective state of the

Baily (Francis)—continued.

- Nautical Almanac, to which is added an account of the New Astronomical Ephemeris published at Berlin. 8vo. London, 1829
- : *On the discordancies in the results of the methods for determining the length of the simple Pendulum. 8vo. London, 1829
- : * Mayer's Catalogue of stars, corrected and enlarged; together with a comparison of the Places of the greater part of them, with those given by Bradley. fol. London [1831]
- : An account of the Revd. John Flamsteed, the first Astronomer-Royal; compiled from his own manuscripts, and other authentic documents never before published. To which is added his British Catalogue of stars, corrected and enlarged. 4to. London, 1835
- : An address to astronomical observers, relative to the improvement and extension of the Astronomical Society's Catalogue of 2,881 principal stars. 4to. London [1837]
- : British Association Catalogue, La Caille's Catalogue, La Lande's Catalogue, *see* British Association.
- : Astronomical Society's Catalogue, *see* London, Royal Astronomical Society.
- : Memoir, *see* Herschel (J. F. W.)

Bainbrigge (Lieut.-Col.):

*Description of an improved sextant. 8vo. London, 1832

Baird (A. W.), E. Roberts (and M. W. Rogers):

Tide-tables for the Indian ports for the years 1881–83.

12mo. London

Baker (Thomas):

The Geometrical Key; or the gate of equations unlock'd: a new discovery of the construction of all equations, howsoever affected, not exceeding the fourth degree . . . and the finding of all their roots, as well false as true . . . (Clavis Geometrica Catholica). Latin and English.

4to. London, 1684

Bakewell (F. C.):

- : Considerations respecting the figure of the earth, in relation to the action of centrifugal force, and to the attempts to determine the ellipticity of the globe by pendulum observations. 8vo. London, 1862
- : A dynamical theory of the figure of the earth, proving the poles to be elongated. 8vo. London, 1867

Bakhuyzen (Ernst Frederik van de Sande):

Bepaling van de helling der ecliptica, uit waarnemingen verricht aan de Sterrenwacht te Leiden. [Inaugural-Dissertation.] 8vo. Leiden, 1879

Bakhuyzen (H. G. van de Sande), *see* Leiden Observatory.**Ball (Leo de):**

- : Untersuchungen über die eigene Bewegung des Sonnensystems, abgeleitet aus Beobachtungen der Sternwarten Cap,

Ball (Leo de)—*continued.*

Melbourne, Williamstown, St. Helena und Madras. Inaugural-Dissertation. 4to. Bonn, 1877

— : *Declination von 200 Sternen innerhalb der Zone + 49° bis + 51° nach Beobachtungen im ersten Vertical am Passageninstrumente der Herzogl. Sternwarte zu Gotha. 4to. Kiel, 1882

— : *Bestimmung der Constante der täglichen Nutation. 4to. Kiel, 1883

Ball (Robert Stawell) :

— : Astronomy. (The London Science class-books, elementary series.) 12mo. London, 1877

— : Elements of Astronomy. 8vo. London, 1880

Baltimore, Johns Hopkins University :

Circular, Nos. 15, 17, 19–22, 24, 25, 27, 28, 30.
4to. Baltimore, 1882–84

Bamfield (Samuel) :

A new treatise of astronomy, or astronomy opened : being a rational and mathematic enquiry into the true principles and nature of astronomy. 4to. Exon. 1764

Banières (Jean) :

Examen et réfutation des éléments de la philosophie de Neuton de M. de Voltaire. 8vo. Paris, 1739

Barclay (J. G.), *see* Leyton Observatory.

Barker (George F.) :

*On the total Solar Eclipse of July 29, 1878.
8vo. [Philadelphia, 1878]

Barker (Thomas) :

An account of the discoveries concerning comets, with the way to find their orbits, . . . [with] new tables . . . particularly with regard to that comet which is soon expected to return. 4to. London, 1757

Barker (William Alleyne) :

Mathematical tables, containing the logarithms of all numbers from 1 to 10,000, the logarithmic sines and tangents to every degree, a traverse or table on difference of latitude and departure, with a table of rums. 12mo. London, 1815

Barlow (Peter) :

— : *Demonstration of a curious numerical proposition.
8vo. 1810

— : An elementary investigation of the theory of numbers, with its application to the indeterminate and Diophantine analysis, the analytical and geometrical division of the circle [&c.]. 8vo. London, 1811

— : New mathematical tables, containing the factors, squares, cubes, square roots, cube roots, reciprocals, and hyperbolic logarithms of all numbers from 1 to 10,000.
8vo. London, 1814

— : Tables of squares, cubes, square roots, cube roots, reciprocals of all integer numbers up to 10,000. 8vo. London, 1840
Edited for the Society for the diffusion of Useful Knowledge, by Prof. De Morgan.

Barlow (Peter). *continued.*

- : An essay on the strength and stress of timber also an appendix on the strength of iron and other materials. 8vo. London, 1817
- : Ditto. New edition, by J. F. Heather, to which is added an essay on the effects produced by causing weights to travel over elastic bars, by Rev. R. Willis. 8vo. London, 1851
- : An essay on magnetic attractions, and on the laws of terrestrial and electro-magnetism. Second edition. 8vo. London, 1823

— : *See also Encyclopædia Metropolitana.*

Barlow's Fluid Lens (reports upon), by Sir J. F. W. Herschel, Prof. Airy, and Capt. W. H. Smyth. 8vo. London, 1833

Barneby (Thomas):

Catalogue of popular sidereal objects (150) in the order of their Right Ascension on the 1st January, 1870. 8vo. Worcester, n.d.

(Barrington, Daines):

The probability of reaching the North Pole discussed, [together with] additional instances of navigators who have reached high northern latitudes. 2 parts. 4to. London, 1775

Barrow (Isaac):

- : The usefulness of mathematical learning explained and demonstrated; being mathematical lectures read in the public schools at the University of Cambridge Translated by the Rev. John Kirkby. 8vo. London, 1734
- : Geometrical lectures, explaining the generation, nature and properties of curve lines Translated from the Latin by Edmund Stone. 8vo. London, 1735
- : Mathematical works Edited for Trinity College by W. Whewell. 8vo. Cambridge, 1860

Bartholini (Caspar):

Specimen philosophiae naturalis, præcipua physices capita exponens accedit de fontium fluviorumque origine ex pluviis dissertatio physica. 12mo. Amstelædami, 1697

Basel. Bernoullianum Anstalt für Physik, Chemie und Astronomie an der Universität:

- : *Beschreibung und Pläne. 8vo. München
- : Bericht für 1879. 8vo. München, 1880

Baselli (Gio. Alberto):

An essay on mathematical language; or an introduction to the mathematical sciences. 8vo. London, 1787

Bashforth (Francis):

- : * Description of a chronograph adapted for measuring the varying velocity of a body in motion through the air, and for other purposes. 8vo. London, 1866
- : Reports on experiments made with the Bashforth Chronograph to determine the resistance of the air to the motion of projectiles. 1865-1870. 8vo. London, 1870

Bartsch (Jacob):

- : Usus astronomicus planisphaerii stellati, seu vice-globi colestis in plano delineati compendiaria introductio. 4to. (Argentinæ, 1624)

— : Tabulae logarithmicæ, *see* Kepler et Bartsch.

Batavia, Magnetical and Meteorological Observatory:

- : Observations . . . 1866-80, made under the direction of P. A. Bergsma. Vols. 1-5. 4to. Batavia, 1871-82
- : Regenwaarnemingen in Nederlandsch-Indië. Jaargang 1-4, 1879-82, door P. A. Bergsma (& J. P. van der Stok). 8vo. Batavia, 1880-83

Batavia, Natuurkundige Vereeniging in Nederlandsch Indië:

- : Verhandelingen (Acta). Deel 1-6. 4to. Batavia, 1856-59
- : Natuurkundig Tijdschrift voor Nederlandsch Indië. Deel 1-20, 22-26, 28-43 (serie 1-8). 8vo. Batavia, 1850-84

Bateman (Joseph):

The construction and application of the sliding rule used by the officers of Her Majesty's revenue. 12mo. London, n.d..

Bauernfeind (Carl Maximilian):

Die Bedeutung moderner Gradmessungen. 4to. München, 1866

Bauernfeind (Carl Maximilian) und Carl Bruhns:

*Bestimmung des geographischen Längenunterschiedes zwischen Leipzig und München. 4to. München, 1876

Baxendell (J.), *see* Knott and Baxendell.**Bayer (Johannes):**

- : Explicatio characterum æneis Uranometrias imaginum, tabulis, insculptorum, addita, & commodiore hac forma tertium redintegrata. 4to. Augustæ Vindelicorum, 1654

— : Ditto. 4to. Ulmæ, 1697

- : Uranometria, omnium asterismorum continens schemata, nova methodo delineata, aereis laminis expressa. [Third Edition.] fol. Ulmæ, 1661

Bayer (Theophil. Siegfried):

De Eclipsi Sinica liber singularis Sinorum de eclipsi solis quae Christo in crucem acto facta esse creditur indicium examinans et momento suo ponderans . . . accedunt præceptionum de lingua Sinica. 4to. Regiomonte, 1718

[Bayes, —]:

An introduction to the doctrine of fluxions, and defence of the mathematicians against the objections of the author of the Analyst. 8vo. London, 1736

Bayle (Pierre):

- : Miscellaneous Reflections occasion'd by the Comet which appear'd in December 1680. Chiefly tending to explode popular superstitions. . . . Translated from the French. To which is added the author's Life. 2 vols. 8vo. London, 1708

— : *See also* Comets (dissertation on).

Bayly (William):

The original astronomical observations made in the course of a voyage to the Northern Pacific Ocean, for the discovery of a north-east or north-west passage . . . in His Majesty's ships the *Resolution* and *Discovery*, in the years 1776–1780, by Captain James Cook and Lieutenant James King.
4to. London, 1782

Bayma (Joseph):

The elements of molecular mechanics. 8vo. London, 1866

Bazley (Thomas Sebastian):

The stars in their courses. A two-fold series of maps, with a catalogue, showing how to identify, at any time of the year, all stars down to the 5·6 mag. inclusive of Heis, which are clearly visible in English Latitudes. fol. London, 1878

Beardmore (Nathaniel):

Manual of hydrology: containing (1) Hydraulic and other tables; (2) Rivers, flow of water, springs, wells, and percolation; (3) Tides, estuaries, and tidal rivers; (4) Rainfall and evaporation. 8vo. London, 1862

Beaufoy (Mark):

Nautical and hydraulic experiments, with numerous scientific miscellanies. Vol. I. 4to. London, 1834

Beaumont (G.):

Fixed stars, or an analyzation and refutation of astrology. Second edition. 12mo. London, 1814

Béchaux (A. H. L. S.):

Mechanical Geometry: an application to geometry of some propositions in statics. 8vo. London, 1869

Becka (Gottlieb):

*Über die Bahn des Kometen II vom Jahre 1873. 8vo. Wien, 1878

Becker (E.):

*Tafeln der Amphitrite, mit Berücksichtigung der Störungen durch Jupiter, Saturn und Mars. 4to. Leipzig, 1870

Becker (Ludwig):

Untersuchungen über die allgemeinen Störungen der Feronia. Inaugural-Dissertation. 4to. Bonn, 1882

Beckett (Edmund):

—: Astronomy without mathematics. Fourth edition. 8vo. London, 1867

—: Ditto. Sixth edition, revised for the results of the transit of Venus. 8vo. London, 1876

Beckett (Joseph):

Elements & practice of mensuration and land surveying. 8vo. London, 1804

Bedford (Arthur):

Horæ mathematicæ vacuæ, or a treatise of the golden and ecliptic numbers, containing a method for finding the change of the Moon [and] the eclipses; of the fractions of square and cube roots. 8vo. London, 1743

Bedford (James):

- : New theories of the universe, explaining how Sun, Moon, stars, &c., are formed. 8vo. Liverpool, 1854
- : The Bedfordian system of astronomy : being new theories of the universe, explaining how Sun, Moon, stars, comets, &c., are formed. . . . Third edition. 8vo. London, 1881

Beebe (Lewis H.):

The dense water of the ocean ; its rivers and currents.

8vo. 1884

Beer (Wilhelm) und Johann Heinrich Mädler:

- : Der Mond nach seinen kosmischen und individuellen Verhältnissen oder Allgemeine vergleichende Selenographie. Mit besondrer Beziehung auf die von den Verfassern herausgegebene Mappa Selenographica. 4to. Berlin, 1837
- : Mappa Selenographica quatuor sectionibus constructa et delineata. 4 sheets mounted in 1. Berolini, 1834
- : Ditto. Second edition. 4 sheets.
- : Ditto. Third edition. 4 sheets.
- : General-Karte der sichtbaren Seite der Mondoberflaeche. 1 sheet. Berlin, 1837
- : Beiträge zur physischen Kenntniss der himmlischen Körper im Sonnensysteme. 4to. Weimar, 1841

Bégat (P.):

Exposé des opérations géodésiques relatives aux travaux hydrographiques exécutés sur les côtes septentrionales de France par les Ingénieurs Hydrographes de la Marine.

4to. Paris, 1839

Behrmann (Carl):

- : Beobachtungen über die Sternschnuppen, angestellt auf den Sternwarten zu Göttingen und Münster, nebst daraus abgeleiteten Resultaten. Inaugural-Dissertation. 8vo. Göttingen, 1866
- : Atlas des südlichen gestirnten Himmels. Darstellung der zwischen dem Südpol und dem 20 Grad südlicher Abweichung mit blossen Augen sichtbaren Sterne nach ihren wahren, unmittelbar vom Himmel entnommenen Grössen. fol. Leipzig, 1874
- : Stern-Verzeichniss. 8vo. Leipzig, 1874

Beilby, J. Wood :

- [—] : Auriferous drifts in Australasia, or the cause and its continuity of the great geological convulsions, and the theory of the origin and position of auriferous drifts. 8vo. Melbourne, 1868
- [—] : The true theory of the earth, and philosophy of the predicted end . . . specially considered as elucidating the origin and distribution of auriferous deposits in Australasia and elsewhere. By 'Research.' 8vo. Edinburgh, 1869
- : Reasons suggestive of mining on physical principles for gold and coal : a review of the assumptions of geologists. 8vo. Melbourne, 1875
- : Eureka : an elucidation of mysteries in nature—the problems of science. 8vo. Melbourne, 1883

Beima (Elto Martinus):

De annulo Saturni. 4to. Lugduni Batavorum, 1842

Beiträge zur meteorologischen Optik und zu verwandten Wissenschaften:

Herausgegeben von J. A. Grunert. Band 1, Heft 1-4.
8vo. Leipzig, 1848-50

Belcher (Edward):

The last of the Arctic Voyages: being a narrative of the expedition in H.M.S. *Assistance* . . . in search of Sir John Franklin, during 1852-54, with notes on the natural history by Sir J. Richardson, R. Owen, T. Bell, J. W. Salter and L. Reeve. 2 vols. roy. 8vo. London, 1855

Belfast Natural History and Philosophical Society:

Proceedings, 1871-83. 8vo. Belfast, 1873-83

Benson (Lawrence Sluter):

- : Geometrical disquisitions. 8vo. London, 1864
- : The truth of the bible upheld; or truth *v.* science. 'My visit to the Sun.' 8vo. London, 1864
- : The truth of the bible upheld, or truth *vs.* science. 8vo. Augusta, Ga., 1866
- : A dissertation on the principles and science of Geometry. 8vo. New York, 1871
- : Replies . . . to E. T. Quimby, W. Chauvenet, R. D. Allen, and A. T. Bledsoe. 8vo. New York, 1872
- : Notes on the first book of Benson's Geometry, and concerning the circle. 8vo. New York, 1873
- : Mathematics in a dilemma. 8vo. New York, 1879
- : Geometry as a science. 8vo. New York, 1882
- : Facts and figures for mathematicians. 8vo.

Benthin (J.) und Carl Bruhns:

Lehrbuch der Sternkunde in entwickelnder Stufenfolge . . . mit einem Vorworte von C. Bruhns. 8vo. Leipzig, 1872

Bentley (C. S.):

A new theory of the tides. fol. 1879

Bentley (John):

A historical view of the Hindu Astronomy, from the earliest dawn of that science in India, to the present time . . . To which are added: 1. Hindu tables of equations. 2. Remarks on the Chinese Astronomy. 3. The Zodiacs of Dendera. 8vo. London, 1825

Benzenberg (Johann Friedrich):

- : Die Sternschnuppen sind Steine aus den Mondvulkanen. 8vo. Bonn, 1834
- : Versuche über die Umdrehung der Erde. 8vo. Düsseldorf, 1845

Berg (Friedrich Wilhelm):

Ueber die Berechnung der Störungen. [Inaugural-Dissertation.] 8vo. Dorpat, 1869

Bergen (W. C.):

- : Spherical tables and diagram, with their application to

Bergen (W. C.)—continued.

- great circle sailing, and various problems in Nautical Astronomy.
8vo. London, 1857
- : Great circle tables, and use of great circle charts.
8vo. Blyth, 1859

Bergen, Observatorium :

- : Indberetning . . . 1868, 1869, 1870, af J. J. Åstrand.
[Swedish and German.] 4to. Bergen, 1871
- : Indberetning om Bergens Observatorium i 1872, af J. J. Åstrand. 4to. Bergen
- : Katalog over Bergens Observatoriums Bibliothek.
8vo. Bergen, 1879

Bergman (Johann Friedrich) :

- Dissertatio de formulis refractionis astronomiae. [Inaugural Dissertation.] 4to. Lundæ, 1817

[Berkeley (George), Bishop of Cloyne] :

- : The analyst, or a discourse addressed to an infidel mathematician . . . by the author of the ‘minute philosopher.’
8vo. London, 1734
- : A defence of free-thinking in mathematics, in answer to a pamphlet of Philalethes Cantabrigiensis, intituled, Geometry no friend to infidelity . . . by the author of the ‘minute philosopher.’ 8vo. London, 1735
- : See Jurin (Dr.)

Berlin, Astronomisches Jahrbuch :

- : Für 1776–1886. 104 vols. 8vo. Berlin, 1774–1884
- : Supplement-Bände 1–4. Sammlung astronomischer Abhandlungen, Beobachtungen und Nachrichten. Herausgegeben von J. E. Bode. 4 vols. 8vo. Berlin, 1793–1808
- : Erläuterungen, von J. E. Bode. 8vo. Berlin, 1817
- : Namen- und Sach-Register . . . 1776 bis 1829.
8vo. Berlin, 1829
- : Circular, No. 44–229. 8vo. Berlin, 1876–84

- Berlin, Commission für die Vorberathung der für die Beobachtung des Venusdurchgangs von 1874 zu ergreifenden Maassregeln. Verhandlungen, 1869, Oct. 25–29. fol. Berlin**
- : Protocole der zweiten Conferenz, 1871, März 20–28.
fol. Berlin

- Berlin, Gewerbeausstellung im Jahre 1879. Bericht über die wissenschaftliche Instrumente . . . Herausgegeben von L. Loewenherz.**
8vo. Berlin, 1880

Berlin, Königliche Akademie der Wissenschaften :

- : Miscellanea Berolinensis ad incrementum scientiarum, exscriptis Societati Regiæ Scientiarum exhibitis edita.
3 parts, 4to. Berolini, 1710 (1723–1727)
- : Abhandlungen, 1822–48, 1850–83. 4to. Berlin, 1825–84
- : Verzeichniss der Abhandlungen, 1710–1870.
8vo. Berlin, 1871
- : Inhaltsverzeichniss der Abhandlungen, 1822–72
8vo. Berlin, 1873

Berlin, Königliche Akademie der Wissenschaften—cont.

- : Bericht über die zur Bekanntmachung geeigneten Verhandlungen, 1836–55 12 vols. 8vo. Berlin, 1836–55
- : Monatsberichte, 1856–81. 26 vols. 8vo. Berlin, 1856–82
- : Monatsberichte. Register . . . vom Jahre 1836 bis 1858. 8vo. Berlin, 1860
- : — vom Jahre 1859 bis 1873. 8vo. Berlin, 1875
- : Sitzungsberichte, . . . Jahrgang 1882–84. 8vo. Berlin, 1882–84
- : Recueil de tables astronomiques (avec catalogue des étoiles fixes). 3 vols. 8vo. Berlin, 1776
- : Dissertations sur la théorie des Comètes qui ont concouru au prix proposé par l'Académie . . . pour l'année 1777, & adjugé en 1778. 4to. Utrecht, 1780
- : Akademische Sternkarten für den Gürtel des Himmels von 15° südlicher bis 15° nördlicher Abweichung, nach Bessel's Vorschlag entworfen von verschiedenen Astronomen. fol. Berlin, 1859
- : Cataloge zu den 24 Stunden der Akademischen Sternkarten für 15° südlicher bis 15° nördlicher Abweichung, bearbeitet von verschiedenen Astronomen [1830–38]. fol. Berlin, 1859

Berlin, Königl. Preuss. Geodätisches Institut: Publicationen:

- : Zur Entstehungsgeschichte der europäischen Gradmessung. (Von J. J. Baeyer.) 4to Berlin
- : Astronomisch-Geodätische Arbeiten, 1870–71. Herausg. von C. Bruhns. 4to. Leipzig, 1871–73
- : Astronomisch-Geodätische Arbeiten, 1872, 1869, 1867. Herausg. von C. Bruhns. 4to. Leipzig, 1874
- : Astronomisch-Geodätische Arbeiten, 1879–82. 4to. Berlin, 1881–83
- : Bestimmung der Längendifferenz zwischen Berlin und Wien . . . Von W. Förster und E. Weiss. 4to. Leipzig, 1871
- : Die Ausdehnungskoeffizienten der Küstenvermessung, von A. Westphal. 4to. Berlin, 1881
- : Das Mittelwasser der Ostsee bei Swinemünde. Bearbeitet von Wilhelm Seibt. 4to. Berlin, 1881
- : Präcisions-Nivellement der Elbe: zweite Mittheilung. Ausgeführt von Wilhelm Seibt. 4to. Berlin, 1881
- : Astronomisch-Geodätische Ortsbestimmungen im Harz . . . im Jahre 1881 . . . von Moritz Löw. 4to. Berlin, 1882
- : Das Hessische Dreiecksnetz. 4to. Berlin, 1882
- : Gradmessungs-Nivellement zwischen Swinemünde und Konstanz. Bearbeitet von Wilh. Seibt. 4to. Berlin, 1882
- : Das Rheinische Dreiecksnetz. 3. Heft. Die Netzausgleichung. 4to. Berlin, 1882
- : Gradmessungs-Nivellement zwischen Swinemünde und Amsterdam. Bearbeitet von W. Seibt. 4to. Berlin, 1883
- : Die gegenseitige Lage der Sternwarten zu Altona und Kiel, von C. F. W. Peters. 4to. Kiel, 1884

Berlin, Königliche Sternwarte :

- : Astronomische Beobachtungen herausgegeben von
J. F. Encke. Band 1-4. fol. Berlin, 1840-57
— : Hülftafeln, *see* Förster (W.)

Berlin, Meteorologisches Institut :

- : Uebersicht der bei dem meteorologischen Institute zu Berlin gesammelten Ergebnisse der Wetterbeobachtungen . . . 1885
4to. Berlin
— : Uebersicht der Witterung im nördlichen Deutschland,
1856-58, 1860. 4to. Berlin

Berlin, Physikalische Gesellschaft :

- : Die Fortschritte der Physik in den Jahren 1855-80. Band
11-33, 36. 8vo. Berlin, 1858-83
— : Namen- und Sach-Register. Band 1-20. 8vo. Berlin, 1872
— : Verhandlungen, 1882-83. Band 1. 8vo. Berlin, 1882-83

Bernaerts (Gustave Louis) :

- : *Note sur la nature du Soleil. 8vo. Bruxelles, 1870
— : Notice biographique de. 8vo.

Bernoulli (Daniel) :

- Hydrodynamica, sive de viribus et motibus fluidorum commentarii.
4to. Argentorati, 1738

Bernoulli (Jacobus) :

- : Conamen novi systematis cometarum, pro motu eorum sub calculum revocando & apparitionibus prædicendis.
12mo. Amstelædami, 1682
— : Dissertatio de gravitate Ætheris. 8vo. Amstelædami, 1683
— : Ars conjectandi ; opus posthumum. Accedit tractatus de seriebus infinitis, et epistola Gallicè scripta de ludo pilæ reticularis.
4to. Basileæ, 1713
— : Opera. 2 vols. 4to. Genevæ, 1744
— : The doctrine of permutations and combinations, being an essential and fundamental part of the doctrine of chances . . . published by Francis Maseres 8vo. London, 1795

Bernoulli (Joannes) :

- Opera omnia, tam antea sparsim edita, quam hactenus inedita.
4 vols. 4to. Lausannæ & Genevæ, 1742

Bernoulli (Joannes) et G. W. Leibnitz :

- Commercium philosophicum et mathematicum, 1694-1716.
2 vols. 4to. Lausanne, 1745

Bernoulli (Jean), junior :

- : Recueil pour les Astronomes. 3 vols. 8vo. Berlin, 1771-76
— : A sexcentenary table, exhibiting at sight the result of any proportion where the terms do not exceed 600 seconds or 10 minutes ; with precepts and examples. 4to. London, 1779

Béron (Pierre) :

- : Texte des explications des faits célestes et géologiques contenus dans l'atlas cosmo-biographique. 4to. Paris, 1858
— : Réforme fondamentale des sciences physiques produite par la découverte de l'origine des faits cosmiques. Panépistème, contenant l'origine des faits cosmiques, des quatre systèmes

Béron (Pierre)—*continued.*

- des physiciens, des quatre religions fondamentales, et de la pesanteur. 8vo. Paris, 1861
- : Electrostatique, contenant l'explication des faits électriques et électrochimiques de toutes les sciences. 8vo. Paris, 1861
- : Chronologie du monde. 8vo. Paris, 1862
- : La découverte de l'origine de la pesanteur démontrée. 8vo. Paris, 1863
- : Météorologie simplifiée. 8vo. Paris, 1863
- : Le grand soleil visible au centre du système du monde. 8vo. Paris, 1866
- : La physique céleste. 8vo. Paris, 1866
- : Taches solaires, et périodicité de leur nombre : faisant partie de la physique céleste, servant à montrer l'état physique du soleil. 8vo. Paris, 1866
- : Physique céleste : contenant le système du monde (le système planétaire ; l'origine de la terre et de l'homme). 3 vols. 8vo. Paris, 1866–67

Berosus Babilonicus : *Hemicyclium* see Valderus and others.

Berry (Calixte):

- Théorie complète des occultations, à l'usage spécial des officiers de marine et des astronomes. 4to. Paris, 1880

Bertrand (Joseph):

- : *Éloge historique d'Urbain-Jean-Joseph Le Verrier. 4to. Paris, 1880
- : Les Fondateurs de l'Astronomie moderne. Copernic—Tycho Brahé—Kepler—Galilée—Newton. 8vo. Paris, n.d.

Bessel (Friedrich Wilhelm):

- : Fundamenta Astronomiae pro anno MDCCCLV deducta ex observationibus viri incomparabilis James Bradley in specula Astronomica Grenovicensi per annos 1750–1762 institutis. fol. Regiomonti, 1818
- : *Untersuchungen über die Länge des einfachen Secundenpendels. 4to. Berlin, 1828
- : Tabulae Regiomontanae reductionum observationum astronomicarum, ab anno 1750 usque ad annum 1850 computae. 8vo. Regiomonti Prussorum, 1830
- : *Versuche über die Kraft mit welcher die Erde Körper von verschiedener Beschaffenheit anzieht. 4to. Berlin, 1832
- : *Bestimmung der Länge des einfachen Secundenpendels für Berlin. 4to. Berlin, 1837
- : *Schreiben vom 10. Oct. 1838 an Hrn. v. Buch [on the parallax of 61 Cygni]. 8vo. Berlin, 1838
- : Darstellung der Untersuchungen und Maassregeln, welche, in den Jahren 1835 bis 1838, durch die Einheit des Preussischen Längenmaasses veranlasst worden sind. 4to. Berlin, 1839
- : Astronomische Untersuchungen. Band 1, 2, in 1 vol. 4to. Königsberg, 1841–42
- : Populäre Vorlesungen über wissenschaftliche Gegenstände . . . Nach dem Tode des Verfassers herausgegeben von H. C. Schumacher. 8vo. Hamburg, 1848

Bessel (Friedrich Wilhelm) —continued.

- : *Verzeichniss sämmtlicher Werke, Abhandlungen, Aufsätze und Bemerkungen von F...W...B.... Versehen von Dr. A. L. Busch. 4to. Königsberg, 1849
- : *Refraction tables, modified and expanded. 4to. London, 1855
- : Refraction tables. The form employed at the Royal Observatory, Cape of Good Hope. 4to.
- : Abhandlungen . . . Herausgegeben von Rudolf Engelmann. 3 vols. 4to. Leipzig, 1875-76
 Band 1. Bewegungen der Körper im Sonnensystem ; sphärische Astronomie.
 2. Theorie der Instrumente ; Stellarastronomie ; Mathematik.
 3. Geodäsie ; Physik ; Verschiedenes ; Literatur.
- : Recensionen. Herausgegeben von Rudolf Engelmann. 8vo. Leipzig, 1878
- : Briefwechsel, see Gauss und Bessel, Olbers und Bessel.
- : See also Königsberg, Sternwarte ; Weisse (M.)

Bessel (Friedrich Wilhelm) und J. J. Baeyer :

- Gradmessung in Ostpreussen, und ihre Verbindung mit Preussischen und Russischen Dreiecksketten. 4to. Berlin, 1838

Betham (John) :

- A new and certain method of finding the latitude by an altitude of the Pole Star. 8vo. Bombay, 1829

Betham (William) :

- *On an astronomical instrument of the ancient Irish. 4to. Dublin, 1836

Bethune (C. R. Drinkwater) :

- : Tables for travellers, adapted to the pocket or sextant case. 16mo. London [1872]
- : *Note on a method of reducing the apparent distance of the moon from sun or star to the true distance. 8vo. London

Bettinus (Marius) :

- : Apiaria vniversæ philosophiæ mathematicæ, in quibus Paradoxa, et noua pleraque Machinamenta ad vsus eximios traducta, & facillimus demonstrationibus confirmata. 2 vols. in 1. fol. Bononiæ, 1642
- : Ærarium philosophiæ mathematicæ, in quo elementa philosophiæ geometricæ de planis, curvis, & solidis figuris applicata et ornata . . . methodo iucundiore ac breviore in tres tomos distributa sunt. 3 vols. 4to. Bononiæ, 1648

Bézout (Étienne) :

- : Cours de mathématiques à l'usage de la Marine et de l'Artillerie. Première partie, Arithmétique. 12mo. Avignon, 1811
- : Traité d'arithmétique . . . avec des notes et des tables de logarithmes par A. A. L. Reynaud. Huitième édition. 8vo. Paris, 1816
- : Cours de mathématiques . . . Seconde partie, contenant la géométrie, la trigonométrie rectiligne et la trigonométrie

Bézout (Etienne)—continued.

- sphérique. Notes sur la géométrie . . . par A. A. L. Reynaud. Seconde édition. 8vo. Paris, 1812
- : Cours de mathématiques . . . Troisième partie, contenant l'algèbre et l'application de l'algèbre à la géométrie, avec des notes explicatives par A. A. L. Reynaud. 2 parts in 1 vol. 8vo. Paris, 1812
- : Traité de Navigation. Nouvelle édition, revue et augmentée de Notes et d'une Section supplémentaire où l'on donne la manière de faire les calculs des observations, avec des nouvelles Tables qui les facilitent, par M. de Rossel. 8vo. Paris, 1814

Bháscara Acharya :

- : Lilawati, or a treatise on arithmetic and geometry. Translated from the original Sanscrit by John Taylor. 4to. Bombay, 1816

— : *See also* Brahmegupta and Bháscara.

Bianchi (Giuseppe) :

- : *Osservazioni fondamentali per una rivista ed ampliazione al Catalogo delle stelle di Piazzi. 4to. Modena [1841]
- : *Posizioni medie delle 220 stelle principali di Piazzi ridotte al solstizio estivo dell'anno 1840 e considerazioni intorno ai movimenti propj. Memoria seconda. 4to. Modena [1844]

Bianchini (Francesco) :

- : Hesperi et Phosphori nova phaenomena, sive observationes circa planetam Veneris. fol. Romæ, 1728
- : Astronomicae ac Geographicae observationes selectae . . . cura et studio Eustachii Manfredi. fol. Veronæ, 1737

Bibliographies :

- Carl (Ph.): Principien der astronomischen Instrumentenkunde, 1863. (Literatur über Mikrometer.)
- : Repertorium der Cometen-Astronomie. 1864.
- De Morgan (A.): Arithmetical Books from the invention of printing to the present time. 1847.
- : Art. Ta'les, Eng. Cyclopædia. List of 457 Mathematical Tables.
- Fiévez (Ch.): Ouvrages, mémoires et notices de spectroscopie (Ann. de l'Observatoire de Bruxelles, 1879).
- Fritz (H.): Verzeichniss beobachteter Polarlichter. 1873.
- Glaisher (J. W. L.): Report on Mathematical Tables (Brit. Ass. Report, 1873).
- Helmholtz (H.): Optique physiologique, 1867. (List of works on optics.)
- Holden (E. S.): Index-catalogue of books and memoirs relating to nebulæ and clusters. 1877.
- : Index-catalogue of books and memoirs on the Transits of Mercury. 1878.
- : Catalogue of U.S. Naval Observatory Library. Part 1. Astronomical Bibliography. 1879.
- : Sir William Herschel: his life and works, 1881 (List of published writings of W. H.)
- Houzeau (J. C.): Catalogue des ouvrages d'astronomie et de météorologie dans les Bibliothèques de la Belgique. 1878.

Bibliographies—continued.

- Houzeau (J. C.): Répertoire des constantes de l'astronomie (Ann. de l'Observatoire de Bruxelles, N.S., Tome 1).
 — : Vade-mecum de l'astronome. 1882.
 — et Lancaster: Bibliographie générale de l'astronomie. Vol. 2.
 Mémoires dans les Collections Académiques. 1882.
- Knobel (E. B.): Reference catalogue of astronomical papers and researches (Mon. Not. of R.A.S., Vol. 36).
 — : Chronology of star catalogues (Mem. R.A.S., Vol. 43).
- Lalande (J. de): Bibliographie Astronomique. 1803.
- London, Royal Society: Catalogue of Scientific papers, 1800-1873. 8 vols.
- Merriman (M.): List of writings relating to the Method of Least Squares. 1877.
- Ranyard (A. C.): Total solar eclipses (Mem. R.A.S., Vol. 41).
- Reuss (J. D.): Repertorium Commentationum a Societatis Litterariis editarum. Vol. 5, Astronomia. 1804.
- Roscoe (H. E.): Spectrum Analysis, 1870. List of Memoirs, &c., on Spectrum Analysis.
- Schellen (H.): Spectrum Analysis, 1872. List of works on spectrum analysis.
- Pulkowa, Librorum in Bibliotheca Speculae Pulcovensis Catalogus. Struve und Lindemann, 1860-80.
- Weidler (J. F.): Bibliographia Astronomica. 1755.
- Bicchierai (Zanobi):**
 *Ricordo del Prof. O. F. Mossotti 8vo. Firenze, 1863
- Biden (W. Downing):**
 Rules, formulæ and tables for the valuation of estates in possession or in reversion. 8vo. London, 1861.
- Bienaymé (J. J.):**
 *Sur la probabilité des erreurs d'après la méthode des moindres carrés. 4to. Paris, 1852
- Bierens de Haan (David):**
 *Notice sur des tables logarithmiques Hollandaises. 4to. Rome, 1874
- Billings (Joseph):**
 Geographical and astronomical expedition to the northern parts of Russia. See Sauer (Martin).
- Billingsley (Case):**
 The longitude at sea not to be found by firing guns, nor by the most curious spring clocks or watches, but the only true method for discovering that valuable secret by the Sun, Moon, or stars, and an exact Time-keeper. 8vo. London, 1714
- Binet (Jacques Philippe Marie):**
 — : *Mémoire sur la détermination des orbites des Planètes et des Comètes. 4to. Paris, 1830
 — : *Mémoire sur les intégrales définies Eulériennes, et sur leur application à la théorie des suites, ainsi qu'à l'évaluation des fonctions de grands nombres. 4to. Paris, 1840

Bion (Nicolas) :

- : L'usage des astrolabes, tant universels que particuliers.
 12mo. Paris, 1702
- : The construction and principal uses of mathematical instruments. . . . Translated from the French . . . by Edmund Stone.
 fol. London, 1723
- : Ditto. Second edition.
 fol. London, 1758

Biot (Édouard) :

- : *Catalogue des comètes observées en Chine, depuis l'an 1230 jusqu'à l'an 1640 de notre ère (et sur les anciennes apparances de la Comète de Halley).
 8vo. Paris, 1843
- : *Note sur la direction de l'aiguille aimantée en Chine, et sur les aurores boréales observées dans ce même pays.
 4to. Paris, 1844
- : *Catalogue général des étoiles filantes et des autres météores observés en Chine pendant vingt-quatre siècles.
 4to. Paris, 1846

Biot (Jean Baptiste) :

- : Analyse du traité de mécanique céleste de P. S. Laplace.
 8vo. Paris, An IX [1801]
- : Traité élémentaire d'astronomie physique . . . avec des additions relatives à l'astronomie nautique par M. de Rossel . . . seconde édition. 3 vols. 8vo. Paris, 1810-11
- : Recherches expérimentales et mathématiques sur les mouvements des molécules de la lumière autour de leur centre de gravité.
 4to. Paris 1814
- : Traité de physique expérimentale et mathématique.
 4 vols. 8vo. Paris, 1816
- : *Recherches sur l'année vague des Égyptiens.
 4to. Paris, 1831
- : *Astronomie physique.—Sur le météore périodique du 13 Novembre.
 4to. Paris, 1836
- : *Mémoire sur la latitude de l'extrémité australe de l'arc méridien de France et d'Espagne.
 4to. Paris, 1843
- : *Sur un traité Arabe relatif à l'Astronomie.
 4to. (Paris) 1843
- : *Précis de l'histoire de l'Astronomie Planétaire, écrit à l'occasion de la découverte de M. Le Verrier.
 4to. Paris, 1847
- : *Sur trois observations d'Hipparque.
 4to. Paris, 1848
- : Notices of astronomical works : five papers.
 4to. Paris, 1848-58
- : *Résumé de chronologie astronomique.
 4to. Paris, 1849
- : Elementary chapters in astronomy, from the 'traité élémentaire d'astronomie physique' of Biot. Edited by the Rev. Harvey Goodwin.
 8vo. Cambridge, 1850
- : *Sur un calendrier astronomique et astrologique trouvé à Thèbes en Égypte . . . Deuxième et dernier mémoire.
 4to. Paris, 1853
- : *Recherches de quelques dates absolues, qui peuvent se conclure des dates vagues inscrites sur des monuments Égyptiens.
 4to. Paris, 1853

Biot (Jean Baptiste)—continued.

- : *Nouvelles études sur les réfractions atmosphériques. 4to. Paris, 1854
- : Remarques relatives à la communication de M. W. Struve [mesure d'un arc du méridien]. 4to. Paris, 1857
- : Mélanges scientifiques et littéraires. 3 vols. 4to. Paris, 1858
- : *Précis de l'Histoire de l'Astronomie chinoise. 4to. [Paris] 1861
- : Discours prononcé aux obsèques de M. le Marquis de Laplace. 4to.

Biot (Jean Baptiste) et Dominique François Arago:

Recueil d'Observations géodésiques, astronomiques et physiques exécutées . . . en Espagne, en France, en Angleterre et en Écosse pour déterminer la variation de la pesanteur et des degrés terrestres sur le prolongement du méridien de Paris, faisant suite au troisième volume de la Base du système métrique [de Delambre et Méchain].

4to. Paris, 1821

Birch (Thomas):

An account of the life of John Ward, LL.D., Professor of Rhetoric in Gresham College. 8vo. London, 1766

Bird (Alfred):

*An account of the water-barometer. 8vo. London, 1865

Bird (John):

- : The method of dividing astronomical instruments. 4to. London, 1767
- : The method of constructing mural quadrants, exemplified by a description of the brass mural quadrant in the Royal Observatory at Greenwich. 4to. London, 1768

Birks (Anthony and John):

Arithmetical collections and improvements, being a complete system of practical arithmetic. 8vo. London, 1766

Birmingham (J.):

*The red stars: observations and catalogue. 4to. Dublin, 1877

Birmingham Philosophical Society:

Proceedings. Session 1881-83. Vol. 3. 8vo. Birmingham

Birt (William Radcliff):

- : The sailor's guide; or short and easy rules for vessels in revolving storms. . . . Third edition. 8vo. London, 1857
- : *On the mid-day illumination of the lunar craters Geminius, Burekhardt, and Bernoulli. 8vo. London, 1860
- : *Contribution to a report on the physical aspect of the moon. 8vo. London, 1861
- : *On a group of lunar craters imperfectly represented in lunar maps. 8vo. London, 1862
- : The manifestation and operation of volcanic forces in modifying the Moon's surface. 8vo. Edgware, 1862
- : *Plato. A few further contributions to a knowledge of its physical aspect; being reminiscences of a visit to Hartwell in April and May 1863. 8vo.

Birt (William Radcliff)—continued.

- : *On secular variations of lunar tints and spots and shadows on Plato. 8vo. London, 1869
- : Discussion and results of observations of the spots on Plato. 8vo. London, 1870
- : *A contribution to our knowledge of atmospheric waves. 8vo. London, 1872
- : Contributions to Selenography. 1. Outline Lunar map, Area IV A". 2. Mare Serenitatis. 3. Hipparchus. 4. Catalogue of Lunar objects. 5. Selections, First issue. 6. Selections, Second issue. 4to. London, 1874

Bishop (George) :

- : Astronomical Observations taken at the Observatory, South Villa, Inner Circle, Regent's Park, London, during the years 1839-51, under the direction of G . . B . . 4to. London, 1852
- : Ecliptic charts, epoch 1825. Hours 1-5, 8-11, 14, 19, 20, 23 (with remarks and notes to hour 1). 13 sheets

Bjerknes (C. A.) :

Über die geometrische Repräsentation der Gleichungen zwischen zwei veränderlichen, reellen oder komplexen Größen. [Universitäts-Program.] 4to. Christiania, 1859

Blackie (W. G.) :

The imperial atlas of modern geography. fol. London, 1865

Blaeuw (Willem Janz) :

Institutio astronomica de usu globorum & sphærarum cœlestium ac terrestrium : duabus partibus adornata, una, secundum hypothesis Pto'emæi: . . . altera, juxta mentem N. Copernici. . . . Latinè redditæ à M. Hortensio. 8vo. Amstelædami, 1690

Blaggrave (John) :

The mathematical Iewel, shewing the making and most excellent vse of a singuler Instrument so called. fol. London, 1585

Blaggrave (Joseph) :

Astrological practice of physick. 8vo. London, 1689

Blake (John F.) :

Astronomical Myths, based on Flammarion's 'History of the heavens.' 8vo. London, 1877

Blanchinus, see Bianchini.**Bland (Miles) :**

- : Algebraical problems, producing simple and quadratic equations, with their solutions. 8vo. Cambridge, 1812
- : Geometrical problems deducible from the first six books of Euclid. . . . To which is added an appendix containing the elements of plane Trigonometry. Second edition. 8vo. Cambridge, 1821
- : The elements of Hydrostatics, with their application to the solution of problems. 8vo. Cambridge, 1824

Blebelius (Thomas):

De sphæra et primis astronomie rudimentis, libellus ad usum
scholarum maximè accommodatus. 8vo. [Witebergæ] 1588

Block (Eugen):

Hilfstafeln zur Berechnung der Polaris-Azimute, zunächst
mit Rücksicht auf die Zeitbestimmung im Verticale des
Polarsterns. 4to. St. Petersburg, 1875

Blondel (François):

— : Histoire du calendrier Romain qui contient son origine et
les divers changemens qui luy sont arrivez. 4to. Paris, 1682

— : Ditto. 12mo. La Haye, 1684

Bloxam (John Charlton):

On the meteorology of Newport, in the Isle of Wight,
as deduced from observations carried on during the sixteen
years 1841–56. 4to. London, 1860

Blundevile (Thomas):

— : The theoriques of the seven planets, showing all their
diverse motions, and all other accidents, called Passions,
thereunto belonging . . . whereunto is added . . . a
breefe extract . . . of Maginus his theoriques, for the
better understanding of the Prutenicall Tables . . . there
is also hereto added the making, description, and use of two
. . . instruments for sea-men . . . first invented by
Doctor Gilbert. 4to. London, 1602

— : His exercises, containing eight treatises . . . very neces-
sarie to be read and learned of all young Gentlemen . . .
desirous to haue knowledge as well in Cosmographie, Astro-
nomie, and Geographie, as also in the art of Nauigation
. . . Fourth edition. 4to. London, 1613

Bode (Johann Elert):

— : Représentation des Astres sur xxxiv planches en taille
douce suivant l'Atlas céleste de Flams[teed]. Édition de
Paris . . avec une instruction sur la manière de s'en servir
et un catalogue complet d'étoiles. obl. fol. Berlin, 1782

— : Anleitung zur allgemeinen Kenntniss der Erdkugel.
8vo. Berlin, 1786

— : Allgemeine Untersuchungen und Bemerkungen über die
Lage und Austheilung aller bisher bekannten Planeten- und
Kometenbahnen. 8vo. Berlin, 1791

— : Allgemeine Beschreibung und Nachweisung der Gestirne
nebst Verzeichniß der geraden Aufsteigung und Abweichung
von 17240 Sternen. [German and French.] fol. Berlin, 1801

— : Uranographia sive Astrorum descriptio viginti tabulis aeneis
incisa ex recentissimis et absolutissimis Astronomorum
observationibus. fol. Berolini, 1801

— : Anleitung zur Kenntniss des gestirnten Himmels. Achte
Auflage. 8vo. Berlin, 1806

— : See also Bremiker (C.)

— : Erläuterung der Sternkunde und der dazu gehörigen Wis-
senschaften. Dritte Auflage. 2 vols. 8vo. Berlin, 1808

— : Nachtrag zu seiner Anleitung zur Kenntniss des gestirnten

Bode (Johann Elert)—continued.

Himmels, so wie zu dessen Betrachtung der Gestirne und
des Weltgebäudes. 8vo. Berlin, 1817

— : Erläuterungen für die Besitzer seiner astronomischen Jahr-
bücher und für andere Liebhaber der Astronomie.
8vo. Berlin, 1817

— : Betrachtung der Gestirne und des Weltgebäudes
Ein Auszug aus dessen Anleitung zur Kenntniß des
gestirnten Himmels. Zweite Auflage. 8vo. Berlin, 1823

— : *See also* Berlin, Astronomisches Jahrbuch.

Boderius (Thomas):

De ratione & usu dierum criticorum opus recens natum
. . . . cui accessit Hermes Trismegistus de decubitu infir-
morum. 4to. Parisiis, 1555

Boë (Ad. de):

* Passage de Mercure devant le Soleil le 6 Mai 1878
Deuxième édition. 8vo. Anvers, 1879

Boeddicker (Otto):

— : * Notes on the physical appearance of the comets *b* and *c*
1881, as observed at Birr Castle, Parsonstown, Ireland.
4to. Dublin, 1882

— : * Notes on the physical appearance of the planet Jupiter
during the season 1880–81, accompanied by sketches made
at the Observatory, Birr Castle. 4to. Dublin, 1882

— : * On the influence of magnetism on the rate of a chronometer.
4to. Dublin, 1883

Bohlin (Karl):

* Bestämning af Upsala Observatoriums Polhöjd.
8vo. Stockholm, 1882

Böhm (J. G.):

* Beobachtungen von Sonnen-Flecken und Bestimmung der
Rotations-Elemente der Sonne. 4to. Wien, 1852

Bohnenberger (J. G. F.):

— : Astronomie. 8vo. Tübingen, 1811

— : Anleitung zur geographischen Ortsbestimmung, vorzüglich
mittels des Spiegelsextanten. Neu bearbeitet von G. A.
Jahn. 8vo. Göttingen, 1852

— : Zeitschrift für Astronomie, *see* Lindenau und Bohnenberger.

Boileau (John T.):

— : A new and complete set of traverse tables, showing the
differences of latitude and the departures to every minute
of the quadrant, and to five places of decimals.
8vo. London, 1839

— : A collection of tables, astronomical, meteorological, and
magnetic; also for determining the altitudes of moun-
tains [&c.], computed in the office of the H. E. I. Co.'s
magnetical observatory, Simla. 4to. Umballa, 1850

Boillot (A.):

— : L'Astronomie au XIX^e siècle. Tableau des progrès de
cette science depuis l'antiquité jusqu'à nos jours.
8vo. Paris, 1864

Boillot (A.)—continued.

- : Traité élémentaire d'Astronomie à l'usage des Lycées et des maisons d'éducation. 8vo. Paris, 1866

Bologna :

- : Novissimæ ephemerides motuum cœlestium . . . ad Meridianum Bononiæ supputatæ auctoris Eustachio Manfredio . . . (et sociis) . . . ex anno 1715 in annum 1750. 3 vols. 4to. Bononiæ, 1715-25.
- : Ephemerides motuum caelestium ex anno 1829 in annum 1844, ad meridianum Bononiae supputatae a Petro Catureglio [&c.] 9 vols. bound in 3, 4to. 1828-43.

Bologna, Accademia delle Scienze dell' Istituto :

- : Memorie. Tomo 8-12. 4to. Bologna, 1857-61
- : Indici generali. 4to. Bologna, 1864
- : Memorie, serie seconda. 10 vols. 4to. Bologna, 1862-70
- : Indici generali. 4to. Bologna, 1880
- : Memorie, serie terza. 10 vols. 4to. Bologna, 1871-79
- : Memorie, serie quarta. Tomo 1-3. 4to. Bologna, 1880-81
- : Accademia delle Scienze dello Istituto di Bologna dalla sua origine a tutto il 1880 [Lists of members, contents of publications, &c.] 8vo. Bologna, 1881
- : Rendiconto delle Sessioni, 1857-79. 8vo. Bologna, 1858-79

Bolzano (Bernard) :

- * Versuch einer objectiven Begründung der Lehre von der Zusammensetzung der Kräfte. 4to. Prag, 1842.

Bombay Branch of the Royal Asiatic Society :

- Journal. Nos. 3-6, 11, 12 : Vols. 7-16. 8vo. Bombay, 1842-83

Bombay, Magnetical and Meteorological Observatory :

- : Meteorological [and Magnetic] Observations made . . . 1842-43. By George Buist. 2 parts 4to.
- : Report on the meteorological observations made at Colába, Bombay, 1843. By George Buist. 4to.
- : Observations made . . . in the years 1846-78. 4to. Bombay, 1849-81
- : Tracing of wind gauge curves. fol.
- : See also Chambers (C.)

Bonatus (Guido) :

- : Guido bonatus de forliuio. Decem continens tractatus Astronomie (Johannis Angeli diligenti correctione). 4to. Anguste Vindelicorum, E. Ratdolt, 1491
- : De Astronomia tractatus x., vniuersum quod ad iudicariam rationem Natuitatum, Aëris, Temporatum attinet, comprehendentes. Adjectus est Cl. Ptolemæi liber fructus, cum commentarijs Georgij Trapezuntij. fol. Basileæ, 1550

Boncompagni (Baldassarre) :

- : *Della vita e delle opere di Gherardo Cremonense, traduttore del secolo duodecimo, e di Gherardo da Sabbionetta, astrologo del secolo decimoterzo. 4to. Roma, 1851
- : *Della vita e delle opere di Guido Bonatti, Astrologo ed Astronomo del secolo decimoterzo. 8vo. Roma, 1851

Boncompagni (Baldassarre)—continued.

— : *Delle versioni fatte da Platone Tiburtino, traduttore del secolo duodecimo. 4to. Roma, 1851

Bond (George P.):

— : *An account of the nebula in Andromeda. 4to. 1848

— : *Some methods of computing the ratio of the distances of a comet from the earth. 4to. Cambridge, 1848

— : *On the great comet of 1844-45. 4to. Cambridge, 1850

— : *On the use of equivalent numbers in the method of least squares. 4to. Cambridge, 1856

— : *An account of Donati's Comet of 1858. 4to. Cambridge, 1858

— : *On the relative brightness of the Sun and Moon, from observations made at the Observatory of Harvard College. 4to. Cambridge, 1861

— : *On the results of photometric experiments upon the light of the Moon and of the planet Jupiter, made at the Observatory of Harvard College. 4to. Cambridge, 1861

— : *On the outline of the head of the comet of Donati. 8vo. 1861

— : *Account of the Comet II, 1861, as seen at the Observatory of Harvard College. 8vo. New Haven, 1861

— : Account of the great comet of 1858. 4to. Cambridge, 1862

— : *On the new form of the achromatic object-glass introduced by Steinheil. 8vo. Cambridge, 1863

— : *See also* Harvard College Observatory.

Bond (Henry):

The longitude found; or a treatise, shewing an easie and speedy way, as well by night as by day, to find the longitude. 4to. London, 1676

Bond (William Cranch):

— : *Description of the observatory at Cambridge, Massachusetts. 4to. 1848

— : *Description of the nebula about the star θ Orionis. 4to. 1848

— : *See also* Harvard College Observatory.

Bond (William Cranch and George P.):

On the rings of Saturn. 4to. [1851]

Bond (William Cranch), W. C. Bond, jun., and G. P. Bond:

*Occultations and eclipses observed at Dorchester and Cambridge, Massachusetts. 4to. [1846]

Bonini (Piermaria):

Lvcidario darithmetica. 8vo. Firenze, 1517

Dedicated to Filippo Strozzi.

Bonn, Sternwarte der k. Rheinischen Friedrich-Wilhelms Universität:

— : Astronomische Beobachtungen . . . angestellt und herausgegeben von Friedrich Wilhelm August Argelander. Band 1-7. 4to. Bonn, 1846-69

Band 1. Durchmusterung des nördlichen Himmels zwischen 45 und 80 Grad der Declination.

**Bonn, Sternwarte der k. Rheinischen Friedrich-Wilhelms
Universität—continued.**

Band 2. Durchmusterung der Himmelszone zwischen 15 und 31
Grad südlicher Declination.

3. Bonner Sternverzeichniss — 2° — $+20^{\circ}$.

4. " " $+20^{\circ}$ — $+41^{\circ}$.

5. " " $+41^{\circ}$ — $+90^{\circ}$.

6. Mittlere Oerter von 33811 Sternen.

7. Eigenbewegungen von 250 Sternen; Tafeln zur Berechnung
der Präcession; Verbesserungen und Bemerkungen; Mitt-
lere Positionen von 160 Sternen; Beobachtungen über
veränderliche Sterne.

— : Anhang zum zweiten Bande, enthaltend Hülftstafeln zur
leichtern Berechnung der Beobachtungen in den südlichen
Zonen. 8vo. Bonn, 1852

— : *See also* Schönfeld (E.)

Bonnycastle (John):

- : The scholar's guide to arithmetic. 12mo. London, 1780
- : A treatise on plane and spherical trigonometry; with their
most useful practical applications. 8vo. London, 1806
- : Ditto. Second edition. 8vo. London, 1813
- : Ditto. Key. By G. Davies. 8vo. London, 1814
- : An introduction to astronomy. In a series of letters from
a preceptor to his pupil. In which the most useful and
interesting parts of the science are clearly and familiarly
explained . . . Sixth edition. 8vo. London, 1811
- : A treatise on Algebra, in practice and theory . . . with
notes and illustrations. 2 vols. 8vo. London, 1813
- : An introduction to Algebra, with notes and observations.
Fourth edition. 12mo. London, 1796

Boole (George):

- : A treatise on differential equations. 8vo. Cambridge, 1859
- : A treatise on the calculus of finite differences.
8vo. Cambridge, 1860

Booth (Rev. James):

- A treatise on some new geometrical methods.
2 vols. 8vo. London, 1873-77

Borda (J. Ch. de):

- : Description et usage du cercle de réflexion, avec différentes
méthodes pour calculer les observations nautiques.
4to. Paris, 1787
- : Tables trigonométriques décimales, ou table des loga-
rithmes, des sinus, sécantes et tangentes, suivant la division
du quart de cercle en 100 degrés . . . précédées de la
table des logarithmes des nombres depuis dix mille jusqu'à
cent mille . . . revues, augmentées et publiées par
J. B. J. Delambre. 4to. Paris, An IX [1801]

Bordeaux, Société des Sciences Physiques et Naturelles:

Mémoires. 10 vols. 8vo. Bordeaux, 1854-75

General Index in Vol. 10.

2me Série. Tome 1-5. 8vo. Bordeaux, 1876-83

Borel, or Borellus (Pierre) :

De vero telescopii inventore, cum brevi omnium conspicillorum historia . . . accessit etiam centuria observationum microscopiarum.

3 parts in 1 vol. 4to. Hagæ-Comitum, 1655-56

Borelli (Giovanni Alfonso) :

— : Theoricae Mediceorum planetarum ex causis physicis deductae. 4to. Florentiae, 1666

— : Historia et meteorologia incendii Ætnæ anni 1669.

4to. Regio Julio, 1670

— : De Motionibus naturalibus a gravitate pendentibus liber. 4to. Regio Julio, 1670

Börgen (Carl), see Göttingen, Sternwarte.**Borron (Mrs.) :**

A review of M. Le Verrier's exposition of his theory of his theoretic Neptune. 4to. [Shrewsbury], 1848

Bosanquet (James Whatman) :

*Chronological remarks on the history of Esther and Ahasuerus, or 'Atossa Tanu-Axares. 8vo. London, 1876

Boscovich (Ruggiero Giuseppe) :

— : De Lunæ Atmosphæra dissertatio. 4to. Romæ, 1753

— : De inæqualitatibus quas Saturnus et Jupiter sibi mutuo videntur inducere, præsertim circa tempus conjunctionis. 8vo. Romæ, 1756

— : De Solis ac Lunæ defectibus Libri V. 4to. Londini, 1760

— : Opera pertinentia ad opticam et astronomiam maxima ex parte nova, & omnia hucusque inedita. [Lat. & Fr.] 5 vols. 4to. Bassani, 1785

Bose (George Mathias) :

Eclipsin. Terræ MDCCXXXIII. [Inaugural Dissertation.] 4to. Lipsiae, 1733

Bosius (Jo. Andreas) :

De significatu Cometarum dissertationes et judicia doctorum hominum [Erasti, Dudithii, Squarcialupi, &c.] : collecta, emendata, & Cometomantice nostri temporis opposita. 4to. Jenæ, 1665

Boss (Lewis) :

— : *Remarks on the Dudley Observatory Observations of the transit of Mercury, May 6, 1878. 8vo. [1878]

— : Report on the declinations of the stars employed in latitude work with the zenith telescope, embracing systematic corrections in declination deduced for various authorities, and a catalogue of five hundred stars for the mean epoch 1875. (Appendix to Report of U.S. Northern Boundary Commission.) 4to. [1877]

Bossut (Charles) :

— : Traité de calcul différentiel et de calcul intégral.

2 vols. 8vo. Paris, An VI [1798]

— : Nouvelles expériences sur la résistance des Fluides, par MM. d'Alembert, Condorcet, et Bossut. 8vo. Paris, 1777

Bossut (Jean):

A general history of Mathematics from the earliest times,
to the middle of the eighteenth century. Translated from
the French. 8vo. London, 1803

Boston, American Academy of Arts and Sciences:

- : Memoirs. Vol. 1-4. 4to. Boston and Cambridge, 1785-1818
New series. Vol. 1-11, Part 1. 4to. Cambridge, 1833-82
- : Proceedings, 1846-73. Vol. 1-8. 8vo. Boston and Cambridge, 1848-73
- : New series, 1873-83. Vol. 1-10 (whole series Vol. 9-18). 8vo. Boston, 1874-83

Boston Public Library:

Index to the Catalogue. 3 vols. 4to. Boston, 1858-66

Boston Scientific Society:

Science Observer, Vol. 1-4. 8vo. Boston, 1877-82

Bothkamp, Sternwarte:

Beobachtungen angestellt auf der Sternwarte des Kammer-
herrn von Bülow . . . Herausgegeben von H. C. Vogel
(und O. Lohse). Heft 1-3. 4to. Leipzig, 1872-75

Bouché (A.):

- : *Recherches sur l'attraction moléculaire. 8vo. Paris, 1859
- : Notice sur un nouveau système de tables de logarithmes à
cinq décimales. 8vo. Angers, 1859

Bougainville (Louis Antoine de):

Traité du calcul intégral, pour servir de suite à l'analyse des
infiniment-petits de M. le Marquis de l'Hôpital.
2 parts, 4to. Paris, 1754-56

Bouguer (Pierre):

- : Essai d'optique, sur la gradation de la lumière.
8vo. Paris, 1729
- : La figure de la Terre, déterminée par les observations de
Messieurs Bouguer & de la Condamine, . . . envoyés par
ordre du Roy au Pérou, pour observer aux environs de
l'Équateur. 4to. Paris, 1749

Bourdon (Pierre Marie):

The elements of algebra, translated from the three first chapters
of the algebra of M. Bourdon, and designed for the use of
students in preparing for the University of London. By
Augustus de Morgan. 8vo. London, 1828

Bourjé (J. P.):

*Algemeene en bijzondere omstandigheden van de aanmer-
kelijke zons-verduistering op donderdag den VII September
1820. 8vo. Middelburg, 1819

Bouvard (Alexis):

- : Tables de Jupiter, de Saturne, et d'Uranus, construites
d'après la théorie de la mécanique céleste. (Tables astro-
nomiques publiées par le Bureau des Longitudes.)
4to. Paris, 1821
- : Corrections to ditto, see Breen (H.)

Bouvard (Alexis)—*continued.*

— : *Note sur la détermination de la différence des longitudes entre les méridiens de Paris et de Greenwich.

8vo. Paris, 1822

Bouvard (Alexis) et J. B. Joseph Delambre:

Nouvelles tables de Jupiter et de Saturne, par M. Bouvard. Nouvelles tables écliptiques des Satellites de Jupiter par M. Delambre. (Tables astronomiques publiées par le Bureau des Longitudes.) 4to. Paris, 1808

Bouvard (Eug.):

*De l'influence de la lune sur l'atmosphère terrestre, déterminée par les observations météorologiques.

8vo. Bruxelles, 1834

Bouvier (Hannah M.):

Familiar astronomy or an introduction to the study of the heavens to which is added a treatise on the globes, and a comprehensive astronomical dictionary.

8vo. Philadelphia, 1856

Bowditch (Nathaniel):

— : The improved practical navigator; containing all necessary instruction for determining the latitude by various methods, and for ascertaining the longitude by lunar observations in a complete Epitome of Navigation; to which is added a number of new tables, including those requisite to be used with the 'Nautical Almanac:' revised and newly arranged by Thomas Kirby. 8vo. London, 1802

— : *Modern Astronomy. 8vo. Boston, 1825

— : See also Laplace, Mécanique Céleste.

— : Life. See White (D. A.), Pickering (J.), Young (A.)

Bowman (Frederick H.):

The intermediate text-book of physical science.

8vo. London, 1882

Boyle (Robert):

— : New experiments physico-mechanical, touching the spring of the air, and its effects, made for the most part in a new pneumatical engine. 4to. Oxford, 1662

— : A continuation of new experiments physico-mechanical, touching the spring and weight of the air, and their effects. Part 1. 4to. Oxford, 1669

— : An examen of Mr. T. Hobbes his 'Dialogus Physicus de naturâ aëris' with an appendix touching Mr. Hobbes's doctrine of fluidity and firmness. 4to. London, 1662

— : A defence of the doctrine touching the spring and weight of the air against the objections of Franciscus Linus. 4to. London, 1662

— : Experiments and considerations touching colours. 8vo. London, 1664

— : Tracts containing new experiments, touching the relation betwixt flame and air, and about explosions: an hydrostatal discourse occasion'd by some objections of Dr. Henry More [&c.] 4 parts in 1 vol. 8vo. London, 1672

— : Essays of the strange subtilty, great efficacy, determinate

Boyle (Robert) -continued.

nature of effluvia. To which are annexed new experiments to make fire and flame ponderable: together with a discovery of the perviousness of glass.

5 parts in 1 vol. 8vo. London, 1673

- : New experiments and observations touching cold to which are added an examen of antiperistasis, and an examen of Mr. Hobbs's doctrine about cold: whereunto is annexed an account of freezing by Dr. C. Merret.

3 parts in 1 vol. 4to. London, 1683

- : Philosophical works abridged, methodized, and dispos'd under the general heads of physics, statics, pneumatics, natural history, chymistry, and medicine. By Peter Shaw.

3 vols. 4to. London, 1725

Bradley (James):

- : Miscellaneous works and correspondence. [Edited by S. P. Rigaud.] 4to. Oxford, 1832

- : Neue Reduction der Bradley'schen Beobachtungen aus den Jahren 1750 bis 1762 von Arthur Auwers. Band 2.

4to. St. Petersburg, 1882

- : See also Greenwich, Royal Observatory; Bessel, Fundamenta Astronomiae.

- : Kew and Wanstead Observations, see Busch (A. L.)

Brahe (Tycho):

- : Astronomiae instauratae mechanica. fol. Noribergæ, 1602

- : Astronomiae instauratae progymnasma; quorum haec prima pars de restitutione motuum Solis & Lunæ, stellarumque . . . tractat, et præterea de . . . nova stella anni 1572 . . . agit. 4to. excudi primum cœptum Uraniburgi, ast Pragæ absoluta. Prostant Francofurti, 1610

- : De Mundi ætherei recentioribus phænomenis liber secundus (de Cometa anni 1577).

4to. excudi primum cœptus Uraniburgi, ast Pragæ absolutus (1603): prostant Francofurti, 1610

- : Epistolarum astronomicarum libri, quorum primus Gulielmi Hassiae Landgravii ac ipsius mathematici literas, unaque responsa ad singulas complectitur. 4to. imp. Uraniburgi Daniae (1596): prostant Francofurti, 1610

- : Historia Cœlestis. Ex libris, commentariis, manuscriptis, observationum vicennalium . . . Tichonis Brahe Dani. (Cum præfatione Lucii Barretti.) 2 vols. fol. Augustæ Vindelicorum, 1666

- : *Observationes cometæ anni 1585 Uraniburgi habitaæ Edidit H. C. Schumacher. 4to. Altonae, 1845

- : Observationes septem cometarum ex libris manuscriptis qui Havniae in magna bibliotheca regia adservantur. Nunc primum edidit F. R. Friis. 4to. Havniae, 1867

- : Tyge Brahes meteorologiske dagbog, holdt paa Uraniborg for aareene 1582-97. 8vo. Kjöbenhavn, 1876

- : Tychonis Brahei et ad eum doctorum virorum epistolæ, nunc primum collectæ et editæ a F. R. Friis. Fasc. 1-3. 4to. Havniae, 1876-77

Brahe (Tycho)—continued.

— : Life, *see* Brewster (D.)

Brahmegupta and Bhāskara:

Algebra, with arithmetic and mensuration, from the Sanscrit translated by H. T. Colebrooke. 4to. London, 1817

Brandenburg (F. von):

Der Komet ist da! oder unumstösslicher Beweis, dass der Halley'sche Komet zwischen Mond und Erde schwebend schon seit zwei Jahren der Erde sehr nahe, alltäglich sichtbar ist. 8vo. Leipzig, 1835

Brandes (Heinrich Wilhelm):

— : Die vornehmsten Lehren der Astronomie deutlich dargestellt in Briefen an eine Freundin. 4 vols. 8vo. Leipzig, 1816
Vols. 1 and 2, second edition.

— : Vorlesungen über die Astronomie, zur Belehrung derjenigen, denen es an mathematischen Vorkenntnissen fehlt. 2 parts in 1 vol. 8vo. Leipzig, 1827

— : De Cometarum Caudis disquisitio mathematica. Pars prima. [Inaugural Dissertation.] 4to. Lipsiae, 1830

Bransby (John):

The use of the globes, containing an introduction to Astronomy and Geography. Second edition. 8vo. Ipswich, 1808

Bravais (Auguste):

*Les Étoiles, ou résumé d'astronomie stellaire. 8vo. [Paris], n.d.

Brayley (Edward William):

— : *An account of some of the 'Recent Observations and Researches' of astronomers and physicists on 'the Physical Constitution of the Sun.' 2 pts. 12mo. London, 1863-64

— : *Inferences and suggestions in cosmical and geological philosophy. 8vo. London, 1865

— : *Note on the importance of the spectroscopical examination of the vicinity of the Sun when totally eclipsed. 8vo. London, 1867

— : *The periodical meteors of November. 12mo. London, n.d.

Breaks (Thomas):

The new art of surveying, by the plain table (with tables of logarithms, and of logarithmic sines and tangents). 8vo.

Bredichin (Th.):

— : *Observations spectroscopiques du Soleil faites pendant l'été de 1872. 8vo. Moscou, 1873.

— : *Observations spectroscopiques du Soleil faites pendant l'été (et l'automne) de 1873. 8vo. Moscou, 1874

— : *Observations sur le Jupiter faites en 1874. 8vo. Moscou, 1874

— : *Sur la queue de la comète de 1874, c. 4to. Moscou, 1877

— : *Remarques générales sur les comètes. 4to. Moscou, 1879

— : *Recherches sur les queues des comètes. 4to. Moscou, 1880

— : *Sur la comète de 1882, I (Wells). 4to. Moscou [1882]

— : *Recherches sur la comète de 1882, II. 4to. Moscou [1883]

Bredichin (Th.)—continued.

- : *Histoire de l'hypothèse des ondes cosmiques, composée pour l'explication des formes cométaires. 8vo. Moscou, 1883
- : Supplément. 8vo. Moscou, 1883
- : *Sur quelques anomalies apparentes dans la structure des queues cométaires. 8vo. Moscou, 1883
- : *Sur la grande comète de 1882, II. 8vo. Moscou, 1883
- : *Sur la grande comète de 1882, II. 4to. Roma, 1883
- : *Sur les anomalies apparentes dans la structure de la grande comète de 1744. 8vo. Moscou, 1884
- : *Quelques remarques concernant mes recherches sur les comètes. 8vo. Moscou, 1884
- : *Sur la queue normale de la comète de 1862, II. 4to. Moscou
- : See also Moscow, Observatoire.

Breen (Hugh):

- : *Corrections of Lindenau's elements of the orbit of Venus, deduced from the Greenwich planetary observations from 1750 to 1830. 4to. London, 1849
- : *On the value of the Moon's semidiameter as obtained from occultations observed at Cambridge and Greenwich. 4to. London, 1866
- : *On the corrections of Bouvard's elements of the orbits of Jupiter and Saturn. 4to. London

Breitschwert (J. L. C. von):

Johann Keppler's Leben und Wirken, nach neuerlich aufgefundenen Manuscripten bearbeitet. 8vo. Stuttgart, 1831

Bremiker (Carl):

- : Nautisches Jahrbuch, oder vollständige Ephemeriden und Tafeln für das Jahr 1852. 8vo. Berlin, 1850
- : Logarithmorum vi Decimalium nova tabula Berolinensis et numerorum vulgarium ab 1 usque ad 100,000 et functionum trigonometricarum ad decades minutorum secundorum. 8vo. Berolini, 1852
- : Die Berechnungen des Laufes und der Erscheinungen der Planeten so wie der Sonnen- und Mondfinsternisse in den Jahren 1858 bis 1868 . . . Ein Anhang zu Bode's Anleitung zur Kenntniss des gestirnten Himmels. 8vo. Berlin, 1858
- : *Bericht über die Beobachtung der Sonnenfinsterniss am 18. Juli 1860. 8vo. Berlin, 1860
- : Logarithmisch-trigonometrische Tafeln mit sechs Decimalstellen. 8vo. Berlin, 1869
- : Studien über höhere Geodäsie. 8vo Berlin, 1869
- : Logarithmisch-trigonometrische Tafeln mit fünf Decimalstellen. 8vo. Berlin, 1872
- : Tafel vierstelliger Logarithmen. 8vo. Berlin, 1874
- : Reduction der Monddistanzen. 8vo

Bremiker (H.):

De temporis e stellarum observationibus definiendi ratione apud veteres usitatissima. [Inaugural Dissertation.]
4to. Berlin, 1856

Brentel (Georg):

Quadrantis astronomici et geometrici utilitates. Ein Tractat vom astronomischen und geometrischen Quadranten, ausz welchem desz Tags oder desz Nachts durch die Sonn, Mond, und andere Planeten oder Fixsternen mögen gefunden. . . . 4to. Laugingen, 1611

Breslau, Königliche Universitäts-Sternwarte:

Mittheilungen . . . über die bisher gewonnenen Resultate für die geographischen und klimatologischen Ortverhältnisse . . . herausg. von J. G. Galle. 4to. Breslau, 1879

Breslau, Schlesische Gesellschaft für vaterländische Kultur:

- : *Auszug aus der Uebersicht der Arbeiten und Veränderungen . . . im Jahre 1847. 4to. Breslau, 1847
- : Resultate der . . . im Jahre 1845 ausgeführten meteorologischen Beobachtungen . . . von Dr. von Boguslawski. 4to. Breslau, 1847

Bretschneider (C. A.):

Produktentafel, enthaltend die 2, 3, 4, 5, 6, 7, 8, 9 fachen aller Zahlen von 1 bis 100,000. 4to. Hamburg und Gotha, 1841

Brett (Thomas):

A treatise on light, vision & colours, comprising a theory on entire new principles. 12mo. Toronto, 1858

Brewster (David):

- : A treatise on new philosophical instruments, for various purposes in the arts and sciences, with experiments on light and colours. 8vo. Edinburgh, 1813
- : The Life of Sir Isaac Newton. 8vo. London, 1831
- : More worlds than one. The creed of the philosopher and the hope of the Christian. 8vo. London, 1854
- : Memoirs of the life, writings, and discoveries of Sir Isaac Newton. 2 vols. 8vo. Edinburgh, 1855
- : The martyrs of science. Lives of Galileo, Tycho Brahe, and Kepler. New Edition. 8vo. London, 1874

Bridge (B.):

- : Six lectures on the elements of plane trigonometry. 8vo. Broxbourn, Herts, 1810
- : Lectures on the elements of algebra. 8vo. London, 1810
- : An introduction to the study of the mathematical principles of Natural Philosophy. 2 vols. in 1, 8vo. London, 1813
- : Lectures on the elements of algebra, designed for the use of the students of the East-India College. Second edition. 8vo. Broxbourn, Herts, 1811

Brière (— de):

Éclaircissements sur la destination de trois zodiaques antiques. 4to. Paris, 1839

Briga (Melchior a), J. P. Simonelli et Ign. Kegler:

Scientia Eclipsium ex imperio et commercio Sinarum illustrata, complectens integras constructiones astronomicas J. P.

Briga (Melchior a), J. P. Simonelli et Ing. Kegler—cont.

Simonelli; *Observationes Sinicas &c.* Ignatii Kegler; *Investigationes ordinis eclipsium M. a B . . .*

4 parts in 2 vols., 4to. Romæ et Lucæ, 1744-47

Briggs (Henry):

— : *Arithmetica logarithmica, sive logarithmorum chiliades trigesinta, pro numeris naturali serie crescentibus ab unitate ad 20,000; et a 90,000 ad 100,000. . . . Hos numeros primus invenit clarissimus vir Johannes Neperus Baro Mercistonij; eos autem ex eiusdem sententia mutavit, eorumque ortum et usum illustravit H B*

fol. Londini, 1624

— : *Tafel van logarithmi, voor de ghetallen van een, tot 10,000.* 8vo. Goude, 1820 [?]

Bright (Edward Brailsford):

Vis. A treatise on the predominating influence of the sun-beam throughout creation. London, 1855

Brinkley (John):

— : Elements of astronomy. . . . Second edition. 8vo. Dublin, 1819

— : *A method of correcting the approximate elements of the orbit of a Comet, and the application of the same to observations of the Comet of July, 1819. 4to. Dublin, 1820

— : *A method of computing astronomical refractions for objects near the horizon. 4to. Dublin, 1820

— : *The quantity of solar nutation as affecting the north polar distances of the fixed stars. 4to. Dublin, 1822

— : *Elements of Captain Hall's Comet. 4to. London, 1822

— : *On the method of finding the longitude from the culmination of the moon and stars. 8vo. Dublin, 1825

— : *On the quantity of the precession of the Equinoxes, as determined by certain stars that appear to have no proper motion [with appendix]. 4to. Dublin, 1827

— : Elements of astronomy . . . , edited by the Rev. Thomas Luby Sixth edition. 8vo. Dublin, 1845

— : Brinkley's astronomy, revised and partly re-written, with additional chapters, by John William Stubbs and Francis Brinnow Second edition. 8vo. London, 1874

Briot (Ch.) et J. Bouquet:

Théorie des fonctions doublement périodiques, et en particulier des fonctions elliptiques. 8vo. Paris, 1859

Brisbane (Thomas Makdougal):

— : *Method of determining the latitude by a sextant or circle, with simplicity and accuracy, from circum-meridian observations taken near noon. 4to. Edinburgh, 1821

— : *See also* Paramatta Catalogue.

— : Reminiscences of. 4to. Edinburgh, 1860

Bristol Museum and Library:

— : Report of Proceedings, 1877-84. 8vo. Bristol

— : Catalogue of books. 8vo. Bristol, 1878

Bristol, Observing Astronomical Society :

Report of observations made by the members, 1869-70.

8vo. Bristol, 1871

British Association for the Advancement of Science :

- : Lithographed signatures of the Members who have met at Cambridge, June 1833. 4to. Cambridge, 1833
 - : The Catalogue of Stars . . . containing the mean Right Ascensions and North polar distances of 8,377 fixed stars, reduced to January 1, 1850 with a preface by the late Francis Baily. 4to. London, 1845
 - : A catalogue of those stars in the ‘*Histoire Céleste Française*’ of Jérôme Delalande, for which tables of reduction to the epoch 1800 have been published by Prof. Schumacher. Reduced . . . under the immediate superintendence of Francis Baily. 8vo. London, 1847
 - : A catalogue of 9,766 stars in the southern hemisphere for the beginning of the year 1750, from the observations of the Abbé de Lacaille, made at the Cape of Good Hope in the years 1751 and 1752, reduced . . . under the immediate superintendence of Prof. Henderson, and printed . . . under the direction of the late Francis Baily ; with a preface by Sir J. F. W. Herschel. 8vo. London, 1847
 - : Suggestions to astronomers for the observation of the total eclipse of the Sun on July 28, 1851. 8vo.
 - : *Report of the Lunar Committee for mapping the surface of the Moon. By W. R. Birt. 8vo. London [1865, 1866, 1868, 1869]
 - : Atlas of charts of meteor tracks . . . 1845-66. Prepared for the Luminous Meteor Committee . . . by R. P. Greg and A. S. Herschel. fol. London, 1867
 - : Stars in the constellations of Bode visible in the latitude of Greenwich [for laying down meteor-tracks]. fol. London, n.d.
 - : *Report of the Committee for discussing the observations of Lunar objects suspected of change. By W. R. Birt. 8vo. London [1871, 1872]
 - : Report of the Committee on mathematical tables. By J. W. L. Glaisher. 8vo. London, 1873
 - : Reports of meetings, 1-52. 8vo. London, 1835-83
- British Oracle (the),** consisting of questions, essays, and dissertations in natural philosophy and the mathematics. Vol. 1. 8vo. London, 1769

Brockmann (F. J.):

System der Chronologie ; unter besonderer Berücksichtigung der jüdischen, römischen, christlichen und russischen Zeitrechnung, sowie der Osterrechnung. 8vo. Stuttgart, 1883

Brothers (Alfred) :

- : *Catalogue of binary Stars, with introductory remarks. 8vo. Manchester, 1868
- : *Notes on Eclipse photography. 8vo. London, 1871

Brothers (Richard) :

The universe as it is : wherein the hypothesis of the earth's

Brothers (Richard)—continued.

motion is refuted, and the true basis of astronomy laid down [edited by] William Woodley. 8vo. London, 1829

Broughton (Charles):

Memoir respecting a new theory of numbers. Part 1.
4to. Edinburgh, 1814

Broughton (William Robert):

A voyage of discovery to the North Pacific Ocean performed in His Majesty's sloop *Providence*, and her tender, in the years 1795-98. 4to. London, 1804

Broun (John Allan):

- : Report on the completion of the publication of the observations made in his observatory at Makerstoun. 4to. Edinburgh, 1850
- : Report on the observatories of His Highness the Rajah of Travancore, at Trevandrum, and on the Agustier peak of the western Ghats. 8vo. Trevandrum, 1857
- : *On the horizontal force of the earth's magnetism. 4to. Edinburgh, 1861
- : *The bifilar magnetometer, its errors and corrections. 4to. Edinburgh, 1861

Brown (John):

- : The description and use of the trianguler-quadrant. 8vo. London, 1671
- : Horologiographia, or the art of dyalling, being the second book of the use of the trianguler-quadrant. 8vo. London, 1671

Brown (Robert), jun.:

- : *On a German astronomico-astrological manuscript, and on the origin of the signs of the Zodiac. 4to. London, 1882
- : Eridanus, river and constellation : a study of the archaic southern asterisms. 4to. London, 1883

Browne (Arthur):

A short view of the first principles of the differential calculus. 8vo. Cambridge, 1824

Browne (R. G. M.):

Astronomical Geology ; a treatise respecting the causes to which the structural and superficial configuration of the earth's crust is attributable. 8vo. London, 1865

Browning (John):

- : A plea for reflectors ; being a description of the new astronomical telescopes with silvered-glass specula, and instructions for adjusting and using them. 8vo. London, 1876
- : How to work with the spectroscope. 8vo. London, n.d.

Bruce (John):

A memoir of Charles Hutton. 8vo. Newcastle, 1823

Bruhns (Carl Christian):

- : De planetis minoribus inter Martem et Jovem circa Solem versantibus. *Dissertatio astronomica inauguralis.* 8vo. Berolini, 1856

Bruhns (Carl Christian)—continued.

- : Geschichte und Beschreibung der Leipziger Sternwarte.
4to. Leipzig, 1861
- : Die astronomische Strahlenbrechung in ihrer historischen Entwicklung dargestellt. 8vo. Leipzig, 1861
- : Die geographischen Constanten der Universitäts-Sternwarte zu Leipzig. [Inaugural-Dissertation.] 4to. Leipzig, 1865
- : Resultate aus den meteorologischen Beobachtungen angestellt an mehreren Orten im Königreich Sachsen in den Jahren 1760 bis 1865, und an den 22 königl. Sächsischen Stationen in 1865. Zweiter Jahrgang.
4to. Leipzig, 1867
- : Johann Franz Encke, königl. Astronom und Director der Sternwarte in Berlin, sein Leben und Wirken.
8vo. Leipzig, 1869
- : Neues logarithmisch-trigonometrisches Handbuch auf sieben Decimalen. 4to. Leipzig, 1870
- : *Bestimmung der Längen-Differenz zwischen Berlin und Lund . . . im Jahre 1868. 4to. Lund, 1870
- : *Einige Notizen über Kepler. 8vo. Leipzig, 1872
- : *Mittheilung über die Ermittelung der Coordinaten der Pleissenburg und verschiedener Thürme in Bezug auf die Leipziger Sternwarte, und über die Construction eines Basisapparates. 8vo. Leipzig, 1872
- : Bestimmung der Längen-Differenz zwischen Leipzig und Wien, auf telegraphischem Wege ausgeführt von C. Bruhns und E. Weiss. 4to. Leipzig, 1874
- : Die Astronomen auf der Pleissenburg. Die Observatoren Rüdiger, Mollweide, Möbius, D'Arrest: die Amanuenses Meissner, Wechsler, Thieme, Brandes, Heym.
4to. Leipzig [1878]
- : *Über die Mondfinsterniss im Jahre 33 nach Christi Geburt am 3. April. 8vo. Leipzig, 1878
- : Über das meteorologische Bureau für Witterungsprognosen im Königreich Sachsen. 8vo. Leipzig, 1879
- : Resultate aus den meteorologischen Beobachtungen angestellt an 25 königl. Sächsischen Stationen im Jahre 1869-75. Jahrgang 6-12.
4to. Dresden und Leipzig, 1871-80
- : *Neue Bestimmung der Längendifferenz zwischen der Sternwarte in Leipzig und der neuen Sternwarte auf der Türkenschanze in Wien. 8vo. Leipzig, 1880
- : Bericht über das meteorologische Bureau für Wetterprognosen im Königreich Sachsen für das Jahr 1879.
8vo. Leipzig, 1880
- : A new manual of logarithms to seven places of decimals. Second stereotype edition. 4to. Leipzig, 1881
- : See also Berlin, K. preuss. geodät. Institut.
- Bruhns (Carl Christian) und Wilhelm Förster:**
Bestimmung der Längen-Differenz zwischen den Sternwarten zu Berlin und Leipzig, auf telegraphischem Wege ausgeführt, 1864.
4to. Leipzig, 1865

Brunetto Latini:

Il Trattato della Sfera con note critiche e sistema di cronologia, tratto dal Tesoro di Brunetto Latini, per cura di B. Sorio. 8vo. Milano, 1858

Bruni (Theofilo):

Armonia Astronomica & Geometrica ne' quali s'insegna la ragione e formatione di tutti gli Horologi. 4to. Venetia, 1622

Brünnow (Franz F. E.):

- : Tafeln der Flora, mit Berücksichtigung der Störungen durch Jupiter und Saturn. 4to. Berlin, 1855
- : Tables of Victoria, computed with regard to the perturbations of Jupiter and Saturn. 4to. New York, 1859
- : Astronomical Notices. No. 1-24, 26-28. 8vo. Ann Arbor, 1858-61
- : Lehrbuch der sphärischen Astronomie mit einem Vorwort von J. F. Encke Zweite Ausgabe. 8vo. Berlin, 1862
- : Ditto. Vierte Auflage. 8vo. Berlin, 1881
- : Spherical astronomy Translated by the author from the second German edition. 8vo. London, 1865
- : Tables of Iris, computed with regard to the perturbations of Jupiter, Mars and Saturn, including the perturbations depending on the square of the mass of Jupiter. 4to. Dublin, 1869
- : Traité d'astronomie sphérique et d'astronomie pratique. Édition française publiée par C. André Astronomie pratique. 8vo. Paris, 1872

Brussels, Académie Royale des Sciences, des Lettres, et des Beaux-arts de Belgique:

- : Nouveaux Mémoires. Tome 9-19. 4to. Bruxelles, 1835-45
- : Mémoires. Tome 20-44. 4to. Bruxelles, 1847-82
- : Mémoires couronnés. Tome 9 (suite)-15. 4to. Bruxelles, 1835-41
- : Mémoires couronnés et Mémoires des Savants Étrangers. Tome 16-44. 4to. Bruxelles, 1844-82
- : Mémoires couronnés et Mémoires des Savants Étrangers. (Collection in 8vo.) Tome 4-6. 8vo. Bruxelles, 1850-55
- : Mémoires couronnés et autres Mémoires. (Collection in 8vo.) Tome 7-35. 8vo. Bruxelles, 1858-83
- : Tables des Mémoires des Membres, des Mémoires couronnés et de ceux des Savants Étrangers, 1816-1857. 12mo. Bruxelles, 1858
- : Ditto, 1858-1878. 12mo. Bruxelles, 1879
- : Bulletins, 1832-56. Tome 1-23. 8vo. Bruxelles, 1832-56
- : 2^{me} série, 1857-80. Tome 1-50. 8vo. Bruxelles, 1857-80
- : 3^{me} série, 1881-83. Tome 1-5. 8vo. Bruxelles, 1881-83
- : Tables générales et analytiques du recueil des Bulletins, 1^{re} série, 1-23 (1832-56). 8vo. Bruxelles, 1858
- : 2^{me} série, 1-20 (1857-66). 8vo. Bruxelles, 1867
- : 21-50 (1867-80). 8vo. Bruxelles, 1883

**Brussels, Académie Royale des Sciences, des Lettres, et
des Beaux-arts de Belgique—continued.**

- : Annuaire, 1835-83. 12mo. Bruxelles, 1835-83
- : Rapport à Monsieur le Ministre de l'Intérieur, sur les travaux de l'Académie . . . depuis le mois de Juillet 1830. (A. Quetelet.) 4to. Bruxelles [1833]
- : Bibliographie Académique, 1854. 12mo. Brussels, 1855
- : Centième Anniversaire de Fondation (1772-1872). 2 vols. 8vo. Bruxelles, 1872
- : Notices Biographiques et Bibliographiques, 1874 12mo. Bruxelles, 1875
- : De l'Astronomie dans l'Académie Royale de Belgique: rapport séculaire (1772-1872), par Ed. Mailly. 8vo. Bruxelles, 1872
- : Catalogue des Livres de la Bibliothèque. 8vo. Bruxelles, 1850
- : Bibliothèque de M. le Baron de Stassart, léguée à l'Académie. 8vo. Bruxelles, 1863

Brussels :

Maritime conference held at Brussels for devising an uniform system of meteorological observations at sea. [English and French.] 4to. Bruxelles, 1853

Brussels, Observatoire Royal :

- : Annales. Tomes 1-25. 4to. Bruxelles, 1834-77
Tomes 1-23 publiés par A. Quetelet.
- : Annales. Nouvelle série, astronomie. Tome 1. 4to. Bruxelles, 1878
- Travaux d'Astronomie contenus dans la première Série des Annales:
Houzeau (J. C.) Uranométrie Générale.
" " Répertoire des Constantes de l'Astronomie.
- : Annales. Nouvelle série, Annales astronomiques. Tomes 2, 3. 4to. Bruxelles, 1879-80
- : *Résumé des observations météorologiques (et magnétiques) faites en 1837-45. 4to. Bruxelles, 1838-46
- : Annuaire, 1834-84. Année 1-51. 12mo. Bruxelles
- : Almanach Séculaire . . . par A. Quetelet. 12mo. Bruxelles, 1854
- : Catalogue des livres de la Bibliothèque. 8vo. 1847
- : See also Correspondance Mathématique ; Liagre (J.); Quetelet (L. A. J.)

Bryson (Robert) :

*Description of a new self-registering barometer.
4to. Edinburgh, 1844

Buchan (Alexander) :

*Remarks on the climate of Jerusalem. 8vo. Genève, 1872

Buchan (David Stewart, Earl of) and Walter Minto :

An account of the life, writings, and inventions of John Napier of Merchiston. 4to. Perth, 1787

Buchholz (Fr.) :

Neue Theorie der Mechanik des Himmels, und Beweis der Unhaltbarkeit einer allgemeinen Gravitation.
8vo. Berlin, 1846

Buchner (O.) und Gustav Tschermak:

*I. Der Meteorstein von Hungen. II. Anhang zu der vorstehenden Mittheilung, von G. Tschermak. 8vo. Wien, 1877

Buck (John):

A new, general and algebraical solution of the higher orders of equations; with solutions of equations to the tenth degree inclusive. 8vo London, 1823

Buda-Pesth, Magyar Tudományos Akadémia:

— : Évkönyvei. Kötet 9, 10, 13–16 [imperfect]. 4to. Budapest, 1858–79

— : Mathematikai és Természettudományi Köslémények. Kötet 5, 7–17. 8vo. Budapest, 1867–81

— : Értesítő, Új folyam. A mathemat. és természet. osztályok köslönye. Vol. I. 8vo. Pest, 1860

— : Értesítője. Évfolyam 2–8. 8vo. Pest, 1868–75

— : Név- és Tárgymutató [Index] 1867–74.

8vo. Budapest, 1875

— : Értekezések a Mathematikai Tudományok Köréböl. Kötet 1–8. 8vo. Budapest, 1867–81

— : Természettudományok Köréböl. Kötet 1–11. 8vo. Budapest, 1867–82

— : Mathematicai Pályamunkák. Kötet I. 8vo. Budán, 1844

— : Természettudományi Pályamunkák. Kötet 1–3. 8vo. Budán, 1837–44

— : Hazai és Külföldi folyóiratok Magyar Tudományos Repertoriuma. II. Osztály, Természet. és mathemat. I.

8vo. Budapest, 1876

— : Almanach, 1869–72, 1874–78. 8vo. Budapesten

Bugge (Thomas):

Observationes Astronomicæ annis 1781, 1782 & 1783, institutæ in Observatorio Regio Havniensi et cum tabulis astronomicis comparatæ. 4to. Havniæ, 1784

Buisson (Benjamin):

Des forces qui régissent le système solaire. 4to. Nouvelle-Orléans, 1848

Bullet (—):

Traité du Nivellement, contenant la théorie et la pratique de cet art. 8vo. Paris, 1688

Bulletin Astronomique, publié sous les auspices de l'Observatoire de Paris par F. Tisserand. Tome I, Nos. 1–5. 8vo. Paris, 1884

Bulletin des Sciences Mathématiques et Astronomiques:

— : Rédigé par G. Darboux et J. Hoüel [and others]. Tome 2–11. 8vo. Paris, 1871–76

General index in tome II.

— : Deuxième Série. Tome 1–8. 8vo. Paris, 1877–84.

Bullialdus [Boulliau] (Ismael):

Astronomia philolaica; opvs novvm, in quo motus Planetarum per nouam ac veram Hypothesim demonstrantur . . . superque illa hypothesi Tabulae constructæ . . .

Bullialdus [Boulliau] (Ismael)—continued.

Addita est nova methodus cvivs ope eclipses solares
expeditissimè computantur. Historia ortvs et progressvs
astronomiæ. fol. Parisiis, 1645

Bouquoy (Georg von):

Prodromus zu einer neuen, verbesserten Darstellungsweise
der höhern analytischen Dynamik. 4to. Prag, 1842

Burckhardt (Johann Karl):

Tables de la lune. (Tables astronomiques publiées par le
Bureau des Longitudes de France.) 4to. Paris, 1812

Burder (William C.):

The meteorology of Clifton. 8vo. Bristol, 1863

Burdwood (John):

— : Sun's true bearing or azimuth tables, computed for intervals
of four minutes between the parallels of latitude 30° and
60° inclusive Third edition. 8vo. London, 1873

— : See Davis (J. E.) for continuation for lat. 30° N. to 30° S.

Burg (Adam):

Ausführliches Lehrbuch der höhern Mathematik, mit beson-
derer Rücksicht auf die Zwecke des practischen Lebens.
3 vols. 8vo. Wien, 1832–33

Bürg (J. T.): Tables de la lune, *see* Delambre et Bürg.**Burgess (J.):**

*On hypsometrical measurements by means of the barometer
and the boiling-point thermometer. 8vo. Calcutta, 1859

Burgh (Thomas):

— : A method to determine the areas of right-lined figures uni-
versally; very useful for ascertaining the contents of any
survey. 4to. Dublin, 1724

— : Ditto. 4to. Dublin, 1760

Bürja (Abel):

Lehrbuch der Astronomie. 5 vols. in 3, 8vo. Berlin, 1794–1806

Burlingtonia: historical notes about Burlington House, Picca-
dilly, and neighbourhood. 12mo. London, 1878

Burnet (Thomas):

— : The theory of the earth, containing an account of the original
of the earth and of all the general changes which it hath
already undergone, or is to undergo, till the consummation
of all things. The two first books. Third edition.
fol. London, 1697

— : See Keill (J.)

Burnham (Sherburne Wesley):

— : *Double stars discovered by Mr. Alvan G. Clark.
8vo. New Haven, 1879

— : Report to the Trustees of the 'James Lick Trust' of
observations made on Mt. Hamilton with reference to
the location of Lick Observatory. 4to. Chicago, 1880

— : *Quadruple stars. 8vo. London, 1881

Burr (Thomas William):

- : A lecture on the history of the law of gravitation.
8vo. London, 1856
- : *The precession of the equinoxes and apparatus for its imitation.
8vo. London, 1863
- : *Celestial chemistry, and the physical constitution of the stars and nebulae.
8vo. London, 1865

Burritt (Elijah H.):

- The Geography of the heavens, and class book of astronomy, accompanied by a celestial Atlas. . . . Revised and corrected by O. M. Mitchel.
12mo. New York, 1849
Atlas wanting.

Burrow (Reuben):

- : A restitution of the geometrical treatise of Apollonius Pergeus on Inclinations; also the theory of gunnery, or the doctrine of projectiles in a non-resisting medium.
4to. London, 1779
- : The Lady's and gentleman's diary, 1776-82.
12mo. London, 1776-82

Burt (T. Seymour):

- Miscellaneous papers on scientific subjects. Vol. 3, Parts 1, 2.
12mo. London, 1861-65

Burton (Charles Edward):

- : *On a spectroscope of the binocular form for the observation of faint spectra.
8vo. Dublin, 1874
- : *Note on the spectrum, polarization, and form of the Zodiacial Light, as observed in the years 1874 and 1875.
8vo. Dublin, 1875
- : *On a spectroscope of the binocular form, for the observation of faint spectra.
8vo. Dublin, 1875
- : *On the aspect of Mars at the oppositions of 1871 and 1873.
4to. Dublin [1877]
- : *Physical observations of Mars, 1879-80. 4to. Dublin, 1880

Burton (Charles Edward) and Howard Grubb:

- *On a new form of ghost micrometer for use with astronomical telescopes.
8vo. Dublin, 1880

Burton (Frances Barbara):

- Thoughts on physical astronomy, with practical observations . . . second edition.
8vo. London, 1842

Busch (A. L.):

- : Reduction of the observations made by Bradley at Kew and Wansted, to determine the quantities of aberration and nutation.
4to. Oxford, 1838
- : Beobachtungen und Wahrnehmungen, welche bei der totalen Sonnenfinsterniss am 28. Juli 1851 gemacht worden sind.
8vo. Königsberg, 1852
- : See also Königsberg, Sternwarte.

Busch (Moritz):

- *Ueber die Bemühungen welche zur Erlangung unserer Kenntniss des Fixsternhimmels gemacht worden sind.
8vo. Königsberg, 1847

Byrne (Oliver) :

- : How to measure the earth with the assistance of railroads.
8vo. Newcastle, 1838
- : Tables of dual logarithms, dual numbers, and corresponding natural numbers, with proportional parts of differences for single digits and eight places of decimals.
4to. London, 1867
- : Dual arithmetic: a new art. 8vo. London, 1863
- : New issue, with a complete analysis. 8vo. London, 1864
- : Part the second: the descending branch of the 'art' and the 'science' of dual arithmetic. 8vo. London, 1867

Cacciatore (Gaetano) :

- : *Elogio di Niccolò Cacciatore. 4to. Palermo, 1842
- : Il padre Angelo Secchi, parole lette nella solenne tornata del 5 Maggio 1878 della Accademia di scienze e lettere di Palermo. 4to. Palermo, 1878

Cacciatore (Innocenzo) :

- Osservazioni sulla Cometa apparsa in Gennaio 1831.
8vo. Palermo, 1831

Cacciatore (Niccolò) :

- : Della Cometa apparsa in Luglio del 1819, osservazioni e risultati. 8vo. Palermo, 1819
- : *Osservazioni geognostiche instituite sul M. Cuccio. 4to. Palermo, 1824
- : *Lettera sulle osservazioni meteorologiche. 8vo. Palermo, 1825
- : Sull' origine del Sistema Solare. . . . Seconda edizione. 8vo. Palermo, 1826
- : *(Lettera) al Sig. Ferdinando Visconti. 8vo. Palermo, 1827
- : *(Lettera) sull' alzamento straordinario osservato nel barometro in Gennaio 1828. 8vo. Palermo, 1828
- : De redigendis ad unicam seriem comparabilem meteorologicis ubique factis observationibus, conventio proposita et tabulae suppunctatae. 4to. Panormi, 1832
- : Relazione dei tentativi fatti per determinare la differenza delle longitudini di Palermo e di Napoli. 8vo. Palermo, 1834
- : See also Palermo, Specola astronomica.

Cadell (W. A.) :

- * On the lines that divide each semidiurnal arc into six equal parts. 4to. Edinburgh, 1816

Cadiz :

- Observaciones Astronomicas hechas en Cadiz, en el Observatorio Real de la Compañia de Cavalleros Guardias Marinas, por Don Vincente Tofiño de San Miguel y por Don Josef Varela. 4to. 1776

Cadiz, see San Fernando.

Cagnoli (Antonio) :

- : Traité de Trigonométrie rectiligne et sphérique, contenant des méthodes et des formules nouvelles, avec des applica-

Cagnoli (Antonio)—*continued.*

- tions à la plupart des problèmes de l'Astronomie. Trad. par
M. Chompré. 4to. Paris, 1786
- : *Catalogo di stelle boreali [473 northern and 28 southern stars]. 4to. Modena, 1803
- : Catalogue de 501 Étoiles, suivi des Tables relatives d'Aber-
ration et de Nutation. [The same catalogue that was
published in 4to. in 1803.] 8vo. Modène, 1807
- : Memoir on a new and certain method of ascertaining the
figure of the earth by means of occultations of the fixed
stars . . . with notes and an appendix by Francis Baily.
8vo. London, 1819
- : Notizie astronomiche adattate all' uso comune. . . . Pre-
messavi la vita dell'autore. 12mo. Milano, 1826
- : Notizie astronomiche adattate all' uso comune.
Seconda edizione accresciuta di annotazioni per opera de'
Professori G. Bianchi, F. Carlini, A. Colla.
2 vols. in 1, 12mo. Parma, 1851

Caillet (V.) :

- * Note sur la valeur du pouvoir réfringent de l'air atmo-
sphérique qui résulte des anciennes expériences de MM. Biot
et Arago. 4to. Paris, 1855

Calcutta, Asiatic Society of Bengal :

- : Asiatick Researches, or Transactions of the Society institu-
ted in Bengal for inquiring into the history and antiqui-
ties [&c.] of Asia. Vol. 1-4, 6-20, 4to. Calcutta, 1788-1836
- : Ditto. Vol. 1-5, 8vo. London, 1798-99
- : Journal. Vol. 12-18, 20, 21, 27, 30, 31, 33-52.
8vo. Calcutta, 1843-83
- : Proceedings. 1871-84. 8vo. Calcutta, 1871-84

Caldecott (John), *see* Trevandrum Observatory.

Calendar :

- : A plain account of the old and new stiles, in which their
difference is deduced from clear principles.
8vo. London, 1751
- : Acts (of the 24th and 55th George II.) for regulating the
commencement of the year, and for correcting the calendar
now in use. fol. London, 1752
- : An examination of the century question, to which is added
a letter to the author of 'Outlines of Astronomy' respect-
ing a certain peculiarity of the Gregorian system of bissex-
tile compensation. 8vo. London, 1850

Callendreau (O.), *see* Paris, Observatoire.

Callet (François) :

- Tables portatives de logarithmes, contenant les logarithmes
des nombres depuis 1 jusqu'à 108,000, [et] les logarithmes
des sinus et tangentes, de seconde en seconde pour les cinq
premiers degrés, de dix en dix secondes pour tous les degrés
du quart de cercle, et suivant la nouvelle division centési-
male de dix-millième en dix-millième. 8vo. Paris, 1795

Calver (George) :

Hints on silvered-glass reflecting telescopes. 8vo. London, 1877

Cambridge, Analytical Society :

Memoirs, 1813. 4to. Cambridge, 1813

Cambridge Observatory :

— : Astronomical Observations 1828-65. Vol. 1-21.
4to. Cambridge, 1829-79

Under the superintendence of G. B. Airy, 1828-35.

J. Challis, 1836-60.

" " J. C. Adams, 1861-65.

— : Report of the Observatory Syndicate, 1836-79.

4to. Cambridge, 1836-79

— : Directorship of, *see* Carrington (R. C.)

— : *See also* Airy (G. B.)

Cambridge, Philosophical Society :

— : Transactions. Vol. 1-13. 4to. Cambridge, 1822-83.

— : Proceedings, Part 3-6 and Vol. 3, 4.

8vo. Cambridge, 1866-83

— : Charter and Bye-Laws. 8vo. Cambridge, 1832

Cambridge Problems: being a collection of the printed questions proposed to the candidates for the degree of Bachelor of Arts from 1801 to 1810. 8vo. Cambridge, 1810

— : Ditto. 8vo. Cambridge, 1821

— : Solutions by J. M. F. Wright.

2 vols. 8vo. Cambridge, 1825

— : Mathematical problems and examples, arranged according to subjects, from the Senate-House examination papers, 1821-1837. 8vo. Cambridge, 1837

Cambridge (Mass.), Astronomical Observatory, *see* Harvard College.

Camillus (Joannes) :

De ordine ac methodo in scientia servandis liber vnvs, nvne - primvm in lvcem editvs. 4to. Venetiis, 1561

Campagna (Giuseppe) :

In morte di Giuseppe Piazzi. 8vo. Napoli, 1826

Campbell (Duncan) :

Time's Telescope, universal and perpetual, fitted for all countries and capacities; containing perpetual tables, fitted to the old and new stile 8vo. London, 1734

Canadian Journal of Science, Literature, and History.

Vol. 12-15. 8vo. Toronto, 1868-76

[Continued as]

Proceedings of the Canadian Institute. Vol. 1, 2.

8vo. Toronto, 1883-84

Cape of Good Hope, *see* Herschel (J. W. F.); Lacaille (N. L. de).

Arc of Meridian, *see* Maclear (T.)

Cape of Good Hope, Magnetical and Meteorological Observatory :

Observations printed under the superintend-

Cape of Good Hope, Magnetical and Meteorological Observatory—continued.

ence of Lieutenant-Colonel Edward Sabine, 1841-46.
With abstracts of the observations from 1841 to 1850
inclusive. 2 vols. 4to. London, 1851

Cape of Good Hope, Meteorological Committee:

Instructions for making and registering meteorological obser-
vations at various stations in Southern Africa.
8vo. Cape Town

Cape of Good Hope, Royal Observatory :

- : Astronomical Observations made in the year 1834,
under the direction of Thomas Maclear. Vol. I.
4to. Cape Town, 1840
- : Results of Astronomical Observations made in the
years 1856-60, and 1871-76. 8vo. Cape Town, 1871-79
1856-60 under the superintendence of Sir T. Maclear.
1871-76 under the direction of E. J. Stone.
- : Zenith distances observed with the Mural Circle, and calcu-
lation of geocentric south polar distances, 1836-37. 4to.
- : The Cape Catalogue of 1159 stars, deduced from observa-
tions 1856 to 1861, reduced to the epoch 1860,
under the superintendence of E. J. Stone.
8vo. Cape Town, 1873
- : The Cape Catalogue of Stars, deduced from observations
made 1834 to 1840, and reduced to the epoch 1840,
under the superintendence of E. J. Stone.
8vo. Cape Town, 1878
- : Catalogue of 12,441 stars, for the epoch 1880, from obser-
vations made during the years 1871 to 1879 [under
the superintendence of] E. J. Stone. 4to. London, 1881
- : Declinations of stars, *see* Henderson (T.)
- : Refraction Tables, *see* Bessel (F. W.)
- : Observations of Halley's Comet, &c., *see* Maclear (T.)

Cape Town, South African Philosophical Society:

Transactions, 1877-81. Vol. 1, 2.

8vo. Cape Town and Cambridge, 1878-82

Capra (Balthasar):

Usus et fabrica Circini cuiusdam proportionis, per quem omnia
ferè tum Euclidis, tum mathematicorum omnium proble-
mata facili negotio resolvuntur. 4to. Bononiae, 1655

Capron (J. Rand):

- : Photographed spectra. One hundred and thirty-six photo-
graphs of metallic, gaseous, and other spectra, printed by
the permanent autotype process. 8vo. London, 1877
- : Aurora: their characters and spectra. 4to. London, 1879
- : *A plea for the rainband. 8vo. London, 1882
- : *The auroral beam of November 17, 1882.
8vo. London, 1883
- : Meteorological observations made at Guildown, Guildford,
1883. 8vo.

Cardanus (Hieronymus) :

Libelli duo : Vnus, de supplemento Almanach ; alter, de Restitutione temporum & motuum cœlestium ; item Genituræ LXVII insignes casibus & fortuna, cum expositione.

4to. Norimbergæ, 1543

Carl (Philipp) :

— : Die Principien der astronomischen Instrumentenkunde.
8vo. Leipzig, 1863

— : Repertorium der Cometen-Astronomie.

8vo. München, 1864

— : Die Sonne : eine Uebersicht der Resultate, welche die seitherigen Forschungen über den Sonnenkörper ergeben haben.
8vo. München, 1864

Carlini (Francesco) :

— : Considerazioni sulle inegualianze a lungo periodo che alterano le epochhe della longitudine della luna.

8vo. Milano, 1824

— : Valore del coefficiente numerico del termine principale della variazione dedotto dalle ascensioni rette della luna osservate negli anni 1820-21-22-23.
8vo. Milano, 1826

— : *Sulla legge delle variazioni orarie del barometro.
4to. Modena, 1828

— : *Sulle proprietà delle funzioni algebriche conjugate.
8vo. Wien, 1854

— : *Descrizione d' una macchinetta che serve a risolvere il problema di Keplero [&c.]
4to. Milano, 1854

— : Life, *see* Schiaparelli.

Carlini (Francesco) e Giuseppe Bianchi :

Memorie sulle irregolarità che si osservano nei livelli a bolla d' aria.
8vo. Milano, 1826

Carlini (Francesco) et Giovanni Plana :

Observations sur l'écrit de M. La Place, au Bureau des Longitudes, intitulé 'Sur le perfectionnement de la théorie et des tables Lunaires.'
8vo. Gênes, 1820

Carpenter, (J.), the Moon, *see* Nasmyth and Carpenter.

Carpenter (William) :

Mr. Lockyer's logic.
8vo. London, 1876

Carpmael (Charles) :

Report on the Canadian observations of the Transit of Venus, 6th December, 1882.
8vo. Toronto, 1883

Carr (John) :

The first three sections of Newton's Principia, with copious notes and illustrations, and a great variety of deductions and problems.
8vo. London, 1821

Carrington (Richard Christopher) :

— : An account of the late total eclipse of the sun on July 28, 1851, as observed at Lilla Edet in Sweden.

8vo. Durham, 1851

— : A catalogue of 3735 circumpolar stars observed at Redhill

Carrington (Richard Christopher)—continued.

- in the years 1854, 1855, and 1856, and reduced to mean positions for 1855^o. fol. London, 1857
- : Circumpolar charts, for 1855^o [10 maps]. fol.
- : Information and suggestions addressed to persons who may be able to place themselves within the shadow of the total eclipse of the Sun, on September 7, 1858 [with appendix, giving a translation of M. Kutzyczki's account of the eclipse of 1850]. 8vo. London, 1858
- : Copies of three letters addressed to the Vice-Chancellor of the University of Cambridge . . . respecting the future directorship of the Observatory. fol. Cambridge, 1861
- : Observations of the spots on the Sun from November 9, 1853, to March 24, 1861, made at Redhill. 4to. London, 1863
- : On the financial state and progress of the Royal Astronomical Society. 8vo. London, 1863
- : Appeal on the accounts at the Special General Meeting [of the Royal Astronomical Society], 1866. 8vo. London, 1866
- : Report on the present state of the astronomical instruments at the Observatory of Durham, 1851. 8vo. London, [1874]
- : Revenue account versus Cash account [Royal Astronomical Society]. 8vo. London, 1875
- : An example of applying Professor Challis's method of obtaining the errors of position of the polar axis of an equatorial. 8vo.

Carruthers (G. T.):

- : The attraction of simple gravity. 8vo. Roorkee [1880]
- : An attempt to prove Newton's law of attraction for a resisting medium. 8vo. Roorkee [1881]
- : The inverse distances of the planets. 8vo. Roorkee [1881]
- : A theory concerning Sun spots. 8vo. Roorkee [1881]

Cassani (Joseph):

Tratado de la naturaleza, origen, y causas de los Cometas.
Con la historia de todos los que se tiene noticia haverse visto, y de los efectos, que se les han atribuido, donde se manifiesta quam sin fundamento se dice que son infiustos.
8vo. Madrid [1737]

Cassini (Jacques):

- : Divers ouvrages d'astronomie. 4to. La Haye, 1731
- : Éléments d'astronomie. Tables astronomiques du Soleil, de la Lune, des planètes, des étoiles fixes, et des satellites de Jupiter et de Saturne. 2 vols. 4to. Paris, 1740

Cassini (Jean Dominique), [jun.]:

- : Extrait des observations astronomiques et physiques faites, par ordre de Sa Majesté, à l'Observatoire Royal, en l'année 1785-91. 4to. Paris, 1786-91
- : Exposé des opérations faites en France en 1787 pour la jonection des Observatoires de Paris et de Greenwich, par MM. Cassini, Méchain et Le Gendre. Description et usage

Cassini (Jean Dominique), [jun.]—continued.

d'un nouvel instrument, propre à donner la mesure des angles à la précision d'une seconde. 4to. Paris [1791]

Cassini de Thury (César François):

La méridienne de l'Observatoire Royal de Paris, vérifiée dans toute l'étendue du Royaume par de nouvelles observations; . . . avec des observations d'histoire naturelle faites dans les provinces traversées par la méridienne, par Le Monnier. 4to. Paris, 1744

Cassino (Samuel E.):

The International Scientist's Directory.

8vo. Boston, U.S., 1883

Cassola (Gaspare Luigi):

Dell' Astronomia libri Sei [an astronomical poem].

8vo. Milano, 1774

Castelli, Benedetto:

Risposta alle opposizioni del S. Lodovico delle Colombe e del S. Vincenzo di Grazia, contro al trattato del Sig. Galileo Galilei, delle cose che stanno sù l' acqua, ò che in quella si muovono. 4to. Firenze, 1615

Attributed to Galileo.

Caswell (Alexis):

— : *Meteorological Observations made at Providence, R.I. 1831–60. 4to. Washington, 1860

— : *Lectures on Astronomy.

8vo. [Washington]

Cataldi (Pietro Antonio):

Prima (seconda, terza e quarta) parte della pratica aritmetica. 4 parts fol. Bologna, 1602–17, 1616

Cattan (Christopher):

The Geomancie of Maister Christopher Cattan . . . whereunto is annexed the wheele of Pythagoras. Translated out of the French. 4to. London, 1591

Catureglio, Ephemerides, see Bologna.

Cavalieri (Cavalerius), Bonaventura:

Geometria indivisibilibus continuorum noua quadam ratione promota. 4to. Bononiæ, 1653

Cavendish (Henry):

*On the civil year of the Hindoos and its divisions, with an account of three Hindoo almanacs. 4to. London, [1792]

Cayley (Arthur):

— : An elementary treatise on elliptic functions.

8vo. Cambridge, 1876

— : *On Hansen's lunar theory.

8vo. London, 1857

Cellerier (Gustave):

*Réfraction cométaire.

4to. Genève, 1883

Celoria (Giovanni):

— : La luna; monografia fisica.

8vo. Milano, 1872

— : Le Comete.

8vo. Milano, 1873

— : *Sopra alcuni Eclissi di Sole antichi, e su quello di Agatocle in particolare. 4to. Roma, 1880

Celoria (Giovanni) - continued.

- : *Sull' Eclissi Solare totale del 3 Giugno, 1239. 4to. Milano
 — : *Sopra una deviazione sensibile del filo a piombo esistente
 fra Milano e Genova. 8vo. Milano, 1884

Chacornac (Jean) :

- : *Note sur les températures des sources jaillissant en talus
 escarpés dans le Jura. 8vo. Lyon, 1864
 — : Note sur les apparences de la surface lunaire. 8vo. Lyon, 1864
 — : Notice sur la constitution physique du Soleil. 8vo. Lyon
 — : Ecliptic Charts, *see* Paris, Observatoire, Atlas Écliptique.

Challis (James) :

- : *On the extension of Bode's empirical law of the distances
 of the planets from the Sun, to the distances of the Satellites
 from their respective primaries. 4to. Cambridge, 1829
 — : *On the determination of the longitude of the Observatory
 of Cambridge by galvanic signals. 4to. Cambridge, 1854
 — : Lectures on practical astronomy and astronomical instru-
 ments. 8vo. Cambridge, 1879
 — : Observations, *see* Cambridge Observatory.

Chalmers (Thomas) :

- : A series of Discourses on the Christian revelation, viewed
 in connection with the modern astronomy . . . fifth
 edition. 8vo. Glasgow, 1817
 — : Ditto. Tenth edition. 8vo. Glasgow, 1822

Chambers's Educational Course :

Mathematical tables, consisting of logarithmic, nautical, and
 other tables. New edition. 8vo. Edinburgh, 1870

Chambers (Charles) :

The meteorology of the Bombay Presidency.
 4to. [with vol. of maps, &c. fol.] London, 1878

Chambers (F.) :

- : Abnormal variations of barometric pressure in the tropics,
 and their relation to Sun-spots, rainfall and famines.
 fol. Bombay [1880]
 — : Report on the administration of the meteorological depart-
 ment of Western India for the years 1878-79, 1880-81.
 fol. Bombay

Chambers (George Frederick) :

- : A handbook of descriptive and practical Astronomy.
 8vo. London, 1861
 — : Descriptive Astronomy. 8vo. Oxford, 1867
 — : *Weather facts and predictions. 8vo. 1868
 — : A handbook of descriptive astronomy. Third edition.
 8vo. Oxford, 1877
 — : Cycle of celestial objects, *see* Smyth (W. H.).

[Chambers, Robert] :

Vestiges of the natural history of creation. 8vo. London

Chaney (H. J.), *see* London, Board of Trade.

- Chapultepec, Observatorio Astronómico :**
 Anuario, 1882-83. 12mo. México, 1881-82
- Charlton (Jasper) :**
 The Ladies' Astronomy and Chronology (explained and demonstrated by means of a machine called the *Assimilo*). 8vo. London, 1735
- Charpentier (F. E. A.) :**
 De la pesanteur terrestre. 8vo. Paris, 1859
- Chartres :**
 Catalogue des manuscrits de la bibliothèque de la ville. 8vo. Chartres, 1840
- Chase (Pliny Earle) :**
 — : *Velocity of primitive undulation. 8vo. New Haven, 1874
 — : *Origin of attractive force. 8vo. Philadelphia, 1874
 — : *Astronomical approximations, 1-6. 8vo. Philadelphia, 1880
- Chasles (Michel) :**
 — : Traité de géométrie supérieure. 8vo. Paris, 1852
 — : *Lettre à M. L. Am. Sébillot, sur la Question de la Variation lunaire découverte par Aboul-Wéfa. 4to. [Paris]
 — : Catalogue de la Bibliothèque Scientifique de M. C. 8vo. Paris, 1881
- Chasles (Philarète) :**
 — : Galileo Galilei : sa vie, son procès, et ses contemporains. 8vo. Paris, 1862
- Chastellet (Marquise du), see Du Chastellet.**
- Chaufa Mongkut (T. Y.) :**
 Supplement to the Bangkok Calendar. 8vo. Bangkok (Siam), 1850
- Chaulnes (le Duc de) :**
 Nouvelle méthode pour diviser les instruments de mathématique et d'astronomie. fol. Paris, 1768
- Chauvenet (William) :**
 A manual of spherical and practical astronomy : embracing the general problems of spherical astronomy, the special applications to nautical astronomy, and the theory and use of fixed and portable astronomical instruments; second edition. 2 vols. 8vo. Philadelphia, 1864
- Chazallon (A. M. R.) :**
 Mémoire sur les divers moyens de se procurer une base, par la mesure directe, par la vitesse du son, par des observations astronomiques. 8vo. Paris, 1837
- Cherbourg, Société des Sciences Naturelles (et Mathématiques) :**
 — : Mémoires. Vols. 2-23. 8vo. Cherbourg, 1854-80
 — : Compte-rendu de la Séance extraordinaire . . . , le 30 Déc. 1876. 8vo. Cherbourg, 1877
 — : Catalogue de la Bibliothèque. 2 parts. 8vo. Cherbourg, 1870-78
 — : Ditto. 1^{re} partie, 2^{me} édition. 8vo. Cherbourg, 1881

Cheseaux (Jean Philippe Loys de):

- : Traité de la Comète qui a paru en Décembre 1743, et en Janvier, Février & Mars, 1744. Contenant outre les observations de l'auteur celles qui ont été faites à Paris par Mr. Cassini, et à Genève par M. Calandrini.
 8vo. Lausanne et Genève, 1744
- : Mémoires posthumes . . . sur divers sujets d'astronomie et de mathématiques, avec des nouvelles tables très exactes des moyens mouvements du soleil & de la lune. (Remarques historiques et chronologiques sur Daniel.)
 4to. Lausanne, 1754

Cheyne (C. Hartwell Horne):

- : The earth's motion of rotation, including the theory of precession and nutation. 8vo. Cambridge, 1867
- : An elementary treatise on the planetary theory, with a collection of problems. 8vo. Cambridge, 1862
- : Ditto. Second edition. 8vo. Cambridge, 1870
- : Ditto. Third edition, edited by the Rev. A. Freeman. 8vo. Cambridge, 1883

Chiarini (C.):

- Fragment d'Astronomie Chaldéenne, découvert dans le prophète Ezéchiel. 8vo. Leipzig, 1831

Chicago Astronomical Society:

- The Solar Eclipse of July 29, 1878 [Reports by various observers]. 8vo. Chicago, 1878

Chicago, Dearborn Observatory:

- Annual Report of the Board of Directors . . . together with the Report of the Director of the Dearborn Observatory, 1880-83. 8vo. Chicago, 1880-83

Chicago Public Library:

- Annual Report, 1880-82. 8vo. Chicago

Childe (G. F.):

- Singular properties of the ellipsoid, and associated surfaces of the *n*th degree. 4to. Cape Town, 1861

Childe (L.):

- A short compendium of the new and much enlarged sea-book or Pilot's sea mirror. 2 parts. 4to. London, 1669

China :

- Documents relating to the establishment of meteorological stations in China . . . and exchange of weather news by telegraph along the Pacific Coast of Asia. fol.

Chladni (Ernst Florens Friedrich):

- Die Akustic. 4to. Leipzig, 1802

Choumara (P. M. Théodore):

- Véritable cause physique de la pesanteur des corps terrestres, et de la gravitation universelle des corps célestes.
 8vo. Paris, 1855-56

Christiania, K. Norske Frederiks Universitet :

- : Meteorologiske Iagttagelser i det Sydlige Norge, 1863-66.
 Oblong 4to. Christiania, 1867

Christiania, K. Norske Frederiks Universitet—continued.

- : Meteorologiske Iagttagelser paa fem Telegrafstationer ved Norges Kyst. Reducerede og sammenstillede af J. J. Åstrand. Aargang, 1-2. Oblong 4to. Christiania, 1866

Christiania, Norske Meteorologiske Institut :

- : Første Beretning af H. Mohn. 8vo. Christiania, 1867
- : Norsk Meteorologisk Aarbog, 1867-73. Aargang 1-7. 4to. Christiania, 1868-74
- : Storm-Atlas . . . af H. Mohn. fol. Christiania, 1870
- : Jahrbuch, 1874-81. Herausgegeben von H. Mohn. 4to. Christiania, 1877-82

Christiania, Observatorium :

- : Meteorologische Beobachtungen, 1837-63. 4to. Christiania, 1860-65
- : Meteorologiske Iagttagelser, 1864-67. Oblong 4to. Christiania, 1865-68
- : See also Hansteen und Fearnley ; Mohn (H.)

Christie (James R.) :

- An introduction to the elements of practical astronomy. 8vo. London, 1853

Christie (S. Hunter) :

- : *Discussion of the magnetical observations made by Captain Back during his late Arctic expedition. 4to. London, 1836
- : An elementary course of mathematics for the use of the Royal Military Academy, and for students in general. Vol. 1, Arithmetic and Algebra. 8vo. London, 1845

Christie (W. H. Mahony) :

- Astronomy. 8vo. London, 1875

Chrysologue de Gy [André (Noel)] :

- Abbrégé d'Astronomie pour l'usage des planisphères. 8vo. Paris, 1778

Chumacero (J. M.) :

- The elements of the principal sciences, viz. metaphysics, logic, and universal mathematics, by way of question and answer. 8vo. London, 1770

Ciccolini (Lodovico) :

- Formole analitiche pel calcolo della pasqua, e correzione di quelle di Gauss, con critiche osservazioni su quanto ha scritto del calendario il Delambre. 8vo. Roma, 1817

Cimento (Accademia del), see Florence.**Cincinnati Observatory :**

- : An oration delivered on the occasion of laying the corner stone of an Astronomical Observatory. By John Quincy Adams. 8vo. Cincinnati, 1843
- : The Annual Address by E. D. Mansfield Together with the reports of the Board of Control, and of the Director of the Observatory. 8vo. Cincinnati, 1845
- : Inaugural Report of the Director 1868. Annual Report, 1869-70. 8vo. Cincinnati, 1869-70

Cincinnati Observatory—continued.

— : Publications, Nos. 1-7. 8vo. Cincinnati, 1876-83

- | | | |
|----|-----------------------------------|-------------------|
| 1. | Catalogue of 50 double stars. | Howe. |
| 2. | Measurements of 176 double stars. | Mitchel. |
| 3. | " 166 " | Stone. |
| 4. | " 517 " | " " |
| 5. | " 1054 " | " " |
| 6. | " 455 " | " " |
| 7. | Observations of comets. | Stone and Wilson. |

Circle (the) and the square in composition, or the quadrature of the circle. By the author of 'Homographia,' &c.

8vo. London, n.d.

Ciscar (Gabriel) :

— : Explicacion de varios métodos gráficos, para corregir las distancias lunares con la aproximacion necesaria para determinar las longitudes en la mar. 4to. Madrid, 1803

— : *See also Juan (Jorge).*

Clairaut (Alexis Claude) :

— : Théorie de la figure de la Terre, tirée des principes de l'hydrostatique. 8vo. Paris, 1743

— : Théorie du mouvement des Comètes, dans laquelle on a égard aux altérations que leurs orbites éprouvent par l'action des planètes. Avec l'application de cette théorie à la Comète qui a été observée dans les années 1531, 1607, 1682 & 1759. 8vo. Paris, [1760]

— : Théorie de la lune, déduite du seul principe de l'attraction réciproquement proportionnelle aux quarrés des distances seconde édition. 4to. Paris, 1765

Clare (Martin) :

The motion of Fluids, natural and artificial ; in particular that of the Air and Water. Second edition. 8vo. London, 1737

Clare (Peter) :

*An account of some thunder-storms and extraordinary electrical phænomena that occurred in the neighbourhood of Manchester, July 16, 1850. 8vo. London, 1850

Clark (Alvan G.), double stars, *see* Burnham.

Clark (Latimer) :

— : A treatise on the use of the transit instrument, as applied to the determination of time, for the use of country gentlemen. 8vo. London, 1882

— : Transit tables for 1883-84, giving the Greenwich mean time of the transit of the Sun, and of certain stars, for every day in the year, with an ephemeris of the Sun, Moon, and planets. 8vo. London, 1883-84

— : Manual of the transit instrument as used for obtaining correct time. 8vo. London, 1884

Clark (Samuel) :

An easy introduction to the theory and practice of mechanics ; containing a variety of curious and important problems.

4to. London, 1764

Clarke (Alex. Ross):

- : *On the determination of the direction of the meridian with a Russian diagonal transit instrument. 4to. London 1870
 — : See also United Kingdom, Ordnance Survey.

Clarke (Colin C.):

- : The Universe. 8vo. Melbourne, n.d.
 — : The true theory of the Universe. 8vo. Melbourne, 1879

Clavijo (Salvador):

- Reflexiones sobre el sistema planetario.
 8vo. Santa Cruz de Teneriffe, 1870

Clavius (Christophorus):

- : In Sphaeram Ioannis de Sacro Bosco commentariis, nunc iterum ab ipso auctore recognitus, & multis ac varijs locis locupletatus. 4to. Romæ, 1581
 — : In Sphaeram Ioannis de Sacro Bosco commentariis, nunc tertio ab ipso auctore recognitus, & plerisque in locis locupletatus. 4to. Romæ, 1585
 — : In Sphaeram Ioannis de Sacro Bosco commentarius, nunc quartò ab ipso auctore recognitus, & plerisque in locis locupletatus. 4to. S. Gervasii [Genevæ], 1602
 — : Fabrica et vsus Instrvmenti ad horologiorvm descriptionem peropportvni : accessit ratio describendarvm horarum a meridie & media nocte exquisitissima, & nunquam ante hac in lucem edita. 4to. Romæ, 1586
 — : Astrolabivm. 4to. Romæ, 1593
 — : Opera Mathematica. 5 vols. fol. Moguntiæ, 1611-12

Cleomedes :

- Meteora, Græce et Latine. A Roberto Balfureo . . . multis mendis repurgata, Latinè versa, & perpetuo commentario illustrata. 4to. Burdigalæ, 1605

Clifford (William Kingdon) :

- Mathematical fragments, being facsimiles of his unfinished papers relating to the theory of Graphs. fol. London, 1881

Clock (Great) for the New Palace at Westminster :

- : Copies of three letters addressed by Mr. Dent to the Commissioners of Her Majesty's Woods and Forests. fol. London, 1847
 — : A list of papers relative to the fol. London, 1847
 — : A return of all specifications and estimates sent by Mr. Dent and by Mr. Whitehurst. fol. London, 1847
 — : Further papers relative to the fol. London, 1848

Cocker (Edward) :

- : Decimal Arithmetick Perused, corrected, and published by John Hawkins. 8vo. London, 1695
 — : Cocker's Arithmetick ; being a plain and familiar method, suitable to the meanest capacity for the full understanding of that incomparable art ; perused and published by John Hawkins 56th edition, by G. Fisher.
 12mo. London, 1767
 — : ditto, 51st edition, by I. Jackson. 12mo. Dublin, 1769

Coddington (Henry):

A treatise on the reflexion and refraction of light; (a treatise on the eye and on optical instruments;) being part 1 (and 2) of a system of optics. 8vo. Cambridge, 1829-30

Coglievina (Domenico):

Centigrad-Photometer. Neues optisches Instrument zur directen Bestimmung der Intensität jeder beliebigen Lichtquelle. 8vo. Braunschweig, 1880

Coimbra (Observatorio Real da Universidade):

— : Ephemerides astronomicas calculadas para o meridiano do Observatorio da Universidade . . . para o uso do mesmo observatorio, e para o da navegação Portugueza. 1804-24, 1844-6, 1853, 1865-71, 1874-77, 1879-85.

4to. Coimbra, 1803-83

— : Taboadas astronomicas ordenadas a facilitar o calculo das Ephemerides. 4to. Coimbra, 1813

— : Methodo facil para calcular as ascensões rectas e declinações dos astros, pelo Jacome Luiz Sarmento. 4to. Coimbra, 1868

— : Observações feitas no primeiro vertical . . . com o instrumento de passagem transportavel de Repsold.

4to. Coimbra, 1882

Colába, see Bombay.

Colden (Cadwallader):

An explication of the first causes of action in matter, and of the cause of gravitation. 8vo. London, 1746

Cole (James E.):

The Earth's orbit and distance from the Sun; reason *vs.* imagination. 16mo. New York, 1882

Cole (William):

Philosophical remarks on the theory of Comets; to which is subjoined, a Dissertation on the nature and properties of Light. 8vo. London, 1823

Colebrooke (Henry Thomas): *see* Brahmegupta.

Coleman (George):

Lunar and nautical tables, arranged and adapted for determining (by various methods) the latitude at sea, [&c.] 8vo. London, 1846

Coley (Henry):

The marrow of astrology; in two books. 2 parts in 1 vol. 4to. 1688

Colla (Antonio):

— : *Sulla temperatura atmosferica notata a Parma nei mesi di Giugno e Luglio 1846. 8vo. Roma, 1846

— : *Cenni sopra le otto Comete telescopiche apparse nell'anno 1846. 8vo. Venezia, 1847

— : *Fortissime perturbazioni magnetiche ed Aurore Boreali osservate a Parma . . . Ottobre 1847. 8vo. Roma, 1847

— : *Sulle due comete di D'Arrest e di Brorsen. 8vo. Roma, 1851

Colla (Antonio) —continued.

- : *Sulle due Comete scoperte nell' anno 1850 da Petersen e da Bond, e sul ritorno della Cometa periodica di Faye. 8vo. Roma, 1851
- : *Sulla Cometa di Westphal e sui due nuovi Asteroidi *Fortuna* e *Massilia*. 8vo. Parma, 1852
- : *Sulla Cometa di Westphal e sui quattro nuovi Asteroidi. 8vo. Parma, 1852
- : *Sulla nuova cometa, e sulla nuova Nebulosa a doppio nucleo scoperte all' Osservatorio dell' Collegio Romano. 8vo. Parma, 1853
- : *Sopra la III e IV Cometa del 1854 . . . e sul pianeta Urania. 8vo. Parma, 1854
- : *Sulla V Cometa del 1854. 8vo. Roma, 1855
- : *Intorno alle scoperte di . . . *Circe*, *Leucotea*, *Atalanta*, e *Fides* . . . e sulle scoperte di due comete telescopiche . . . e sul ritorno della Cometa . . . di Encke. 8vo. Fano, 1855
- : *Intorno alla III Cometa del 1855 scoperta . . . dall' astronomo Carlo Bruhns. 8vo. Fano, 1855
- : *Fenomeni celesti nel Novembre 1856 8vo. Parma, 1856
- : *Ulteriori notizie intorno ai pianeti *Circe*, *Leucotea*, *Atalanta*, e *Fides*; e sulla III Cometa del 1855, [etc.] 8vo. Parma, 1856
- : Necrologia di A. Colla. 8vo. Parma, 1857

Collins (John), see *Commercium Epistolicum*.**Colnett (James) :**

A voyage to the South Atlantic and round Cape Horn into the Pacific Ocean. 4to. London, 1798

Colombe (Lodov. delle) :

- : Discorso apologetico . . . d' intorno al discorso del S. Galileo Galilei circa le cose che stanno sù l'acqua ò che in quella si muouono. 4to. Bologna, 1655
- : See Castelli (B.)

Colonial Magnetic Observatories :

- : Observations on days of unusual magnetic disturbances . . . printed under the superintendence of Lieut.-Col. Edward Sabine, 1840-44. Vol. I, Parts 1, 2. 4to. London, 1843-51
- : See Cape of Good Hope, Hobarton, St. Helena, Toronto.

Comet, 1664-65 :

- : Il telescopio d' Urania. Discorso astronomico preventivo del sofistico indovino sopra della Cometa apparsa del mese di Decembre 1664. 4to. Milano, 1665
- : Politisches Sendschreiben eines Teutschen Patrioten über die vilfältigen und ungleichen Schriften und Tractaten welche wegen dess unlängst im . . . 1664 und . . . 1665 . . . erschienenen Cometen aussgangen und in öffentlichen Truck gegeben worden. 4to. 1665

Comet [Halley's] :

Der Komet von 1759 wiederkehrend im Jahre 1835, wahr-

Comet [Halley's]—continued.

scheinlich das von den Heiligen drei Königen beobachtete Gestirn. Mit angehängter Uebersicht des Wissenswürdigsten über den Lauf und die Natur der Kometen.

8vo. Zeitz, 1819

Cometomantia. A discourse of Comets : showing their original, substance, place, time, magnitude, motion, number, colour, figure, kinds, names, and, more especially, their prognostics, significations and presages. 8vo. London, 1684

Comets. Observations on the origin and nature of Comets, their influence and use, and on the variations of the magnetic needle [by H. S.] 8vo. London, 1832

Comets (A dissertation on), proving that the vulgar and long-received notion, that they either cause or foreshew public calamities, is unphilosophical, absurd, and irreligious. Being the substance of the celebrated Mr. Bayle's Reflections on that subject. 4to. London, n.d.

Commandinus (Federicus):

In planisphaerium Ptolemæi Commentarius. 4to. Venetiis, 1558

Commercium Epistolicum:

D. Johannis Collins, et aliorum, de Analysis promota. Jussu Societatis Regiae in lucem editum. [Second edition.] 8vo. Londini, 1722

Commercium Epistolicum de Varia Re Mathematica, inter Celeberrimos præsentis seculi Mathematicos, viz. Isaacum Newtonum [&c.] . . . et alios. Jussu Societatis Regiae in lucem editum. 8vo. Londini, 1725

Commercium Epistolicum :

J. Collins et aliorum de analysis promota, etc., ou correspondance de J. Collins et d'autres savants célèbres du XVII^e siècle, relative à l'analyse supérieure . . . publiée par J. B. Biot et F. Lefort. 4to. Paris, 1856

Comparetti (Andreas):

Observationes opticæ de luce inflexa et coloribus. 4to. Patavii, 1787

Comte (Auguste):

Traité philosophique d'Astronomie populaire, ou exposition systématique de toutes les notions de philosophie astronomique, soit scientifiques, soit logiques, qui doivent devenir universellement familières. 8vo. Paris, 1844

Conder (Francis Roubilac):

The geognostic pendulum, or an enquiry into the theory of the pendulum experiment. 8vo. London, 1851

Condillac (É. Bonnot de):

La langue des calculs; ouvrage posthume et élémentaire, imprimé sur les manuscrits autographes de l'auteur, dans lequel des observations . . . démontrent les vices des langues vulgaires. 12mo. Paris, an VI. (1798)

Contarenus (Gaspar):

(De Elementis eorumque mixtionibus libri quinque). 12mo.

Conversations-Lexikon):

Allgemeine deutsche Encyklopädie für die gebildeten Stände . . . Siebente Originalauflage. 12 vols. 8vo. Leipzig, 1830

Conynenburg (Lucas):

Dissertatio astronomico-physica de Cometis. [Inaugural dissertation.] 4to. Trajecti ad Rhenum, 1728

Cook (James), Captain:

— : A voyage towards the South Pole, and round the world, performed in His Majesty's ships the *Resolution* and *Adventure* in the years 1772-1775. . . . In which is included Captain Furneaux's narrative of his proceedings in the *Adventure* during the separation of the ships.
2 vols. 4to. London, 1777

— : *See also* Wales (W.)

Cooper (Edward J.):

— : Cometic orbits; with copious notes and addenda.
8vo. Dublin, 1852

— : Observations of Donati's Comet, 1858, made at Markree Observatory, Ireland. 4to. Dublin

— : *See also* Markree Observatory.

Copeland (R.), see Göttingen, K. Sternwarte.

Copenhagen, Kongelige Danske Videnskabernes Selskab:

— : Oversigt over det K. Danske Videnskabernes Selskabs Forhandlinger og dets Medlemmers Arbejder, 1842-83.
8vo. Kjöbenhavn, 1843-83

— : Skrifter, femte Række: Naturvidenskabelig og matematisk Afdeling. Bind 1-12. 4to. Kjöbenhavn, 1849-80

— : Sjette Række: Naturvidenskabelig og mathematiske Afdeling. Bind 1-2. 4to. Kjöbenhavn, 1881-83

Copenhagen, Observatorium:

— : Observationes Astronomicæ annis 1781, 1782, & 1783, institutæ in Observatorio Regio Havniensi, et cum tabulis astronomicis comparatæ, auctore Thoma Bugge.
4to. Havniæ, 1784

— : Siderum Nebulosorum observationes Havnienses institutæ . . . 1861-67; auctore H. L. D'Arrest.
4to. Havniæ, 1867

— : *See also* Arrest (H. L. d'); Schumacher (H. C.)

Copenhagen, Universitet:

Festskrifter, udgivne af det mathematisk-naturvidenskabelige Fakultet . . . i anledning af Universitetets Fire-hundredaarsfest, Juni 1879. 8vo. Kjöbenhavn, 1879

Copernicus (Nicolaus):

— : De Revolutionibus orbium cœlestium libri vi.
fol. Norimbergæ, apud J. Petreium, 1543

— : De revolutionibus orbium cœlestium libri vi. . . . Item,

Copernicus (Nicolaus)—continued.

de libris revolutionum Nicolai Copernici narratio prima,
per G. J. Rheticum ad J. Schonerum scripta.

fol. Basileæ [1566]

- : Astronomia Instaurata, libris sex comprehensa, qui de revolutionibus orbium celestium inscribuntur. Nunc demum . . . integrati suæ restituta, notisque illustrata, opera & studio N. Mulerii. 4to. Amstelodami, 1617
- : *De Hypothesibus motuum cœlestium a se constitutis commentariolus . . . Edidit et præfatus est Arvid Lindhagen. 8vo. Stockholm, 1881
- : Beiträge zur Beantwortung der Frage nach der Nationalität des N.C., von R. 8vo. Breslau, 1872
- : Life, &c., see Flammarion, Gassendi, Hüssener, Lichtenberg, Prowe, Sniadecki, Wolynski.

Copernicus and Ptolemy (the theories of), by a Wrangler.

8vo. London, 1867

Copernicus:

An International Journal of Astronomy. Edited by Ralph Copeland and J. L. E. Dreyer. Vol. 1-3.
4to. Dublin, 1881-84

Corabœuf:

* Mémoire sur les Opérations géodésiques des Pyrénées, et la comparaison du niveau des deux Mers. 4to. Paris, 1831

Córdoba, Observatorio Astronómico Argentino:

— : Discursos sobre su inauguracion verificada el 24 de Octubre de 1871. 8vo. Buenos Aires, 1872

— : Resultados . . . Bénjamin A. Gould, Director. Vol. 1-2.
4to. Buenos Aires, 1879-81

Vol. 1. Uranometria Argentina (with Atlas fol.).

Vol. 2. Observaciones, 1872.

— : See also Gould (B. A.)

Córdoba Oficina Meteorológica Argentina:

Anales . . . por su Director Benjamin A. Gould. Tomo 1-3. 4to. Buenos Aires, 1878-82

Coresio (Giorgio):

Operetta intorno al galleggiare de corpi solidi.
4to. Firenze, 1612

Cornu (A.), see Paris, Observatoire.**Cornu (A.) et H. Fizeau :**

*Résumé des mesures effectuées sur les épreuves daguerriennes du passage de Vénus en 1874, obtenues par la Commission française.
4to. Paris, 1882

Cornuel (M. J.):

Notice sur la cause des mouvements de rotation et de translation de la terre et des autres planètes. 8vo. Paris, 1854

Correspondance Astronomique, Géographique, Hydrographique et Statistique du Baron de Zach. Vol. 1-14.

8vo. Gênes, 1818-26

— : See Monatliche Correspondenz.

- Correspondance Mathématique et Physique**, publiée par A. Quetelet. Tome 3-6. 8vo. Bruxelles, 1827-30.
 — : de l'Observatoire de Bruxelles, publiée par A. Quetelet. Tome 7, 8. 8vo. Bruxelles, 1832-35
 — : publiée par A. Quetelet. Tome 9-11 (1-3 de la troisième série). 8vo. Bruxelles, 1837-39

Correspondence of scientific men of the seventeenth century including letters of Barrow, Flamsteed, Wallis, and Newton, printed from the originals in the collection of the Earl of Macclesfield. [Edited by S. P. Rigaud.]
 2 vols. 8vo. Oxford, 1841

Cosmos :

- : Revue Encyclopédique hebdomadaire des progrès des Sciences. Tome 5-25. 8vo. Paris, 1854-64
 — : Série II. 6 vols. 8vo. Paris, 1865-67
 — : Série III. Tome 1-7. 8vo. Paris, 1867-70
 — : Annuaire, année 3, 4. 12mo. Paris, 1861-62

Costard (George) :

- : A letter to Martin Folkes, Esq., President of the Royal Society, concerning the rise and progress of Astronomy amongst the Antients. 8vo. London, 1746
 — : A further account of the rise and progress of Astronomy amongst the Antients, in three letters to Martin Folkes, Esq., President of the Royal Society. 8vo. Oxford, 1748
 — : The History of Astronomy, with its application to Geography, History, and Chronology; occasionally exemplified by the globes. 4to. London, 1767

Cotes (Roger) :

- : Harmonia mensurarum, sive analysis & synthesis per rationum & angulorum mensuras promotæ: accedunt alia opuscula mathematica. . . . Edidit et auxit Robertus Smith . . . 2 parts in 1 vol. 4to. Cantabrigiae, 1722
 — : Hydrostatical and pneumatical lectures. Second edition, by Robert Smith. 8vo. Cambridge, 1747
 — : De descensu graviuni, de motu pendulorum in cycloide, et de motu projectilium. 4to. Cantabrigiae, 1770
 — : Correspondence, *see* Newton and Cotes.

Coulier (Ph. J.) :

- : Dictionnaire d'astronomie, mise à la portée des gens du monde, et appliquée à la marine, la géodésie, et la gnomonique. 12mo. Paris, 1824
 — : Guide des marins pendant la navigation nocturne, ou description générale des Phares, Fanaux, &c., construits pour la sûreté de la navigation. 8vo. Paris, 1829

Coulevier-Gravier (—) :

- *Catalogue des Globes filants (bolides) observés de 1841 à 1853. 8vo. Paris, 1854

Coulevier-Gravier (—) et Jacques Frédéric Saigey :

- Recherches sur les étoiles filantes. . . . Introduction historique. 8vo. Paris, 1847

Cousin (Jacques Antoine Joseph):

— : Introduction à l'étude de l'astronomie physique.
4to. Paris, 1787

— : Traité de calcul différentiel et de calcul intégral.
2 vols. 4to. Paris, an IV (1796)

Cowley (John Lodge):

Geometry made easy, or a new and methodical explanation of
the elements of Geometry. 8vo. London [1752]

[Cowper (Spencer)]:

A treatise on the parallactic angle to which is added
an appendix, containing a compleat set of Solar and Lunar
tables, entitled *Tabulae Dunelmenses*. 4to. London, 1766

Crabtree (William), see Horrox (J.)

Cracow, Sternwarte :

— : Resultate der an der Cracauer Sternwarte gemachten
meteorologischen und astronomischen Beobachtungen (von
M. Weisse). 4to. Krakau, 1839

— : Allgemeine Uebersicht der an der K.K. Krakauer Stern-
warte vom Jahre 1826 bis 1852 gemachten meteorologischen
Beobachtungen, zusammengestellt von Max Weisse.
4to. Krakau, 1853

— : Sternbedeckungen und Mondsterne beobachtet auf der K.K.
Sternwarte in Krakau. Herausgegeben von M. Weisse.
4to. Krakau, 1855

— : See also Weisse (Maximilian).

Cramer (Gabriel):

Introduction à l'analyse des lignes courbes algébriques.
4to. Genève, 1750

Crawford and Balcarres (Earl of):

— : Notes and suggestions to observers of the transit of Mer-
cury, May 6, 1878. 4to. London, 1878

— : See also Dun Echt Observatory.

**Creed (the) of Saint Athanasius proved by a mathematical pa-
rallel.** 8vo. London, 1839

Crelle (A. L.):

Rechentafeln, welche alles Multipliciren und Dividiren mit
Zahlen unter Tausend ganz ersparen ; bei grösseren Zahlen
aber die Rechnung erleichtern und sicherer machen.
2 vols. 8vo. Berlin, 1820

Crellin (William):

Complete Traverse table. 4to. Melbourne, 1881

Cremoninus (Cæsar):

Apologia dictorum Aristotelis de callido innato adversus
Galenum. 4to. Venetiis, 1626

Creswell (Daniel):

— : An elementary treatise on the geometrical and algebraical
investigation of maxima and minima to which is
added a selection of propositions deducible from Euclid's
Elements. 8vo. Cambridge, 1812

— : Treatise on spherics, comprising the elements of spherical

Creswell (Daniel) -continued.

geometry, of plane and spherical trigonometry, together with a series of trigonometrical tables.

8vo. Cambridge, 1816

Crisp (John):

On the methods of determining terrestrial longitudes by the Moon's Right Ascension, as deduced from her altitudes and culminations.

4to. Calcutta, 1827

Croft (Thomas):

The self-propagating nature of centrifugal force as it affects our earth and other portions of our solar system.

8vo. Papeete (Tahiti), 1875

Croll (James):

— : On ocean currents. Part 3. On the physical cause of ocean currents.

8vo. London, 1874

— : *On the physical cause of ocean-currents.

8vo. London, 1874

— : Climate and time in their geological relations : a theory of secular changes of the earth's climate.

8vo. London, 1875

Crosier (E. S.):

*Total Eclipse of the Sun, Saturday, August 7th, 1869.

8vo. Albany, 1869

Croslan (Newton):

The Astronomy of the future.

8vo.

Crossley (Edward), Joseph Gledhill, and James M. Wilson:

— : A Handbook of double stars, with a catalogue of twelve hundred double stars and extensive lists of measures.

8vo. London, 1879

— : Corrections ; together with notes, criticisms, recent measures and discoveries, &c.

8vo. London, 1880

Croucher (Joseph):

Analytical hints on the patent Marine Time-keeper.

8vo. London, n.d.

Crüger (Melchior) et J. A. Stempel:

De immobilitate Terræ. [Inaugural Dissertation.]

4to. Wittebergæ, 1659

Cruls (Luiz):

Observatoire Impérial de Rio-de-Janeiro. Mémoire sur Mars.

Taches de la planète et durée de sa rotation d'après les observations faites pendant l'opposition de 1877.

8vo. Rio de Janeiro, 1878

Cumming (Alexander):

The elements of clock and watch work, adapted to practice.

In two essays.

4to. London, 1766

Cunitia [Cunitz] (Maria):

Urania propitia, sive tabulæ astronomicæ mirè faciles, vim hypothesium physicarum à Kepplero proditarum complexæ [Lat. & Ger.]

2 parts in 1 vol. fol. Olsnæc, 1650

Cunn (Samuel):

- : A new and compleat treatise of the doctrine of fractions to which is added an epitome of duodecimals, and an idea of measuring. Second edition. 8vo. London, 1718
- : A new treatise of the construction and use of the Sector Revised by Edmd. Stone. 8vo. London, 1729

Cunningham (John):

An inquiry into the Copernican system wherein it is proved in the clearest manner that the Earth has only her diurnal motion, and that the Sun revolves round the world. 8vo. London, 1789

Cursory thoughts on some natural phenomena, bearing chiefly on the primary cause of the succession of new species, and on the unity of force. 8vo. New York [1862]

Cuvier (Georges), Baron:

Essay on the theory of the earth with geological illustrations by Professor Jameson. Fifth edition. 8vo. Edinburgh, 1827

Cysat (J. B.), Life, *see* Wolf (R.).

D'Abbadie (Antoine), *see* Abbadie (A. d').

Dacosta (Alvaro Telles):

Disputatio philosophica inauguralis de Maculis Solis. 4to. Trajecti ad Rhenum, 1734

D'Agelet, *see* Agelet (J. L. d').

Daguerre (L. J. M.):

Historique et description des procédés du Daguerréotype et du diorama. 8vo. Paris, 1839

D'Alembert, *see* Alembert (J. le Rond D').

Dalrymple (A.):

Longitude. A full answer to the advertisement concerning Mr. Earnshaw's time-keeper. 8vo. London, 1806

Dalton (John):

— : Meteorological observations and essays. 8vo. London [1793]

— : Mathematical and philosophical writings, *see* Wilkinson (T. T.).

Damoiseau (Mar. Ch. Théodore de):

— : Tables de la lune, formées par la seule théorie de l'attraction, et suivant la division de la circonférence en 400 degrés. 4to. Paris, 1824

— : Tables de la lune, formées par la seule théorie de l'attraction, et suivant la division de la circonférence en 360 degrés. fol. Paris, 1828

— : Tables écliptiques des satellites de Jupiter d'après la théorie de leurs attractions mutuelles et les constantes déduites des observations. Publiées par le Bureau des Longitudes. 4to. Paris, 1836

— : Continuation of ditto, *see* Todd (D. P.).

Daniels (William H.):

An hypothesis of the Universe.

4to. circular [London, 1876]
G 2

Danti (Egnatio):

Primo volume dell' uso et fabbrica dell' Astrolabio et del
 Planisferio nuovamente ristampato con
 l'aggiunta dell' uso & fabbrica di nove altri istromenti astro-
 nomici. 4to. Firenze, 1578

Darby (W. A.):

The Astronomical Observer. A hand-book to the Observatory
 and common telescope. 8vo. London, 1864

D'Arrest, see Arrest (H. L. d').**Da Rocha, see Monteiro da Rocha.****Dates:**

L'Art de vérifier les dates des faits historiques, des inscriptions,
 des chroniques, et autres anciens monuments
 par un religieux de la congrégation de Saint-Maur.
 42 vols. 8vo. Paris, 1819-30

Daussy (P.):

- : *Table des positions géographiques des principaux lieux du globe (extrait de la Connaissance des Temps, 1837, '51, '54, '56). 8vo. Paris
- : *Second mémoire sur les marées des côtes de France. 8vo. Paris
- : Extrait du voyage en Turquie et en Perse exécuté . . . pendant les années 1846-48 par Xavier Hommaire de Hell. Partie géographique. 8vo. Paris, 1859

Davidson (John):

A system of practical mathematics. 8vo. Edinburgh, 1817

Davies (Charles):

- : Elements of the differential and integral calculus. 8vo. Philadelphia, 1844
- : Elements of algebra, on the basis of M. Bcurdon, embracing Sturm's and Horner's theorems, and practical examples. 8vo. New York, 1855

Davies (Thomas Stephens):

*An inquiry into the geometrical character of the hour-lines upon the antique sun-dials. 4to. Edinburgh, 1831

Davis (Charles Henry):

- : Tables of the Moon, constructed from Plana's theory, with Airy's and Longstreh's corrections, Hansen's two inequalities of long period arising from the action of Venus, and Hansen's values of the secular variations of the mean motion and of the motion of the perigee. Arranged in a form designed by B. Peirce. 4to Washington, 1853
- : Tables of the Moon's parallax, constructed from Walker's and Adams's formulæ, arranged as a supplement to the first edition of Peirce's Tables of the Moon. 4to. Washington, 1854

[Davis, (John)]:

The Seaman's secrets, devided into two parts; wherein is taught the three kindes of sayling, horizontal, paradoxal, and sayling upon a great circle . . . 2 parts, 4to. London, 1657

Davis (John E.), and Percy L. H. Davis:

Sun's true bearing, or azimuth tables, computed for intervals of four minutes between the parallels of latitude 30° N. and 30° S. inclusive, with variation chart. 8vo. London, 1877

Davis (William):

An easy and comprehensive description of the terrestrial and celestial globes, with their several uses Second edition. 12mo. London, n.d.

Davy (Sir Humphry):

— : On the safety lamp for coal mines; with some researches on flame. 8vo. London, 1818

— : Six discourses delivered before the Royal Society . . . on the award of the Royal and Copley medals; preceded by an address . . . on the progress and prospects of Science. 4to. London, 1827

Dawes (John):

Elements of fluxions. 8vo. Birmingham, 1821

[Dawson (John)]:

Four propositions, &c., shewing not only that the distance of the Sun, as attempted to be determined from the theory of gravity by a late author, is upon his own principles erroneous, but also that it is more than probable this capital question can never be satisfactorily answered by any calculus of the kind. 8vo. Newcastle, 1769

Day (James):

Journal of psychological meteorology with ephemeris. 8vo. London [1852]

Dealtry (William):

The principles of fluxions, designed for the use of students in the Universities. . . . Second edition. 8vo. Cambridge, 1816

Dean de Luigné (Ch.):

L'Hélice dans les mouvemens planétaires. 8vo. Château-Gontier, 1852

Debenham (John):

A new theory of the tides; in which the errors of the usual theory are demonstrated, and proof shown that the full Moon is not the cause of a concomitant spring tide, but actually the cause of the neaps. 8vo. London, 1846

Decimal quotients (a tabular series of) for all the proper vulgar fractions, of which, when in their lowest terms, neither the numerator nor the denominator is greater than 1000.

8vo. London, 1823

Decimal Association, Proceedings: with an introduction by Professor De Morgan. 8vo. London, 1854

Decuppis (Pompilio):

Alcune osservazioni fatte sopra Saturno nell' Osservatorio del Collegio Romano. 8vo. Roma, 1838

Dee (John):

Parallaticae commentationis praxeosque nucleus quidam.
4to. Londini, 1573

De Forest (E. L.):

- : *Interpolation and adjustment of series. 8vo. New Haven, 1876
 — : *On an unsymmetrical law of error in the position of a point in space. 8vo. Connecticut, 1884

Deichmann (A. H.):

New Tables to facilitate the practice of great circle sailing, together with an application of the theory of the great circle on the globe to the sailing. 8vo. Hanover, 1856

Deinse (Ant. Jac. van):

Dissertatio astronomica inauguralis, exhibens determinationem orbitae Cometae detecti a Cl. de Vico, die 20 m. Februarii a. 1846. 4to. Lugduni-Batavorum, 1849

Delambre (Jean Baptiste Joseph):

- : Méthodes analytiques pour la détermination d'un Arc du Méridien . . . précédées d'un mémoire sur le même sujet par A. M. Legendre. 4to. Paris, An VII (1799)
 — : Abrégé d'Astronomie, ou leçons élémentaires d'astronomie théorique et pratique. 8vo. Paris, 1813
 — : Astronomie théorique et pratique. 3 vols. 4to. Paris, 1814
 — : Tables écliptiques des satellites de Jupiter, d'après la théorio de M. le Marquis de Laplace, et la totalité des Observations faites depuis 1662 jusqu'à l'an 1802. 4to. Paris, 1817
 — : Histoire de l'Astronomie Ancienne. 2 vols. 4to. Paris, 1817
 — : Histoire de l'Astronomie du moyen âge. 4to. Paris, 1819
 — : Histoire de l'Astronomie Moderne. 2 vols. 4to. Paris, 1821
 — : Histoire de l'Astronomie au dix-huitième siècle . . . publiée par M. Mathieu. 4to. Paris, 1827
 — : Tables des satellites de Jupiter, *see* Bouvard et Delambre.
 — : *See also* Borda (J. Ch. de).
 — : Life, *see* Dupin (C.)

Delambre (Jean Baptiste Joseph) et J. T. Bürg:

Tables du Soleil, par M. Delambre. Tables de la Lune, par M. Bürg. (Tables astronomiques publiées par le Bureau des Longitudes, première partie.) 4to. Paris, 1806

Delambre (Jean Baptiste Joseph) et Pierre François André Méchain:

- : Base du système métrique décimal, ou mesure de l'arc du méridien compris entre les parallèles de Dunkerque et Barcelone exécutée en 1792 et années suivantes. (Suite des Mémoires de l'Institut.) 3 vols. 4to. Paris, 1806-1810
 — : Continuation, *see* Biot (J. B.) et D. F. Arago.

De La Rue (Warren):

- : *Report of celestial photography in England. 8vo. London, 1860
 — : *The Bakerian Lecture. On the total solar eclipse of July

De La Rue (Warren) - *continued.*

18th, 1860, observed at Rivabellosa, near Miranda de Ebro,
in Spain. 4to. London, 1862

— : *On the Solar Eclipse of August 18th, 1868. 8vo. London, 1869

— : Auxiliary Tables for determining the angle of position of
the Sun's axis and the longitude of the Earth referred to
the Sun's Equator. 4to. London, 1875

De La Rue (Warren), Balfour Stewart, and Benjamin Loewy :

*Researches on Solar physics . . . Series I., II., and
Appendix. 4to. London, 1865-68

De La Rue (Warren) [and Albert Marth] :

Tables for the reduction of Solar observations.
4to. London, 1878

De La Rue (Warren) and Hugo W. Müller :

*Experimental researches on the electric discharge with the
chloride of silver battery. Parts 1-4. 4to. London, 1877-83

Delaunay (Charles Eugène) :

— : Théorie du mouvement de la lune. 2 vols. 4to. Paris, 1860-67

— : *Nouvelle théorie du mouvement de la lune. Comparaison
des expressions trouvées pour les coordonnées de cet astre
avec celles qui ont été obtenues antérieurement.
4to. Paris 1862

— : *Mémoire sur l'inégalité lunaire à longue période due à
l'action perturbatrice de Vénus et dépendant de l'argument
 $13l'-8l''$. 8vo. Paris [1861]

— : Cours élémentaire d'Astronomie. Quatrième édition.
8vo. Paris, 1864

— : Sur l'existence d'une cause nouvelle ayant une influence
sensible sur la valeur de l'équation séculaire de la lune.
4to. Paris, 1865

— : Life, see Thévenot.

De l'Isle (de Romé) :

— : L'action du feu central démontrée nulle à la surface du
globe . . . Seconde édition. 8vo. Stockholm, 1781

— : Plejaden-Bedeckungen, see Linsser.

Dembowski (Ercole) :

Misure micrometriche di stelle doppie e multiple fatte negli
anni 1852-1878. Vol. 1. 4to. Roma, 1883

Demerara Observatory, see Georgetown.

De Moivre (Abraham) :

— : Annuities on lives; with several tables, exhibiting at one
view the values of lives, for different rates of interest.
Fourth edition. 8vo. London, 1752

— : The doctrine of chances, or a method of calculating the
probabilities of events in play. The third edition.
4to. London, 1756

Demonville:

Question de Longitude sur Mer. (*Mémoire explicatif des phénomènes de l'aiguille aimantée.*)
2 parts, 8vo. Paris, 1833

De Morgan (Augustus):

- : The Elements of Arithmetic. 12mo. London, 1830
- : Ditto. Third edition. 8vo. London, 1835
- : *On the general equation of curves of the second degree. 4to. Cambridge, 1831
- : *On the general equation of surfaces of the second degree. 4to. Cambridge [1832]
- : The elements of algebra, preliminary to the differential calculus. 8vo. London, 1835
- : Elements of spherical trigonometry. (*Library of Useful Knowledge.*) 8vo. London, 1835
- : The connexion of number and magnitude; an attempt to explain the fifth book of Euclid. 8vo. London, 1836
- : An explanation of the gnomonic projection of the sphere, and of such points of astronomy as are most necessary in the use of astronomical maps. 8vo. London, 1836
- : *A treatise on the calculus of functions. [*From 'Encyclopædia Metropolitana.'*] 4to. London, 1836
- : Study and difficulties of mathematics. Arithmetic and algebra. Examples of the processes of arithmetic and algebra. (*Library of Useful Knowledge.*) 8vo. London, 1836
- : Elements of trigonometry, and trigonometrical analysis, preliminary to the differential calculus. 8vo. London, 1837
- : Remarks on an accusation made by the proprietors of the '*Encyclopædia Metropolitana*' against the author of an '*Essay on probabilities.*' 12mo. London, 1838
- : An essay on probabilities, and on their application to life contingencies. (*Lardner's Cabinet Cyclopædia.*) 8vo. London, 1838
- : On the calculation of single life contingencies. 8vo. London, [1839]
- : *References for the history of the Mathematical Sciences. 8vo. London [1842]
- : Contents of the correspondence of scientific men of the seventeenth century, printed . . . under the superintendence of the late Professor Rigaud, from the originals in the collection of the Earl of Macclesfield. 8vo. Oxford, 1842
- : The differential and integral calculus. (*Library of Useful Knowledge.*) 8vo. London, 1842
- : *Tables. [*From 'Penny Cyclopædia.'*] 8vo. London [1842–46]
- : Statement in answer to an assertion made by Sir William Hamilton . . . 8vo. London, [1847]
- : The Globes, celestial and terrestrial . . . to accompany the globes of the Society for the Diffusion of Useful Knowledge. . . . Second edition. 8vo. London, 1847
- : Arithmetical books from the invention of printing to the

De Morgan (Augustus) -continued.

- present time; being brief notices of a large number of works, drawn up from actual inspection. 8vo. London, 1847
- : Formal Logic, or the calculus of inference, necessary and probable. 8vo. London, 1847
- : *On the structure of the syllogism, and on the application of the theory of probabilities to questions of argument and authority. 4to. Cambridge, 1847
- : Trigonometry and double algebra. 12mo. London, 1849
- : *On the symbols of logic, the theory of the syllogism, and in particular of the copula, and the application of the theory of probabilities to some questions of evidence. 4to. Cambridge, 1850
- : Companion to the almanac for 1850, 1852, 1855. 8vo. London
- : The book of almanacs, with an index of reference by which the almanacs may be found for every year, whether in old style or new, from any epoch, ancient or modern, up to A.D. 2000. oblong, London, 1851
- : *On some points of the Integral Calculus. 4to. Cambridge, 1851
- : *On the authorship of the account of the Commercium Epistolicum. 8vo. London, 1852
- : *Some suggestions in logical phraseology. 8vo. London, 1853
- : *On some points in the theory of differential equations. 4to. Cambridge, 1855
- : *On the syllogism, No. III., and on logic in general. 4to. Cambridge, 1858
- : *A proof of the existence of a root in every algebraic equation. 4to. Cambridge, 1858
- : *On the syllogism, No. IV., and on the logic of relations. 4to. Cambridge, 1860
- : Syllabus of a proposed system of Logic. 8vo. London, 1860
- : *On the theory of errors of observation. 4to. Cambridge, 1862
- : *On the syllogism, No. V., and on various points of the onymatic system. 4to. Cambridge, 1863
- : On infinity; and on the sign of equality. 4to. Cambridge, 1865
- : A budget of paradoxes. 8vo. London, 1872
- : *See also* Bourdon, Elements of Algebra; Decimal Association.

De Morgan (Sophia Elizabeth):

Memoir of Augustus de Morgan with selections from his letters. 8vo. London, 1882

Denning (William Frederick):

- : Astronomical phenomena in 1872. 8vo. London, 1872
- : Radiazioni Meteoriche dedotte da 7512 traiettorie di stelle cadenti osservate durante l' anno 1872 dai membri dell' Associazione Meteorica Italiana. 8vo. Torino, 1878

Dennis (Joffery):

- : A diurnal register for the barometer and thermometer. 4to. London, 1818

Dennis (Jeffery)—continued.

— : Ample instructions for the barometer and thermometer
.... The third edition. 8vo. London, 1825

Dennis (J. C.):

A diurnal register for the barometer, sympiesometer and
thermometer. 4to. London, n.d.

Dent (Caroline), see Rolleston.

Dent (Edward J.):

— : Abstract of paper on pendulums presented to the British
Association. 16mo. London, 1838

— : On the errors of chronometers, and explanation of a new
construction of the compensation-balance. 8vo. London, 1842

— : On the errors of the chronometrical thermometer.
8vo. London, 1843

— : A description of the dipleidoscope, or double reflecting
meridian and altitude instrument. 8vo. London, 1843

— : *A paper on the patent azimuth and steering compass.
8vo. London, 1844

— : A treatise on the aneroid, a newly invented portable
barometer. 8vo. London, 1849

Denza (Francesco):

— : Le stelle cadenti dei periodi di Novembre 1868 ed Agosto
1869 osservate in Piemonte ed in altre contrade d' Italia.
Memoria V e VI. 8vo. Torino, 1870

— : Norme per le osservazioni delle meteore luminose.
8vo. Torino, 1870

— : *Sulla possibile connessione tra le Eclissi di Sole ed il
magnetismo terrestre. 4to. Roma, 1873

— : *Osservazioni della declinazione magnetica fatte in occa-
sione delle Eclissi di Sole del 9-10 Ottobre 1874, del 5
Aprile e del 29 Settembre 1875. 4to. Roma, 1876

— : La Corrispondenza Meteorologica Italiana Alpina-Appen-
nina. Relazione di F . . . D . . . 4to. Roma, 1877

— : *Riassunto delle osservazioni meteorologiche eseguite nelle
stazioni Italiane presso le Alpi e gli Appennini 1874-76,
8vo. Torino, 1878

— : *Relazione tra la frequenza delle macchie solari e delle
variazioni della declinazione magnetica. 8vo. Firenze, 1878

— : *La Corrispondenza Meteorologica Italiana Alpina-Appen-
nina. Lettera di F . . . D . . . 8vo. Torino, 1878

— : *Intorno alla Aurora Polare del 31 Gennaio 1881.
8vo. Torino, 1881

— : *Amplitudine della oscillazione diurna della declinazione
magnetica ottenuta all' Osservatorio . . . in Moncalieri,
1879-80. 8vo. Torino, 1881

— : *Variation de la déclinaison magnétique déduite des obser-
vations régulières faites à Moncalieri. 8vo. Paris [1881]

— : *Sulla connessione tra le eclissi di Sole ed il magnetismo
terrestre. 8vo. Torino, 1882

Denza (Francesco)—continued.

- : *La meteorologia e la fisica terrestre al III Congresso Geografico Internazionale di Venezia. 8vo. Roma, 1882
- : *Osservazioni del passaggio di Venere [1882] sul disco solare, fatte all' Osservatorio del R. Collegio Carlo Alberto in Moncalieri. 8vo. Milano, 1883
- : See also Schiaparelli (G. V.), e F. Denza.

Der Becke (David von):

Exercitium Astronomicum circa Eclipsin Solis futuram anni 1684. 4to. Hamburgi, 1683

Derham (Rev. William):

Astro-theology, or a demonstration of the being and attributes of God, from a survey of the heavens . . . Eighth edition. 8vo. London, 1741

Desaguliers (John Theophilus):

A course of experimental philosophy. Third edition.
2 vols. 4to. London, 1763

Des-Cartes (René):

- : Appendix continens objectiones quintas & septimas in . . . meditationes de primâ philosophia. 4to. Amstelodami, 1649
- : Meditationes de prima philosophia, in quibus Dei existentia, & animæ humanæ a corpore distinctio demonstrantur. 4to. Amstelodami, 1650
- : Principia philosophiae. 4to. Amstelodami, 1650
- : Ditto. 4to. Amstelodami, 1656
- : Specimina philosophiae, seu dissertatio de methodo rectè regendæ rationis & veritatis in scientiis investigandæ: dioptrice et meteora. 4to. Amstelodami, 1656
- : Passiones, sive affectus animæ. 4to. Amstelodami, 1656
- : Opera philosophica. Editio ultima. 4to. Amstelodami, 1692-98

Desdouits (—):

Leçons élémentaires d'Astronomie. 8vo. Tours, 1844

Design and Work. Vol. 8-10.

Fol. London, 1880-81

Dosjardins (C.):

Précis d'Uranographie et de géographie, mathématique et physique [French and German]. 8vo. Vienne, 1847

Diarian Repository, or Mathematical Register. Containing . . . all the mathematical questions which have been published in the 'Ladies' Diary' from . . . 1704 to 1760.

4to. London, 1774

Diaz (Juan Carballo y):

Sistema astronómico. 4to. Sevilla, 1870

Dick (Thomas):

- : Celestial Scenery ; or, the wonders of the planetary system displayed ; illustrating the perfections of the Deity and a plurality of worlds. 8vo. London [1838]

- : The practical astronomer ; comprising illustrations of light and colours ; practical description of all kinds of telescopes ;

Dick (Thomas)—continued.

- the use of the equatorial, transit, circular, and other astronomical instruments [&c.] 8vo. London, 1845
- : Die Wunder des Himmels. Dargestellt zur Verherrlichung der Vollkommenheiten Gottes und zur Aufklärung über eine Mehrheit von Welten . . . Aus dem Englischen von F. v. Eichstrom . . . Neuer Abdruck. 8vo. Stuttgart, 1850
- : The sidereal heavens, and other subjects connected with Astronomy, as illustrative of the character of the Deity and of an infinity of worlds. 8vo. London [1859]

Dictionaries: English.

- Bailey (N.) : The new universal etymological English dictionary . . . 4th edition. 8vo. London, 1756
- Ditto. 22nd edition. 8vo. London, 1770
- Johnson (Samuel) : A dictionary of the English language, in which the words are deduced from their originals, and illustrated in their different significations by examples from the best writers; together with a history of the language and an English grammar, with numerous corrections . . . and additions by the Rev. H. J. Todd. 3 vols. 4to. London, 1827
- Rowbotham (J.) : A new derivative and etymological dictionary of such English words as have their origin in the Greek and Latin languages. 8vo. London, 1838

— : English-French.

- Chambaud (Louis) : Dictionnaire François-Anglois & Anglois-François . . . Nouvelle édition . . . par J. Th. H. des Carrières. 4 vols. 8vo. London, 1815
- Wessely (J. E.) : A new pocket dictionary of the English and French languages . . . Fifth edition. 16mo. Leipzig, 1873

— : English-German.

- Wessely (J. E.) : A new pocket dictionary of the English and German languages . . . Fifth edition. 16mo. Leipsic, 1875

— : English-Italian.

- Wessely (J. E.) : A new pocket dictionary of the English and Italian languages . . . Third edition. 16mo. Leipsic, 1874

— : English-Latin.

- Ainsworth (Robert) : Latin dictionary, improved and enlarged by the late Dr. Thomas Morell; since carefully revised . . . by John Carey . . . Second edition. 4to. London, 1823

— : English-Russian.

- Tauchnitz (Karl) : A new pocket dictionary of the English and Russian languages. 16mo. Leipsic, 1871

— : English-Spanish.

- Wessely (J. E.) and Gironés : A new pocket dictionary of the English and Spanish languages . . . Third edition. 16mo. Leipzig, 1874

Dictionaries : English-Swedish.

Tauhnitz (Karl) : A new pocket dictionary of the English and Swedish languages. 16mo. Leipsie, 1873

Dictionnaire de Géographie ancienne et moderne à l'usage du libraire et de l'amateur de livres. 8vo. Paris, 1870**Dien (Ch.) :**

- : Atlas des phénomènes célestes, donnant le tracé des mouvements apparents des planètes, à l'usage des astronomes et des navigateurs . . . Année 1841. 4to. Paris, 1841
- : Tables donnant les mesures micrométriques de plus de 500 étoiles doubles et multiples observées à Dorpat par F. G. W. Struve . . . et classées par constellations par C. D. . . . fol. Paris, 1843
- : De l'usage des globes et des sphères . . . nouvelle édition. 8vo. Paris, n.d.
- : Atlas céleste contenant plus de 100,000 étoiles et nébulueuses dont la position est réduite au 1^{er} Janvier 1860, d'après les catalogues les plus exactes des astronomes français et étrangers. fol. Paris, n.d.

Dieu (Th.) :

Sur la propagation du son dans un milieu indéfini homogène dans l'état d'équilibre. (Paris, Thèses Fac. Sci.)
4to. Paris, 1849

Digges (Leonard and Thomas) :

A Geometrical Practise, named Pantometria, divided into three Bookes, Longimetra, Planimetra, and Stereometria, containing Rules manifolde for mensuration of all lines, Superficies and Solides . . . framed by L . . D . ., lately finished by T . . D . . his sonne, who hath also thereunto adioyned a mathematical treatise of (Geometricall solides). 4to. London, 1571

Dijon, Académie des Sciences, Arts, et Belles-Lettres :

- : Mémoires. 1820-50. 14 vols. 8vo. Dijon, 1820-50
- : 2^{me} Série, Année 1851-70. Tome 1-14, 16. 8vo. Dijon, 1852-71
- : 3^{me} Série, Année 1871-82. Tome 1-7. 8vo. Dijon, 1873-82

Dilworth (Thomas) :

- : The schoolmaster's assistant, being a compendium of arithmetic both practical and theoretical. 16th edition. 12mo. London, 1770
- : Miscellaneous arithmetic, or a full account of the new calendar, with the several uses of the logarithms . . . &c. 12mo. London, 1773
- : A new and complete description of the Terrestrial and Celestial Globes, with their several uses. . . To which is annexed an appendix, concerning the nature and use of the Orrery, or planetarium. 8vo. London, 1775

Dimbleby (J. B.) :

All past time, and almanack for 1880-81. 8vo. London

Dingle (Edward) :

How globes are raised and moved : being the fourth part of

Dingle (Edward)—continued.

Hints from the Dawning, or the creation story considered under the laws of light and motion. 8vo. London, 1868

Diophantus Alexandrinus :

- : Arithmeticorum libri sex, et de numeris multangulis liber unus. Nunc primūm Græcè & Latinè editi, atque absolutissimis commentariis illustrati. Auctore C. G. Bacheto.
2 parts in 1 vol. fol. Lutetiae Parisiorum, 1621
- : Arithmeticorum libri sex, et de numeris multangulis liber unus [Gr. & Lat.]; cum commentariis C. G. Bacheti, et observationibus P. de Fermat. Accessit doctrinæ analyticæ inuentum nouum, collectum ex varijs eiusdem de Fermat epistolis. 2 parts in 1 vol. fol. Tolosæ, 1670

Dirksen (Enno Hero) :

Historiae progressuum instrumentorum mensurae angulorum accuratiōri inservientium, inde a Tob. Mayeri temporibus, adumbratio, nec non de artificio multiplicationis. [Inaugural dissertation.] 4to. Gottingae, 1819

Ditton (Humphry) :

- : The general laws of nature and motion, with their application to mechanicks. Also the doctrine of the centripetal forces and velocities of bodies, describing any of the conick sections. 8vo. London, 1705
- : An institution of fluxions, containing the first principles, the operations, with some of the uses and applications of that admirable method Second edition, revised . . . by John Clarke. 8vo. London, 1726

Dix (Thomas) :

Treatise on the constructing & copying all kinds of geographical maps Second edition. 8vo. Norwich, n.d.

Dixon (George) :

A voyage round the world, but more particularly to the North-West coast of Africa, performed in 1785–88.
4to. London, 1789

Doberck (William) :

- : *On the binary stars σ Coronae, τ Ophiuchi, γ Leonis, ζ Aquarii, 36 Andromedae, and ι Leonis. 4to. Dublin, 1875
- : *On μ^2 Boötis (considered as a revolving double star). 4to. Dublin, 1875
- : *On the first comet of 1845. 4to. Dublin [1875]
- : *On ω Leonis considered as a revolving double star. 4to. Dublin, 1876
- : *On the binary stars 44 Boötis, η Cassiopeiae and μ Draconis. 4to. Dublin, 1876
- : *On γ Virginis considered as a revolving double star. 4to. Dublin [1881]
- : *The inventor of the telescope. 8vo. London [1879]

Dodabetta :

Meteorological Observations made at the meteorological Bungalow on Dodabetta . . . in the years 1847–48, under the direction of T. G. Taylor. 4to. Madras, 1848

Dodson (James):

- : The anti-logarithmic canon ; being a table of numbers consisting of eleven places of figures, corresponding to all logarithms under 100,000 . . . to which is prefix'd an introduction containing a short account of logarithms.
fol. London, 1742
- : The calculator ; being correct and necessary tables for computation, adapted to science, business, and pleasure.
8vo. London, 1747
- : The mathematical repository ; containing analytical solutions of five hundred questions. 3 vols. 12mo. London, 1748-55
- : Ditto, second edition. Vol. I. 12mo. London, 1775

Dodwell (Henry):

De veteribus Græcorum Romanorumque cyclis, obiterque de cyclo Judeorum ætate Christi, dissertationes decem ; cum tabulis necessariis.
4to. Oxonii, 1701

Döllen (Wilhelm):

- : *Neue Reduction der Königsberger Declinationen für 1820.
4to. St. Petersburg, 1849
- : *Ueber Dr. Wichmann's Bestimmung der Parallaxe des Argelander'schen Sterns. 4to. St. Petersburg, 1854
- : Die Zeitbestimmung vermittelst des tragbaren Durchgangsinstruments im Verticale des Polarsterns.
2 parts, 4to. St. Petersburg, 1863-74

Dollond (John), life, see Kelly (J.)**Domckius [Domcke] (George Peter):**

Philosophiae Mathematicæ Newtonianæ illustratæ Tomi duo.
2 vols. in one, 8vo. Londini, 1730

Donati (Giovanni Battista):

- : *Della scintillazione delle stelle ; . . . con nota del Prof. O. F. Mossotti. 8vo. Pisa, 1855
- : *Intorno alla II Cometa del 1855. 8vo. Pisa, 1855
- : *Intorno alle Comete III, IV, e V del 1857. 8vo. Pisa, 1857
- : *Intorno alle due prime Comete del 1857. 8vo. Pisa, 1857
- : *Memorie Astronomiche (Spettri stellarri ; Osservazioni dell' eclisse totale di sole del 18 Luglio 1860 ; Osservazioni di Comete 1854-60). 4to. Firenze, 1862
- : *Il Sole. 8vo. Firenze, 1868
- : *Dei fenomeni Solari in relazione con altri fenomeni cosmici. Lezione popolare. 8vo. Urbino, 1869
- : *Le Aurore Boreali e la loro origine cosmica. 8vo. Firenze, 1872
- : *Di alcuni fenomeni che si manifestarono sulle linee telegrafiche durante la grande Aurora Boreale del 4 Febbraio 1872 : Della origine delle Aurore Boreali. 8vo. Firenze, 1872
- : *Dell' urto di una Cometa con la terra, e particolarmente della Cometa di Biela. 8vo. Firenze, 1872
- : Life, see Uzielli (G.) ; Pittei (C.)

Donati (Paolo):

Theoriche overo speculationi intorno alli moti celesti
 nelle quali senza eccentrici, epicieli, spire, circitor, revol-
 venti, ò deferrenti, con novo modo si salvano le celesti
 apparentie. 4to. Venetia, 1575

Donkin (W. F.):

*An essay on the theory of the combination of observations.
 8vo. Oxford, 1844

Donne (Benjamin):

- : The British Mariner's Assistant; containing forty tables
 adapted to the several purposes of trigonometry and navi-
 gation. To which are prefixed an essay on logarithms,
 and navigation epitomized. . . . Second edition.
 8vo. London, 1785
- : The description and use of Donn's improved navigation
 scale. 12mo. London, 1839

Doolittle (C. L.):

Determination of the latitude and longitude of Wilkes-Barro
 in Luzerne County, and of Pottsville in Schuylkill County.
 8vo. Harrisburg, 1884

Doppelmaier (Johann Gabriel):

Atlas Coelestis secundum Nic. Copernici et ex parte
 Tychonis de Brahe hypothesin. fol. Norimbergae, 1742

Doppler (Christian):

*Ueber das farbige Licht der Doppelsterne und einiger anderer
 Gestirne des Himmels. 4to. Prag, 1842

Dorn (B.):

- : *Kurze Nachricht von zwei Astrolabien mit morgenländi-
 schen Inschriften. 8vo. St. Petersburg [1838]
- : *Ueber ein drittes in Russland befindliches Astrolabium
 mit morgenländischen Inschriften.
 8vo. St. Petersburg [1841]

Dorpat, Kaiserliche Universitäts-Sternwarte:

- : F. G. W. Struve: Observations Astronomicæ, institutæ
 in Specula Universitatis Cæsareæ Dorpatensis, 1814-24,
 1831-38. Vol. 1-5, 8. 4to. Dorpati, 1817-39
- : Beobachtungen der kaiserlichen Universitäts-Sternwarte.
 Herausgegeben von J. H. Mädler. Band 9-16.
 4to. Dorpat, 1842-66
- : *Catalogus 795 stellarum duplicitum ex diversorum astro-
 nomorum observationibus. 4to. Dorpati, 1822
- : Beschreibung des auf der Sternwarte befindlichen
 grossen Refractors von Fraunhofer. Herausg. von F. G.
 W. Struve. fol. Dorpat, 1825
- : Catalogus Novus stellarum duplicitum et multiplicitum.
 . . . auctore F. G. W. Struve. fol. Dorpati, 1827
- : Stellarum duplicitum et multiplicitum mensurae micrometricæ
 . . . auctore F. G. W. Struve. fol. Petropoli, 1837
- : Beobachtungen des Halley'schen Cometen bei seinem
 Erscheinen im Jahre 1835 angestellt von F. G. W.
 Struve. fol. St. Petersburg, 1839

Dorpat, Kaiserliche Universitäts-Sternwarte—continued.

- : Stellarum fixarum imprimis duplicium et multiplicium positiones mediae pro epocha 1830.0 . . . auctore F. G. W. Struve. fol. Petropoli, 1852
 — : *See also* Struve (F. G. W.)

Douglas (George) :

- An appeal to the republic of letters in behalf of injured science, from the opinions and proceedings of some modern authors of elements of geometry. 8vo. Edinburgh, 1810

Dowling (Daniel) :

- : Key to the course of mathematics, composed for the use of the Royal Military Academy, by Charles Hutton. 8vo. London, 1818
 — : Ditto, with an appendix . . . by Olinthus Gregory. Second edition. 8vo. London, 1824

Downes (John) :

- Occultations of planets and stars by the Moon during the year 1853. 4to. Washington, 1853

[Downes (J. J.)] :

- The first principles of algebra, compiled for the use of mechanics and others, by a member of the Spitalfields Mechanics' Institution. 12mo. London, 1825

Downes (Olinthus Gregory) :

- On the physical constitution of comets. 4to. London, 1860

Drach (Solomon Moses) :

- : Mathematical Essays . . . No. 1. The limits of the Atmosphere barometrically defined to be below sixty miles. 4to. London, 1840
 — : *An easy rule for formulizing all epicyclical curves with one moving circle by the binomial theorem. 8vo. London, 1849
 — : *Deductions from Mr. Glaisher's 'Meteoro logical Collections.' 8vo. London, 1851
 — : On the circle-area and heptagon-chord. 8vo. (London, 1864)
 — : *Observations on base-length of great pyramid, and royal coffer's dimensions. 8vo. London, 1872
 — : *An easy general rule for filling up all magic squares. 8vo. Cambridge, 1873

Drago (Raffaele) :

- Sulla relazione dei fenomeni meteorologici colle variazioni del magnetismo terrestre : teoria del P. A. Secchi. 8vo. Genova, 1870

Draper (Henry) :

- : *Discovery of oxygen in the Sun by photography, and a new theory of the solar spectrum. 8vo. New Haven, 1877
 — : *Astronomical observations on the atmosphere of the Rocky Mountains. 8vo. New Haven, 1877
 — : *On photographing the spectra of the stars and planets. 8vo. New Haven, 1879

Draper (Henry)—continued.

- : *The total solar eclipse of July 29, 1878.
8vo. Philadelphia, 1878
- : *On photographs of the spectrum of the nebula in Orion.
8vo. New Haven, 1882
- : Account of. (From Anthony's Photographic Bulletin.)
8vo. New York, 1881

Draper (Henry), Charles A. Young, and E. C. Pickering:

*Researches on astronomical spectrum photography. Extracts from the original note books, with an introduction and description of the apparatus by C. A. Young, and measurements and discussion of the plates by E. C. Pickering.
8vo. Cambridge, Mass., 1884

Draper (John William):

*Researches in actino-chemistry. Memoir second; on the distribution of chemical force in the spectrum.
8vo. New Haven, 1872-73

Drechsler (Adolph):

- : Die Sonnen- und Mondfinsternisse in ihrem Verlaufe, oder Anleitung wie diese durch Rechnung oder Zeichnung zu ermitteln sind. 8vo. Dresden, 1858
- : Astronomische Vorträge über Stellung, Beschaffenheit, und Bewegung der Gestirne . . . Zweite Auflage.
8vo. Dresden, 1861

Drew (John):

- : *On the adjustment of the transit circle and equatorial.
4to. London
- : Manual of Astronomy: a popular treatise on theoretical, descriptive, and practical astronomy; with a familiar explanation of astronomical instruments, and the best methods of using them. 12mo. London [1845]
- : Ditto, second edition. 8vo. London, 1853
- : *On the instruments employed in meteorological observations. 8vo. London, 1850
- : *On deductions from meteorological observations.
8vo. London, 1850

Dreyer (John L. E.):

- : *On personal errors in astronomical transit observations.
8vo. Dublin, 1876
- : *Heinrich Louis D'Arrest. 8vo. Leipzig, 1876
- : *A supplement to Sir John Herschel's 'General Catalogue of Nebulæ and Clusters of Stars.' 4to. Dublin, 1878
- : *Notes on the physical appearance of the planet Mars, as seen with the three-foot reflector, at Parsonstown, during the opposition of 1877. 4to. Dublin, 1878
- : *Note on the meteors connected with the first comet of 1870. 8vo. Dublin, 1880
- : *A record of the progress of astronomy during the year 1879. 8vo. Dublin, 1880

Drobisch (Moritz Wilhelm):

- : Disquisitionis de vera lunae figura observationibus deter-

Drobisch (Moritz Wilhelm)—continued.

- minanda pars prior. . . . [Inaugural dissertation.]
8vo. Lipsiae, 1826
— : Ad selenographiam mathematicam symbolae. [Inaugural Dissertation.] 4to. Lipsiae, 1827

Droysen (Johann Friedrich) :

- Ueber den Gebrauch des Hadley'schen Octanten, besonders zu Beobachtungen auf der See. 16mo. Greifswald, 1804

Dryander (Johannes) [Johann Eychmann] :

- Novi annuli astronomici, per J . . . D . . . excogitati, atque hactenus, ex crebra ejusdem Instrumenti, in diversis scholis professione, mirum in modum, aucti, Canones atque explicatio succincta. 4to. Marpurgi, 1536

Dryden (Johnathan) :

- An elementary treatise on the angular calculus, developing the properties of n Arcs in a clear and comprehensive manner, consisting of at least 115 formulæ not previously published. 8vo. London, 1831

Dublin, Royal Irish Academy :

- : Transactions. Vol. 1-23. 4to. Dublin, 1787-1856
— : Transactions, Science. Vol. 24-28. 4to. Dublin, 1871-83
— : An index to the Transactions of the Royal Irish Academy (Vol. 1-11) from 1786 to the present time, by Nicholas Carlisle. 4to. London, 1813
— : Cunningham Memoirs, No. 1. 4to. Dublin, 1880
— : Proceedings, 1836-69. 10 vols. 8vo. Dublin, 1841-70
Vol. 7 contains Index to Vols. 1-7.
— : Proceedings. Series 2, Vol. 1-3. Science. 8vo. Dublin, 1870-83

Dublin, Royal Society :

- : Journal. Vol. 1-7. 8vo. Dublin, 1858-78
— : Scientific Proceedings (New Series). Vol. 1-3. 8vo. Dublin, 1878-83
— : Scientific Transactions. New Series. Vol. 1-3, Part 1. 4to. Dublin, 1877-83

Dubois (Edmond) :

- : Cours d'astronomie. Ouvrage destiné aux officiers de la marine Impériale, aux élèves de l'École Polytechnique, de l'École normale, de l'École centrale, &c., et aux Licenciés ès sciences. . . . Deuxième édition. 8vo. Paris, [1865]
— : Les passages de Vénus sur le disque solaire considérés au point de vue de la détermination de la distance du Soleil à la terre. Passage de 1874. Notions historiques sur les passages de 1761 et 1769. 12mo. Paris, 1873

Dubourguet (J. B. E.) :

- L'Art du calcul astronomique des Navigateurs.
4to. Paris, an X (1801)

Du Chastellet (G. E. Le Tonnelier de Breteuil), Marquiso :

- : Institutions physiques ; nouvelle édition. Tomo 1. 8vo. Amsterdam, 1742

Du Chastellet (G. E. Le Tonnelier de Breteuil), Marquise—
continued.

— : Principes mathématiques de la philosophie naturelle.
2 vols. 4to. Paris, 1759
A translation of Newton's Principia, with commentary.

Ducom (P.) :

Cours d'observations nautiques. 8vo. Bordeaux, 1820

Dudithius (Andreas), see Bosius; Erasmus and others.

Dudithius (Andreas) et Thomas Erasmus :

De cometarum significatione Cl. Virorum A. Duditii commentariolus; & D. Thomae Erasti sententia. Elias Maior Vratislaviensis denuò edidit, & adjecit παράδοξον ὅτι οὐδὲς κομήτης, ὅστις οὐκ ἀγαθὸν φέρει. 8vo. Breslæ, 1619

Dudley Observatory, Albany :

— : The Dudley Observatory and the Scientific Council. Statement of the Trustees. 8vo. Albany, 1858
— : *See also* Gould (B. A.)
— : Defence of Dr. Gould by the Scientific Council. Second edition. 8vo. Albany, 1858
— : Annals, Vol. 1, 2. 8vo. Albany, 1866–71
— : Annual Report of the Astronomer for 1877. 8vo. Albany, 1878
— : *See also* Boss (L.)

Dufour (Ch.) :

*Mémoire sur une nouvelle méthode pour déterminer la distance de quelques étoiles. 8vo. Paris, 1868

Dufresnoy (Lenglet) :

Tablettes chronologiques de l'histoire universelle sacrée et prophane, ecclésiastique et civile, depuis la création du monde, jusqu'à l'an 1762. 2 vols. 8vo. Paris, 1763

Du Hamel (Jean Baptiste) :

Astronomia physica, seu de luce, natura, et motibus corporum cælestium libri duo Accessere Petri Petiti Observationes aliquot eclipsium solis et lunæ, cum dissertationibus de latitudine Lutetiae, declinatione magnetis, nec non de novo systemate mundi quod anonymous dudum proposuit. 4to. Parisiis, 1660

Duhamel (J. A. Mazure) :

Mémoire sur l'astronomie nautique. 4to. Paris, 1822

[**Du Hamel, le Due] :**

Diverses méthodes pour connaître à la mer sans observations nautiques l'avance et le retard absolu des Chronomètres sur le temps moyen du lieu où ils ont été réglés.
4to. Londres, 1832

Dumont d'Urville (Jul. Séb. Cés.) :

Voyage au pôle Sud et dans l'Océanie sur les corvettes *l'Astrolabe* et *la Zélée*, exécuté . . . pendant les années 1837–40. Hydrographie, par Vincendon-Dumoulin.
8vo. Paris, 1843

Dun Echt Observatory :

— : Publications, Vol. 1, 2. 4to. Dun Echt, Aberdeen, 1876-77

Vol. 1. A summary or index of the measurements in the 'Stellarum duplicium et multiplicium mensuræ micrometricæ'; 'Aditamentum in . . . mensuras micrometricas' . . . ; including all the stars in the 'Synopsis observationum de stellis duplicitibus in Specula Dorpatensi, 1814-24 . . .'; and in the 'II. Mensuræ Micrometricæ.'

Vol. 2. Mauritius Expedition, 1874, I.

— : Classification scheme, and index to the same, of the Library of the Observatory, by Lord Lindsay. 4to. Dun Echt, 1879

Dunér (N. C.) :

— : Mesures micrométriques d'Étoiles doubles, faites à l'Observatoire de Lund, suivies de notes sur leurs mouvements relatifs. 4to. Lund, 1876

— : *Undersökningar öfver kärnan och die närmast kärnan liggande delarne hos 1874 års stora komet.

8vo. Stockholm, 1876

Dunkin (Edwin) :

— : The Midnight Sky : familiar notes on the stars and planets. 4to. London [1869]

— : Obituary notices of astronomers, Fellows and Associates of the Royal Astronomical Society. Written chiefly for the Annual Reports of the Council. 8vo. London, 1879

— : See also Lardner (D.); Milner (T.)

Dunn (Samuel) :

A description of peculiar charts and tables for facilitating a discovery of both the latitude and longitude in a ship at sea. fol. London, 1787-88

Dunsink, Observatory of Trinity College, Dublin :

Astronomical Observations and Researches. Part 1-4.

4to. Dublin, 1870-82

Dunthorne (Richard) :

The practical astronomy of the Moon, or new tables of the Moon's motions; with precepts for computing the place of the Moon and eclipses of the luminaries. 8vo. London, 1739

Du Petit-Thouars (Abel) :

Voyage autour du monde sur la frégate *la Vénus* pendant les années 1836-39. Tome 6-10. Physique, par U. de Tessan. 8vo. Paris, 1842-44

Dupin (Charles) :

*Notice nécrologique sur M. Delambre. 8vo. Paris, 1822

Dupuis (Charles François) :

— : *Mémoire sur l'origine des constellations, et sur l'explication de la Fable, par le moyen de l'astronomie . . . extrait de l'Astronomie de M. de la Lande, Tome 4. 4to. Paris, 1781

— : Mémoire explicatif du Zodiaque chronologique et mythologique. 4to. Paris, 1806

— : Dissertation sur le Zodiaque de Dendra. 12mo. Paris, 1822

Dupuy (L.):

*Exposition de la méthode de Hansen relative au calcul des perturbations des petites planètes. 8vo. Bordeaux, 1874

Durban, Natal Observatory:

Report on the Natal Observatory (by E. Neison).
fol. Durban, 1883

Durham, Observatory of the University:

Results of Astronomical Observations made from 1846 to 1852, under the direction of the Rev. Temple Chevallier, by the Rev. R. A. Thompson and R. C. Carrington.
2 vols. 8vo. Durham, 1846-55

Durret (Noel):

Novæ motuum cœlestium Ephemerides Richelianæ, annorum 15, ab anno 1637 incipientes, quibus accesserunt in priori parte: 1. Isagoge in Astrologiam. 2. De aeris mutatione; 3. Doctrina primi mobilis In secunda parte: 1. Usus tabularum . . . ; 2. De crisiū mysterio tractatus; 3. Gnomonices liber unus. 4to. Londini, 1647

Du Séjour (Ach. P. Dionis):

—: Essai sur les Comètes en général, et particulièrement sur celles qui peuvent approcher de l'orbite de la terre.
8vo. Paris, 1775

—: Traité analytique des mouvemens apparenrs des corps célestes.
2 vols. 4to. Paris, 1786-89

Du Villard de Durand (E. E.):

Nouvelle formule pour trouver la hauteur des lieux par celles du baromètre et du thermomètre. 8vo. Paris, 1826

Dyer (John):

The spherical form of the earth. A reply to 'Parallax.'
8vo. London, n.d.

Earnshaw (Thomas):

—: Longitude: an appeal to the public, stating Mr. Thomas Earnshaw's claim to the original invention of the improvements in his timekeepers. 8vo. London, 1808

—: Longitude. [A broadsheet advertisement setting forth Mr. Earnshaw's claim for the reward offered by the government for the improvement of timekeepers.]

—: See Dalrymple (A.)

Earnshaw (Thomas) and John Arnold:

Explanation of Timekeepers. Published by order of the Commissioners of Longitude. 4to. London, 1806

Earth not a globe! An experimental inquiry into the true figure of the earth; proving it a plane, without axial or orbital motion, and the only material world in the Universe! by 'Parallax.' 8vo. Bath, 1865

Eastman (J. R.):

—: *Report on the difference of longitude between Washington and Detroit, Michigan; Carlin, Nevada; and Austin, Nevada. 4to. Washington, 1874

Eastman (J. R.)—continued.

- : *Report on the difference of longitude between Washington and Ogden, Utah. 4to. Washington, 1876
- : *A value of the solar parallax from meridian observations of Mars at the opposition in 1877. 4to. Washington, 1881
- : *Internal contacts in transits of the inferior planets. 8vo. Salem, Mass., 1883
- : *See also* Washington, U.S. Naval Observatory.

Eastman (J. R.) and Henry S. Pritchett :

- *The longitude of the Morrison Observatory, Glasgow, Mo. 4to. Washington, 1881

Eccœ Cœlum, or parish astronomy. In six lectures. By a Connecticut pastor. Nineteenth edition. 8vo. Boston, 1867

Eclipse races, being an impartial account of the celestial coursers and their riders, starting together April 1, 1764 By Philo-Pegasus. 4to. London, 1764

Eclipse, Solar (1715) :

- : Geographische und astronomische Beschreibung der entsetzlichen grossen Sonnen-Finsterniss welche in diesem 1715ten Jahr den 3. May wird zu sehen seyn. 4to. Leipzig, 1715
- : Ditto, 1870, *see* Italian Eclipse Expedition.

Edor (J. M.) :

- The chemical effect of the spectrum. Translated and edited by Capt. W. de W. Abney. 8vo. London, 1883

Edinburgh Astronomical Institution (laws of the).

8vo. Edinburgh, 1815

Edinburgh Philosophical Journal, exhibiting a view of the progress of discovery in Natural Philosophy, Chemistry, Natural History [&c.] Conducted by D. Brewster and R. Jameson. 14 vols. 8vo. Edinburgh, 1819-26

Edinburgh New Philosophical Journal, exhibiting a view of the progressive improvements and discoveries in the sciences and the arts. Conducted by R. Jameson. Vol. 1-28. 8vo. Edinburgh, 1826-40

Edinburgh, Royal Observatory :

- : Astronomical observations made by Thomas Henderson and Charles Piazzi Smyth, 1834-77. Vol. 1-14. 4to. Edinburgh, 1838-77

Vol. 1-10 by Thomas Henderson.

Vol. 6-10 reduced and edited by C. P. Smyth.

Vol. 11-14 by C. P. Smyth.

Vol. 14 Edinburgh Star Catalogue, R.A. 0^h to 3^h.

- : Some remarks on the present state and future prospects of the Observatory of the Astronomical Institution of Edinburgh. 8vo. Edinburgh, 1846

- : *Scottish Meteorology, 1856-71, computed at the Royal Observatory, Edinburgh (from the observations of the Scottish Meteorological Society). 4to. Edinburgh [1871]

Edinburgh, Royal Society:

- : Transactions. Vol. 1-30. 4to. Edinburgh, 1788-1883
 — : Proceedings, 1832-80. Vol. 1-11. 8vo. Edinburgh, 1845-82
 — : Address . . . by J. D. Forbes . . . on the rise and progress of learned societies [etc.] 8vo. Edinburgh, 1863

Egidy (Heinrich Eduard von):

- Das Weltall, oder populäre Darstellung der Astronomie . . .
 II. Theil. Kometen, Astronomie, und Astrologie. Zweite Auflage. 8vo. Zittau und Leipzig, 1845

Eichhorn (Johann Aegidi):

- Die Erscheinung der Venus in der Sonnenscheibe, als eine sehr seltene und weil die Welt stehet nur einmal bemerkte Himmelsbegebenheit; welche zum andernmal den 6. Jun. dieses Jahrs Vormit erscheinen wird. 4to. Nürnberg, 1761

Eiffe (John Sweetman):

- Account of improvements in chronometers. . . . With an appendix containing Mr. Robert Molyneux's specification of a patent for improvements in chronometers.
 4to. London, 1842

Electrical News and Telegraphic Reporter. Vol. 1.

4to. London, 1875

Eliander (Johann Baptista):

- Cometische hohe Himmels-Ruthe, so der allmächtige Gott in Frühling dieses weit-aussehenden 1672sten Jahrs Nord-westenwerts zur Abendzeit unter den gestirneten Perseo uns zur Busse nebenst mehrern nachdencklichen Wunderzeichen vorgestellt. 4to. Leipzig, 1672

Elkin (William L.):

- Über die Parallaxe von α Centauri. Inaugural Dissertation.
 4to. Karlsruhe, 1880

Ellery (R. L. J.), see Melbourne Observatory.**Ellis (Alexander J.):**

- Algebra identified with geometry ; in a series of five tracts.
 8vo. London, 1874

Ellis (George E.):

- Memoir of Sir Benjamin Thompson, Count Rumford, with notices of his daughter. Published . . . by the American Academy of Arts and Sciences. 8vo. Philadelphia [1873]

Ellis (William):

- : *On the relation between the diurnal range of magnetic declination and horizontal force, as observed at the Royal Observatory, Greenwich, 1841-1877. 4to. London [1880]
 — : *On the Greenwich sunshine records, 1876-80.
 8vo. London, 1880

Emerson (William):

- [—] : The projection of the sphere, orthographic, stereographic, and gnomonical. 8vo. London, 1749
 [—] : Ditto, second edition. 8vo. London, 1769
 — : The principles of mechanics ; explaining and demonstrating

Emerson (William)—*continued.*

- the general laws of motion, the laws of gravity, motion of descending bodies . . . 8vo. London, 1754
- : The doctrine of fluxions; not only explaining the elements thereof, but also its application and use in the several parts of mathematics and natural philosophy. The second edition . . . 8vo. London, 1757
- : The method of increments, wherein the principles are demonstrated, and the practice thereof shewn in the solution of problems. 4to. London, 1763
- : Cyclomathesis; or an easy introduction to the several branches of the mathematics. 8vo. London, 1763
- : The Elements of Geometry. 8vo. London, 1763
- [—] : Navigation, or the art of sailing upon the sea, containing a demonstration of the fundamental principles of this art . . . Second edition. 12mo. London, 1764
- : A treatise of algebra, in two books. 8vo. London, 1764
- : The elements of trigonometry, containing the properties, relations and calculations of sines, tangents, secants, &c. Second edition, with tables of sines, tangents, &c., and logarithms. 8vo. London, 1764
- : The arithmetic of infinities, and the differential method; illustrated by examples. 8vo. London, 1767
- : The elements of optics, in four books. 1. Simple optics. 2. Catoptrics. 3. Dioptrics. 4. The construction of optical instruments. [Part 2.] Perspective. 2 parts in 1 vol. 8vo. London, 1768
- : Mechanics, or the doctrine of motion. 8vo. London, 1769
- : The laws of centripetal and centrifugal force, shewing the motion of bodies in circular orbits, and in the conic sections and other curves. 8vo. London
- : A system of astronomy, containing the investigation and demonstration of the elements of that science. 8vo. London, 1769
- : The art of surveying, or measuring land. 8vo. London, 1770
- : Calculation, libration, and mensuration; or the arts of reckoning, weighing and measuring. 8vo. London, 1770
- : Chronology, or the art of reckoning time . . . founded upon astronomical principles. 8vo. London, 1770
- [—] : The doctrine of combinations, permutations, and compositions of quantities, clearly and succinctly demonstrated. 8vo. London, 1770
- : A short comment on Sir I. Newton's Principia, containing notes upon some difficult places of that excellent book. 8vo. London, 1770
- : Miscellanies; or a miscellaneous treatise, containing several mathematical subjects. 8vo. London, 1776

Emmanuel (Charles):

- : Astronomie nouvelle, ou erreurs des Astronomes . . . Seconde édition. 12mo. Paris, 1853
- : Conférences astronomiques. Première conférence, précédée d'une lettre à l'Académie. 12mo. Paris, 1860

Encke (Johann Franz):

- : Die Entfernung der Sonne von der Erde aus dem Venusdurchgang von 1761 hergeleitet. 8vo. Gotha, 1822
- : Der Venusdurchgang von 1769, also Fortsetzung der Abhandlung über die Entfernung der Sonne von der Erde. 8vo. Gotha, 1824
- : *Ueber die nächste Wiederkehr des Cometen von Pons im Jahr 1832. 4to. Altona, 1831
- : On Encke's Comet. Encke's dissertation contained in Nos. ccx and ccxi of the 'Astronomische Nachrichten.' Translated from the German by G. B. Airy. 8vo. Cambridge, 1832
- : *Über die geographische Länge und Breite der Berliner Sternwarte. 4to. Berlin, 1832
- : Extract of a letter to Mr. Airy. (Ephemeris of Encke's comet, 1842.) 4to. 1841
- : Betrachtungen über die Anordnung des Sternsystems. 8vo. Berlin, 1844
- : Ueber das Verhältniss der Astronomie zu den andern Wissenschaften. 8vo. Berlin, 1846
- : *On a new method of computing the perturbations of planets Translated and illustrated with notes by G. B. Airy. 8vo. London, 1852
- : *Über die Existenz eines widerstehenden Mittels im Welt- raume. 8vo. Berlin, 1858
- : Ueber die Erscheinungen der Kometen. Ein Vortrag im wissenschaftlichen Verein zu Berlin. 8vo. Berlin, 1859
- : *Sur la différence de longitude des observatoires de Bruxelles et de Berlin [trad. de l'Allemand]. 4to. Bruxelles [1861]
- : Observations, *see* Berlin, K. Sternwarte.
- : Life, *see* Bruhns (C.)

Encyclopædia Britannica:

- : 7th edition : Dissertations on the history of metaphysical and ethical, and of mathematical and physical science, by Dugald Stewart, Sir James Mackintosh, John Playfair and John Leslie. 4to. Edinburgh, n.d.
- : A review of the progress of mathematical and physical science in more recent times, and particularly between the years 1775 and 1850 prefixed to the 8th edition. By James D. Forbes. 4to. Edinburgh, 1858

Encyclopædia Metropolitana:

- : Second division, Mixed Sciences (Electro-Magnetism, Electricity, Galvanism, Heat, Light, Chemistry, Sound). 4to. London, 1830
- : The encyclopædia of pure mathematics. 4to. London, 1847
- : The Encyclopædia of astronomy, comprising plane astronomy, by Peter Barlow. Nautical astronomy, by Captain Kater. Physical astronomy, by Sir J. F. W. Herschel. On the figure of the earth, and on tides and waves, by G. B. Airy. 4to. London, 1848

Encyclopædia Metropolitana—continued.

- : The Encyclopædia of experimental philosophy; comprising Magnetism, Electro-Magnetism, Electricity, Galvanism, Heat, Chemistry, Meteorology. 4to. London, 1848
- : The Encyclopædia of mechanical philosophy, comprising the sciences of mechanics, hydrodynamics, pneumatics, and optics, by Peter Barlow, and treatises on Sound and Light by Sir John F. W. Herschel. 4to. London, 1848
- : See also De Morgan (A.)

Enfield (William):

- Institutes of natural philosophy, theoretical and experimental.
4to. London, 1785

Engel (F.) and K. Schellbach:

- Explanations of the 21 plates containing the graphical representations of optics. (With Atlas in folio.) 8vo. Halle, 1856

Engelhardt (Valentinus):

- Libellus de compositione et usu quadrantis astronomici aë geometrici scriptus. 4to. Ephordiae, 1550

Engelmann (Rudolf):

- : Messungen von neunzig Doppelsternen am sechsfüßigen Refractor der Leipziger Sternwarte ausgeführt.
8vo. Leipzig, 1865

- : *Resultate aus Doppelstern-Messungen.
4to. [Altona, 1867]

- : Über die Helligkeitsverhältnisse der Jupiterstrabanten.
Habilitations-Schrift. 8vo. Leipzig, 1871

- : See also Bessel, Abhandlungen.

Englefield (Henry):

- On the determination of the orbits of Comets, according to the methods of Father Boscovich and Mr. de La Place. With new and complete tables; and examples of the calculation by both methods. 4to. London, 1793

- English Mechanic (the) and World of Science.** Vols. 11–38.
fol. London, 1870–84

- English Pilot (the).** fol. London, 1755

Engman (Eric):

- Dissertatio astronomico-physica de Luna non habitabili.
4to. Upsaliæ, 1740

Engström (Folke):

- *Bestämmning af banan för Komet 1847 II. 4to. Lund, 1881

- Enigmatical Entertainer, and mathematical associate**
for 1828–29. 12mo. London, 1827–28

Ennis (Jacob):

- : The origin of the stars, and the causes of their motions and their light . . . second edition. 8vo. New York, 1868

- : Ditto, first London, from the fourth American edition.
8vo. London, 1876

- : *Sequel to the 'Origin of the stars,' or the mechanical theory of solar heat. 8vo. Philadelphia, 1867

Ennis (Jacob)—continued.

- : *Sequel to the ‘Origin of the stars,’ or the necessity of nebular rotation. 8vo. Philadelphia
- : *The discovery of the force which in the beginning put all the heavens and the earth in motion. 8vo. Cambridge [U.S.], 1871
- : *The meteors and their long-enduring trails. 8vo. Cambridge [U.S.], 1872
- : *The four great eras in modern astronomy. 8vo. Cambridge [U.S.], 1872
- : *Our sidereal system, and the direction and distance to its centre. 8vo. Philadelphia, 1876
- : *Physical and mathematical principles of the nebular theory. 8vo. London, 1877

Ephemerides:

- Argoli (A.): Ephemerides, 1621-40; 1630-80; 1641-1700.
- Bartsch (J.): Planisphærium stellatum (Ephemeris V planetarum, 1624-33).
- Berlin: Astronomisches Jahrbuch, 1776-1886.
- Bologna: Novissimæ Ephemerides motuum cœlestium a E. Manfredio, 1715-50.
- : Ephemerides motuum cœlestium a P. Catureglio, 1829-44.
- Coimbra: Ephemerides astronomicas 1804-24, 1844-46, 1853, 1865-71, 1874-77, 1879-85.
- Durret (N.): Novæ motuum cœlestium Ephemerides Richelianaæ, 1637-51.
- Gadbury (J.): Ephemerides of the celestial motions, 1672-1701.
- Kepler (J.): Ephemerides novæ motuum cœlestium, 1617-20.
- Leovitius (C.): Ephemeridum novum atque insigne opus, 1556-1606.
- London: Nautical Almanac, 1767-1887.
- Milan: Effemeridi astronomiche, 1821, 1823-4, 1826-7, 1829-30, 1833-5, 1840-41, 1843-52, 1861.
- Mouton (G.): Observationes diametrorum Solis et Lunæ . . cum tabula declinationum Solis [&c.], 1670.
- Origanus (D.): Ephemerides novæ, 1595-1630.
- : Novæ motuum cœlestium Ephemerides Brandenburgicæ, 1595-1624.
- Pagan (B. F. de): Tables astronomiques. Paris, 1681.
- Palermo: Effemeridi astronomiche, 1855-56.
- Paris: Connaissance des Temps, 1686, 1762-5, 1769, '71, '73, '77, '81, '84, 1806-7, 1810-85.
- : Ephémérides des mouvemens célestes, par Desplaces, Lacaille et Lalande, 1715-35, 1745-1800.
- Perlachius (A.): Ephemerides pro anno 1531.
- Pitatus (P.): Almanach novum, 1551-56.
- Regiomontanus (J. de): Ephemerides astronomicæ, 1475-1506.
- : Ephemerides, 1482-1506.
- Reinieri (V.): Tabulae motuum cœlestium . . Mediceæ, 1647.
- San Fernando: Almanaque Náutico, 1830-32, 34-50, 55-64, 67-85.
- Stadius (J.): Ephemerides novæ et exactæ, 1554-70.
- : Ephemerides novæ, auctæ et repurgatae, 1554-1600.
- Stöffler (J.): Tabulae astronomicæ. Verarum mediaramque coniunctionum et oppositionum Solis et Lunæ exactissima suppeditatio, 1514.

Ephemerides—continued.

- Stöffler (J.): *Calendarium Romanum, 1518-79.*
- Washington: *American Ephemeris and Nautical Almanac, 1855-83.*
- Wing (J.): *Ephemerides of the celestial motions, 1702-7.*
- Wing (V.): *Ephemerides of the celestials motions, 1652-71.*

Erastus (Thomas) [and others]:

- : *De Cometis dissertationes novae clariss. virorum Thom. Erasti, Dudithij, Marc. Squarcialupi, Symon Grynæi.*
2 parts, 4to. [Basileæ], 1580
- : *See also Bosius; Dudithius.*

Eratosthenes, Catasterisms. *See Aratus.*

Erlinger (Georg):

- Innhalt des planetischen Werks. 4to. Augspurg, 1516

Ertborn (Octave van):

- **Observations de la planète Vénus en 1876.*
8vo. Bruxelles, 1877

E[sper] (J. F.):

- Anweisung den Lauf eines Cometen und andere Gestirne ohne astronomische Instrumenten und mathematische Rechnungen zu beobachten. 8vo. Erlangen, 1770

Essler (Joannes): Speculum Astrologorum, see Purbach.

Euclid:

- : The elements of geometrie of the most auncient Philosopher Euclide of Megara. Faithfully (now first) translated into the Englishe tong by H. Billingsley, citizen of London . . . with a very fruitfull preface made by M. I. Dee.
fol. London (1570)
- : Euclidis Elementorum Libri XV. Una cum scholijs antiquis. A Federico Commandino Urbinate nuper in Latinum conversi, commentarijsque quibusdam illustrati.
4to. Pisauri, 1572
- : Elementorum libri XV., Graecè & Latinè.
8vo. Parisiis, 1573
- : Elementorum libri XV., breviter demonstrati operâ Is. Barrow.
12mo. Cantabrigiæ, 1655
- : The English Euclide, being the first six elements of geometry, translated out of the Greek, with annotations and useful supplements. By Edmund Scarburgh.
fol. Oxford, 1705
- : Elements ; the whole fifteen books compendiously demonstrated, with Archimedes's theorems of the sphere and cylinder . . . By Isaac Barrow. To which is annex'd Euclide's Data with Marinus's preface, and a brief treatise of regular solids.
8vo. London, 1722
- : Elementa Euclidea geometriæ, planæ ac solide, et selecta ex Archimede theoremata, quibus accedit trigonometria, auctore Andrea Tacquet [edidit] Gulielmus Whiston.
8vo. Amstelodami, 1725
- : The elements of Euclid explain'd . . . By Claud. Francis Milliet de Chales. Seventh edition.
8vo. London, 1726
- : The six first, together with the eleventh and twelfth books of Euclid's elements. By Henry Hill.
4to. London, 1726

Euclid—continued.

- : Elements with select theorems out of Archimedes.
 By the learned Andrew Tacquet Abridg'd, and
 publish'd in English by William Whiston. Third edition.
 8vo. London, 1727
- : Elements of geometry, from the Latin translation of Com-
 mandine; to which is added a treatise of the nature of
 arithmetic, of logarithms, likewise of plain and
 spherical trigonometry, with a preface by John
 Keil The whole revised by Samuel Cunn.
 The fourth edition. 8vo. London, 1741
- : Elements of geometry translated into English from
 Dr. Gregory's edition, with notes and additions. By E.
 Stone. 2 vols. 8vo. London, 1752-31
- : Elements viz.: the first six books, together with
 the eleventh and twelfth also the book of Euclid's
 data By Robert Simson. To this third edition are
 also annexed elements of plain and spherical trigonometry.
 8vo. Edinburgh, 1767
- : Elementorum libri priores XII., ex Commandini et Gregorii
 versionibus Latinis, in usum juventutis academice edidit,
 pluribus in locis auxit, et in depravitis emendavit Samuel
 [Horsley], Episcopus Roffensis. 8vo. Oxonii, 1802
- : Datorum liber, cum additamento, necon tractatus ali ad
 geometriam pertinentes (Sphæricorum liber Theodosii;
 Archimedis circuli dimensio; eribrum Eratosthenis ad
 numeros primos omnes ordine inveniendos; J. Keillii de
 natura et arithmeticâ logarithmorum). Edidit Samuel
 [Horsley], Episcopus Asaphensis. 3 parts in 1 vol.
 8vo. Oxonii, 1803
- : The elements of plane geometry, containing the first six
 books of Euclid with notes To which are
 added Books 7-10. By Thomas Keith. 8vo. London, 1814
- : Les Œuvres d'Euclide, en Grec, en Latin, et en Français,
 d'après un manuscrit très-ancien qui était resté inconnu
 jusqu'à nos jours. Par F. Peyrard. [At the end of the third
 vol. is added] Les deux livres des cinq corps, attribués à
 Hypsicle. 3 vols. 4to. Paris, 1814-18
- L'Eugénie** (Voyage autour du Monde sur la Frégate Suédoise),
 exécuté pendant les années 1851-53, sous le commandement
 de C. A. Virgin. Observations scientifiques (publiées
 par A. J. Ångström). Physique. [French and Swedish.]
 4to. Stockholm, 1858-74

Euler (Leonhard):

- : Mechanica, sive motus scientia analytice exposita.
 2 vols. 4to. Petropoli, 1736
- : Tentamen novae theoriae musicae ex certissimis harmoniae
 principiis dilucide expositae. 4to. Petropoli, 1739
- : Methodus inveniendi lineas curvas maximi minimive
 proprietate gaudentes, sive solutio problematis isoperi-
 metriæ latissimo sensu accepti.
 4to. Lausannæ & Genevæ, 1744

Euler (Leonhard)—continued.

- : *Theoria Motuum Planetarum et Cometarum . . . una cum calculo, quo Cometæ, qui annis 1680 et 1681, itemque ejus, qui nuper est visus, motus verus investigatur.* 4to. Berolini, 1744
- : *Opuscula varii argumenti. [Tomus 2.] Conjectura physica circa propagationem soni ac luminis una cum aliis dissertationibus analyticis. Tomus 3, continens novam theoriā magnetis . . . una cum nonnullis aliis dissertationibus analytico-mechanicis.* 3 vols. in 2, 4to. Berolini, 1746–51
- : *Introductio ad analysis infinitorum.* 2 vols. 4to. Lausannæ, 1748
- : *Theoria motus Lunæ, exhibens omnes eius inaequalitates. In additamento . . . ostenditur quemadmodum motus Lunæ cum omnibus inaequalitatibus innumeris aliis modis repraesentari atque ad calculum reuocari possit.* 4to. Berolini, 1753
- : *Institutiones calculi differentialis, cum eius usu in analysi finitorum ac doctrina serierum.* 4to. Petropoli, 1755
- : *Theoria motus corporum solidorum seu rigidorum ex primis nostræ cognitionis principiis stabilitata, et ad omnes motus qui in hujusmodi corpora cadere possunt, accomodata.* 4to. Rostochii et Gryphiswaldiae, 1765
- : *Institutionum calculi integralis volumen primum (secundum et tertium.)* 3 Vols. 4to. Petropoli, 1768–70
- : *Dioptricæ pars prima . . . de explicatione principiorum ex quibus constructio tam telescopicorum quam microscopiorum est petenda; pars secunda . . . de constructione telescopicorum . . . pars tertia . . . de constructione microscopiorum.* 3 vols. 4to. Petropoli, 1769–71
- : *Theoria motuum Lunæ, noua methodo pertractata, vna cum tabulis astronomicis, vnde ad quodvis tempus loca Lunæ expedite computari possunt, incredibili studio . . . J. A. Euler, W. L. Krafft, J. A. Lexell; Opus dirigente L. Eulero.* 4to. Petropoli, 1772
- : *Élémens d'Algèbre . . . traduits de l'Allemand, avec des notes et des additions.* 2 vols. 8vo. Lyon, 1774
- : *Theorie der Planeten und Cometen, von Johann Freiherrn von Paccassi übersetzt.* 4to. Wien, 1781
- : *Opuscula analytica.* 2 vols. 4to. Petropoli, 1783–85
- : *Elements of Algebra . . . translated from the French, with the critical and historical notes of M. Bernoulli; to which are added the additions of M. de la Grange . . . Vol. 2.* 8vo. London, 1797
- : *Letters . . . on different subjects in physics and philosophy, addressed to a German princess. Translated from the French by Henry Hunter . . . Second edition.* 2 vols. 8vo. London, 1802
- : *See also Fuss (P. H.)*
- Europe, Centralbureau der Europäischen Gradmessung:**
- : *Gegenbericht an die permanente Commission der Europäischen Gradmessung, von P. A. Hansen.* 4to. Gotha, 1868

**Europe, Centralbureau der Europäischen Gradmessung—
continued.**

- : Verhandlungen der vom 13. bis 16. September 1880 zu München abgehaltenen sechsten allgemeinen Conferenz der Europäischen Gradmessung. 4to. Berlin, 1881
- : Verhandlungen der vom 11. bis 15. September 1882 im Haag vereinigten permanenten Commission der Europäischen Gradmessung. 4to. Berlin, 1883
- : *Unification des Longitudes par l'adoption d'un Méridien initial unique, et introduction d'une heure universelle. (From 'Verhandlungen,' 1883.) 4to. Berlin, 1884

Evans (Frederick J. O.):

- Chart of the curves of equal magnetic variation, 1858.
4to. London, 1859

Evans (T. S.):

- : *Further remarks on Dr. Bradley's theorem for computing the astronomic refraction. 8vo. London, 1816
- : *Historical memoranda respecting experiments intended to ascertain the calorific powers of the different prismatic rays. 8vo. London, 1816

Everest (George) :

- : An account of the measurement of an Arc of the meridian between the parallels of $18^{\circ} 3'$ and $24^{\circ} 7'$, being a continuation of the grand Meridional Arc of India, as detailed by Lieut.-Col. Lambton. 4to. London, 1830
- : Rectification of logarithmic errors in the measurements of two sections of the Meridional Arc of India.
8vo. London, 1859
- : *See also India, Great Trigonometrical Survey.*

Everett (J. D.):

- Illustrations of the centimètre-gramme-second (C.G.S.) system of units. 8vo. London, 1875

Ewbank (Thomas):

- A descriptive and historical account of hydraulic and other machines for raising water, ancient and modern; with observations on various subjects connected with the mechanic arts. 8vo. New York, 1842

Ewing (Alexander):

- Practical astronomy; containing a description of the solar system; the doctrine of the sphere; the principal problems in astronomy, illustrated with many examples. Together with astronomical tables of the sun, moon, and primary planets. 8vo. Edinburgh, 1797

Exhibition (Great), 1851:

- Reports by the Juries. Class X. Philosophical instruments and processes depending upon their use. By James Glaisher.
4to. London

Exhibition (International), 1862:

- Jurors' Reports. Chronometers, watches, and clocks.
fol. London

Exley (Thomas):

Principles of natural philosophy, or a new theory of physics,
founded on gravitation. 8vo. London, 1829

Faber Stapulensis [J. Léfeuvre d'Étaples]:

Introductorium astronomicum, theorias corporum celestium
duobus libris complectē; adiecto commentario declaratum
(Judoci Clichtouei). fol. Parisiis, 1517

Falconer (William):

An universal dictionary of the marine New edition.
4to. London, 1789

Fale (Thomas):

Horologiographia. The art of dialling; teaching an easier
and perfect way to make all kinds of dials upon any plaine
plat howsoever placed. 8vo. London, [1593]

Fantonius (Philippus):

De ratione reducendi anni ad legitimam formam et numerum,
ac alii ad eandem rem pertinentibus. 8vo. Florentiae, 1560

Faraday (Michael):

- : Chemical manipulation; being instructions to students in chemistry. 8vo. London, 1827
- : * On the manufacture of glass for optical purposes. (The Bakerian Lecture, 1829.) 4to. London, 1830
- : Experimental researches in Electricity. 8vo. London, 1839

Fauro (F.):

Beobachtungen der totalen Sonnenfinsterniss am 18. August
1868, angestellt von den Vätern der Gesellschaft Jesu zu
Manila auf den Philippinen. 8vo. Halle, 1869

Faye (Hervé Aug. Ét.):

- : Leçons de cosmographie, rédigées d'après les programmes officiels d'admission à l'École Polytechnique et à l'École de Saint-Cyr. 8vo. Paris, 1852
- : Ditto, deuxième édition. 8vo. Paris, 1854
- : *Sur les travaux sélénographiques de M. Bulard, et sur la formation des Cirques lunaires. 4to. Paris, 1858
- : *Sur une méthode nouvelle proposée par M. de Littrow pour déterminer en mer l'heure et la longitude. 8vo. Vienne, 1864
- : *Sur la situation actuelle du Bureau des Longitudes. 4to. Paris, 1872
- : Cours d'Astronomie Nautique. 8vo. Paris, 1880
- : Cours d'Astronomie de l'École Polytechnique. 2 vols. 8vo. Paris, 1881-83

Fearnley (C.):

- : *Nordlysets Höide bestemt ved Iagttagelse fra eet Punkt. 8vo. Christiania, 1859
- : *Om Fordelingen af den Lys og Varmemængde, som Jorden modtager fra Solen. 8vo. Stockholm, 1868

Fedorenko (Ivan):

Positions moyennes pour l'époque de 1790,0 des étoiles
circompolaires dont les observations ont été publiées par
Jérôme Lalande. 4to. St.-Pétersbourg, 1854

Feilitzsch (F. C. O. von):

Optische Untersuchungen veranlassst durch die totale Sonnenfinsterniss des 28 Juli 1851. 8vo. Greifswald, 1852

Fellöcker (Sigmund):

Geschichte der Sternwarte der Benediktiner-Abtei Kremsmünster. 4to. Linz, 1864

Fenland Meteorological Circular and Weather Report.
1874-75. Edited by S. H. Miller. 4to. Wisbeach, 1874-76**Fenning (D.) and John Probert:**

The Method of calculating an Eclipse geometrically; with an example of the great Eclipse of the Sun, which will happen on April the 1st, between nine and ten in the morning, 1764. 8vo. London, 1764

Fenwick (Stephen):

— : On the motion of a projectile in a resisting medium. 8vo. Woolwich, 1859

— : Applications of mechanics. 8vo. Woolwich, 1860

Fergola (Emmanuele):

— : *Sopra talune oscillazioni diurne degli strumenti astronomici, e sopra una probabile causa della loro apparenza. 4to. Napoli, 1871

— : *Determinazione novella della latitudine del R. Osservatorio de Capodimonte. 4to. Napoli, 1873

— : *Sulla posizione dell'asse di rotazione della Terra rispetto all'asse di figura. 4to. Napoli, 1874

— : *Dimensioni della Terra, e ricerca della posizione del suo asse di figura rispetto a quello di rotazione. 4to. Napoli, 1876

Fergola (Emmanuele) ed Angelo Secchi:

*Sulla differenza di longitudine fra Napoli e Roma. 4to. Napoli, 1871

Fergola (Francesco):

Relazione delle operazioni geodetiche eseguite nelle provincie settentrionali del regno di Napoli. 4to.

Ferguson (James):

— : A dissertation upon the phænomena of the harvest Moon, also the description and use of a new four-wheel'd Orrery, and an essay upon the Moon's turning round her own axis. 8vo. London, 1747

— : An idea of the material universe, deduced from a Survey of the Solar System. 8vo. London, 1754

— : A plain method of determining the parallax of Venus, by her transit over the Sun, and from thence, by analogy, the parallax and distance of the Sun, and of all the rest of the planets. . . . Second edition. 4to. London, 1761

— : Analysis of a course of lectures on mechanics, hydrostatics, hydraulics, pneumatics, spherics, and astronomy. . . . The fifth edition. 8vo. London, 1767

— : Aufangsgründe der Sternseherkunst für die Jugend in zehn Gesprächen. Aus dem Englischen übersetzt. 8vo. Leipzig, 1771

Ferguson (James)—continued.

- : Astronomy explained upon Sir Isaac Newton's principles, and made easy to those who have not studied mathematics; to which are added a plain method of finding the distances of all the planets from the Sun by the transit of Venus over the Sun's disc, in 1761, an account of Mr. Horrox's observation of the transit of Venus in 1639 [&c.] New edition. 4to. London, 1773
- : Select mechanical exercises, showing how to construct different clocks, orreries, and sun-dials, on plain and easy principles, with several miscellaneous articles, and new Tables, 1. for computing the time of any new or full Moon; 2. for graduating the lines on the Sector, Plain Scale, and Gunter; to which is prefixed a short account of the life of the author [written by himself]. 8vo. London, 1778
- : An easy introduction to Astronomy, for young gentlemen and ladies. . . . Fourth edition. 8vo. London, 1779
- : An Astronomical lecture, on Eclipses of the Sun and Moon, the true year of our Saviour's crucifixion, the Supernatural Darkness at that time, and the prophet Daniel's Seventy weeks. 8vo. Bristol, n.d.
- : Lectures on mechanics, hydrostatics, hydraulics, pneumatics, optics, geography, astronomy and dialing; edited by David Brewster. Plates. 4to. Edinburgh, 1805
- : [Life] see Henderson (E.)

Format (Pierre de):

- : Varia opera mathematica; . . . accesserunt selectæ quædam ejusdem Epistolæ, vel ad ipsum . . . de rebus ad mathematicas disciplinas aut physicam pertinentibus scriptæ. fol. Tolosæ, 1679
- : Spherical tangencies, *see* Apollonius.

Ferrari (G. F.):

- *Risposta ad una critica del Sig. F. Keller intorno alle osservazioni della declinazione magnetica fatte all' Osservatorio del Collegio Romano. 4to. Roma, 1880

Forrari (Gaspare Stanislao):

- : Ricerche fisico-astronomiche intorno all' uranolito caduto nell' Agro Romano il 31 di Agosto 1872. 4to. Roma, 1873
- : *Sopra la relazione fra i massimi e minimi delle Macchie Solari e le straordinarie perturbazioni magnetiche. Comunicazioni I-XII. 4to. Roma, 1874-81
- : *Terza serie delle misure micrometriche delle Stelle doppie fatte all' equatoriale del Collegio Romano dal 22 Giugno 1872 a tutto il 1874. 4to. Roma, 1875
- : *Sopra il radiante delle Stelle Cadenti del periodo di Agosto. 4to. Roma, 1876
- : *Sulle protuberanze e le macchie solari osservate nel 1877 nell' Osservatorio del Collegio Romano. 4to. Roma, 1879
- : [Obituary Notice of Angelo Secchi.] 4to. Roma, 1878
- : *Meteorologia Romana. 4to. Roma, 1878
- : *La luce zodiacale studiata secondo le osservazioni fatte dal

Ferrari (Gaspar Stanislao)—continued.

- : 1875 al 1879 all' osservatorio di Zi-Ka-Wei, nella Cina, dal P. Marco Dechevrens. 4to. Roma, 1880
 — : *La luce zodiacale. 8vo. Roma, 1881
 — : *I recenti progressi dell' Astronomia. 8vo. Roma, 1882
 — : Il calendario Gregoriano. 2^a edizione. 8vo. Roma, 1882
 — : La riforma Gregoriana del calendario. 8vo. Roma, 1883
 — : *See also* Rome, Collegio Romano.

Ferrel (W.):

- *The motions of fluids and solids relative to the earth's surface; comprising applications to the winds and the currents of the ocean. 4to. New York, 1860

Ferrer (José Joaquin de):

- *On the determination of the parallax of the Sun from the observations of the Transit of Venus over his disk, June 3, 1769. 4to. London, 1833

Fienus (Thomas) et Libertus Fromondus:

- : De cometa anni MDCXVIII. Dissertationes. . . . eiusdem T. Fieni epistolica quaestio, an verum sit, Cœlum moueri, & Terram quiescere? 8vo. Antverpiæ, 1616
 — : Ditto. 8vo. Londini, 1655

Fiévez (Ch.):

- : *Bibliographie des ouvrages, mémoires et notices de spectroscopie. 12mo. Bruxelles, 1878
 — : *Étude du spectre solaire. 4to. Bruxelles, 1882
 — : *Étude de la région rouge (A—C) du spectre solaire. 4to. Bruxelles, 1883

Filipponi (Alfonso):

- Elogio del P. Giuseppe Piazzi. 8vo. Napoli, 1826

Filopanti (Quirico):

- : Sunto della memoria sulle Geuranie ossia di alcune singolari relazioni cosmiche della Terra e del cielo. 8vo. Bologna, 1862
 — : Indication de quelques nouvelles idées scientifiques exposés dans son ouvrage 'L' Universo,' ou Essai de philosophie encyclopédique. 8vo. Bologne, 1875

Finæus [Fineus, Finé] (Orontius):

- : Sphaera Mvndi, sive cosmographia qvinque libris recens auctis & emēdatis absoluta; in qua tum prima astronomiae pars, tum geographiae ac hydrographiae rudimenta pertractatur. 4to. Lutetiae Parisiorum, 1552
 — : De duodecim caeli domiciliis, & horis inæqualibus, libellus non aspernandus. 4to. Lutetiae, 1553
 — : In eos quos de mundi sphæra conscripsit libros, ac in planetarum theoricas, canonum astronomicorum libri II. 4to. Lutetiae, 1553

Findlater (Andrew):

- Astronomy (Chambers's Elementary Science manuals). 8vo. Edinburgh, 1875

Fischer (A.):

Die Erscheinung des Halley'schen Kometen im Jahre 1835.

Nach den besten astronomischen Schriften mit einer Einleitung in das Weltall zu Jedermannes Belehrung.

12mo. Stuttgart, 1835

Fischer (Ernst Gottfried):

Betrachtungen über die Kometen. Bey Gelegenheit der vermuteten Wiedererscheinung eines Kometen im Jahre 1789.

8vo. Berlin, 1789

Fisher (W. M.):

A philosophical dissertation on Astronomy, containing an accurate and comprehensive view of the Solar System.

8vo. Liverpool, n.d.

FitzRoy (Robert): see London, Board of Trade.

Fizeau (H.) et A. Cornu:

*Résumé des mesures effectuées sur les épreuves daguerriennes du passage de Vénus en 1874, obtenues par la Commission française.

4to. Paris, 1882

Flammarion (Camille):

- : La pluralité des mondes habités. Étude où l'on expose les conditions d'habitabilité des terres célestes discutées au point de vue de l'astronomie, de la physiologie, et de la philosophie naturelle. . . . Nouvelle édition. 8vo. Paris, 1864
- : Ditto, vingt-cinquième édition. 8vo. Paris, 1877
- : *Changement arrivé sur la Lune. Le cratère de Linné. 4to. Paris [1867]
- : Études et lectures sur l'Astronomie. Tome 1-8. 12mo. Paris, 1867-77
- : *Études météorologiques faites en Ballon. 4to. Paris, 1868
- : *Segmentation d'une tache solaire. 4to. Paris 1868
- : Vie de Copernic et histoire de la découverte du système du monde. 8vo. Paris, 1872
- : L'Atmosphère. Description des grands phénomènes de la Nature. 8vo. Paris, 1872
- : Ditto, deuxième édition. 8vo. Paris, 1873
- : *Sur la planète Mars. 4to. Paris 1873
- : *Orbite apparente et période de révolution de l'étoile double ξ de la Grande Ourse. 4to. Paris 1873
- : *Phénomènes observés sur les satellites de Jupiter. 4to. Paris 1874
- : *Orbite de l'étoile double γ de la Vierge. 4to. Paris 1874
- : *Orbite apparente et période de révolution de l'étoile double η de la Couronne. 4to. Paris 1874
- : *Orbite apparente et période de révolution de l'étoile double ζ d'Hercule. 4to. Paris 1874
- : Les mondes imaginaires et les mondes réels. Voyage pittoresque dans le ciel, et revue critique des théories humaines scientifiques et romanesques, anciennes et modernes, sur les habitants des astres. Quatorzième édition. 8vo. Paris, 1876

Flammarion (Camille)—continued.

- : Petite astronomie descriptive . . . adaptée aux besoins de l'enseignement par C. Delon. 8vo. Paris, 1877
- : Les Terres du Ciel. Description astronomique, physique, climatologique, géographique, des planètes qui gravitent avec la terre autour du Soleil, et de l'état probable de la vie à leur surface. 8vo. Paris, 1877
- : Histoire du Ciel. 8vo. Paris [1872]
- : Les merveilles célestes, lectures du soir . . . Sixième édition. 8vo. Paris, 1878
- : Catalogue des étoiles doubles et multiples en mouvement relatif certain, comprenant toutes les observations faites sur chaque couple depuis sa découverte et les résultats conclus de l'étude des mouvements. 8vo. Paris, 1878
- : Les étoiles et les curiosités du ciel ; description complète du ciel visible à l'œil nu, et de tous les objets célestes faciles à observer : Supplément de l'Astronomie Populaire. 8vo. Paris, 1882
- : Astronomical Myths, *see* Blake (J. F.)
- : *See also* Astronomie (I').

Flamsteed (John) :

- : Historiae Coelestis libri duo quorum prior exhibet catalogum stellarum fixarum Britannicum . . . posterior transitus syderum per planum Arcus meridionalis. fol. Londini, 1712
- : Historiae Coelestis Britannicae Volumen primum (secundum et tertium) . . . observante J. F. . . 1675-1720 in Observatorio Regio Grenovicensi. 3 vols. fol. Londini, 1725
- : Atlas Coelestis. fol. London, 1726
- : Ditto. fol. London, 1781
- : Atlas céleste . . . approuvé par l'Académie Royale des Sciences, et publié sous le privilége de cette compagnie. Seconde édition. Par M. J. Fortin [with catalogue of stars, &c.] 4to. Paris, 1776
- : *See also* Bode (J. E.)
- : Catalogue of stars, taken from Mr. Flamsteed's observations contained in the second volume of the Historia Coelestis, and not inserted in the British Catalogue. By Carolina Herschel. fol. London, 1798
- : An account of the Revd. John Flamsteed, the first Astronomer Royal, compiled from his own manuscripts, and other authentic documents never before published. To which is added his British Catalogue of stars, corrected and enlarged. By Francis Baily. 4to. London, 1835

Flauti (V.) :

- *Discorso pronunziato . . . nella solenne pubblica tornata della Società Reale Borbonica, 1847. 4to. Napoli [1847]

Fleming (Peter) :

- Geometrical solutions of the quadrature of the circle.
fol. Montreal, 1850

Fleming (Sandford):

- : Papers on Time-reckoning and the selection of a prime meridian to be common to all nations. 8vo. Toronto, 1879
 — : The adoption of a prime meridian to be common to all nations. The establishment of standard meridians for the regulation of time. 8vo. London, 1881

Fletcher (A.):

- The universal measurer and mechanic. 8vo. London, 1762

Flögel (J. H. L.):

- *Ueber die Höhe des Nordlichtes, und dessen Lage im Raume. 8vo. Wien, 1871

Florence, Accademia del Cimento:

- : Essays of Natural Experiments made in the Accademie del Cimento Englished by Richard Waller. 4to. London, 1684
 — : Saggi di naturali esperienze ; terza edizione Fiorentina, preceduta da notizie storiche dell' Accademia. 4to. Firenze, 1841

Florence, R. Museo di Fisica e Storia Naturale:

- : Annali del Museo Imperiale per l'anno 1808-9. Tomo 1, 2. 4to. Firenze, 1808-10
 — : — 1865. Nuova Serie. Vol. 1. 4to. Firenze, 1866
 — : Archivio Meteorologico centrale Italiano. Prima Pubblicazione. 8vo. Firenze, 1858
 — : Annuario, 1859-60. 12mo. Firenze, 1858-60

Floryn (Evert):

- Tafelen bevattende de sinussen, tangenten, en secanten en de logarithmen der sinussen, tangenten en secanten. 8vo. Amsterdam, 1817

Fluxions (an explanation of) in a short essay on the theory.

8vo. London, 1741

Fluxions (an introduction to the doctrine of). Revised by several gentlemen well skill'd in the mathematics.

8vo. London, 1751

Fockens (Gerard Regner):

- Commentatio Astronomica de parallaxi annua stellarum fixarum (qui praemium reportavit). 4to. Lugduni Batavorum, 1834

Fontana (Francesco):

- Novae cœlestium terrestriumque rerum observationes, et fortasse hactenus non vulgatae . . . specillis a se inventis, et ad summam perfectionem perductis, editæ. 4to. Neapol, 1646

Fontenelle (Bernard le Bovier de):

- : Entretiens sur la pluralité des mondes. . . . Nouvelle édition, augmentée de pièces diverses. 8vo. Paris, 1724
 — : Ditto, avec des remarques & des figures . . de M. Bode. 8vo. Berlin, 1783

Fonvielle (W. de):

- Une visite à la grande Comète de 1881. 12mo. Paris [1881]

Forbes (George):

The transit of Venus. 8vo. London, 1874

Forbes (George) and James Young:

*Experimental determination of the velocity of white and of coloured light. 4to. London, 1882

Forbes (James D.):

— : A review of the progress of Mathematical and Physical Science in more recent times, and particularly between the years 1775 and 1850 [Encycl. Britannica, 8th edition]. 4to. Edinburgh, 1858

— : Address delivered to the Royal Society of Edinburgh, 1862. 8vo. Edinburgh, 1863

Forman (Walter):

— : A new theory of the tides; shewing what is the immediate cause of the phenomenon, and which has hitherto been overlooked by philosophers. 8vo. Bath, 1822

— : An essay on the laws of gravity, and the distance of the planets; with observations on the tides, the figure of the earth, and the precession of the equinoxes. 8vo. Bath, 1824

— : A letter to Lord John Russell on Lord Brougham's most extraordinary conduct; and another to Sir John Herschel on the application of Kepler's third law to the periods of the satellites of Jupiter and Saturn. 8vo. Shepton-Mallet [1832]

— : A letter to the Secretary of the Royal Astronomical Society, in refutation of some absurd & mistaken notions upon philosophical subjects which are held in common by that Society and by all the Newtonian philosophers. 8vo. Shepton-Mallet, 1833

Förster (Wilhelm):

— : De altitudine poli Bonnensi Dissertatio Astronomica. 4to. Bonnae, 1854

— : Johann Kepler und die Harmonie der Sphären. Vortrag gehalten im Wissenschaftlichen Verein zu Berlin. 8vo. Berlin, 1862

— : *Ephemeride des Encke'schen Cometen, 1868. 8vo. Berlin

— : Sammlung von Hülftstafeln der Berliner Sternwarte. 4to. Berlin, 1869

— : Sammlung wissenschaftlicher Vorträge. 8vo. Berlin, 1876

— : Sammlung populärer astronomischer Mittheilungen. 8vo. Berlin, 1878

— : Populäre Mittheilungen zum astronomischen Theile des k. preuss. Normalkalenders für 1881. 8vo. Berlin, 1880

Förster (Wilhelm) und P. Lehmann:

Die veränderlichen Tafeln des astronomischen und chronologischen Theils des königl. preussischen Normalkalenders für 1881. 8vo. Berlin, 1880

Forster (George):

A voyage round the world in the *Resolution*. 4to.

Forster (Thomas):

- : Researches about atmospheric phaenomena. Second edition.
8vo. London, 1815
- : The perennial calendar, and companion to the almanack.
8vo. London, 1824
- : Illustrations of the atmospherical origin of Epidemic diseases. 2nd edition. 8vo. Chelmsford, 1829
- : Annals of some remarkable aërial and Alpine voyages.
8vo. London, 1832
- : Observations sur l'influence des comètes sur les phénomènes de l'atmosphère. 8vo. Aix la Chapelle, 1836
- : Essai sur l'influence des comètes sur les phénomènes de la terre. Seconde édition, augmentée d'un autre sur les étoiles filantes. 8vo. Bruges, 1843
- : Mémoire sur les étoiles filantes, ainsi que sur les météores en général, par rapport à leurs causes déterminantes.
8vo. Bruges, 1846

Fortin, J., Atlas Céleste, *see* Flamsteed (J.)**Foster, Chronometrical Observations,** *see* Tiarks (J. L.)!**Foster (Samuel):**

- : Elliptical or Azimuthal Horologiography, comprehending severall wayes of describing dials upon all kinds of superficies, either plain or curved, and unto all upright stiles in whatsoever position they shall be placed. 4to. London, 1654
- : Miscellanies, or mathematical lucubrations; . . . published, and many of them translated into English, by . . . John Twysden. (Stellæ Fixæ; Astroscopium; De instrumentis planetariis; Observations Eclipsium; Ratio computandi altitudinem Solis; Problemata Geometrica; Problemata Mathematica a J. Twysden; Aristarchus de Magnitudinibus &c.; Lemmata Archimedis; Geometrical Square; projections; dialling &c.)
19 parts in 1 vol. fol. London, 1659

— : *See also* Gunter (E.)

Foucault (Léon), *see* Paris, Observatoire.**Fourier (Joseph):**

- The analytical theory of heat. . . . Translated, with notes, by Alexander Freeman. 8vo. Cambridge, 1878

Francœur (Louis Benjamin):

- : Traité élémentaire de mécanique. Quatrième édition.
8vo. Paris, 1807
- : Cours complet de Mathématiques pures; . . . ouvrage destiné aux élèves des Ecoles Normale et Polytechnique.
2 vols. 8vo. Paris, 1809
- : Uranographie ou traité élémentaire d'astronomie, à l'usage des personnes peu versées dans les mathématiques, des géographes, des marins, des ingénieurs, &c. . . . Quatrième édition.
8vo. Paris, 1828
- : Astronomie pratique. Usage et composition de la Connaissance des Tems. Ouvrage destiné aux astronomes, aux marins et aux ingénieurs.
8vo. Paris, 1830

Francœur (Louis Benjamin)—continued.

- : Géodésie, ou traité de la figure de la Terre et de ses parties. 8vo. Paris, 1835
 — : *Sur le calendrier des Mahométans. 8vo. Paris, 1841
 — : Théorie du calendrier, et collection de tous les calendriers des années passées et futures. 12mo. Paris, 1842

Frankenheim (M. L.):

Populäre Astronomie, ohne Hülfe der Mathematik in zwanzig Vorlesungen erläutert. Nach der dreizehnten englischen und dritten französischen Ausgabe frei bearbeitet. 8vo. Braunschweig, 1827
 A translation of ‘The wonders of the heavens displayed.’

Franklin Institute, Philadelphia:

Journal. Third series. Vols. 21-87. 8vo. Philadelphia, 1851-84

Frankz (Thomas):

Πρόδρομος Ἐκλειψίες, being a philosophical dissertation on the Doctrine of Eclipses. Explaining the physical cause thereof in each Luminary. . . . Also a few words on the Pythagorean system with an inquiry into the nature and laws of Comets. The second edition. 8vo. London, 1736

Frauenholz (A.):

- : Das Sonnensystem in der Vorzeit. 8vo. Breslau, 1868
 — : Die Sonnenflecken, was sie sind und woher sie kommen. Eine wissenschaftliche Abhandlung begründet auf das Sonnen-System in der Vorzeit. 8vo. Breslau, 1870
 — : Die Sonne und ihre Achsendrehung: eine kurze wissenschaftliche Abhandlung. 8vo. Breslau, 1870

Fraunhofer (J.), Life, see Jolly (Ph.)**Freeman (A.):**

Solar fictions; a free inquiry into the received astronomical doctrines and popular opinions concerning the Sun. 8vo. London, 1871

Froeman (Alexander):

- : Table shewing the time and place of the transit across the prime vertical circle in latitude $50^{\circ} 12' 10''$. 8vo. Cambridge, 1882
 — : *See also* Cheyne (C. H. H.); Fourier (J.)

Freke (John):

An essay to shew the cause of electricity, and why some things are non-electricable. 8vo. London, 1746

Frend (William):

- : The principles of algebra, or the true theory of Equations established on mathematical demonstration. Part 2. London, 1799
 — : Evening amusements; or the beauty of the heavens displayed. In which several striking appearances, to be observed on various evenings in the heavens, during the years 1804-1822, are described. 19 vols. 8vo. London, 1806-1822

Froson (Wilhelm):

De computo Gregoriano, seu stylo novo. [Inaugural dissertation.] 4to. Wittebergæ, 1662

Friedrich (Johann):

Astrologie und Reformation; oder die Astrologen als Prediger der Reformation und Urheber des Bauernkrieges. 8vo. München, 1864

Fries (Jakob Friedrich):

Populäre Vorlesungen über die Sternkunde, gehalten zu Heidelberg im Winter 1811 auf 1812. 8vo. Heidelberg, 1813

Friesach (Karl):

— : *Ueber die Reduction der grössten Sonnenhöhe auf den Meridian bei veränderlichem Beobachtungsorte. 8vo. Wien, 1863

— : Theorie der Planetenvorübergänge vor der Sonnenscheibe. 4to. Leipzig, 1874

Frischauf (Johann):

— : *Bahnbestimmung des Kometen 1863 II. 8vo. Wien, 1863

— : Theorie der Bewegung der Himmelskörper um die Sonne nebst deren Bahnbestimmung in elementarer Darstellung. 8vo. Graz, 1868

Frissi [Frisius], (Paolo):

— : Disquisitio mathematica in caussam physicam figuræ et magnitudinis telluris nostræ. 4to. Mediolani, 1751

— : Dissertationum variarum tomus primus (et secundus). 2 vols. 4to. Lucæ, 1759–61

— : De gravitate universalis corporum libri tres. 4to. Mediolani, 1768

— : Cosmographiæ physicæ et mathematicæ: pars prior, motuum periodicorum theoriam continens: (pars altera, de rotationis motu et phænomenis inde pendentibus).

2 parts in 1 vol. 4to. Mediolani, 1774–75

— : Operum tomus primus, algebra et geometriam analyticam continens. (Tomus secundus, mechanicam universam et mechanicæ applicationem ad aquarum fluentium theoriam continens.) Tomi 1 & 2. 4to. Mediolani, 1782–83

Frissi (Paolo) et Melander (Daniel):

De theoria lunæ commentarii. 4to. Parmæ, 1769

Frisius, see Gemma Frisius.

Fritz (Hermann):

— : Verzeichniss beobachteter Polarlichter. 4to. Wien, 1873

— : Das Polarlicht. 8vo. Leipzig, 1881

— : Die Perioden der Sonnenflecken, des Polarlichtes und des Erdmagnetismus. 4to.

Frodsham (Charles):

A few remarks upon the construction and principles of action of the aneroid barometer. 8vo. London, 1849

Fromondus (Libortus):

— : Vesta, sive ant-Aristarchi vindex, aduersus Iac. Lansbergium Philippi F. Medicum Middelburgensem. 4to. Antverpiæ, 1634

— : De Cometa, *see* Fienus; De motu Terræ, *see* Lansberg.

Frost (G. & W.) :

Companion to the mental astronomer ; or an easy guide to a complete knowledge of the constellations.

4to. Hackney, 1829

Fuchs (Johann Nep.) :

*Ueber die Theorien der Erde. 4to. München, 1838

Fuss (Paul Henri) :

— : *Über Leonhardi Euleri commentationes arithmeticæ collectæ. 8vo. St. Pétersbourg, 1848

— : Éloge de, *see* Struve (O.)

Fuss (V.) :

*Beobachtungen und Untersuchungen über die astronomische Strahlenbrechung in der Nähe des Horizontes.

4to. St. Pétersbourg, 1872

Fuss (V.) und Magnus Nyrén :

*Bestimmung der Längen-Differenz zwischen den Sternwarten Stockholm und Helsingfors. 4to. St. Pétersbourg, 1871

Gabriele (Giacomo) :

Dialogo . . . nel quale de la sphera, et de gli orti et occasi de le stelle minutamente si ragiona. 4to. Vinetia, 1545

Gadbury (John) :

— : Coelestis legatus ; or the coelestial ambassadour, astrologically predicting the grand catastrophe that is probable to befall most of the kingdomes and countries of Europe. 4to. London, 1656

— : Ephemerides of the celestial motions for X years, beginning anno 1672 (where the industrious Mr. Wing's expired) and ending an. 1681. 4to. London, 1672

— : Ephemerides of the celestial motions and aspects, eclipses of the luminaries, &c., for XX years, beginning anno 1682 and ending an. 1701. 4to. London, 1680

Gaffarel (Jacques) :

Vnheard-of curiosities, concerning the talismanical sculpture of the Persians, the horoscope of the patriarches, and the reading of the stars . . . Englished by Edmund Chilmead. 8vo. London, 1650

Galbraith (William) :

— : Mathematical and astronomical tables for the use of students of mathematics, practical astronomers, surveyors, engineers and navigators. 8vo. Edinburgh, 1827

— : Barometric Tables, for the use of engineers, geologists, and scientific travellers. 8vo. Edinburgh, 1833

— : Trigonometrical surveying, levelling, and railway engineering. 8vo. Edinburgh, 1842

Galilei (Galileo) :

— : Istoria e dimostrazioni intorno alle macchie solari e loro accidenti, comprese in tre lettere scritte all' illustrissimo signor Marco Velseri. 4to. Roma, 1613

— : Il saggiatore, nel quale con bilancia esquisita e giusta si ponderano le cose contenute nella libra astronomica e

Galilei Galileo—continued.

- philosophica di Lotario Sarsi Sigensano, scritto in forma di lettera. 4to. Roma, 1623
- : *See Grassi (H.)*
- : Dialogo . . . sopra i due massimi sistemi del mondo, Tolemaico e Copernicano. 4to. Fiorenza, 1632
- : Systema cosmicum . . . in quo quatuor dialogis, de duobus maximis mundi systematibus Ptolemaico & Copernicano, utriusq: rationibus philosophicis ac naturalibus indefinite propositis, disseritur. 4to. Augustae Treboc, 1635
- : Systema cosmicum, in quo dialogis IV de duobus maximis mundi systematibus Ptolemaico & Copernicano rationibus utrinque propositis indefinite disseritur. 4to. Lugduni, 1641
- : Opere . . . Nuova editione [da Carlo Manolessi]. 8 parts in 1 vol. 4to. Bologna 1656-55
- : Le messager céleste ; contenant toutes les nouvelles découvertes qui ont été faites dans les astres depuis l'invention de la lunette d'approche, avec des reflexions sur les utilitez qu'on en peut tirer pour la conservation de la vie. 12mo. Paris, 1681
- A translation, with additions, by De Castelet.
- : Sidereus Nuncius. 8vo. [Londini] 1682
- : Lettera . . . scritta alla Granduchessa di Toscana. 4to. Fiorenza, 1710
- : Mathematical discourses concerning two new sciences relating to mechanicks and local motion, in four dialogues . . . with an appendix concerning the center of gravity of solid bodies. Done into English from the Italian by Tho. Weston. 4to. London, 1730
- : Opere. 4 vols. 4to. Padova, 1744
- : Ditto. 13 vols. 8vo. Milano, 1808-1811
- : Ditto. Prima edizione completa, condotta sugli autentici manoscritti Palatini (da Eugenio Albèri e Celestino Bianchi). 16 vols. 8vo. Firenze, 1842-56
- : In Jovis satellites lucubrations, quae per ducentos fere annos desiderabantur, ab Eugenio Albèrio in lucem vindicatae. 8vo. Florentiae, 1846
- : *See also Albèri (E.)*
- : The Sidereal Messenger of Galileo Galilei, and a part of the preface to Kepler's Dioptries, containing the original account of Galileo's astronomical discoveries. A translation with introduction and notes by Edward Stafford Carlos. sq. 12mo. London, 1880
- : Considerazioni sopra il discorso del sig. Galileo Galilei intorno alle cose, che stanno in sù l'acqua, o che in quella si muovono . . . Da Accademico incognito. 4to. Pisa, 1612
- : *See also Castelli (B.) ; Colombe (L. delle) ; Grazia (V. di).*
- : Difesa . . . contro alle calunie & imposture di Baldessar Capra. 4to. Bologna, 1655
- : System of the world, *see Salusbury.*
- : (Life), *see Brewster, Libri, Secchi, Society for the Diffusion of Useful Knowledge, Viviani.*

Galilei Galileo—continued.

— : (Trial), *see* Chasles, Gebler, Gherardi, Plana, Wohlwill, Wolynski.

Galle (Andreas) :

Zur Berechnung der Proximitäten von Asteroiden-Bahnen.
Inaugural-Dissertation. 8vo. Breslau, 1883

Galle (Johann Gottfried) :

- : Ueber die Verbesserung der Planeten-Elemente aus beobachteten Oppositionen, angewandt auf eine neue Bestimmung der Pallas-Bahn. [Habilitations-Schrift.] 4to. Breslau, 1858
- : Dr. Wilhelm Olbers' Abhandlung über die leichteste und bequemste Methode die Bahn eines Cometen zu berechnen. Nachtrag zu der zweiten Auflage. 8vo. Leipzig, 1864
- : *Ueber die Bahn des am 30. Januar 1868 beobachteten und . . . als Steinregen niedergefallenen Meteors durch die Atmosphäre. 8vo. Breslau, 1868
- : Ueber eine Bestimmung der Sonnen-Parallaxe aus correspondirenden Beobachtungen des Planeten Flora auf mehreren Sternwarten der nördlichen und südlichen Halbkugel im October und November 1873. 8vo. Breslau, 1875

Gallo (Giuseppe) :

Introduzione alla meccanica, ed alla filosofia della natura.
2 vols. 8vo. Torino, 1855-1860

Galloway (Thomas) :

- : *A treatise on Astronomy, theoretical, physical and practical, from the Encyclopædia Britannica. 7th edition. 4to. Edinburgh, 1831
- : *Trigonometrical survey. [Encycl. Brit. 7th edition.] 4to.
- : *Figure of the Earth. [Encycl. Brit. 7th edition.] 4to.
- : *A treatise on probability, forming an article under that head in the seventh edition of the Encyclopædia Britannica. 8vo. Edinburgh, 1839
- : *Memoir of Thomas Henderson. 8vo. London, 1845

Gallucci (Giovanni Paolo) :

- : Della fabrica & uso del novo Horologio universale ad ogni latitudine. 4to. Venetia, 1590
- : Speculum Vranicvm ; in quo vera loca tum octauæ sphæræ, tum septem Planetarum mira facilitate ad quodlibet datum tempus ex prutenicarum ratione colliguntur. fol. Venetijs, 1593

Gamaches (Étienne Simon de) :

Astronomie physique, ou principes généraux de la nature, appliqués au mécanisme astronomique, et comparés aux principes de la philosophie de M. Newton. 4to. Paris, 1740

Garcæus (Johannes) :

- : Primus Tractatus brevis et utilis de tempore, conscriptus in gratiam studiosorum. 8vo. Vitebergæ, 1563

Garcæus (Johannes)—continued.

- : Secundus Tractatus de tempore, sive de ortu et occasu stellarum fixarum ad quodlibet temporis momentum. 8vo. Witebergæ, 1565
- : Tertius Tractatus, de usu globi astriferi. 8vo. Vitebergæ, 1565
- : Astrologiae methodus in qua secundum doctrinam Ptolemæi, exactissima facillimaque Genituras qualescumque iudicandi ratio traditur . . . (accessit E. O. Schreckenfuchsii Dialogus de septem Calendariis). 2 vols. in 1, fol. Basileæ, 1576

Gardiner (Wm.) et François Callet:

Tables portatives de logarithmes, publiées à Londres par Gardiner, augmentées, et perfectionnées dans leur disposition par M. Callet. 12mo. Paris, 1783

Garnier (J. G.):

- : Élémens d'algèbre à l'usage des aspirans à l'École Polytechnique. Première section. Troisième édition. 8vo. Paris, 1811
- : Leçons de calcul intégral Troisième édition. 8vo. Paris, 1812
- : Analyse algébrique, faisant suite à la première section de l'algèbre. Deuxième édition. 8vo. Paris, 1814
- : Élémens de géométrie analytique. 8vo. Paris, 1808
- : Leçons de statique, à l'usage des aspirans à l'École Impériale Polytechnique. 8vo. Paris, 1811
- : Réciproques de la géométrie, suivies d'un recueil de théorèmes et de problèmes. Seconde édition. 8vo. Paris, 1810

Garrard (William):

Copious trigonometrical tables, shewing the results in all cases of plane trigonometry, by inspection. Intended to complete the requisite tables to the Nautical Almanack. 8vo. London, 1589

Garthe (C.):

- : Foucault's Versuch als direkter Beweis der Achsendrehung der Erde, angestellt im Dom zu Köln. 8vo. Köln, 1852
- : Die Absidenscheibe. Beschreibung eines Apparates durch welchen die Lage der Absidenlinie der Erdbahn und deren Veränderlichkeit im Weltenraume erörtert werden kann. 8vo. Köln, 1871

Gasparis (Annibale de):

*Sui rapporti delle variazioni simultanee di alcuni elementi di ellissi instantanee nel problema dei tre corpi. 4to. Napoli, 1880

Gassendi (Pierre):

- : Novem stellæ circa Jovem visæ. . . . Accessit observatio geminatæ in singulos dies (æstus maris instar) reciprocationis perpendicularorum. 4to. Parisiis, 1643
- : Tychonis Brahei Equitis Dani, astronomorum Coryphæi vita Accessit Nicolai Copernici, Georgii Peurbachii, & Joannis Regiomontani astronomorum celebrium vita. 4to. Parisiis, 1654

Gassendi (Pierre) —continued.

- : Institutio astronomica juxta hypotheses tam veterum quam Copernici & Tychonis . . . Accedunt ejusdem varij tractatus astronomici. Editio ultima. 4to. Hage-Comitum, 1656
- : Institutio astronomica, juxta hypotheses tam veterum quam recentiorum. Cui accesserunt Galilei Galilei Nuncius Sidereus et Johannis Kepleri Dioptrice. Tertia editio. 3 parts in 1 vol. 8vo. Londini, 1683 (1682)
- : The vanity of judiciary astrology, or divination by the stars. 8vo. London, 1659

Gauss (Carl Friedrich):

- : Disquisitiones arithmeticæ. 8vo. Lipsiae, 1801
- : Recherches arithmétiques . . . traduites par A. C. M. Poulet-Delisle. 4to. Paris, 1807
- : Theoria motus corporum coelestium in sectionibus conicis Solem ambientium. 4to. Hamburgi, 1809
- : Théorie du mouvement des corps célestes parcourant des sections coniques autour du Soleil ; traduction du ‘Theoria motus’ de Gauss, suivie de notes, par Edmond Dubois. 8vo. Paris, n.d.
- : Theorie der Bewegung der Himmelskörper welche in Kegelschnitten die Sonne umlaufen . . . Ins Deutsche übertragen von Carl Haase. 4to. Hannover, 1865
- : *Disquisitio de elementis ellipticis Palladis ex oppositionibus annorum 1803–1809. 4to. Gottingae, 1811
- : *Observationes cometæ secundi A. 1813 in Observatorio Gottingensi factæ ; adjectis nonnullis adnotationibus circa calculum orbitarum parabolicarum. 4to. Gottingae, 1813
- : Determinatio attractionis, quam in punctum quodvis positionis datae exerceret planeta, si ejus massa per totam orbitam, ratione temporis, quo singulæ partes describuntur, uniformiter esset disperita. 4to. Gottingae, 1818
- : Theorematis fundamentalis in doctrina de residuis quadratricis demonstrationes, et ampliations novæ. 4to. Gottingae, 1818
- : *Theoria combinationis observationum erroribus minimis obnoxiae. 4to. Gottingae, 1823
- : Theoria residuorum biquadraticorum . . . Commentatio Secunda. 4to. Gottingae, 1832
- : Werke. Herausgegeben von der K. Gesellschaft der Wissenschaften zu Göttingen. 7 vols. 4to. Göttingen, 1870–77

Band 1. Disquisitiones arithmeticæ.

2. Höhere Arithmetik.
3. Analysis.
4. Wahrscheinlichkeits-Rechnung und Geometrie.
5. Mathematische Physik.
6. Astronomische Abhandlungen.
7. Theoria motus corporum cœlestium.

— : Life, see Winnecke.

Gauss (Carl Friedrich) und Friedrich Wilhelm Bessel:

Briefwechsel . . . Herausgegeben auf Veranlassung der königlich-preussischen Akademie der Wissenschaften. 8vo. Leipzig, 1880

Gauss (Carl Friedrich) und Heinrich Christian Schumacher:
 Briefwechsel . . . Herausgegeben von C. A. F. Peters.
 6 vols. 8vo. Altona, 1860-65

Gautier (Alfred):

- : Essai historique sur le problème des trois corps, ou dissertation sur la théorie des mouvements de la lune et des planètes. 4to. Paris, 1817
- : *Note sur quelques observations astronomiques faites en 1821 et 1822 à l'observatoire de Genève. 4to. Genève, 1822
- : *Mémoire sur une nouvelle détermination de la longitude de Genève. 4to. Genève, 1824
- : *Coup-d'œil sur l'état actuel de l'astronomie pratique en France et en Angleterre. 8vo. Genève, 1825
- : *Mémoire sur une nouvelle détermination de la latitude de Genève. 4to. Genève, 1830
- : *Sur les Bolides qui ont paru le 19 Août 1847 et le 11 Février 1850. 8vo. Genève, 1850
- : *Notice biographique sur M. le Baron Maurice. 8vo. Genève, 1851
- : *Notice sur les derniers travaux d'observation relatifs aux Anneaux de Saturne. 8vo. Genève, 1856
- : Sur quelques applications récentes de la photographie à l'astronomie. 8vo. Genève 1858
- : *Sur les travaux récents des géomètres et des astronomes relatifs à la théorie des mouvements de la lune. 8vo. Genève, 1859
- : *Louis François Wartmann. 8vo. Genève, 1864
- : *Notice sur les observations météorologiques faites sur la côte du Labrador par des missionnaires Moraves. 8vo. Genève, 1870
- : *Observations thermométriques récentes faites dans quelques stations de Syrie et de Palestine. 8vo. Genève, 1870
- : [Reviews of various astronomical works, from the Bibliothèque Universelle, &c.] 8vo. Genève, v.d.

Gautier (Emile):

- : *Observation de l'éclipse totale du soleil du 18 Juillet 1860 à Tarazona. 8vo. Genève, 1860
- : Notice historique et descriptive sur l'Observatoire de Genève. 8vo. Genève, 1883

Geber (Filius Affla Hispalensis):

Libri ix de Astronomia, see Apianus, Instrumentum Primi Mobilis.

Gebler (Karl von):

Galileo Galilei and the Roman Curia, from authentic sources . . . Translated, with the sanction of the author, by Mrs. G. Sturge. 8vo. London, 1879

Geiser (C. F.):

Beiträge zur synthetischen Geometrie. 8vo. Zürich, 1866

Gell (Robert):

Stella nova, a new starre leading wisemen unto Christ. 4to. London, 1649

Gelpke (August Heinrich Christian):

- : Neue Ansicht über den merkwürdigen Naturbau der Kometen und besonders derjenigen von 1811 und 1819; wie auch über die Beschaffenheit ihrer Bahnen, und die einstige Zerstörungsart unseres Wohnortes von denselben. Zweite Ausgabe. 8vo. Leipzig, 1820
- : Neue Ansicht über den merkwürdigen Naturbau der Kometen und die Beschaffenheit ihrer Bahnen, wie auch über die einstige Zerstörungsart unseres Wohnortes von denselben. Dritte Ausgabe. 8vo. Leipzig, 1829
- : Ueber die schrecklichen Wirkungen des Aufsturzes eines Kometen auf die Erde und über die vor fünftausend Jahren gehabte Erscheinung dieser Art. 8vo. Leipzig, 1835
- : Über die Entstehungsart und Beschaffenheit der Kometen, wie auch über die Bahn und den Lauf des Halley'schen Kometen für das Jahr 1835. 8vo. Braunschweig, 1835
- : Populaire Himmelskunde oder allgemein fassliche Betrachtungen über die grossen Wunderwerke des Weltalls Fünfte Ausgabe. 8vo. Hannover, 1837

Geminus:

- : Γεμιίρου Εἰσαγωγὴ εἰς τὰ Φαινόμενα. Gemini Elementa Astronomiae, Graecè & Latinè, interprete Edone Hilderico. 8vo. Altorphii, 1590
- : Isagoge ad Arati Phænomena, *see* Petavius.

Gemma Frisius (Reinier):

- : De Radio Astronomico & Geometrico liber. In quo multa quæ ad Geographiā, Opticam, Geometriam & Astronomiam vtiliss. sunt, demonstrantur. 4to. Antuerpiæ, 1545
- : De Astrolabo Catholico, liber quo latissime patentis Instrumenti multiplex vsus explicatur, & quicquid vspiam rerum Mathematicarū tradi possit continetur. 8vo. Antuerpiæ, 1556
- : De principijs Astronomiæ & Cosmographiæ, deque vsu globi ab eodem editi : Item De Orbis diuisione, & Insulis, rebusque nuper inuentis. 8vo. Coloniae, 1578
- : Cosmographia, *see* Apianus et Gemma Frisius.

Geneva, Observatoire:

- : Observations Astronomiques faites dans les années 1841-58, par E. Plantamour. 4to. Genève, 1842-61
- : Résultats des observations magnétiques dans les années 1842 et 1843. 4to. Genève, 1844
- : Résumé des observations thermométriques et barométriques faites à l'Observatoire de Genève et au Grand St.-Bernard 1841-50. 4to. Genève, 1851
- : *Résumé Météorologique pour Genève et le Grand St.-Bernard, par E. Plantamour (et A. Kammermann), 1847-48, 1850-77, 79-82. 8vo. Genève, 1848-83
- : *Nouvelle organisation des observations météorologiques à Genève, au Grand Saint-Bernard, & à Martigny. Observations météorologiques pendant le mois de Décembre 1883. 8vo. Genève, 1884
- : *See also* Gautier (E.); Meyer (W.)

- Geneva, Société de Physique et d'Histoire Naturelle:**
 — : Mémoires. Tome 5-28, Part 1. 4to. Genève, 1832-83
 — : Table des mémoires contenus dans les tomes 1-20. 4to. Genève, 1871
 — : Rapport du Président (A. de Candolle) pour la période annuelle 1873-74. 4to. Genève
- Gentleman's Diary, or mathematical repository, 1741-77, and 1782-1813.** 7 vols. 12mo. 1741-1813
- Gentleman's Mathematical Companion, 1798-1827.** 7 vols. 12mo. London, 1797-1827
 The title of the first vol. is 'Companion to the Gentleman's diary.'
- Geography and Astronomy:**
 An introduction to geography and astronomy: containing chiefly The Description and Use of the Terrestrial and Celestial Globes The second edition. 8vo. London, 1735
- George (Christopher):**
 *Description of an improved double sextant. 8vo. London, 1867
- Georgetown College, District of Columbia:**
 — : Astronomical Observatory, Annals. No. 1. 4to. New York, 1852
 — : Observations of solar spots, *see* Sestini (B.).
- Georgetown, Demerara, Observatory:**
 Monthly Tables of daily means of meteorological elements, deduced from observations taken . . . during eleven years, commencing January 1846 . . . by Patrick Sandeman. 4to. Greenock, 1857
- Gergonne (J. D.):**
 Annales de mathématiques pures et appliquées: recueil périodique. Tomes 21, 22. 4to. Nismes, 1830-32
- Gerling (Christ. Ludwig):**
 Beiträge zur Geographie Kurhessens und der umliegenden Gegenden, vermittelst der kurhessischen Triangulirung vom Jahr 1823. 8vo. Cassel, 1831-39
- Germain (A.):**
 Traité des projections des cartes géographiques, représentation plane de la sphère et du sphéroïde. 8vo. Paris, n.d.
- Germanicus, Phænomena, *see* Aratus.**
- Germar (F. H.):**
 Sechs Tafeln zur Erleichterung der Himmelskunde, für die Liebhaber derselben (with portfolio of plates). 8vo. Leipzig, 1846
- Gherardi (Silvestro):**
 — : *Il processo Galileo riveduto sopra documenti di nuova fonte. 8vo. Firenze, 1870
 — : *Sulla dissertazione del dott. Emilio Wohlwill. Il processo di Galileo Galilei : ragguaglio. 8vo. Firenze, 1872

Gilbert (William):

Tractatus, sive physiologia nova de Magnete, magneticisque corporibus, & magno magnete tellure, sex libris comprehensus omnia nunc diligenter recognita opera & studio Wolfgangi Lochmans. 4to. Sedini, 1633

Gill (David):

- : *The Determination of the Earth's distance from the Sun: an address delivered at the annual meeting of the South African Philosophical Society at Cape Town. 8vo. Cape Town, 1880
- : *A determination of the solar parallax from observations of Mars made at the Island of Ascension in 1877. 4to. London, 1881
- : *Finlay's Comet [1882, II]. 8vo. Cape Town, 1882

Gill (Mrs.):

Six months in Ascension. An unscientific account of a Scientific Expedition [with an introduction by David Gill] 8vo. London, 1878

Gilliss (James Melville):

- : *The longitude of Washington, computed from the moon culminations observed 1839-42. 4to. Philadelphia, 1849
- : *An account of the total eclipse of the Sun on September 7, 1858, as observed near Olmos, Peru. 4to. Washington, 1859
- : *Physical aspects of the Comet II, 1861. 8vo. New Haven, 1861
- : *A catalogue of 1963 stars reduced to the beginning of the year 1850, together with a catalogue of 290 double stars. The whole from observations made at Santiago, Chili, during the years 1850-51-52, by the U.S. Naval Astronomical Expedition. 4to. Washington, 1870
- : See also Maury (M. F.); United States Coast Survey; Washington, U.S., Naval Observatory.
- : Life, see Gould (B. A.).

Giulio (Carlo Ign.):

*Recherches expérimentales sur la résistance de l'air au mouvement des pendules. 4to. Turin, 1852

Glaisher (James):

- : *On the amount of the radiation of heat at night from the earth, and from various bodies placed on or near the surface of the earth. 4to. London, 1847
- : Hygrometrical Tables, to be used with, and description of the dry- and wet-bulb thermometers. 8vo. London, 1847
- : *On the reduction of the thermometrical observations made at the apartments of the Royal Society from the years 1774-1781, 1787-1843. 4to. London, 1849
- : Sequel. 4to. London, 1850
- : *Meteorology of Scotland, 1856-57. 8vo.
- : *On the determination of the mean temperature of every day in the year from observations taken at the Royal Observatory, Greenwich, 1814-56. 8vo. London, 1858

Glaisher (James)—continued.

- : *On the meteorological and physical effects of the Solar Eclipse of March 15, 1858. 8vo. London, 1858
- : *An account of meteorological and physical observations made in five balloon ascents in the year 1863. 8vo. London, 1863
- : *An account of meteorological and physical observations made in nine balloon ascents in the years 1863 and 1864. 8vo. London.
- : Scientific experiments in balloons. 8vo. London, 1863
- : Meteorology of England, 1863–84. 8vo. London.
- : Reduction of the meteorological observations made at the Royal Horticultural Gardens, Chiswick, in the years 1826–69. 8vo. London, 1871
- : *See also* Guillemin (A.) ; Mitchel (O. M.).

Glaisher (J. W. L.):

- *Report of the Committee [of the British Association] on mathematical tables. 8vo. London, 1873

Glasgow Astronomical Society (report of the nature and progress of the), drawn up by order of the directors.
8vo. Glasgow, 1809

Glasgow, Mitchell Library:

- Report, 1881–83. 8vo. Glasgow.

Glasgow Observatory:

- : Report of the proceedings at the dinner of the friends of astronomical science, held in the Town Hall on Friday, December 16. 8vo. Glasgow, 1836
- : Report of the Professor of Astronomy in the University of Glasgow, 1864–68 and 1871. 8vo. Glasgow.
- : Catalogue of 6415 stars, for the epoch 1870, deduced from observations made . . . during the years 1860 to 1881, preceded by a synopsis of the annual results of each star arranged in the order of Right Ascension. By Robert Grant. 4to. Glasgow, 1883

Glasgow Philosophical Society:

- Proceedings, 1841–83. Vol. 1–14. 8vo. Glasgow, 1844–83

Glasgow University:

- Statement by the Committee . . . on time-signals, in reference to a report addressed on the 14th of October, 1863, by Professor Piazzi Smyth to the Board of Visitors of the Edinburgh Observatory. 8vo. Glasgow, 1863

Gledhill (Joseph):

- Handbook of Double Stars, *see* Crossley and Gledhill.

Gloriosus (Joannes Camillus):

- : De Cometis dissertatio Astronomico-Physica. 4to. Venetiis, 1624
- : Responsio . . . ad controversias de Cometis peripateticas, seu potius ad calumnias & mendacia eiusdam peripatetici. 4to. Venetiis, 1626

Gnomonic Projection of the Sphere. 8vo. London, 1851

Goad (J.):

- Astro-meteorologica, or aphorisms and discourses of the Bodies Coelestial, their natures and influences. fol. London, 1686

Godfray (Hugh):

- : A treatise on astronomy for the use of colleges and schools. 8vo. Cambridge, 1866

- : An elementary treatise on the lunar theory, with a brief sketch of the history of the problem before Newton Third edition. 8vo. Cambridge, 1871

Godward (William):

- Auxiliary tables for computing an approximate Ephemeris of a Minor Planet where the angle of excentricity does not exceed twenty degrees. 4to. London, 1866

Gogou (Constantin), see Paris, Observatoire.

Goldbach (C. F.):

- Neuester Himmels-Atlas zum Gebrauche für Schul- und Akademischen Unterricht Revidirt auf der Sternwarte Seeberg bey Gotha, und mit einer Einleitung begleitet vom Hrn. Obristwachtmstr. von Zach. Obl. fol. Weimar, 1799

Goldbach (Joachim):

- Dissertatio Selenographica. [Inaugural dissertation.] 4to. Regiomonti, 1662

Goldingham (John):

- : Report of the length of the pendulum at the Equator from experiments and observations made on an expedition in 1821 ; together with a deduction of the figure of the Earth. fol. Madras, 1824

— : *See also* Madras Observatory.

Gompertz (Benjamin):

- : *On pendulums vibrating between cheeks. 8vo. London, 1817

- : The principles and application of imaginary quantities. Books 1 and 2. 2 parts in 1 vol. 4to. London, 1817-18

- : *A sketch of an analysis and notation applicable to the estimation of the value of life contingencies. 4to. London, 1820

- : Hints on Porisms being No. 3 of Original Tracts. 4to. London, 1850

— : Life, *see* Adler (M. N.).

Good (John):

- The art of shadows, or universal dialling, with tables exactly calculated for the lat. of 51 deg. 30 min. viz.: London. Third edition. 8vo. London, 1731

Goodacre (Robert):

- A glossary; or explanation of the principal terms used in the Sciences of Astronomy and Geography, with a description of the principal stars and constellations of the heavens Fifth edition. 12mo. Nottingham, 1828

Gordon (Edward Smith):

*On fixing positions by the more simple astronomical observations.
8vo. Woolwich, 1881

Gore (John Ellard):

Southern stellar objects for small telescopes, between the equator and 55° south declination, with observations made in the Punjab.
8vo. Lodiania, 1877

Gotha Observatory, see Ball (L. de); Hansen (P. A.); Zach (F. X. von).

Gothard (Alexander von):

*Adatok Jupiter és Mars Bolygók physikálához.
8vo. Budapest, 1884

Gothard (Eugen von):

- : *Ein Spektroscop für Kometen- und Fixstern-Beobachtungen.
4to. Leipzig, 1883
- : *Egy új Spektroscop.
8vo. Budapest, 1884
- : See Herény, Observatorium.

Göttingen, Königliche Gesellschaft der Wissenschaften:

- : Commentarii Societatis Regiae Scientiarum Gottingensis, 1751-54.
4 vols. 4to. Gottingae, 1752-55
- : Novi Commentarii Societatis Regiae Scientiarum Gottingensis, 1769-77.
8 vols. 4to. Gottingae, 1771-78
- : Commentationes Societatis Regiae Scientiarum Gottingensis Recentiores, 1823-27. Vol. 6.
4to. Gottingae, 1828
- : Abhandlungen, 1838-83. Band 1-22, 24-30.
4to. Göttingen, 1843-83
- : Göttingische Gelehrte Anzeigen, 1858-83.
12mo. Göttingen, 1858-83
- : Nachrichten von der k. Gesellschaft der Wissenschaften und der Georg-Augusts-Universität, 1853-83.
12mo. Göttingen, 1853-83

Göttingen (Königl. Sternwarte):

- : Astronomische Mittheilungen. Erster Theil : Mittlere Oerter der in den Zonen -0° und -1° der Bonner Durchmusterung enthaltenen Sterne bis zu 9^{mo} Grösse beobachtet und auf 1875.0 reducirt, von R. Copeland und C. Bürgen.
4to. Göttingen, 1869
- : Veröffentlichungen . . . 1. Theorie des Bifilar-Hygrometers. 2. Ueber Fixsternsysteme. 3. Ueber einen grossen Sternschnuppenfall aus dem Jahre 524, von W. Klinkerfues. 4. Zeichnungen des Planeten Mars, von O. Boedicker.
8vo. Göttingen, 1878
- : See also Mayer (T.)

Gould (Benjamin Apthorp):

- : Untersuchungen über die gegenseitige Lage der Bahnen der zwischen Mars und Jupiter sich bewegenden Planeten. Inaugural-Dissertation.
4to. Göttingen, 1848
- : The Astronomical Journal. Vol. 1-6.
4to. Cambridge and Albany, 1851-61
- : Reply to the 'Statement of the Trustees' of the Dudley Observatory.
8vo. Albany, 1859

Gould (Benjamin Apthorp)—continued.

- : *See also Albany, Dudley Observatory.*
- : *Reduction of the Observations of fixed Stars made by Joseph Lepaute D'Agelet, at Paris, in 1783-1785, with a catalogue of the corresponding mean places, referred to the Equinox of 1800.0. 4to. [Washington, 1866]
- : *Biographical Notice of James Melville Gilliss. 8vo. Cambridge (U.S.), 1867
- : *The Transatlantic longitude, as determined by the Coast Survey Expedition of 1866. 4to. Washington, 1869
- : Address on receiving from the Governor of the Province of Cordoba the premiums awarded at the Centennial Exhibition, in Philadelphia, to the Argentine National Observatory and to himself, for lunar and stellar photographs. 4to. 1877
- : *Uranometria Argentina.* Brightness and position of every fixed star, down to the seventh magnitude, within one hundred degrees of the South pole. 4to. Buenos Aires, 1879
- : *Uranometria Argentina.* Mapas: Publicado por el Observatorio Nacional Argentino. fol. Buenos Aires, 1877
- : *Sobre el Cometa de Febrero de 1880. 8vo. Buenos Aires, 1880
- : Sobre las observaciones de los contactos en el pasaje de Venus hechas en el Observatorio Nacional Argentino. 8vo.
- : Reception of Dr. Benjamin A. Gould by his fellow-citizens of Boston and vicinity, June 22, 1874. 8vo. Boston, 1874
- : *See also* Córdoba, Observatorio Nacional Argentino.

Gould (C.):

An extensive table, containing eighty thousand azimuths, computed to given altitudes, latitudes, and declinations to be taken out by inspection, for the purpose of more readily determining the variation of the compass at sea.
8vo. London, 1820

Grablovitz (Giulio):

Dell' attrazione luni-solare in relazione coi fenomeni mareo-sismici. 8vo. Milano, 1877

Gräbner (Paul):

Prognosticon oder Erklärung über den Anno 1618 erschienen Comet-Stern, und dessen Operation, von Veränderung der höchsten Potentaten dieser Welt, und von dem Untergang dess Türkischen Kaysers. 4to. [Magdeburg] 1631

Gräf (F. C. A.):

Unsere Erde mit ihrem Monde. Ein Beytrag zur allgemeinern Verbreitung der Einsicht in das Weltgebäude.
8vo. Gotha, 1825

Graham (James D.):

*Observations of the Magnetic Dip made in 1840, 1842-45. 4to. Philadelphia, 1846

Grandsagne (Ajasson de):

Uranographie ou description du ciel, renfermant un abrégé

Grandsagne (Ajasson de)—continued.

de géographie mathématique et un traité du calendrier . . . suivi d'un article sur les étoiles doubles par M. Arago. 12mo. Paris, 1834

Grant (Robert):

- : History of Physical Astronomy, from the earliest ages to the middle of the nineteenth century. 8vo. London, 1852
- : Two letters on the question of the authenticity of the documents respecting Newton, which have been communicated by M. Chasles to the Academy of Sciences of the French Institute. 8vo. Glasgow, 1869
- : Catalogue of 6415 stars, *see* Glasgow Observatory.

[Grassi (Horatius)]:

Libra astronomica ac philosophica qua Galilaei Galilaei opiniones de cometis a Mario Guiducio in Florentina Academia expositæ, atque in lucem nuper editæ, examinantur. 4to. Perusiae, 1619

Published under the name of Lotario Sarsi.

Gravesande (Guill. Jac.'s):

- : Physices elementa mathematica experimentis confirmata, sive introductio ad philosophiam Newtonianam. Vol. 2. 4to. Lugduni Batavorum, 1721
- : Mathematical elements of natural philosophy confirm'd by experiments; or an introduction to Sir Isaac Newton's philosophy . . . Translated by J. T. Desaguliers . . . The fifth edition. 2 vols. 8vo. London, 1737
- : The elements of universal mathematics, or algebra; to which is added a specimen of a commentary on Sir Isaac Newton's Universal Arithmetic . . . Second edition. 8vo. London, 1752

Gravitation:

- : Thoughts on general gravitation, and views thence arising as to the state of the Universe. 4to. London, 1777
- : An exposition of the nature, force, action, and other properties of gravitation on the planets . . . 8vo. London, 1842

Gravius (Johannes):

- : Elementa linguæ Persicæ . . . Item Anonymus Persa de Siglis Arabum et Persarum Astronomicis. 4to. Londini, 1649
- : *See also* Ulugh Beigh.

Gray (Peter):

- : On a practical method of forming logarithms and anti-logarithms to twelve or any less number of places. 8vo. London, 1847
- : A table for the easy formation of anti-logarithms of twelve or any less number of places. 8vo. London, 1848
- : Tables and formulae for the computation of life contingencies; with copious examples of annuity, assurance, and friendly society calculations. 8vo. London, 1849
- : Addendum. 8vo. London, 1870
- : *Remarks on a problem in life contingencies. 8vo. London, 1850

Gray (Peter)—continued.

- : Tables for the formation of logarithms & anti-logarithms to twelve places ; with explanatory introduction. 8vo. London, 1865
- : On the arithmometer of M. Thomas (De Colmar), and its application to the construction of life contingency tables. 8vo. London, 1874
- : Tables for the formation of logarithms & anti-logarithms to twenty-four or any less number of places, with explanatory introduction and historical preface. 8vo. London, 1876

Gray (Peter), Henry Ambrose Smith, & William Orchard :
Assurance and annuity tables, according to the Carlisle rate of mortality at three per cent. 8vo. London, 1851

Grazia (Vincenzio di) :

Considerazioni . . . sopra a'l discorso di Galileo Galilei intorno alle cose che stanno su l'acqua, e che in quella si muovono. 4to. Firenze, 1613

Greaves (John) :

The origine and antiquity of our English weights and measures discover'd, by their near agreement with such standards that are now found in one of the Egyptian pyramides. 8vo. London, 1706

Grebel (M. W.) :

Die Strahlenbrechung in einaxigen Mitteln, graphisch dargestellt. (Programm des K. Gymnasiums zu Glogau.) 4to. Glogau, 1842

Green (F. M.) :

Report on the telegraphic determination of differences of longitudes in the West Indies and Central America. 4to. Washington, 1877

Green (F. M.), C. H. Davis, and J. A. Norris :

— : Telegraphic determination of longitudes on the East Coast of South America, embracing the meridians of Lisbon, Madeira [etc.] 4to. Washington, 1880

— : Telegraphic determination of longitudes in Japan, China, and the East Indies. 4to. Washington, 1883

Green (F. M.) and E. S. Holden :

The determination of secondary meridians by electric telegraph, and the personal equation. 4to. Washington, 1876

Green (George) :

*Mathematical investigations concerning the laws of the equilibrium of fluids analogous to the electric fluid, with other similar researches. 4to. Cambridge, 1835

Green (Jacob) :

Astronomical Recreations ; or sketches of the relative position and mythological history of the constellations. fol. Philadelphia, 1824

Green (Nathaniel E.) :

*Observations of Mars at Madeira, August and September, 1877. 4to. London, 1879

Greene (Robert):

The principles of the philosophy of the expansive and contractive forces, or an inquiry into the principles of the modern philosophy In seven books.

fol. Cambridge, 1727

Greenwich, Royal Observatory:

- : Historiæ cœlestis libri duo, quorum prior exhibit catalogum stellarum fixarum Britannicum novum et locupletissimum, una cum earundem planetarumque omnium observationibus sextante, micrometro, &c., habitis: Posterior transitus syderum per planum arcus meridionalis, et distantias eorum a vertice complectitur. Observante Johanne Flamsteedio, 1676–1705. fol. Londini, 1712
- : Historiæ Cœlestis Britannicæ volumen primum (secundum et tertium) observante Joanne Flamsteedio, 1675–1720. 3 vols. fol. Londini, 1725
- : Astronomical observations made from the year 1750 to the year 1762, by the Rev. James Bradley, Astronomer Royal, together with a continuation of the same [to 1764] by the Rev. Nathaniel Bliss, Astronomer Royal. 2 vols. fol. Oxford, 1798–1805
- : Astronomical observations made from the year 1765 to the year 1810, by the Rev. Nevil Maskelyne, Astronomer Royal. 4 vols. London, 1776–1811
- : Astronomical observations made in the years 1811–1835, by John Pond, Astronomer Royal. 10 vols. fol. London, 1815–36
- : A Catalogue of 1112 stars, reduced from Observations made from the years 1816 to 1833 [under the direction of John Pond]. fol. London, 1833
- : The sum of the three equations of aberration, solar nutation, and precession of forty principal fixed stars for every day of the year, in leap year, the first, the second, and third years after (1824–39). [J. Pond.] fol. London.
- : Tables of the aberration, annual variation, solar and lunar nutation in N.P.D. for 40 principal fixed stars for every day of the year 1825. [J. Pond.] fol. London.
- : Experiments made to determine whether any permanent difference exist between the two Mural Circles. 8vo. London, 1825
- : Astronomical Observations made in the years 1836–1847, under the direction of G. B. Airy. 12 vols. 4to. London, 1837–49
- : Magnetical and meterological observations made in the years 1840–47, under the direction of G. B. Airy. 7 vols. 4to. London, 1843–49
- : Astronomical and magnetical and meteorological observations made in the years 1848–81 under the direction of G. B. Airy. 34 vols. 4to. London, 1850–83
- : Appendices.

Greenwich, Royal Observatory—continued.**— : Appendices—continued.**

1836. II. Table of factors for converting errors of R.A. and N.P.D. into errors of longitude and ecliptic P.D.
1837. III. Logarithms of sines and cosines to time for every 10 seconds through the 24 hours.
- IV. Tables for converting sidereal time into mean solar time.
1842. Catalogue of the places of 1439 stars referred to Jan. 1, 1840, from observations 1836–41.
1845. Determination of the longitude of Valentia by transmission of chronometers.
1847. Catalogue of 2156 stars from the observations made 1836–47.
1851. Results in R.A. of observations of stars by Dr. Maskelyne 1765–1807, arranged by R. Main.
1852. I. Description of the Transit Circle.
II. Regulations of the Royal Observatory.
1853. Bessel's Refraction Tables, modified and expanded.
1854. I. Description of the Reflex Zenith Tube.
II. Catalogue of 1576 stars from observations 1848–53, reduced to 1850.
1856. Description of the Galvanic Chronographic Apparatus.
1862. I. Seven-year catalogue of 2022 stars from observations 1854–60, reduced to 1860.
II. Plan of Buildings and grounds.
1864. I. On the value of the Moon's semidiameter from the occultations observed at Cambridge and Greenwich. (H. Breen.)
II. Reduction of the Greenwich planetary observations 1831–35.
1867. I. Description of the Altazimuth.
II. Description of the Transit Circle.
1868. I. Corrections of Bouvard's elements of the orbits of Jupiter and Saturn, by H. Breen.
II. New seven-year catalogue of 2760 stars, from observations 1861–67, reduced to 1864.
III. Description of the Great Equatorial.
1873. Regulations of the Royal Observatory.
1875. Numerical lunar theory.
1876. Nine-year catalogue of 2263 stars, from observations from 1868–76, reduced to 1872.
1877. Mean temperature of the Air at every hour of the day from 1849 to 1868.
1879. Description of the Greenwich time signal system.
Results of Astronomical Observations, 1847–81.
Results of magnetical and meteorological observations, 1848–81.
Results of spectroscopic and photographic observations, 1878–81.
Reports of the Astronomer Royal to the Board of Visitors, 1836–84.
- : Reduction of the observations of the Moon made from 1750 to 1830, computed under the superintendence of G. B. Airy. 2 vols. 4to. London, 1848
- : (Continuation) from 1831 to 1851. 4to. London, 1859
- : Reduction of the observations of planets made from

Greenwich, Royal Observatory—continued.

1750 to 1830, computed . . . under the superintendence
of G. B. Airy. 4to. London, 1845

— : Reduction of twenty years' photographic records of the baro-
meter, and dry-bulb and wet-bulb thermometers, and of
twenty-seven years' observations of the earth thermometers,
made . . . under the direction of G. B. Airy.
4to. London, 1878

Greenwood (Nicholas) :

Astronomia Anglicana : containing an absolute and entire piece
of astronomy. Wherein is succinctly handled the trigono-
metrical part, generally propounded and particularly apply'd
in all questions tending to diurnal motion . . . with new,
facile, and most exact tables . . . fol. London, 1689

Grégoire (—) :

Rapport sur l'établissement du Bureau des Longitudes.
8vo. Paris, An III [1795]

Gregorie (John) :

The description and use of the terrestrial globe (description
and use of maps and charts). 4to. London, 1649

Gregorius, Bishop of Tours :

Liber ineditus de Cursu Stellarum ; ratio qualiter ad officium
implendum debeat observari, sive de cursibus ecclesiasticis.
Nunc primum edidit, recensuit, vindicavit Frid. Haase.
4to. Vratislaviae, 1853

Gregory (David) :

— : Astronomiae physicæ & geometricæ elementa.
fol. Oxoniæ, 1702

— : Astronomiae physicæ & geometricæ elementa. Secunda
editio ; accesserunt præfatio editoris (C. Huart) ; cometog-
raphia Halleiana ; Horologiorum Sciotericorum tractatus
[a C. Huart]. 2 vols. 4to. Genevæ, 1726

— : The elements of physical and geometrical astronomy, done
into English. Second edition, to which is annex'd Dr.
Halley's synopsis of the astronomy of comets. The whole
newly revised . . . by Edmund Stone.
2 vols. 8vo. London, 1726

— : Catoptricæ et dioptricæ sphæricæ elementa.
8vo. Edinburgi, 1713

— : Elements of catoptries and dioptries. Translated from the
Latin original, with a large supplement, by William
Browne. The second edition, to which is added an appendix
by J. T. Desaguliers. 8vo. London, 1735

Gregory (G.) :

The economy of nature explained and illustrated on the prin-
ciples of modern philosophy. 3 vols. 8vo. London, 1796

Gregory (Olinthus) :

— : A treatise on astronomy, in which the elements of the
science are deduced in a natural order, from the appearances
of the heavens to an observer on the earth . . .
8vo. London, 1802

Gregory (Olinthus)—continued.

- : Elements of plane and spherical trigonometry. 12mo. London, 1816
- : *An account of some experiments made in order to determine the velocity with which sound is transmitted in the atmosphere. 4to. Cambridge, 1824
- : Mathematics for practical men; being a common-place book of principles, theorems, rules, and tables. 8vo. London, 1825

Gregory (Olinthus) [and others]:

Dissertations and letters by Don Joseph Rodriguez, the Chevalier Delambre, Baron de Zach, Dr. Thomas Thomson, Dr. Olinthus Gregory, and others, tending either to impugn or defend the trigonometrical survey of England and Wales . . . collected by O. . . . G. . . . 8vo. London, 1815

Gregory (Olinthus), W. S. B. Woolhouse, and James Hann:

Tables for the use of nautical men, astronomers, and others, intended particularly as supplementary to the Nautical Almanac, and White's celestial atlas. 12mo. London, 1841

Gressler (F. G. L.):

Himmel und Erde, beschrieben und im Modell dargestellt . . . Achte Auflage. 8vo. Langensalza, 1853

Groombridge (Stephen):

- : *Astronomical Observations. 4to. London, 1820
- : A catalogue of Circumpolar Stars, deduced from the observations of Stephen Groombridge . . . reduced to January 1, 1810. Edited by G. B. Airy. 4to. London, 1838

Grove (William Robert):

- : A lecture on the progress of physical science since the opening of the London Institution. 8vo. London, 1842
- : On the correlation of the physical forces; being the substance of a course of lectures delivered in the London Institution in the year 1843. 8vo. London, 1846
- : The correlation of the physical forces. Sixth edition. With other contributions to science. 8vo. London, 1874
- : Address to the British Association for the advancement of Science. (On continuity.) 8vo. London, 1867
- : *On aplanatic telescopes. 8vo. London, 1867

Grover (H. M.):

Changes of the poles and the equator considered as a source of error in the present construction of the maps and charts of the globe. 8vo. London, 1848

Grubb (Howard):

*On a new form of equatorial telescope. 4to. Dublin, 1884

Grubb (Howard) and C. E. Burton:

*On a new form of Ghost micrometer for use with astronomical telescopes. 8vo. Dublin, 1880

Grubb (Thomas), Melbourne Telescope, see Robinson and Grubb.

Gruithuisen (Franz von Paula):

- : Ueber die Natur der Kometen, mit Reflexionen auf ihre Bewohnbarkeit und Schicksale; bey Gelegenheit des Kometen von 1811. 8vo. München, 1811
- : Selenognostische Fragmente . . . Einleitung. 4to.
- : Analekten für Erd- und Himmels-Kunde. Band 1. Heft 1-7. 8vo. München, 1828-31
- : Neue Analekten für Erd- und Himmels-Kunde. Band 1, 2 (alter Reihe 8.-15. Heft) 8vo. München, 1834-36
- : Kritik der Rede Schellings zum fünf und siebzigsten Jahrestag der königlich-Bayer'schen Akademie der Wissenschaften. 8vo. München, 1834
- : Naturgeschichte des gestirnten Himmels. Eine neue, zufolge ihrer Einrichtung jedem scientifich Gebildeten fassliche Darstellung der neuesten Lehren der Astronomie, nebst tabellarischer Astronomie als Anhang. 8vo. München, 1836
- : Astronomisches Jahrbuch für physische und naturhistorische Himmelsforscher. Band 1-11. 8vo. München, 1838-51
- : Bedeutungsvolle und neue Erscheinungen bei der Sonnenfinsterniss vom 8. Juli 1842. 8vo. Stuttgart, 1842

Grummert (Gottfried Heinrich):

Betrachtungen über die Mondenluft, bey Gelegenheit der grossen Sonnenfinsterniss, am 25. des Heu-Monats 1748.
4to. Dresden und Leipzig, 1748

Grunort (Johann August):

- : Optische Untersuchungen. 1. Allgemeine Theorie der Fernröhre und Mikroskope. 2. Theorie der achromatischen Objective. 3. Theorie der zweifachen achromatischen Oculare. 3 parts in 1 vol. 8vo. Leipzig, 1846-51
- : Beiträge zur meteorologischen Optik und zu verwandten Wissenschaften. Herausgegeben von J. A. G. Band 1, Heft 1-4. 8vo. Leipzig, 1848-50
- : Loxodromische Trigonometrie. Ein Beitrag zur Nautik. 8vo. Leipzig, 1849
- : *Ueber die nautische Aufgabe: Aus den gemessenen Höhen zweier Sterne, deren Rectascensionen und Declinationen bekannt sind, und der Zwischenzeit der beiden Beobachtungen die Polhöhe und die Zeit zu bestimmen. 8vo. Greifswald, 1850
- : *Neue Methode zur Berechnung der Cometenbahnen. 8vo. Greifswald, 1851
- : *Über die Proximitäten der Bahnen der Planeten und Kometen. 8vo. Wien, 1854
- : *Theorie der Sonnenfinsternisse, der Durchgänge der unteren Planeten vor der Sonne, und der Sternbedeckungen für einen gegebenen Ort der Erde. 2 parts, 4to. Wien, 1854-55
- : *Über eine geometrische Aufgabe, mit besonderer Rücksicht auf die Bestimmung der Stillstandpunkte oder Stationen der um die Sonne sich bewegenden Weltkörper. 8vo. Wien, 1855
- : *Über eine astronomische Aufgabe. 8vo. Wien, 1855

Grunert (Johann August)—continued.

- : De area trianguli loxodromici in superficie ellipsoidis.
Inaugural Dissertation. 4to. Gryphiswaldiae, 1859
- : *Neue nähерungsweise Auflösung der Kepler'schen Aufgabe.
8vo. Wien, 1856
- : *Theorie der wahren und scheinbaren Bewegung eines
Weltkörpers um die Sonne, nebst neuen Methoden zur
Bestimmung der Bahn aus drei Beobachtungen.
8vo. Greifswald, 1857
- : *Directe Bestimmung der Durchschnittspunkte der Bahnen
zweier in Kegelschnitten sich um die Sonne bewegender
Weltkörper. 4to. Wien, 1861
- : *Allgemeine Theorie der Kegelschnitte als Curven im
Raume betrachtet, nebst deren Anwendung auf die Bestim-
mung der Bahnen der um die Sonne in Kegelschnitten
sich bewegenden Weltkörper und der Proximitäten dieser
Bahnen. 8vo. Greifswald, 1861

Gruppe (O. F.) :

Die kosmischen Systeme der Griechen. 8vo. Berlin, 1851

Gruss (Gustav) :

- : *Über die Bahn der Loreley (165). 8vo. Wien, 1877
- : *Bestimmung der Bahn des Kometen V, 1874.
8vo. Wien, 1878

Grynaeus (Simon) :

Commentarii duo, de ignitis meteoris unus : alter de cometarum
causis atque significationibus Accessit eiusdem ob-
servatio cometæ 1577-78 et disputatio de
inusitata magnitudine & figura Veneris 1578-79.
4to. [Basileæ, 1580]

Gualterotti (Raffaele), Nuova Stella, see Jacoli (Ferdinando).

Guarini (Giovanni), L. Palmieri, ed. A. Scacchi :

Memoria sullo incendio Vesuviano del mese di Maggio 1855.
4to. Napoli, 1855

Guarini (Guarino) :

Cælestis mathematicæ, pars prima, in qua leges antiquæ et
novæ temporum ac planetarum digeruntur, et in tabulas
ordinantur. fol. Mediolani, 1683

Guccia (J.) :

*Sur une classe de surfaces, représentables, point par point,
sur un plan. 8vo. Paris, [1880]

Guericke (Otto von) :

Experimenta nova (ut vocantur) Magdeburgica de Vacuo
Spatio quibus accesserunt simul certa quedam de
aeris pondere circa terram ; de virtutibus mundanis &
systemate mundi planetario ; sicut & de stellis fixis ac spatio
illo immenso, quod tamen intra quam extra eas funditur.
fol. Amstelodami, 1672

Guérin (J.) :

Catalogue des manuscrits orientaux en langue Sanscrite, sur
l'astronomie, la médecine, &c. 8vo. Paris, 1855

Guillemin (Amédéo):

- : Le Ciel : Notions d'astronomie à l'usage des gens du monde et de la jeunesse. 8vo. Paris, 1864
 — : Ditto, quatrième édition. 8vo. Paris, 1870
 — : Le Ciel. Notions élémentaires d'astronomie physique Cinquième édition. 8vo. Paris, 1877
 — : The Heavens : an illustrated handbook of popular astronomy Edited by J. Norman Lockyer. 8vo. London, 1866
 — : La Lune. 8vo. Paris, 1866
 — : Le Soleil. 8vo. Paris, 1869
 — : The Sun. . . . From the French by T. L. Phipson. 8vo. London, 1870
 — : Les Comètes. 8vo. Paris, 1875
 — : The World of Comets. . . . Translated and edited by James Glaisher. 8vo. London, 1877
 — : Les Nébuleuses : notions d'Astronomie sidérale. 8vo. Paris, 1880

Guimaraens (A. de Souza):

- *Remarks on a paper on fluid cavities in Meteorites by H. Hensoldt. 8vo. London, 1883

Guinand (Aimé):

- Some account of the late M. G., and of the important discovery made by him in the manufacture of Flint Glass for large telescopes. (By E. R.) 8vo. London, 1825

Guinea :

- Observationes meteorologicae per annos 1829-34 & 1838-42 in Guinea factae a J. J. Trentepohl, R. Chenon, F. Sannom. 4to. Hauniæ, 1845

Guldberg (C. M.):

- Om Cirklers Beröring. Christiania Universitets-Program. 4to. Christiania, 1861

Guldberg (C. M.) et H. Mohn:

- Études sur les mouvements de l'atmosphère. Première partie. 4to. Christiania, 1876

Guldberg (C. M.) et P. Waage :

- Études sur les affinités chimiques. Programme de l'Université, 1867. 4to. Christiania, 1867

Gumpach (Johannes von):

- : Hülfsbueh der Rechnenden Chronologie, oder Largeteau's abgekürzte Sonnen- und Mondtafeln nebst Beispielen ihrer praktischen Anwendung. 8vo. Heidelberg, 1853
 — : A popular inquiry into the Moon's rotation on her axis. 8vo. London, 1856
 — : A letter to William Hopkins on the subject of the true figure and dimensions of the Earth. 8vo. Guernsey [1862]
 — : A letter to Warren De La Rue [the same letter]. 8vo. Guernsey [1862]
 — : The true figure and dimensions of the Earth, newly determined from the results of geodetic measurements and

Gumpach (Johannes von)—continued.

pendulum observations . . . in a letter addressed to
G. B. Airy, Astronomer Royal. Second edition.
8vo. London, 1862

Gunter (Edmund):

— : Works: containing the description and use of his sector, cross-staff, bow, quadrant, and other instruments: with a canon of artificial sines and tangents to radius of 10,000,000 parts, and logarithms from an unite to 10,000 . . . corrected by H. Bond. Fourth edition, to which is added the description and use of another sector . . . also of a quadrant . . . by Sam. Foster. Enlarged by W. L[eybourn].
4to. London, 1662

— : Ditto, fifth edition. 4to. London, 1673

Günther (Friedrich Wilhelm):

De perturbationibus quas Saturnus per integrum revolutionem in Palladem exercet; commentatio astronomica, cui Palladis orbitae determinatio nova superstruitur. [Inaugural Dissertation.] 4to. Wratislaviae, 1860

Günther (Joh. Jac.):

Populäre Betrachtung über die Kometen, mit Bezug auf die uns in diesem (1834) oder folgenden Jahre (1835) bevorstehende Erscheinung des sogenannten Halley'schen Kometen. 12mo. Cöln, 1834

Gussew (H.):

*Über die Gestalt des Mondes. 8vo. St. Petersburg, 1860

Guynemer (A. M. A.):

Dictionnaire d'astronomie à l'usage des gens du monde.
8vo. Paris, 1852

Guyot (Arnold):

— : *A collection of meteorological tables, with other tables useful in practical meteorology. 8vo. Washington, 1852

— : Ditto, second edition (tables meteorological and physical). 8vo. Washington, 1858

Gyldén (Hugo):

— : *Untersuchungen über die Constitution der Atmosphäre und die Strahlenbrechung in derselben. (Abhandlungen I und II.) 4to. St. Petersburg, 1866–68

— : *Über eine Methode die Störungen eines Cometens vermittelst rasch convergirender Ausdrücke darszustellen.
8vo. St. Petersburg, 1869

— : *Studien auf dem Gebiete der Störungstheorie. I. Entwicklung einiger Verbindungen elliptischer Functionen.
4to. St. Pétersbourg, 1871

— : *Relationer emellan Stjernornas glans, antal och relativa medelafstånd från vår ständpunkt i verldsrymden.
8vo. Stockholm, 1872

— : *Formler och tabeller för beräkning af fyrars lysvidd.
8vo. Stockholm, 1872

— : *Om stjernkatalogen i Lacaille's 'Astronomiae Fundamenta.'
8vo. Stockholm, 1873

Gyldén (Hugo)—continued.

- : *Förteckning öfver rektascensionerna för 103 Fundamentalstjernor. 8vo. Stockholm, 1874
- : *Om en method för den analytiska härledningen af de små planeternas relativa störingar. 8vo. Stockholm, 1874
- : *Grunddraget af en method för beräkningen af absoluta störingar, med hufvudsakligt afscende på de små planeternas banor. 8vo. Stockholm, 1875
- : Die Grundlehren der Astronomie nach ihrer geschichtlichen Entwicklung dargestellt. 8vo. Leipzig, 1877
- : *Ueber die mittlere Parallaxe der Fixsterne erster Grösse. 8vo. Leipzig, 1877
- : *Ueber die Bahn eines materiellen Punktes, der sich unter dem Einflusse einer Centralkraft von der Form $\frac{\mu_1}{r^2} + \mu_2 r$ bewegt. 4to. Stockholm, 1879
- : * Sur la sommation des fonctions périodiques. 4to. Paris, 1879
- : *Versuch einer mathematischen Theorie zur Erklärung des Lichtwechsels der veränderlichen Sterne. 4to. Helsingfors, 1880
- : *Om banan af en punkt, som rör sig i en sferoids eqvatorplan under inverkan af den Newtonska attraktionskraften. 8vo. Stockholm, 1880
- : *Ueber die Theorie der Bewegungen der Himmelskörper. 4to. Kiel.
- : *Eine Annäherungsmethode im Probleme der drei Körper. 4to.
- : *Ueber die Convergenz der successiven Annäherungen bei der theoretischen Berechnung der Bahnen der Himmelskörper. 8vo. Leipzig [1881]
- : *Undersökningar af theorien för himlakropparnas rörelser. 1-3. 8vo. Stockholm, 1881-82
- : *Bestämning af afståndet till stjernan No. 3077 i. Bradley's Katalog. 8vo. Stockholm, 1882
- : *Ueber die absoluten Elemente der Planetenbahnen. 4to. Kiel, 1882
- : See also Stockholm, Observatorium.

Györy (Sándor) :

A' Felsöbb Analysis' Elemei. Parts 1, 2. 4to. Budán, 1836-40

Haarlem, Musée Teyler :

- : Archives. Vol. 1-4. 8vo. Haarlem, 1868-1878
- : Série 2. Part 1-3. 8vo. Haarlem, 1881-82

Haase (Carl) :

- : Die Sonnenfinsterniss. Populär beschrieben, nebst erläuternden Angaben für die totale Finsterniss am 18. Julius 1860. 8vo. Hannover, 1860
- : *Einige Zusammenstellungen als Beitrag zu der Frage, ob ausser Mercur und Venus in dem Raume zwischen Sonne und Erde noch andere planetenartige Körper vorhanden sind. . . . Herausgegeben von C. A. F. Peters. 8vo. Hannover, 1864

- ***Hadley (John, George and Henry)**, (biographical account of). 8vo.
- Hadley's Quadrant** (the nature and use of), with . . . a description of the Nonius. 8vo. London.
- ***Hadley's Quadrant** (invention and history of). 8vo.
- Hagecius [Hageck] (Thaddeus)**:
- : *Dialectis de novae et prius incognitæ stellæ inusitatæ magnitudinis & splendidissimi luminis apparitione, & de eiusdem stellæ vero loco constituendo. Adiuncta est ibidem ratio investigandæ parallaxeos cuiuscunq[ue] Phænomeni, ei[us]que à centro terræ distantia.* . . . 4to. Francofurti ad Mœnum, 1574
 - : *Responsio ad virulentem & male dicum Hannibal Raymundi . . . scriptum; quo iterum confirmare nititur, Stellam, quæ anno LXXII & LXXXIII supra sesquimillesimum fulsit, non nouā, sed veterem fuisse.* 4to. Pragæ, 1576
- Hagen (Gotthilf Heinrich Ludwig)**:
- *Über die Wärme der Sonnenstrahlen. 4to. Berlin, 1864
- Hagens (Joachim Heinrich)**:
- Bemerkung der jüngsten grossen Comet-Erscheinungen, auf Hoch-Fürstlichen gnädigsten Befehl, verabfasst und hervorgegeben. 4to. Bayreut, 1681
- Hague (The), Commission géodésique Néerlandaise**:
- Publications, No. 1: *Détermination, à Utrecht, de l'Azimut d'Amersfoort, par J. A. C. Oudemans.* 4to. La Haye, 1881
- Hahn (Friedrich Gustav)**:
- Ueber die Beziehungen der Sonnenfleckenperiode zu meteologischen Erscheinungen. Inaugural-Dissertation. 8vo. Leipzig, 1877
- Hahn (Otto)**:
- Die Meteorite (Chondrite) und ihre Organismen. 4to. Tübingen, 1880
- Haidinger (Wilhelm)**:
- : Berichte über die Mittheilungen von Freunden der Naturwissenschaften in Wien. Band 1, 2. 8vo. Wien, 1847
 - : Naturwissenschaftliche Abhandlungen, gesammelt und . . . herausgegeben von W. H. . . Band 1. 4to. Wien, 1847
 - : *Herrn Director Julius Schmidt's Beobachtung der Meteore in der Nacht des 13.—14. November 1866. 8vo. Wien, 1866
- Hailes (John Davey)**:
- : Astronomy, established on a principle practically proving the words of Joshua, 'Sun, stand thou still upon Gibeon, and thou, Moon, in the valley of Ajalon.' 16mo. London, 1843
 - : Instructions for J. D. Hailes's universal orrery globe. 8vo. London, 1848
 - : The Hailesean system of Astronomy . . . displaying Joshua's miracle time, origin of time from science; with Bible and Egyptian history. 12mo. Cambridge, 1865

Hales (Charles):

The theory of electric repulsion examined, in a series of experiments . . . adduced principally to show the non-existence of repulsion. 8vo. London, [1837]

Hales (William):

Analysis Fluxionum. 4to. Londini, 1800

Hall (Asaph):

- : *Catalogue of 151 Stars in Praesepe. 4to. Washington, 1870
- : *Address before the American Association for the Advancement of Science . . . 1880. 8vo. Cambridge, 1880
- : *Observations of double stars made at the United States Naval Observatory. 4to. Washington, 1881
- : *The Parallax of α Lyrae and 61 Cygni. 4to. Washington, 1882
- : *The motion of a satellite. 8vo.
- : *Stellar parallax. 8vo.

Hall (Asaph) and William Harkness:

*Reports on observations of Encke's comet during its return in 1871. 4to. Washington, 1872

Hallaschka (Cassian):

- : Elementa eclipsium quas patitur tellus, Luna eam inter et Solem versante, ab a. 1816 usque ad a. 1860. 4to. Pragae, 1816
- : Sammlung der vom 8. May 1817 bis 31. December 1827 in . . . Prag angestellten astronomischen, meteorologischen und physischen Beobachtungen. 4to. Prag, 1830

Halle, Kaiserliche Leopoldinisch-Carolinische deutsche Akademie der Naturforscher:

- : Verhandlungen (Nova Acta). Band 41-44. 4to. Halle, 1879-83
- : Leopoldina. Heft 17, 18. 4to. Halle, 1881-82

Halley (Edmund):

- : Catalogus Stellarum australium sive Supplementum Catalogi Tychonici exhibens longitudines & latitudines Stellarum fixarum . . . Accedit appendicula de rebus quibusdam astronomicis [Mercurii transitus, &c.] 4to. Londini, 1679
- : Catalogue des estoilles australes, ou supplément du catalogue de Thycho. 12mo. Paris, 1679
- : Astronomical tables with precepts both in English and Latin, for computing the places of the Sun, Moon, planets, and comets. 4to. London, 1752
- : *Dissertation on the method of determining the parallax of the Sun by the Transit of Venus, June 6, 1761. 4to. London, 1761
- : Astronomy of Comets, see Gregory (D.); Rigaud (S. P.).

Halliwell (James Orchard):

- : Rara mathematica ; or a collection of treatises on the mathematics and subjects connected with them, from ancient inedited manuscripts. 8vo. Cambridge, 1839

Contains Sacro Bosco de Arithmetica, J. Robyns de Cometis, &c.

Halliwell (James Orchard)—*continued.*

- : A collection of letters illustrative of the progress of science in England from the reign of Queen Elizabeth to that of Charles the second. 8vo. London, 1841

Halma, *see Aratus; Ptolemy; Theon.*

Haly, *see Albohazen Haly.*

Hamburg, Sternwarte:

- : Mittlere Oerter von 12,000 Fix-Sternen, für den Anfang von 1836 . . . von C. Rümker. obl. fol. Hamburg, 1843
- : Meteorological Observations made at the Observatory of Hamburg by M. Rümker (1853–56). 4to.
- : Publicationen. Herausgegeben von G. Rümker. No. 1. Stern-Haufen im Sternbilde des Sobieski'schen Schildes, von F. R. Helmert. 4to. Hamburg, 1874

Hamilton (George):

- : A law of elliptic motion, deduced from the laws of gravitation and compound rotation. 8vo. Liverpool, 1873
- : Remarks on Prof. Hamilton's paper . . . by J. Clerk Maxwell. 8vo. Liverpool, 1873
- : Progressive changes of form in rotating spheroids (Sun, planets, &c.) from cooling and contraction of their mass. 8vo. Liverpool, 1874

Hamilton (Hugh):

- : A geometrical treatise of the conic sections, in which the properties of the sections are derived from the nature of the cone. 4to. London, 1773
- : Philosophical Essays. 1. On the ascent of vapours, the formation of clouds, rain, and dew, and on several other phenomena of air and water. 2. Observations and conjectures on the nature of the Aurora Borealis, and the tails of Comets. 3. On the principles of mechanicks. Fourth edition. 12mo. London, 1783

Hamilton (William Rowan):

- : *The first part of an essay on the theory of systems of rays. 4to. Dublin, 1828
- : *Supplement. 4to. Dublin, 1830
- : *Second supplement. 4to. Dublin, 1830
- : *On the error of a received principle of analysis, respecting functions which vanish with their variables. 4to. Dublin, 1830
- : *On a general method of expressing the paths of light, and of the planets, by the coefficients of a characteristic function. 8vo. Dublin, 1833
- : *On a general method in Dynamics. 4to. London, 1834
- : *Theory of conjugate functions, or algebraic couples, with a preliminary and elementary essay on algebra as the science of pure time. 4to. Dublin, 1835
- : *Abstracts of additional communications on Quaternions. 8vo. Dublin, 1846
- : A letter to Augustus De Morgan . . . on his claim to

Hamilton (William Rowan)—continued.

an independent re-discovery of a new principle in the theory
of syllogism. 8vo. London and Edinburgh, 1847

— : *Researches respecting quaternions. First series.
4to. Dublin, 1847

— : Lectures on quaternions, containing a systematic statement
of a new mathematical method. 8vo. Dublin, 1853

— : Elements of quaternions . . . Edited by William Edwin
Hamilton. 8vo. London, 1866

Hammaræus (Olaus):

Projectio generalis Eclipseos Terræ Ann. 1730, die $\frac{4}{5}$ Julii.
[Inaugural Dissertation] 8vo. Upsalæ 1729

Hammond (John):

The practical surveyor. Second edition. 8vo. London, 1731

Hammond (Nathaniel):

The elements of algebra . . . to which is prefixed an intro-
duction, containing a succinct history of this science.
Fourth edition. 8vo. London, 1772

Hampden (John):

[Various leaflets in reference to the form of the earth.]

Hamstead (J.):

An essay to explain the cause of the principal phenomena in
nature. 8vo. London [1811]

Hancke (Joannes):

Tenebrae summatim illustratæ, sive Doctrina Eclipsium quam
e majoribus J. B. Riccioli, A. Tacquet, P. Lansbergii,
aliorumque voluminibus, pro opportuniore discentium usu,
in compendium redigit . . . J... H... 4to. Moguntiæ, 1682

Hannington (John Caulfeild):

Haversines natural and logarithmic used in computing lunar
distances for the Nautical Almanac. fol. London, 1876

Hansen (Peter Andreas):

— : Ausführliche Methode mit dem Fraunhofer'schen Helio-
meter Beobachtungen anzustellen, nebst Cometen-Beobach-
tungen mit solchem Instrumente auf der Ernestinischen
Sternwarte Seeberg angestellt. 4to. Gotha, 1827

— : Untersuchung über die gegenseitigen Störungen des
Jupiters und Saturns. 4to. Berlin, 1831

— : Ueber die Chronometer welche Herr Kessels verfertigt
. . . mit Bemerkungen über die vortheilhafteste Art sie zu
Längenbestimmungen zu gebrauchen. 8vo. Altona, 1836

— : Fundamenta nova investigationis orbitæ veræ quam luna
perlustrat, quibus annexa est solutio problematis quatuor
corporum . . . 4to. Gothae, 1838

— : Ermittelung der absoluten Störungen in Ellipsen von
beliebiger Excentricität und Neigung . . . Erster Theil,
welche als Beispiel die Berechnung der absoluten, vom
Saturn erzeugten Störungen des Encke'schen Kometen
enthält. 4to. Gotha, 1843

Hanson (Peter Andreas)—continued.

- : *Darlegung eines Verfahrens um die absoluten Störungen der Himmelskörper . . . zu berechnen. 8vo. Berlin, 1843
 - : Theorie der Pendelbewegung, mit Rücksicht auf die Gestalt und Bewegung der Erde . . . Gekrönte Preisschrift. 4to. Danzig, 1853
 - : *Auseinandersetzung einer zweckmässigen Methode zur Berechnung der Absoluten Störungen der kleinen Planeten . . . Erste Abhandlung. 8vo. Leipzig (1857)
 - : Tables de la lune, construites d'après le principe Newtonien de la gravitation universelle. 4to. Londres, 1857
 - : Corrections to ditto, *see* Newcomb.
 - : *Einleitende Bemerkungen über seine dritte Abhandlung: Auseinandersetzung einer zweckmässigen Methode zur Berechnung der absoluten Störungen der kleinen Planeten. 8vo. Leipzig, 1859
 - : Über die Einrichtung der neuen herzoglichen Sternwarte zu Gotha. 8vo. Leipzig, 1859
 - : *Darlegung der theoretischen Berechnung der in den Mondtafeln angewandten Störungen. 2 parts, 8vo. Leipzig, 1862–64
 - : *Einige Bemerkungen über die Säcularänderung der mittleren Länge des Mondes. 8vo. Leipzig [1863]
 - : *Relationen eintheils zwischen Summen und Differenzen, und anderntheils zwischen Integralen und Differentialen. 8vo. Leipzig, 1865
 - : *Geodätische Untersuchungen. 8vo. Leipzig, 1865
 - : *Nachtrag. 8vo. Leipzig, 1866
 - : *Nachtrag zur Abhandlung ‘Entwickelung des Produkts einer Potenz des Radius Vectors.’ 8vo. Leipzig, 1866
 - : *Theorie der Eingriffe gezahnter Räder in einander. 8vo. Leipzig, 1866
 - : *Tafeln der Egeria. 8vo. Leipzig, 1867
 - : *Von der Methode der kleinsten Quadrate im Allgemeinen, und in ihrer Anwendung auf die Geodäsie. 8vo. Leipzig, 1867
 - : *Fortgesetzte geodätische Untersuchungen, bestehend in zehn Supplementen zur Abhandlung von der Methode der kleinsten Quadrate. 8vo. Leipzig, 1868
 - : Gegenbericht an die permanente Commission der Europäischen Gradmessung. 4to. Gotha, 1868
 - : *Entwickelung eines neuen veränderten Verfahrens zur Ausgleichung eines Dreiecksnetzes. 8vo. Leipzig, 1869
 - : *Bestimmung der Sonnenparallaxe durch Venusvorübergänge vor der Sonnenscheibe mit besonderer Berücksichtigung des im Jahre 1874 eintreffenden Vorüberganges. 8vo. Leipzig, 1870
 - : *Von der Bestimmung der Theilungsfehler eines gradlinigen Maassstabes. 8vo. Leipzig, 1874
- Hansen (Peter Andreas), A. Auwers, und E. Bruhns:**
- *Bestimmung des Längenunterschiedes zwischen den Sternwarten zu Gotha und Leipzig. 8vo. Leipzig, 1866

Hansen (Peter Andreas) et C. F. R. Olufsen:

Tables du soleil exécutées d'après les ordres de la Société royale des Sciences de Copenhague. 4to. Copenhague, 1853

Hansteen (Christopher):

- : Untersuchungen über den Magnetismus der Erde
Erster Theil : die mechanischen Erscheinungen des Magneten. 4to. Christiania, 1819
- : Disquisitiones de mutationibus, quas patitur momentum acus magneticae. [Inaugural Dissertation.] 4to. Christianiae, 1842
- : *Sur le magnétisme terrestre. 8vo. Bruxelles [1859]

Hansteen (Christopher) und Carl Fearnley:

Beschreibung und Lage der Universitäts-Sternwarte in Christiania. 4to. Christiania, 1849

Harding (Karl Ludwig):

- : Atlas novus coelestis xxvii tabulis, continens stellas inter polum borealem et trigesimum gradum declinationis australis adhuc observatas. fol. Gottingae, 1822
- : Neuer Himmelsatlas von 27 Tafeln, enthaltend die bis jetzt zwischen dem Nordpol und dem 30. Grade südlicher Abweichung beobachteten Sterne. Neue Ausgabe. fol. Halle a. S., 1856

Hardy (James):

Complete system of interest and annuities, founded upon new, easy, and rational principles. 12mo. London, 1753

Hardy (R. W. H.):

Incidental remarks on some properties of light; being part v. of an essay on vision. 8vo. London, 1856

Harkness (William):

- : *Report on the difference of longitude between Washington and St. Louis. 4to. Washington, 1872
- : *On the color correction of achromatic telescopes. 8vo. New Haven, 1879
- : *On the relative accuracy of different methods of determining the solar parallax. 8vo. New Haven, 1881
- : Encke's Comet, *see* Hall and Harkness.
- : *See also* Washington, U.S. Naval Observatory.

Harley (Timothy):

Lives which live: a series of biographical reviews. I. Sir John Herschel. 8vo. London, 1884

Harpur (Alexander):

The nature of visible magnitude. The deductions by which the relative magnitudes of the planets, and the absolute magnitude of the Sun, and consequently the magnitudes of the Moon and of the planets are determined in the received astronomical system, proved to be fallacious
8vo. Dublin, 1856

Harrington (G. F.):

*An important discovery on light. [Extract from the 'Portsmouth Times.']

Harriot (Thomas) :

Artis analyticæ praxis, ad æquationes algebräicas nouâ expeditâ, & generali methodo, resoluendas : Tractatus posthumus. fol. Londini, 1631

Harris (John) :

- : A new short treatise of algebra, with the geometrical construction of equations, as far as the fourth power of dimension, together with a specimen of the nature and algorithm of fluxions. 8vo. London, 1702
- : Lexicon technicum, or an universal English dictionary of arts and sciences, explaining not only the terms of art, but the arts themselves. 2 vols. fol. London, 1704-1710

H[arris], J[ohn] :

- : Astronomical dialogues between a gentleman and a lady : wherein the doctrine of the sphere, uses of the globes, and the elements of astronomy and geography are explain'd. 8vo. London, 1719
- : Ditto, second edition, corrected by George Gordon. 8vo. London, 1729

Harris (John) :

- : Lectures on astronomical theories. [Lectures 1-4.] 8vo. Montreal, 1876
- : Astronomical lectures : Measurement of the Sun's distance. [Lecture 5.] 8vo. London, 1876
- : Two lectures on the circle and straight line. (Lecture 1.) 4to. London, 1879
- : New views in Astronomy, illustrated by working models and diagrams, and demonstrated by inductive philosophy. 4to. London, 1879
- : Geometrical demonstration of the ratio of the circle's circumference to the diameter. 4to. London, 1879

Harris (Richard) :

*An account of some Astronomical Tables in the library of the Rev. C. Turnor. 4to. London, 1845

Harrison (John) :

- : An account of the proceedings, in order to the discovery of the longitude at sea Second edition. 8vo. London, 1763
- : A narrative of the proceedings relative to the discovery of the longitude at sea by Mr. John Harrison's time-keeper, subsequent to those published in the year 1763. 8vo. London, 1765
- : Remarks on a pamphlet lately published by the Rev. Mr. Maskelyne, under the authority of the Board of Longitude. 8vo. London, 1767
- : The principles of Mr. Harrison's time-keeper, with plates of the same. 4to. London, 1767
- : A description concerning such mechanism as will afford a nice or true mensuration of time ; together with some account of the attempts for the discovery of the longitude by the Moon. 8vo. London, 1775

Harrison (J. Park):

*On the relation of Insolation to atmospheric humidity.

8vo. London, 1867

Harrison (William A.):

A manual of physiography. 12mo. London and Derby [1879]

Hartmann (Fr. J.):

Was hat die Welt zu fürchten von dem Kometen des Jahres 1834? Oder über die sechste Erscheinung des Halley'schen Kometen und über Kometen im Allgemeinen.

8vo. Quedlinburg und Leipzig, 1830

Hartmann (Martinus):

Disputatio de Luce Cometarum [Inaugural Dissertation].

4to. Jenæ, 1666

Hartnup (John):

— : *Meteorological Results deduced from observations taken at the Liverpool Observatory during . . . 1850–52. By John Hartnup. 8vo. Liverpool, 1854

— : *Results deduced from observations taken with the self-registering anemometer and rain-gauge, at the Liverpool Observatory, during the four years ending Dec. 31, 1855. 8vo. Liverpool, 1856

— : *On controlling the movements of ordinary clocks by galvanic currents. 8vo. Liverpool, 1857

Hartwig (—):

Über die Berechnung der Auf- und Untergänge der Sterne. [Inaugural Dissertation.] 4to. Schwerin, 1861

Hartwig (Ernst):

— : *Untersuchungen über die Durchmesser der Planeten Venus und Mars. 4to. Leipzig, 1879

— : Beitrag zur Bestimmung der physischen Libration des Mondes, aus Beobachtungen am Strassburger Heliometer . . . Inaugural-Dissertation. 4to. Karlsruhe, 1880

— : *Der grosse Septembercomet von 1882 und sein Begleiter vom 9. October. 4to. Kiel, 1883

Harvard College Astronomical Observatory:

— : Annals, Vol. 1–13, Part 1. 4to. Cambridge, 1856–82

Vol. 1, Part 1. History and description of the Observatory.

2. Zone Observations.

2, Part 1. Observations of Saturn, 1847–57. W. C. Bond.

2. Zone Observations.

3. Account of the great Comet of 1858. G. P. Bond.

4, Part 1. Catalogue of standard polar & clock stars. T. H. Safford.

2. R.A. of 505 stars. T. H. Safford.

5. Observations of the Great Nebula of Orion. G. P. Bond.

6. Zone Catalogue of 6100 stars.

7. Observations of solar spots, 1747–49. W. C. Bond.

8, Part 1. Historical account of Observatory, Instruments, &c.

2. Drawings of the moon, planets, nebulæ, comets, &c.

9. Photometric researches. C. S. Poirce.

10. Observations with the meridian circle.

Harvard College Astronomical Observatory—continued.

- Vol. 11, Part 1. Photometric observations. E. C. Pickering.
 12. Catalogue of stars for 1875, &c.
 13, Part 1. Micrometric measurements of double stars, &c.

— : Reports, 1859-61, 1863, 1877-80, 1882-84.
 8vo. Boston and Cambridge, 1860-84

— : Statement of work done during the years 1877-82.
 8vo. Cambridge, 1882

— : *List of new Nebulæ and Star-Clusters.
 8vo. Cambridge, 1863

— : *A catalogue of the declinations of 532 stars culminating
 near the zenith of the Observatory. By T. H. Safford.
 4to. Cambridge, 1861

— : *Catalogue of 618 stars observed with the Meridian
 Circle during the years 1871-2, 1874, and 1875. By Wil-
 liam A. Rogers. 4to. Cambridge, 1880

— : See also Bond (G. P.); Pickering (E. C.)

Harvey (George):

- *On a remarkable case of magnetic intensity of a chronometer.
4to. Edinburgh, 1823

Harzer (Paul):

- Brorsen's Comet im Jahre 1842. Inaugural-Dissertation.
4to. Leipzig, 1878

Hasselberg (B.):

- : *Russische Expeditionen zur Beobachtung des Venusdurchgangs 1874. Bearbeitung der photographischen Aufnahmen im Hafen Possiet. 4to. St. Petersburg, 1877

— : *Studien auf dem Gobiete der Absorbtionspectralanalyse. 4to. St. Pétersbourg, 1878

— : *Über das durch electrische Erregung erzeugte Leuchten der Gase bei niedriger Temperatur. 4to. St. Pétersbourg, 1879

— : *Über die Spectra der Cometen und ihre Beziehung zu denjenigen gewisser Kohlenverbindungen. 4to. St. Pétersbourg, 1880

— : *Untersuchungen über das zweite Spectrum des Wasserstoffs. Abhandl. 1, 2. 4to. St. Pétersbourg, 1882-83

Hassenfratz (J. H.):

- Cours de physique céleste, ou leçons sur l'exposition du système
du monde, données à l'École Polytechnique en l'an dix.
8vo. Paris. 1803

Hassler (Ferdinand Rod):

- : *Papers on various subjects connected with the survey of the coast of the United States. 4to. Philadelphia, 1824

— : Elements of analytic trigonometry, plane and spherical. 8vo. New York, 1826

— : A popular exposition of the system of the universe. 8vo. New York, 1828

— : Plates and tables. obl. 4to. New York, 1828

— : Elements of the geometry of planes and solids. 8vo. Richmond [U.S.], 1828

— : Logarithmic and trigonometric tables to seven places of

Hassler (Ferdinand Rod)—continued.

decimals, in a pocket form, in which the errors of former tables are corrected. 12mo. New York, 1830

— : Comparison of weights and measures of length and capacity, reported to the Senate of the United States. 8vo. Washington, 1832

— : Principal documents relating to the survey of the coast of the United States since 1816. 8vo. New York, 1834

Hausen (Christian Aug.):

Elementa matheseos. Pars prima (elementa arithmeticæ et geometriæ; trigonometria, geometria sectionum conicarum). 4to. Lipsiæ, 1734

Haüy (René Just):

An elementary treatise on natural philosophy, translated from the French . . . by Olinthus Gregory.

2 vols. 8vo. London, 1807

Havemann (Michael):

Astræa, sive epitomæ sideralis scientiæ.

4to. Francofurti ad Moenum, 1650

Hawkesworth (John):

Account of the voyages undertaken . . . for making discoveries in the Southern Hemisphere, and successively performed by Commodore Byron, Captains Wallis, Carteret, and Cook in the *Dolphin*, the *Swallow*, and the *Endeavour*. 3 vols. 4to. London, 1773

Hawkins (Aaron):

The Gregorian and Julian calendars: wherein are taught how to find arithmetically the leap-years, golden number, epacts [&c.] . . . in both accounts, for ever. 8vo. London, 1752

Hawkins (John), Arithmetic, see Cocker (E.)**Hawney (William):**

— : The compleat measurer; or the whole art of measuring; in two parts. Second edition. 12mo. London, 1721

— : The doctrine of plain and spherical trigonometry, with its application and use in . . . Navigation, astronomy, projection of the sphere, geography, fortification, mensuration, dialling. 8vo. London, 1725

Hayden (W.):

A very close approach to the geometrical quadrature of the circle. 8vo. Chichester, 1872

Haynisch (Johann Christoph):

Systema Copernicanum Scripturae sacrae non esse oppositum . . . demonstrat . . . J . . . C . . . H. [Inaugural Dissertation.] 4to. Jenac, 1724

Heap (John) and G. V. Vernon:

*On the rain-fall at Oldham during the years 1836 to 1862. 8vo. London, 1864

Heath (Robert):

Astronomia accurata, or the royal astronomer and navigator, containing new improvements in astronomy, chronology,

Heath (Robert)—continued.

and navigation, particularly new and correct solar and lunar tables, 1 vol. and supplement. 4to. London, 1760-68

Hecht (Heinrich August):

Der schöne Halley, ein Komet, den wir mit dem Jahre 1834 wieder zu erwarten haben. 8vo. Ilmenau, 1833

Heegmann (Alph.):

*Théorie de la réfraction astronomique. 8vo. Lille, 1856

Heinsius (Gottfried):

De phasi rotunda Saturni quae an. MDCCCLX rediit observationes et conclusiones. [Inaugural Dissertation]. 4to. Lipsiae, 1762

Heis (Eduard):

— : Die periodischen Sternschnuppen und die Resultate der Erscheinungen, abgeleitet aus den während der letzten 10 Jahren zu Aachen angestellten Beobachtungen. 4to. Köln, 1849

— : De magnitudine relativa numeroque accurato Stellarum quae solis oculis conspicuntur Fixarum. [Inaugural Dissertation.] 4to. Coloniae ad Rhenum, 1852

— : *Sur les étoiles filantes périodiques du mois d'août 1858. Lettre à M. Quetelet. 8vo. Bruxelles, 1859

— : *Die grosse Feuerkugel, welche am Abende des 4. März 1863 in Holland, Deutschland, Belgien und England gesehen worden ist. 8vo. Halle, 1863

— : Grosse Feuerkugel in der Nacht des 10.-11. März (1866) in Westfalen und Hannover. 8vo. Halle, 1866

— : Sammlung von fünf Sterncharten . . . zum Einzeichnen der Sternschnuppen der November-Periode. 4to. Köln, 1868

— : Atlas Coelestis Novus. Stellae per medium Europam solis oculis conspicuae secundum veras lucis magnitudines e coelo ipso descriptae. obl. fol. Coloniae ad Rhenum, 1872

— : Catalogus stellarum. 8vo. Coloniae ad Rhenum, 1872
Errata in ditto, see U.S. Coast Survey.

— : Beobachtungen, deren Anstellung den Mitgliedern der Expeditionen zur Beobachtung des Durchganges der Venus anempfohlen wird. 4to. Münster, 1874

— : Zodiacallicht-Beobachtungen in den letzten 29 Jahren, 1847-1875. 4to. Münster, 1875

— : Resultate der in den 43 Jahren 1833-1875 angestellten Sternschnuppen-Beobachtungen. 4to. Münster, 1877

— : Atlas Coelestis Eclipticus . . . octo continens tabulas ad delineandum Lumen Zodiacaile. obl. fol. Coloniae ad Rhenum, 1878

Hell (Maximilian):

Tabulae solares (lunares et planetarum) ad meridianum Parisi-
num, quas . . . deduxit . . . N. L. de la Caille (T.
Mayer, J. Cassini). 8vo. Vindobonæ, 1763-64

Hell (Maximilian):

Observatio transitus Veneris ante discum Solis die 3 Junii anno
1769 Wardloëhusii . . . facta. 4to. Hafnia, 1770

Hell (Maximilian) et A. Hallerstein:

Observationes Astronomiae ab Anno 1717 ad Annum 1752 a patribus Societatis Jesu Pekini Sinarum facte et a A. Hallerstein . . . collectæ atque operis editionem ad fidem autographi manuscripti curante M. Hell.

2 parts, 4to. Vindobonæ, 1768

Hellins (John):

— : Mathematical essays on several subjects, containing new improvements and discoveries in the mathematics.

4to. London, 1788

— : An extract from a letter . . . to Francis Maseres [relating to the trial of Mr. Mudge's time-keepers at the Royal Observatory].

4to. [London, 1792]

Helmbert (F. R.):

Der Stern-Haufen im Sternbilde des Sobieski'schen Schildes. (Publ. der Hamburger Sternwarte.) 4to. Hamburg, 1874

Helmholtz (Hermann L. F.):

— : Optique physiologique. Traduite par Émile Javal et N. Th. Klein.

8vo. Paris, 1867

— : On the sensations of tone as a physiological basis for the theory of music . . . Translated . . . by Alexander J. Ellis.

8vo. London, 1875

— : Wissenschaftliche Abhandlungen. Band 1, Abth. 1.

8vo. Leipzig, 1882

Helmuth (Johann Heinrich):

Gestirnbeschreibung nach den von dem Bayer gebrauchten griechischen Buchstaben, und den seit seiner Zeit an der scheinbaren Grösse der Sterne geschehenen Veränderungen.

8vo. Braunschweig, 1747

Helsham (Richard):

A course of lectures in natural philosophy . . . published by Bryan Robinson. Second edition. 8vo. London, 1743

Helsingfors, Finska Vetenskaps-Societet:

— : Acta Societatis Scientiarum Fennicæ. Tom. 1-12.

4to. Helsingforsia, 1842-83

— : Öfversigt, 1838-82.

Vol. 1-4, 4to. Vol. 7-24, 8vo. Helsingfors, 1853-82

— : Förteckning öfver Finska Vetensk. Soc. Boksamling.

8vo. Helsingfors, 1862

— : Katalog öfver . . . Bibliothek. 8vo. Helsingfors, 1881

— : Observations Météorologiques, 1873-80. Vol. 1-8.

8vo. Helsingfors, 1875-83

Helsingfors, Observatoire Magnétique et Météorologique :

— : Observations faites . . . sous la direction de Jean Jacques Nervander (1844-48). Vol. 1-4. 4to. Helsingfors, 1850

Première section, Observations magnétiques.

Deuxième section, Observations météorologiques.

— : Observations. Vol. 5. 4to. Helsingfors, 1873

— : Zonen-Beobachtungen, see Krueger (A.).

Helvicus (Christoph.):

Theatrum historicum et chronologicum . . . Nunc de novo
recognitum . . . à Johanne-Justo Winkelmanno . . .
Editio quinta. fol. Francofurti ad Moenum, 1666

Henderson (E.):

Life of James Ferguson, in a brief autobiographical account
and further extended memoir. 8vo. Edinburgh, 1867

Henderson (Thomas):

- : *On the declinations of the principal fixed stars, deduced
from observations made at the observatory, Cape of Good
Hope, in the years 1832 and 1833. 4to. London, 1837
— : Life, *see* Galloway; Observations, *see* Edinburgh, Royal
Observatory.

Henischius (Georgius):

Tabulae Institutionum Astronomicarum . . . Adiuncta est
sphæra Procli, cum textu Græco è regione in latinam lin-
guam conuerso. 4to. Augustæ Vindelicorum, 1575

Honly (William):

*Experiments and observations on a new apparatus, called a
machine for exhibiting perpetual electricity.
4to. London, 1776

Hennessy (Henry):

*On the influence of the earth's internal structure on the
length of the day. 8vo. London, 1856

Henry (Joseph):

*Meteorology in its connection with agriculture.
8vo. Washington, 1858

Henry (Paul et Prosper):

*Sur un nouveau télescope catadioptrique. 4to. Paris, 1879

Herapath (John):

Mathematical physics, or the mathematical principles of
natural philosophy; with a development of the causes of
heat, gaseous elasticity, gravitation, and other great phe-
nomena of nature. 2 vols. 8vo. London, 1847

Herény, Astrophysikalisches Observatorium:

Publikationen . . . Herausgegeben von Eugen von Got-
hard. Heft 1. 4to. Herény, 1884

Herlicius (Christian):

Eclipsiologia: das ist gründliche, wahre, natürliche, astro-
nomische und historische Beschreibung der vier erschreck-
lichen Finsternissen . . . welche sich begeben und zu-
tragen auffs Jahr . . . 1634. 4to. 1633

Hormann (Jacob):

Phoronoma, sive de viribus et motibus corporum solidorum
et fluidorum libri duo. 4to. Amstelædami, 1716

Hermes Trismegistus: De decubitu infirmorum, *see* Boderius.**Herpin (A.):**

Dictionnaire astronomique, où exposé par ordre alphabétique
des principes fondamentaux et des lois générales de la
mécanique universelle. 8vo. Paris, 1875

Herrick (Edward C.):

*Sur les étoiles filantes, 1861. 8vo. Bruxelles, 1862

Herschel (Alexander Stewart):

- : *Method of determining the path of a meteor. 8vo. London, 1863
 — : Observations and real path of the fireball of 1879, September 23rd, 8^h 10^m p.m. (Scotland and the north of England). 8vo.
 — : *Notice of the fall of an aërolite near Middlesborough, Yorkshire, on the 14th of March, 1881. 16mo. Newcastle on Tyne.

Herschel (Carolina):

Catalogue of stars, taken from Mr. Flamsteed's observations contained in the second volume of the *Historia Cœlestis*, and not inserted in the British Catalogue; to which is added a collection of errata that should be noticed in the same volume with remarks by William Herschel.

fol. London, 1798

[Herschel (John)]:

- : *Bibliography of pendulums in connection with the figure of the Earth. 4to. Calcutta, 1879
 — : *Table of provisional equatorial vibration-numbers of pendulums used differentially since 1800; followed by a synopsis of pendulum observations from 1672 to 1874. 4to. Calcutta, 1879

Herschel (Mrs. John):

Memoir and correspondence of Caroline Herschel. 8vo. London, 1876

Herschel (John Frederick William):

- : A collection of examples of the applications of the calculus of finite differences. 8vo. Cambridge, 1820
 Forming Part 3 of Peacock's examples of the calculus.
 — : *On the reduction of certain classes of functional equations to equations of finite differences. 4to. Cambridge, 1820
 — : Light. [Encyclopædia Metropolitana.] 4to. [London, 1827]
 — : A preliminary discourse on the study of natural philosophy. [Lardner's Cabinet Cyclopædia.] 12mo. London, 1831
 — : *On the absorption of light by coloured media, viewed in connexion with the undulatory theory. 8vo. London, 1833
 — : A treatise on Astronomy. [Lardner's Cabinet Cyclopædia.] 12mo. London, 1833
 — : *Observations of Nebulæ and clusters of stars, made at Slough, with a twenty-feet reflector, between the years 1825 and 1833. 4to. London, 1833
 — : *A second series of micrometrical measures of double stars, chiefly performed with the 7-feet equatorial at Slough, in the years 1831, 1832, and 1833. 4to. London, 1834
 — : *A list of test objects, principally double stars, arranged in classes, for the trial of telescopes in various respects, as to light, distinctness, &c. 4to. London, 1834
 — : *On the satellites of Uranus. 4to. London, 1834

Herschel (John Frederick William)—continued.

- : *On the advantages to be attained by a revision and arrangement of the constellations, with especial reference to those of the southern hemisphere. 4to. London, 1841
- : Memoir of Francis Baily. 8vo. London, 1845
- : Results of Astronomical Observations made during the years 1834–38 at the Cape of Good Hope; being the completion of a telescopic survey of the whole surface of the visible heavens, commenced in 1825. 4to. London, 1847
- : Outlines of Astronomy. 8vo. London, 1849
- : Ditto, fifth edition. 8vo. London, 1858
- : Ditto [Translated into Chinese, by A. Wylie.] 3 vols. Shanghai, 1874
- : *On the algebraic expression of the number of partitions of which a given number is susceptible. 4to. London, 1850
- : Essays from the Edinburgh and Quarterly Reviews, with addresses and other pieces. 8vo. London, 1857
- : An essay, entitled The Yard, the Pendulum, & the Metre, considered in reference to the choice of a standard of length. 8vo. London, 1863
- : *A general catalogue of nebulae and clusters of stars, arranged in order of Right Ascension and reduced to the common epoch 1860°. 4to. London, 1864
- : *Supplement, by J. L. E. Dreyer. 4to. Dublin, 1878
- : *A catalogue of 10,300 multiple and double stars arranged in the order of right ascension. . . . Edited by R. Main and C. Pritchard. 4to. London, 1874
- : Life, *see* Harley; Pritchard; Quetelet.

Herschel (John Frederick William) and James South :

- *Observations of the apparent distances and positions of 380 double and triple stars, made in the years 1821, 1822, and 1823. 4to. London, 1825

Herschel (William) :

- : *Astronomical observations on the periodical star in collo Ceti. 4to. London, 1780
- : *Astronomical observations relating to the mountains of the Moon. 4to. London, 1780
- : *Astronomical observations on the rotation of the planets round their axes, made with a view to determine whether the Earth's diurnal motion is perfectly equable. 4to. London, 1781
- : *Account of a comet. [Uranus.] 4to. London, 1781
- : *On the parallax of the fixed stars. 4to. London, 1782
- : *Catalogue of double stars. 4to. London, 1782
- : *Description of a lamp-micrometer, and the method of using it. 4to. London, 1782
- : *A paper to obviate some doubts concerning the great magnifying powers used. 4to. London, 1782
- : *A letter . . . to Sir Joseph Banks, [upon the name of the newly-discovered planet.] 4to. London, 1782

Herschel (William)—*continued.*

- : *On the diameter and magnitude of the Georgium Sidus, with a description of the dark and lucid disk and periphery micrometers. 4to. London, 1783
- : *On the proper motion of the Sun and solar system, with an account of several changes that have happened among the fixed stars since the time of Mr. Flamstead. 4to. London, 1783
- : *On the remarkable appearances at the polar regions of the planet Mars, the inclination of its axis, the position of its poles, and its spheroidal figure. 4to. London, 1784
- : *Account of some observations tending to investigate the construction of the heavens. 4to. London, 1784
- : *Catalogue of double stars. 4to. London, 1785
- : *On the construction of the heavens. 4to. London, 1785
- : *Catalogue of one thousand new nebulae and clusters of stars. 4to. London, 1786
- : *Investigation of the cause of that indistinctness of vision which has been ascribed to the smallness of the optic pencil. 4to. London, 1786
- : *An Account of the discovery of two satellites revolving round the Georgian planet. 4to. London, 1787
- : *An account of three volcanoes in the Moon. 4to. London, 1787
- : *On the Georgian planet and its satellites. 4to. London, 1788
- : *Observations on a Comet. 4to. London, 1789
- : *Catalogue of a second thousand of new nebulae and clusters of stars, with a few introductory remarks on the construction of the heavens. 4to. London, 1789
- : *Account of the discovery of a sixth and seventh satellite of the planet Saturn; with remarks on the construction of its ring, its atmosphere, its rotation on its axis, and its spheroidal figure. 4to. London, 1790
- : *On the satellites of the planet Saturn, and the rotation of its ring on an axis. 4to. London, 1790
- : *On nebulous stars, properly so called. 4to. London, 1791
- : *On the ring of Saturn, and the rotation of the fifth satellite upon its axis. 4to. London, 1792
- : *Miscellaneous observations. (Account of a Comet; On the periodical appearance of α Ceti; On the disappearance of the 55th Herculis; Remarkable phenomena in an eclipse of the Moon.) 4to. London, 1792
- : *Observations on the planet Venus. 4to. London, 1793
- : *Observations of a quintuple belt on the planet Saturn, also an account of some particulars observed during the late eclipse of the Sun, and also on the rotation of the planet Saturn upon its axis. 4to. London, 1794
- : *Description of a forty-feet reflecting telescope. 4to. London, 1795
- : *On the method of observing the changes that happen to the fixed stars, with some remarks on the stability of the light of our Sun: to which is added a catalogue of comparative

Herschel (William)—*continued.*

- brightness, for ascertaining the permanency of the lustre of stars. 4to. London, 1796
- : *On the periodical star *a* Herculis; with remarks tending to establish the rotatory motion of the stars on their axes; to which is added a second catalogue of the comparative brightness of the stars. 4to. London, 1796
- : *A third catalogue of the comparative brightness of the stars; with an introductory account of an index to Mr. Flamsteed's observations of the fixed stars. 4to. London, 1797
- : *Observations of the changeable brightness of the satellites of Jupiter, and of the variation in their apparent magnitudes, with a determination of the time of their rotatory motions on their axes [&c.] 4to. London, 1797
- : *On the discovery of four additional satellites of the Georgium Sidus. The retrograde motion of its old satellites announced, and the cause of their disappearance at certain distances from the planet explained. 4to. London, 1798
- : *A fourth catalogue of the comparative brightness of the stars. 4to. London, 1799
- : *On the power of penetrating into space by telescopes, with a comparative determination of the extent of that power in natural vision, and in telescopes of various sizes and constructions. 4to. London, 1800
- : *Investigation of the powers of the prismatic colours to heat and illuminate objects, with remarks that prove the different refrangibility of radiant heat; to which is added an inquiry into a method of viewing the Sun advantageously with telescopes of large aperture and high magnifying powers. 4to. London, 1800
- : *Experiments on the refrangibility of the invisible rays of the Sun. 4to. London, 1800
- : *Experiments on the solar and on the terrestrial rays that occasion heat; with a comparative view of the laws to which light and heat are subject 4to. London, 1800
- : *Observations tending to investigate the nature of the Sun, in order to find the causes or symptoms of its variable emission of light and heat; with remarks on the use that may possibly be drawn from solar observations. 4to. London, 1801
- : *Additional observations tending to investigate the symptoms of the variable emission of the light and heat of the Sun, with trials to set aside darkening glasses by transmitting the solar rays through liquids. 4to. London, 1801
- : *Observations on the two lately discovered celestial bodies [Ceres and Pallas]. 4to. London, 1802
- : *Catalogue of five hundred new nebulæ, nebulous stars, planetary nebulæ, and clusters of stars; with remarks on the construction of the heavens. 4to. London, 1802
- : *Observations of the transit of Mercury over the disc of the

Horschel (William)—*continued.*

- Sun ; to which is added an investigation of the causes which often prevent the proper action of mirrors. 4to. London, 1803
- : *Account of the changes that have happened, during the last twenty-five years, in the relative situation of double stars, and an investigation of the cause to which they are owing. 4to. London, 1803
- : *Continuation of an account of the changes that have happened in the relative situation of double stars. 4to. London, 1803
- : *Experiments for ascertaining how far telescopes will enable us to determine very small angles ; with an application of the result of these experiments to a series of observations on the nature and magnitude of Mr. Harding's lately discovered star [Juno]. 4to. London, 1805
- : *On the direction and velocity of the motion of the Sun and solar system. 4to. London, 1805
- : *Observations on the singular figure of the planet Saturn. 4to. London, 1805
- : *On the quantity and velocity of the solar motion. 4to. London, 1806
- : *Observations and remarks on the figure, the climate, and the atmosphere of Saturn and its ring. 4to. London, 1806
- : *Experiments for investigating the cause of the coloured concentric rings, discovered by Sir Isaac Newton, between two object-glasses laid upon one another. 4to. London, 1807
- : *Observations on the nature of the new celestial body [Vesta] discovered by Dr. Olbers, and of the Comet which was expected to appear last January in its return from the Sun. 4to. London, 1807
- : *Observations of a Comet, made with a view to investigate its magnitude and the nature of its illumination ; to which is added an account of a new irregularity lately perceived in the apparent figure of the planet Saturn. 4to. London, 1808
- : *Continuation of experiments for investigating the cause of coloured concentric rings ; and other appearances of a similar nature. 4to. London, 1809
- : *Supplement to the first and second part of the paper of experiments for investigating the cause of coloured concentric rings between object-glasses, and other appearances of a similar nature. 4to. London, 1810
- : *Astronomical observations relating to the construction of the heavens, arranged for the purpose of a critical examination. 4to. London, 1811
- : *Observations of a Comet, with remarks on the construction of its different parts. 4to. London, 1812
- : *Observations of a second Comet, with remarks on its construction. 4to. London, 1812
- : *Astronomical observations relating to the sidereal part of the heavens, and its connection with the nebulous part. 4to. London, 1814

Herschel (William)—continued.

- : *A series of observations of the satellites of the Georgian planet, including a passage through the node of their orbits, with an introductory account of the telescopic apparatus that has been used on this occasion. 4to. London, 1815
- : *Astronomical observations and experiments tending to investigate the local arrangement of the celestial bodies in space, and to determine the extent and condition of the milky way. 4to. London, 1817
- : *Astronomical observations and experiments selected for the purpose of ascertaining the relative distances of clusters of stars, and of investigating how far the power of our telescopes may be expected to reach into space. 4to. London, 1818
- : Discoveries, *see* Pfaff.
- : Nebulæ (catalogues of), *see* Auwers.
- : Variable stars (observations of), *see* Pickering.
- : Life, *see* Holden, Wolf.

Herschel (William and Carolina):

- : *An account of a new Comet. 4to. London, [1786]
- : *Account of the discovery of a new comet. 4to. London, 1795

Hertzsprung (Severin):

- *Reduction af Maskelyne's Jagttagelser af smaa stjerner, anstillede i aarene fra 1765 til 1787. 4to. Kjöbenhavn, 1865

Herz (Norbert) und Josef Strobl:

- *Reduction des Auwers'schen Fundamental-Cataloges auf die Le Verrier'schen Praecessionscoefficienten. 4to. Wien, 1883

Hevelius (Johannes):

- : Selenographia, sive Lunæ descriptio atque accurata . . . delineatio. In quâ simul cæterorum omnium planetarum nativa facies variaeque observationes, præsertim autem macularum solarium atque Jovialium, tubospicillo aquisitæ, figuris accuratissimè æri incisis, sub aspectum ponuntur. . . . Addita est lentes expoliandi nova ratio. fol. Gedani, 1647
- : Epistolæ IV. I. De observatione deliquii Solis anno 1649 habitâ . . . II. De eclipsi Solis anno 1652 observatâ . . . III. De motu Lunæ libratorio . . . IV. De utriusque luminaris defectu anni 1654. fol. Gedani, 1654
- : Epistolæ II. Prior, de motu Lunæ libratorio, in certas tabulas redacto . . . posterior, de utriusque Luminaris defectu anni 1654. fol. Gedani, 1654
- : Dissertatio de nativa Saturni facie, ejusque variis phasibus, certa periodo redeuntibus; Cui addita est, tam eclipseos solaris anni 1656 observatio, quam diametri Solis apparentis accurata dimensio. fol. Gedani, 1656
- : Mercurius in Sole visus Gedani anno christiano MDCLXI . . . Cui annexa est Venus in Sole pariter visa anno 1639

Hevelius (Johannes)—continued.

- Liverpoliae a Jeremia Horroxio . . . quibus accedit succincta historiola novæ illius ac miræ stellæ in collo Ceti.
fol. Gedani, 1662
- : Prodromus Cometicus, quo historia Cometæ anno 1664 exorti cursum, faciesque diversas capitis ac caudæ accuratè delineatas complectens, nec non dissertatio de Cometarum omnium motu, generatione, variisq; phænomenis, exhibetur.
fol. Gedani, 1665
- : Descriptio Cometæ anno æræ Christ. MDCLXV exorti . . . cui addita est mantissa Prodromi Cometicæ, observationes omnes prioris Cometæ MDCLXIV.
fol. Gedani, 1666
- : Cometographia totam naturam cometarum . . . exhibens. In quâ universa insuper phænomena, quæstionesque de cometis omnes, rationibus evidentibus deducuntur . . . cum primis verò Cometæ anno 1652, 1661, 1664 & 1665 ab ipso auctore summo studio observatæ . . . accessit omnium cometarum à mundo condito . . . historia.
fol. Gedani, 1668
- : Annus climactericus, sive rerum uranicarum observationum annus quadragesimus nonus, exhibens diversas occultationes tam planetarum quam fixarum post editam Machinam Cœlestem, nec non plurimas altitudines meridianas Solis, ac distantias planetarum fixarumque . . . & continuatione historiæ novæ stellæ in Collo Ceti.
fol. Gedani, 1685
- : Firmamentum Sobiescianum, sive Uranographia, totum cælum stellatum, utpote tam quodlibet sidus, quam omnes et singulas stellas, secundum genuinas earum magnitudines, nudo oculo, et olim jam cognitas, et nuper primum detectas accuratissimisque organis rite observatas exhibens.
fol. Gedani, 1690
- : Prodromus astronomiæ, exhibens fundamenta, que tam ad novum planè & correctiorem stellarum fixarum catalogum construendum, quam ad omnium planetarum tabulas corrigendas omnimodè spectant . . . quibus additus est uterque catalogus stellarum fixarum.
fol. Gedani, 1690
- : The illustrated account given by Hevelius in his 'Machina Cœlestis' of the method of mounting his telescopes and erecting an observatory. Reprinted from an original copy, with some remarks, by C. Leeson Prince. 8vo. Lewes, 1882
- : See Hooke (Robert).

Heynes (Samuel):

A treatise of trigonometry, plane and spherical, theoretical and practical . . . as likewise a treatise of stereographick and orthographick projection of the sphere. Third edition.
8vo. London, 1725

Heyns (Johann):

Versuch einer Betrachtung über die Cometen, die Sündflut und das Vorspiel des jüngsten Gerichts, nach astronomischen Gründen und der heiligen Schrift angestellet, und mit Herrn J. Chr. Gottscheds . . . Vorrede begleitet.
8vo. Berlin und Leipzig, 1742

Hibner (Israel):

Mysterium sigillorum herbarum et lapidum Translated
 for B. Clayton. 8vo. London, 1698

Higgins (W. H.):

The names of the stars and constellations, compiled from the
 Latin, Greek, and Arabic, with their derivations and mean-
 ings. 8vo. Leicester, 1882

Higgins (W. M.):

Researches in the Solar realm. 8vo. London, 1852

Hildreth (S. P.):

*Results of Meteorological Observations made at Marietta,
 Ohio, between 1826 and 1859 inclusive.
 4to. Washington, 1868

Hilfiker (Jakob):

Ueber die Bestimmung der Constante der Sonnenparallaxe
 mit besonderer Berücksichtigung der Oppositionsbeobach-
 tungen. 8vo. Bern, 1878

Hill (George W.):

- : Tables of Venus, prepared for the use of the American Ephemeris and Nautical Almanac. 4to. Washington, 1873
- : *Researches in the lunar theory, 1-3. 4to. Baltimore, [1878]
- : On the part of the motion of the lunar perigee which is a function of the mean motions of the Sun and Moon. 4to. Cambridge [U.S.], 1877
- : On the development of the perturbative function in periodic series. 8vo.
- : On Gauss's method of computing secular perturbations. (Astronomical papers prepared for the use of the American Nautical Almanac.) 4to. Washington, 1881

Hill (John) :

- : Urania, or a compleat view of the heavens; containing the antient and modern astronomy, in form of a dictionary. 4to. London, 1754
- : Arithmetick, both in the theory and practice, made plain and easy in all the common and useful rules 11th edition. 8vo. London, 1772
- : A review of the works of the Royal Society of London, containing animadversions on such of the papers as deserve particular observation Second edition. 4to. London, 1780

Hind (John):

- : The elements of plane and spherical trigonometry, designed for the use of students in the University. Second edition. 8vo. Cambridge, 1828
- : The elements of algebra, designed for the use of students in the University. Second edition. 8vo. Cambridge, 1830
- : Ditto, fourth edition. 8vo. Cambridge, 1839
- : The principles of the differential calculus, with its applica-

Hind (John) — *continued.*

tion to curves and curve surfaces. Designed for the use of students in the University. . . . Second edition.

8vo. Cambridge, 1831

— : The principles and practice of arithmetic, designed for the use of students in the University. 8vo. Cambridge, 1832

Hind (John Russell):

— : On the expected return of the great Comet of 1264 and 1556; with a history of former appearances, compiled from various authors, and ephemerides for facilitating its re-discovery.

8vo. London, 1848

— : The solar system: a descriptive treatise upon the Sun, Moon, and planets, including an account of all the recent discoveries. 8vo. London [1851]

— : An Astronomical vocabulary; being an explanation of all terms in use amongst Astronomers at the present day.

8vo. London, 1852

— : The Comets: a descriptive treatise upon those bodies, with a condensed account of the numerous modern discoveries respecting them; and a table of all the calculated comets from the earliest ages to the present time.

8vo. London, 1852

— : Die Kometen. Eine gemeinfassliche Beschreibung dieser Körper nebst einer kurzen Uebersicht der neueren Entdeckungen und einer Tafel der Kometenbahnen . . . In deutscher Bearbeitung mit zahlreichen Anmerkungen und Zusätzen von J. H. Mädler. 8vo. Leipzig, 1854

— : Total Solar Eclipse, 1860, July 18. Revised path of the shadow, &c. (Nautical Almanac circular, No. 5.)

8vo. London, [1858]

— : An introduction to astronomy, to which is added an astronomical vocabulary containing an explanation of terms in use at the present day. Third edition.

8vo. London, 1863

Hipp (Karl Friedrich):

Commentatio de scriptis factisque Veterum, qui vel obser-
vandis et describindis rebus caelestibus vel perficienda
astrorum scientia prae ceteris inclinarerunt. [Inaugural
Dissertation.] 4to. Hamburgi, 1826

Hirsch (Adolph):

— : *Vorausberechnung der totalen Sonnen-Finsterniss am 18.
Juli 1860. 8vo. Wien, 1856

— : Déterminations de longitude, *see* Plantamour et Hirsch.

Hirsch (Adolph) et E. Plantamour:

Nivellement de précision de la Suisse, exécuté par la Com-
mission Géodésique Fédérale. Livraison 1-8.

4to. Genève, 1867-83

Hirsch (Meier):

— : Integraltafeln, oder Sammlung von Integralformeln.

4to. Berlin, 1810

Hirsch (Meier)—continued.

- : Collection of examples, formulæ, & calculations, on the literal calculus and algebra. Translated . . . by the Rev. J. A. Ross. 8vo. London, 1827

Hirzel (G.):

Astronomie de l'amateur, ou considérations philosophiques et populaires sur l'univers, suivies d'une méthode nouvelle et facile de connoître les étoiles. 8vo. Genève, 1820

Hobart Town, Magnetical and Meteorological Observatory:

Observations made at the . . . Observatory, and by the Antarctic Naval Expedition, 1841–48. Printed . . . under the superintendence of Lieut.-Col. Edward Sabine. 3 vols. 4to. London, 1850–53

Hobart Town, Meteorological Observatory:

- : Results of meteorological observations for twenty years, for Hobart Town, made at the Royal Observatory, Ross Bank, 1841–54, and at the private observatory, 1855–60.

4to. Hobart Town, 1861

- : *Meteorological Observations, 1856–58, by F. Abbott.

4to. Hobart Town, 1859

- : Results of twenty-five years' meteorological observations. By F. Abbott.

4to. Hobart Town, 1866

- : Results of five years' meteorological observations . . . with which are incorporated the results of twenty-five years' observations previously published. By F. Abbott.

4to. Hobart Town, 1872

Hobart Town, Royal Society of Tasmania:

- : Papers and Proceedings of the Royal Society of Van Diemen's Land. Vol. 2, Part 2, and Vol. 3, Part 2 (and Report . . . for the year 1852). 8vo. Hobart Town, 1853–59

- : Monthly notices of papers and proceedings (and Reports), of the Royal Society of Tasmania, 1863–74.

8vo. Hobart Town, 1864–75

- : Papers and proceedings and report, 1875–81.

8vo. Hobart Town, 1876–82

Hodgson (James):

- : A system of the mathematics; containing the Euclidean geometry, plane and spherical trigonometry, the projection of the sphere . . . astronomy, the use of the globes, and navigation. 2 vols. 4to. London, 1723

- : The theory of Jupiter's satellites, with the construction and use of the tables for computing their eclipses, to which is added an account of the several methods proposed for fixing the longitude of places. 4to. London, 1750

- : The doctrine of fluxions, founded on Sir Isaac Newton's method, published by himself in his tract upon the quadrature of curves. 4to. London, 1758

Hoek (Martinus):

- : De Kometen van de Jaren 1556, 1264 en 975, en hare vermeende identiteit. Academisch Proefschrift . . .

4to. s'Gravenhage, 1857

Hoek (Martinus)—continued.

- : Détermination de la vitesse avec laquelle est entraînée une onde lumineuse traversant un milieu en mouvement. Sur les prismes achromatiques construits avec une seule substance. 8vo. Amsterdam, 1867
- : *See also* Utrecht, Observatoire.

Hoffmann (Karl Friedrich):

- Vollständiger Himmels-Atlas für Freunde und Liebhaber der Sternkunde, nach den vorzüglichsten Hilfsquellen und eigenen Beobachtungen gezeichnet. obl. fol. Stuttgart, 1835

Hofmann (Andreas):

- Disputatio Astronomica . . . de Eclipsibus terrestribus, in specie vero de famosa illa ad $\frac{1}{2} \frac{3}{4}$ Sept. 1699. [Inaugural Dissertation.] 4to. Lipsiae, 1699

Holden (Edward S.):

- : *On supposed changes in the Nebula M. 17. 8vo. New Haven, 1876
- : *On the proper motion of the Trifid Nebula: M. 20. 8vo. New Haven, 1877
- : *Index catalogue of books and memoirs relating to Nebulae and Clusters, etc. 8vo. Washington, 1877
- : *Index catalogue of books and memoirs on the transits of Mercury. 4to. Cambridge, Mass., 1878
- : *Note on a relation between the colours and magnitudes of the components of binary stars. 8vo. New Haven, 1880
- : *On some of the consequences of the hypothesis, recently proposed, that the intrinsic brilliancy of the fixed stars is the same for each star. 8vo. [1880]
- : *Observations on the light of telescopes used as night-glasses. 8vo. New Haven, 1881
- : *Investigation of the objective and micrometer of the twenty-six inch equatorial constructed by Alvan Clark & Sons. 4to. Washington, 1881
- : *The multiple star Σ 748. 4to. Washington, 1881
- : Sir William Herschel, his life and works. 8vo. New York, 1881
- : *Monograph of the central parts of the Nebula of Orion. 4to. Washington, 1882
- : *Observations of the transit of Venus made at the Washburn Observatory, Madison, Wisconsin, 1882, December 5–6. 8vo. New Haven, 1883
- : Astronomy, *see* Newcomb and Holden.
- : Determination of secondary meridians, *see* Green and Holden.
- : *See also* Washburn Observatory; Washington, U.S. Naval Observatory.

Holdred (Theophilus):

- A new method of solving equations with ease and expedition. 4to. London, 1820

Holetschek (Johann):

- *Bahnbestimmung des ersten Kometen vom Jahre 1871 [2 parts]. 8vo. Wien, 1873–74

Holfelder (Georg):

De Sole, omnium siderum inerrantium & planetarum maximo
ac splendidissimo luminari Tractatus theologicus &
philosophicus. 8vo. Noribergæ, 1612

Holland (James):

The Herschelian ; or companion to the telescope. [Part 1.]
fol. London, 1831

Holliday (Francis):

An introduction to fluxions, designed for the use, and adapted
to the capacities of beginners. 8vo. London, 1777

Hollis (Henry William):

The Astronomical Almanac for 1873-74.
8vo. London and Newcastle, Staffordshire, 1873-74

Holmboe (C. A.):

Ezechiels Syner og Chaldæernes Astrolab. Universitets-Pro-
gram. 4to. Christiania, 1866

Holmgren (F.):

De la cécité des couleurs. 8vo. Stockholm, 1878

Holtzapffel (Charles):

A new system of scales of equal parts, applicable to various
purposes of engineering, architectural and general science.
8vo. London, 1838

Holwell (John):

Catastrophe Mundi ; or Europe's many mutations until the
year 1710 also an ephemeris of all the comets that
have appeared from the year 1603 to 1682.
4to. London, 1682

Hombresoy :

La répulsion universelle. 8vo. Paris, 1872

Hong Kong Observatory:

— : Report on a determination of latitude at Mount Elgin, in
the Kau-lung Peninsula, by Major H. S. Palmer.
fol. Hong Kong, 1882

— : Report of the Government Astronomer, 1883.
fol. Hong Kong, 1883

Honorius Augustudunensis [Gallus]:

Mundi synopsis, sive de Imagine Mundi, libri tres.
8vo. Spiræ, 1583

Hooke (Robert):

— : Animadversions on the first part of the Machina Coelestis
of the honourable, learned, and deservedly famous astro-
nomer Johannes Hevelius together with an explica-
tion of some instruments made by R H
4to. London, 1674

— : An attempt to prove the motion of the earth from observa-
tions. 4to. London, 1674

— : Lampas ; or descriptions of some mechanical improvements
of lamps & waterpoises, together with some other physical
and mechanical discoveries. 4to. London, 1677

— : A description of helioscopes and some other instruments.

Hooke (Robert) – continued:

- (Appendix concerning the eclipse of the moon, observed in London Jan. 1, 1674.) 4to. London, 1676
- : Lectures de potentia restitutiva, or of spring, explaining the power of springing bodies: to which are added some collections. 4to. London, 1678
- : Lectures and collections. I. Cometa [&c.] II. Microscopium. 4to. London, 1678
- : Posthumous works . . . containing his Cutlerian Lectures and other discourses . . . I. The present deficiency of natural philosophy . . . II. The nature, motion, and effects of light . . . III. An hypothetical explication of memory . . . IV. Gravity, magnetism, &c. V. Earthquakes . . . VI. . . . Navigation and astronomy . . . ; to these discourses is prefixt the author's life. Publish'd by Richard Wallis. fol. London, 1705
- : Philosophical Experiments and Observations of the late eminent Dr. R. H. . . . , and other eminent virtuoso's in his Time. Published by W. Derham. 8vo. London, 1726

Hooper (W.):

Rational recreations, in which the principles of numbers and natural philosophy are clearly and copiously elucidated by . . . experiments. 4 vols. 8vo. London, 1774

Hopkins (Evan):

- : On the connexion of Geology with terrestrial magnetism. 8vo. London, 1844
- : Ditto, third edition. 8vo. London, 1855
- : *On the optical illusions of the Atmospheric Lens, and its effects on celestial bodies. 8vo. London, 1855

Hopkins (W.):

- : Elements of trigonometry. (Library of Useful Knowledge.) 8vo. London, 1833
- : *On the causes which may have produced changes in the Earth's superficial temperature. 8vo. London, 1852

Hopton (Arthur):

A concordancy of yeares, containing a new, easie, and most exact computation of time, according to the English account: also the use of the English and Roman kalender, with briefe notes, rules and tables. 8vo. London, 1616

Horne (George), Bishop of Norwich:

A fair, candid, and impartial state of the case between Sir Isaac Newton and Mr. Hutchinson; in which is shewn how far a system of physics is capable of mathematical demonstration, how far Sir Isaac's, as such a system, has that demonstration, and consequently what regard Mr. Hutchinson's claim may deserve to have paid it.

8vo. Oxford, 1753

Horner (—):

- : Méthode facile et générale pour calculer les latitudes d'un lieu par les hauteurs de l'étoile polaire. 8vo. Gênes, 1822

Horner (—) —continued.

- : Mémoire sur la réduction des distances lunaires. 8vo. Gênes, 1822
 — : A short and easy method for correcting the apparent distances of the Moon from the Sun or a fixed star. 8vo. Genoa, 1822

Hornstein (Karl):

- : *Bestimmung der Bahn des ersten Kometen vom Jahre 1847. 8vo. Wien, 1854
 — : *Bestimmung der Bahn des ersten Kometen vom Jahre 1853. 8vo. Wien, 1854
 — : *Opposition der Calliope im Jahre 1856. 8vo. Wien, 1855
 — : *Über die Bahn der Calliope. 2 parts, 8vo. Wien, 1855
 — : *Über die neuesten Fortschritte der Astronomie. 8vo. Wien, 1857
 — : Über die Bahn der Calliope und ihre Opposition im Jahre 1859. 8vo. Wien, 1857
 — : *Beobachtungen von Cometen am Refractor in den Jahren 1853 bis 1857. 8vo. Wien, 1858
 — : Die Asteroiden. Ein Vortrag. 8vo. Wien, 1858
 — : *Über die Bahn des Hind'schen Cometen vom Jahre 1847. 8vo. Wien, 1870
 — : *Über die Abhängigkeit des Erdmagnetismus von der Rotation der Sonne. 8vo. Wien, 1871
 — : *Über den Einfluss der Electricität der Sonne auf den Barometerstand. 8vo. Wien, 1872
 — : *Über die Abhängigkeit der täglichen Variation des Barometerstandes von der Rotation der Sonne. 8vo. Wien, 1873
 — : *Über die wahrscheinliche Abhängigkeit des Windes von den Perioden der Sonnenflecke. 8vo. Wien, 1877

Horological Journal. Vol. 1–26. 8vo. London, 1858–84

Horoscope (the), edited by Zadkiel. Nos. 1–19. 8vo. Liverpool, 1834

Horrebow (Petrus):

Basis astronomiæ, sive astronomiæ pars mechanica, in qua describuntur observatoria atque instrumenta astronomica Rœmeriana Danica, simulque eorundem usus, sive methodi observandi Rœmerianæ. . . . tridui observationum Tusculanarum Roemeri ex fundamentis exponuntur. 4to. Havniæ, 1735

Horrox, or Horrocks (Jeremiah):

- : Opera Postuma; viz. Astronomia Kepleriana defensa & promota; Excerpta ex epistolis ad Crabtræum suum; Observationum cœlestium Catalogus; Lunæ Theoria nova. Accedunt Gulielmi Crabtræi observationes cœlestes; in calce adjiciuntur J. Flamstedii de temporis æquatione diatriba; numeri ad Lunæ Theoriam Horroccianam. 4to. Londini, 1673
 — : Opuscula astronomica; viz. Astronomia Kepleriana defensa & promota; Excerpta ex epistolis ad Cabtræum suum; observationum cœlestium catalogus; Lunæ theoria nova, &

Horrox, or Horrocks (Jeremiah)—continued.

pra aliis accurata. Accedunt G. Crabtrai observationes cœlestes [&c.]. 4to. Londini, 1673

— : Venus in Sole visa, *see* Hevelius.

— : Life : *see* Whatton (A. B.).

Horsley (Samuel), Bishop of Rochester :

— : The power of God, deduced from the computable instantaneous productions of it in the Solar system. 8vo. London, 1767

— : The true notion of centripetal and centrifugal forces. 8vo. [Oxford, 1767]

— : Elementary treatises on the fundamental principles of practical mathematics. 8vo. Oxford, 1801

— : *See also* Apollonius ; Euclid.

Hortensius (Martinus) :

Dissertatio de Mercurio in Sole viso et Venere invisa.

4to. Lugduni Batavorum, 1633

Hoskins (S. Elliott) :

Tables for the extemporaneous application of corrections for temperature to barometric observations. 8vo. Guernsey, 1842

Hotin (Jules) :

Cosmogonie. Unité des Mondes. 12mo. Bayeux, 1875

Hoüel (G. J.) :

*Tables pour la réduction du temps en parties décimales du jour. 4to. Leipzig, 1866

Hoüel (J.) :

— : Sur l'intégration des équations différentielles dans les problèmes de mécanique. Application de la méthode de M Hamilton au calcul des perturbations de Jupiter. (Paris, Thèses Fac. Sci. No. 191.) 4to. Paris, 1855

— : Note sur le théorème d'Hamilton et de Jacobi, et sur son application à la théorie des perturbations planétaires. 4to. [1856]

— : Tables de logarithmes à cinq décimales pour les nombres et les lignes trigonométriques. 8vo. Paris, 1858

— : *Recueil de formules et de tables numériques. 8vo. Paris, 1866

— : *See also* Paris, Observatoire.

Hough (G. W.) :

— : *Description of a new machine for cataloguing and charting stars. 8vo. Albany, 1863

— : Description of an automatic registering and printing barometer. 8vo. Albany, 1865

Houlston (William) :

The circle secernd from the square, and its area gauged in terms of a triangle common to both. 4to. Jersey, 1862

Houzeau (Jean C.) :

— : *Sur les étoiles filantes périodiques du mois d'Août, et en particulier sur leur apparition de 1842. 4to. Bruxelles, 1844

— : *Sur l'Astronome Van Langren. 8vo. Bruxelles, [1852]

Houzeau (Jean C.)—continued.

- : *Méthode pour déterminer simultanément la latitude, la longitude, l'heure et l'azimut, par des passages observés dans deux verticaux. 4to. Bruxelles [1853]
- : *Méthode pour mesurer la parallaxe horizontale des Astres. 8vo. Bruxelles, 1862
- : Catalogue des ouvrages d'astronomie et de météorologie qui se trouvent dans les principales bibliothèques de la Belgique, préparé et mis en ordre à l'Observatoire Royal de Bruxelles. 8vo. Bruxelles, 1878
- : Uranométrie générale, avec une étude sur la distribution des étoiles visibles à l'œil nu. 4to. Bruxelles, 1878
- : Répertoire des constantes de l'astronomie. 4to. Bruxelles, 1878
- : Atlas de toutes les étoiles visibles à l'œil nu, formé d'après observation directe, dans les deux hémisphères. fol. Mons, 1878
- : Vade-mecum de l'Astronome. 8vo. Bruxelles, 1882

Houzeau (J. C.) et A. Lancaster:

Bibliographie générale de l'Astronomie, ou Catalogue méthodique des ouvrages, des mémoires et des observations astronomiques publiés depuis l'origine de l'imprimerie jusqu'en 1880. Tome 2 : mémoires et notices insérés dans les collections académiques et les revues. 8vo. Bruxelles, 1880-83

Howard (Edward):

Copernicans of all sorts convicted, by proving that the earth hath no diurnal or annual motion. . . . To which is annex'd a treatise of the Magnet. 8vo. London, 1705

Howard (John):

A treatise on spherical geometry, containing its fundamental properties; the doctrine of its loci; the maxima and minima of spherical lines and areas. 8vo. Newcastle upon Tyne, 1798

Howard (Luke):

Barometrographia: the variations of the barometer in the climate of Britain, exhibited in autographic curves, with the attendant winds and weather. 1815-35 [with 2 appendices]. fol. and 4to. London, 1854-50

Howe (Alexander Hamilton):

A theoretical inquiry into the physical cause of epidemic diseases, accompanied with tables. 8vo. London, 1865

Howe (H. A.):

- : *Three approximate solutions of Kepler's problem. 8vo. Cincinnati
- : Double Stars, *see* Cincinnati Observatory.

Hoynovius (Michael) et Jacob Horn:

Dissertatio astronomica de descensu Solis ad terram. [Inaugural Dissertation.] 4to. [Königsberg], 1687

Huber (Gottlieb):

Anwendung der conformen Abbildung. Inaugural-Dissertation.
8vo. Zürich, 1883

Huber (Johannes):

Zur Philosophie der Astronomie. 4to. München, 1878

Hues (Robert):

Tractatus de globis, cœlesti et terrestri, eorumque usu, primum
conscriptus & editus à R . . . H . . . , semelque atque
iterum à J. Hondio excusus, & nunc . . . , auctus operâ
ac studio J. I. Pontani. 4to. Amstelodami, 1617

Huggins (William):

- : On the results of spectrum analysis applied to the heavenly bodies. A Discourse delivered at Nottingham August 24, 1866. 8vo. London, 1866
- : Ergebnisse der Spectral-Analyse in Anwendung auf die Himmelskörper Deutsch, mit Zusätzen, von W. Klinkerfues. 8vo. Leipzig, 1868
- : *On the photographic spectra of stars. 4to. London, 1880

Hugo (Léopold):

- : Le Valhalla des sciences pures et appliquées. 8vo. Paris, 1875
- : *Extrait de deux lettres adressées à D. B. Boncompagni. 4to. Roma [1875]
- : Astronomie géométrique, ou brèves considérations sur la nouvelle théorie des ovhélites. 8vo. Paris, 1876

Hulsius (Levinus):

Tractatus primus (secundus et tertius) Instrumentorum
mechanicorum
3 parts in 1 vol. 4to. Francofurti ad Moenum, 1605

Humboldt (Friedrich Heinrich Alexander von):

- : Lettre . . . au Duc de Sussex . . . sur les moyens propres à perfectionner la connoissance du magnétisme terrestre par l'établissement de stations magnétiques. 4to. [Berlin, 1836]
- : Report on ditto, by S. H. Christie and G. B. Airy. 8vo. [London, 1836]
- : Cosmos: a sketch of a physical description of the Universe. . . . Translated by E. C. Otté. 2 vols. 8vo. New York, 1850
- : Ditto, translated from the German by E. C. Otté (B. H. Paul and W. S. Dallas). 5 vols. 8vo. London, 1871-78, 1876

Humboldt (Friedrich Heinrich Alexander von) et Aimé Bonpland:

- : Voyage, quatrième partie: Recueil d'observations astronomiques, d'opérations trigonométriques, et de mesures barométriques rédigées et calculées par Jabbo Oltmanns. 2 vols. 4to. Paris, 1810
- : Personal narrative of travels to the equinoctial regions of the new continent, during the years 1799-1804 Translated by Ellen Maria Williams. Vol. 1-6, Part. 1. 8vo. London, 1814-26

Hunt (Robert):

The practice of photography. 8vo. Glasgow, n.d.

Hunt (William):

A mathematical companion, or the description and use of a new sliding-rule. 12mo. London, 1697

Hunter (Samuel):

*On the various forms of apparatus used for polishing specula for reflecting telescopes. 8vo. Dublin, 1877

Hunyady (E. de):

*Sur une espèce particulière de surfaces et de courbes algébriques, et sur des propriétés générales des courbes du quatrième ordre. 4to. Paris, 1867

Hüssener (Hermann):

Des Copernicus Gründe für die Bewegung der Erde. [Jahresbericht des K. Wilhelms-Gynnasiums.] 4to. Berlin, 1874

Hutchison (Graham):

Essays on unexplained phenomena, containing new views regarding the cause of centrifugal force in planetary motion, the radiation of caloric, and the central heat of the earth. 12mo. Glasgow, 1838

Hutt (Alexander):

— : Theoretical discovery of the law of the inter-circulation of air between the Sun and the planets. 4to. circular [1879]

— : An astronomical catechism. [Single sheet]

Hutton (Charles):

— : A treatise on mensuration, both in theory and practice. 4to. Newcastle-upon-Tyne, 1770

— : The diarian miscellany; consisting of all the useful and entertaining parts, both mathematical and poetical, extracted from the Ladies' Diary, from 1704 to 1773. In five volumes. Vol. 1-3. 12mo. London, 1775

— : Miscellanea mathematica; consisting of a large collection of curious mathematical problems, and their solutions. 12mo. London, 1775

— : A complete treatise on practical arithmetic and book-keeping. 5th edition. 12mo. London, 1778

— : Tables of the products and powers of numbers with an introduction, explaining and illustrating the use of the tables. fol. London, 1781

— : Tracts mathematical and philosophical. Vol. 1. 4to. London, 1786

— : Elements of conic sections, with select exercises in various branches of mathematics and philosophy, for the use of the Royal Military Academy at Woolwich. 8vo. London, 1787

— : A course of mathematics Composed, and more especially designed for the use of the Gentlemen Cadets in the Royal Military Academy at Woolwich.

3 vols. 8vo. London, 1799, 1798, 1811
Vol. 1. Second edition.

— : Key, by D. Dowling. 8vo. London, 1818 and 1824

Hutton (Charles)—continued.

- : Mathematical tables, containing the common, hyperbolic, and logistic logarithms; also sines, tangents, secants & versed sines both natural and logarithmic. . . . Fourth edition. 8vo. London, 1804
- : Ditto, fifth edition. 8vo. London, 1811
- : Ditto, with seven additional tables of trigonometrical formulæ, by Olinthus Gregory. . . . Twelfth edition. 8vo. London, 1855
- : Tracts on mathematical and philosophical subjects, comprising, among numerous important articles, the theory of bridges; also the results of numerous experiments on the force of gunpowder. 3 vols. 8vo. London, 1812
- : A philosophical and mathematical dictionary, containing an explanation of the terms, and an account of the several subjects comprised under the heads mathematics, astronomy, and philosophy both natural and experimental. 2 vols. 4to. London, 1815
- : *A letter to the Marquis De Laplace, on several astronomical and philosophical subjects. 8vo. London, 1820
- : *On the mean density of the earth. 4to. London, 1821
- : Life: *see* Bruce (J.)

Huyghens (Christian):

- : *Systema Saturnium, sive de causis mirandorum Saturni phænomenôn, et comite ejus planeta novo.* 4to. Hagaë-Comitis, 1659
- : *Horologium oscillatorium, sive de motu pendulorum ad horologia aptato demonstrationes geometricæ.* fol. Parisiis, 1673
- : The celestial worlds discover'd, or conjectures concerning the inhabitants, plants and productions of the worlds in the planets. 8vo. London, 1698
- : *Koσμοθέωπος, sive de terris cœlestibus, earumque ornatu, conjecturæ.* 4to. Hagaë-Comitum, 1698
- : Ditto, Editio Altera. 4to. Hagaë-Comitum, 1699
- : *Opuscula postuma, quæ continent dioptricam, commentarios de vitris figurandis: dissertationem de corona & parheliis: tractatum de motu; de vi centrifuga; descriptionem automati planetarii.* 4to. Lugduni Batavorum, 1703
- : *Opera varia.* (Tomus primus, opera mechanica. Tomus secundus, opera geometrica. Tomus tertius, opera astronomica. Tomus quartus, opera miscellanea.) 4 vols. in 1, 4to. Lugduni Batavorum, 1724
- : Christiani Hugenii, aliorumque seculi XVII virorum celebrium exercitationes mathematicæ et philosophicæ Edidit Petrus Joannes Uylenbroek. Fasciculus 1-2. . 4to. Hagaë Comitum, 1833

Hyginus (C. Julius):

- : Clarissimi viri Hyginii Poeticon Astronomicum. 4to. Venetiis (Thomas de Blavis do Alexandria), 1488
- : Clarissimi viri Higinij Poeticon Astronomicum. 4to. Parrhisij, 1514

Hyginus (C. Julius)—continued.

- : Clarissimi viri Higinii Poeticon Astronomicon.
 — : Fabularum liber . . . Poeticon Astronomicon libri quatuor: quibus accesserunt . . . Palæphati de fabulosis narrationibus . . . Arati φανωμένων fragmentum, Germanico Cæsare interprete; eiusdem Phænomena græcè, cum interpretatione Latina: Procli de sphæra libellus, Græcè & Latinè. 4to. Parrhisijs, 1517
 — : Hygini Astronomica, ex codicibus a se primum collatis, recensuit B. Bunte. fol. Basileæ, 1570
 — : Hygini Astronomica, ex codicibus a se primum collatis, recensuit B. Bunte. 8vo. Lipsiae, 1875

Ideler (Julius Ludwig):

- Ueber den Ursprung der Feuerkugeln und des Nordlichts.
 8vo. Berlin, 1832

Ideler (Ludwig):

- : Historische Untersuchungen über die astronomischen Beobachtungen der Alten. 8vo. Berlin, 1806
 — : Untersuchungen über den Ursprung und die Bedeutung der Sternnamen. Ein Beytrag zur Geschichte des gestirnten Himmels. 8vo. Berlin, 1809
 — : Handbuch der mathematischen und technischen Chronologie. 2 vols. 8vo. Berlin, 1825–26

India, Great Trigonometrical Survey:

- : An account of the measurement of an Arc of the Meridian between the parallels of $18^{\circ} 3'$ and $24^{\circ} 7'$, being a continuation of the Grand Meridional Arc of India, as detailed by Lieut.-Col. Lambton. By Capt. G. Everest. 4to. London, 1830
 — : An account of the measurement of two sections of the Meridional Arc of India, bounded by the parallels of $18^{\circ} 3' 15''$; $24^{\circ} 7' 11''$; & $29^{\circ} 30' 48''$. By Lieut.-Col. Everest. [With vol. of plates.] 4to. London, 1847
 — : Tables of heights in Sind, the Punjab, N.W. Provinces, and Central India, determined . . . to May 1862. 8vo. Calcutta, 1863
 — : Tables of heights in N.W. Provinces and Bengal, determined . . . to May 1865. 8vo. Roorkee, 1866
 — : Abstract of the Reports of the Surveys and of other geographical operations in India for 1869–70. 8vo. London, 1871
 — : Account of the operations of the Great Trigonometrical Survey of India. Prepared under the direction of Lieut.-Gen. J. T. Walker. Vol. 1–9. 4to. Dehra Doon, 1870–83
 — : General Report on the operations of the Great Trigonometrical Survey of India, 1867–77. fol. Dehra Doon and Calcutta, 1868–78
 — : General Report on the operations of the Survey of India, comprising the Great Trigonometrical, the Topographical, and the Revenue Surveys, 1878–82. fol. Calcutta, 1880–83

— : See also Markham (C. R.).

Inghirami (Giovanni):

- : Metodo e tavole per costruire un cfemeride di occultazioni delle fisse sotto la luna. 4to. Firenze, 1826

Inghirami (Giovanni)—continued.

- : Mappa Uranografica rappresentante la porzione dell' ora xviii compresa fra i paralleli xv° boreale et xv° australe . . . presentata alla reale Accademia delle Scienze di Berlino [e catalogo delle stelle]. fol. Firenze, 1829
 — : Life : see Scarpellini.

Inglefield (E. A.):

- A new theory of the physical causes of Terrestrial Magnetism, and some remarks in connection therewith on the Aurora Borealis. 8vo. London, 1851

Ingram (Alexander):

- A concise system of mensuration, adapted to the use of schools. 12mo. Edinburgh, 1822

Inman (James):

- Nautical tables, designed for the use of British seamen . . . New edition. 8vo. London, 1856

Innes (George):

- : *On the great solar eclipse which will take place on the 17th July, 1833, being the principal results of a calculation for Edinburgh Observatory. 8vo. Edinburgh, 1828

- : Tide Tables for 1834-42, showing at sight the true times of high water at Aberdeen, Dundee, Leith & London. 12mo. Aberdeen.

- : *Meteorological Observations made at Aberdeen, 1837-41. 8vo. and 4to. Aberdeen.

- Intellectual Observer : Review of Natural History, microscopic research, and recreative science. Vol. 1-12. 8vo. London, 1862-68

Continued to 1871 under the title of The Student and Intellectual Observer.

International Polar Commission:

- Mittheilungen der internationalen Polar-Commission. Heft 1-5. 8vo. St. Petersburg, 1882-84

- International Scientist's Directory . . . Compiled by S. E. Cassino. 8vo. Boston, U.S.A., 1883

- International Standard (the), a magazine devoted to the preservation and perfection of the Anglo-Saxon weights and measures, and the discussion and dissemination of the wisdom contained in the great pyramid of Jeczeh in Egypt. Vol. 1, No. 4. 8vo. Cleveland and Boston, 1883

Inwards (Richard):

- Weather Lore ; a collection of proverbs, sayings, and rules concerning the weather. 8vo. London, 1869

[Italian Eclipse Commission]:

- Rapporti sulle osservazioni dell' eclisse totale di Sole del 22 Dicembre 1870 eseguite in Sicilia dalla commissione Italiana. 4to. Palermo, 1872

Italy, Associazione Meteorologica Italiana:

- : Atti della prima riunione meteorologica Italiana. 8vo. Torino, 1881

Italy, Associazione Meteorologica Italiana—continued.

— : I. Assemblea Generale . . . nella Città di Napoli, 1882.
8vo. Napoli, 1882

— : *See* Moncalierli, R. Collegio Carlo Alberto.

Italy, Riunione degli Scienziati Italiani :

Atti della prima riunione . . . tenuta in Pisa, 1839.
4to. Pisa, 1840

Itinerary Instructor (the), No. 1-8. 8vo. London, 1861

Ivory (James) :

*A method of ascertaining the number of figures that are exact, in the value of a root of an algebraick equation that has been obtained by Mr. Raphson's method of approximation [from Maseres's Scriptores Logarithmici]. 4to.

Jack (Richard) :

Elements of conic sections, in three books.
8vo. Edinburgh, 1742

[**Jackson (J. R.)**] :

Commentary notes on the first two chapters of the 'Vestiges of the natural history of creation.' 8vo. London, 1845

Jacob (William Stephen) :

— : A few more words on the plurality of worlds.
8vo. London, 1855

— : *See also* Madras, Observatory.

Jacobi (Hermann) :

De astrologiae Indicae 'Horâ' appellatae originibus. [Inaugural Dissertation.] 8vo. Bonnae, 1872

Jacoli (Ferdinando) :

*Intorno a due scritti di Raffaele Gualterotti Fiorentino, relativi alla apparizione di una nuova stella avvenuta nell' anno 1604. 4to. Roma, 1875

Jahn (Gustav Adolph) :

— : Practische Astronomie, oder Beschreibung und Gebrauch der vorzüglichsten astronomischen Instrumente und Tafeln.
2 vols. in 1, 8vo. Berlin, 1834-35

— : Die grosse Sonnenfinsterniss am 15. Mai 1836 central und ringförmig in ihren verschiedenen und merkwürdigen Umständen ausführlich beschrieben. 8vo. Leipzig, 1836

— : Populäre Sternkunde, oder leichtfassliche und unterhaltende Darstellung der Wunder des gestirnten Himmels. Nebst einem Anhange über das Wesentlichste des Kalenders und der Witterungslehre. 8vo. Leipzig, 1843

— : Geschichte der Astronomie vom Anfange des neunzehnten Jahrhunderts bis zu Ende des Jahres 1842.
2 vols. 8vo. Leipzig, 1844

— : Ueber den neuen Planeten Astræa und den Biela'schen Kometen. 8vo. Leipzig, 1846

— : Verzeichniss aller bis zum Jahre 1847 berechneten Kometenbahnen. obl. fol. Leipzig, 1847

— : Populäre Astrognosie oder leichtfassliche Anleitung zur Kenntniß des gestirnten Himmels. 8vo. Leipzig, 1848

Jahn (Gustav Adolph)—continued.

- : Katechismus der Astronomie. 8vo. Leipzig, 1851
 — : Der grosse Komet von 1556 und seine bevorstehende Wiederkehr. 8vo. Leipzig, 1856

Jahrbuch, herausgegeben von H. C. Schumacher, 1836–41,
 1843–44. 8vo. Stuttgart, 1836–44

Jahrbuch (Astronomisches), see Berlin; Gruithuisen.

Jamaica:

Weather Report for the month of April 1883.
 fol. Kingston, 1883

James (Henry):

- : Instructions for taking meteorological observations, with tables for their correction, and notes on meteorological phenomena. (Ordnance Survey.) 8vo. London, 1860
 — : See also United Kingdom, Ordnance Survey.

Jamieson (Alexander):

A celestial atlas comprising a systematic display of the heavens in a series of thirty maps accompanied by catalogues of the stars and astronomical exercises.
 obl. 4to. London, 1822

Janssen (Jules):

- : *Rapport sur une mission en Italie, dans les Alpes, et en Grèce . . . concernant l'étude de plusieurs questions de physique céleste. 8vo. Paris, 1868
 — : *Note sur la photographie de la Comète b 1881, obtenue à l'Observatoire de Meudon. 12mo. Paris [1882]
 — : Observations de l'Eclipse totale du 6 Mai 1883 à l'Isle Caroline. 8vo. Salem, Mass., 1883

Janvier (Antide):

Des révolutions des corps célestes par le mécanisme des rouages.
 4to. Paris, 1812

Java:

- : Die Triangulation von Java, ausgeführt vom Personal des Geographischen Dienstes in Niederländisch Ost-Indien, von J. A. C. Oudemans, E. Metzger und C. Woldringh. Abtheilung 1, 2. 4to. Batavia und Haag, 1875–78
 — : See also Oudemans (J. A. C.).

Jeanjaquet (Eugène):

Phénomènes célestes résultant de la transmission successive de la Lumière. 8vo. Neuchatel, 1859

Jeans (George):

Practical Astronomy for the unlearned. 8vo. London, 1856

Jelinek (C.):

- : *Bahnbestimmung des von de Vico am 24. Januar 1846 entdeckten Cometen. 4to. Prag, 1848
 — : See also Vienna, K.K. Sternwarte.

Jentzsch (Hermann Theodor):

Theorie der Astroiden ; einer neuen Classe von Curven. [Inaugural-Dissertation.] 8vo. Greifswald, 1860

Jerwood (James) :

- : A lecture on the new planet Neptune and its discovery. 8vo. Exeter, 1849
- : *On the longitude of places, and on the application of the electric telegraph to determine it. 8vo. Exeter, 1867
- : *On the application of the calculus of probabilities to legal and judicial subjects. 8vo. Exeter, 1868

Johnson (Edward John) :

Practical illustrations of the necessity for ascertaining the deviations of the compass. . . . 4to. London, 1847

Johnson (Manuel John) :

- : Astronomical Observations made at the Honorable East India Company's Observatory, St. Helena, 1831. 4to. St. Helena, 1832
- : A catalogue of 606 principal fixed stars in the Southern hemisphere; deduced from observations made at the Observatory, St. Helena, 1829, 1833. 4to. London, 1835
- : *See also* Oxford, Radcliffe Observatory.

Johnson (Richard Coward) :

*Description of observatory at Higher Bebington, Cheshire. 8vo. Manchester, 1878

Johnson (Samuel J.) :

Eclipses, past and future; with general hints for observing the heavens. 8vo. Oxford, 1874

Jolly (Ph.) :

Das Leben Fraunhofer's. Rede an die Studirenden der k. Ludwig-Maximilians-Universität zu München. 8vo. München, 1865

Jones (George) :

Observations on the Zodiacial light, from April 2, 1853, to April 22, 1855 with conclusions from the data thus obtained. (United States Japan Expedition, Vol. 3.) 4to. Washington, 1856

Jones (T. Rupert) :

Manual of the natural history, geology and physics of Greenland and the neighbouring regions, prepared for the use of the Arctic expedition of 1875 Edited by T. R J 8vo. London, 1875

Jones (William) :

- : An essay on the first principles of natural philosophy In four books. 4to. Oxford, 1762
- : *Properties of the conic sections. 4to. London, 1774

Jordaine (-) :

Duodecimal Arithmetick. 4th edition. 8vo. London, 1720

Jordan (William Leighton) :

- : A treatise on the action of Vis Inertiae in the ocean, with remarks on the abstract nature of the forces of vis inertiae and gravitation, and a new theory of the tides. 8vo. London, 1868

Jordan (William Leighton)—continued.

- : The ocean ; its tides and currents, and their causes. 8vo. London, 1873
 — : The new principles of natural philosophy. 8vo. London, 1883

Jordanus, see Ptolemy, Planisphærium ; Valderus and others.

Jost (Ernst) :

- Das Sonnensystem von einem hydrodynamischen Gesichtspunkte betrachtet. [Inaugural Dissertation.] 4to. Berlin, 1874

Journal of Natural Philosophy, Chemistry, and the Arts :

- : By William Nicholson. 5 vols. 4to. London, 1797-1802
 — : Ditto [Second series]. Vol. 1-14, 16-36. 8vo. London, 1802-13

Journal of Science and the Arts. Edited at the Royal Institution of Great Britain. Vol. 1-6. 8vo. London, 1816-19

- : The Quarterly Journal of Literature, Science and the Arts. Vol. 7-22. 8vo. London, 1819-27

— : Index to the first twenty volumes. 8vo. London, 1826

- : The Quarterly Journal of Literature, Science and the Arts (New Series). Jan. 1827 to June 1830.

7 vols. 8vo. London, 1827-30

Journal of Science [continuation of the Quarterly Journal of Science] edited by W. Crookes. Third series. Vol. 1-5.

8vo. London, 1879-83

Juan (Jorge) :

Exámen marítimo teórico-práctico, ó tratado de mecánica aplicado á la construcción, conocimiento y manejo de los navíos y demás embarcaciones. Edición segunda, aumentada . . . por Gabriel Ciscár. Tomo 1. 4to. Madrid, 1793

Juan (Jorge) y Antonio de Ulloa :

- : Observaciones astronomicas, y phisicas hechas . . . en los reynos del Perú . . . de las quales se deduce la figura y magnitud de la tierra, y se aplica á la navegacion. 4to. Madrid, 1748

- : A voyage to South America . . . translated from the original Spanish. Third edition, to which are added, by Mr. John Adams . . . occasional notes and observations [&c.]. 2 vols. 8vo. London, 1772

Julius (Frederik Hendrik) :

Berekening van de Loopbaan der Komeet 1863 VI. Academisch Proefschrift. 8vo. Utrecht, 1867

Junctinus (Franciscus) :

Speculum Astrologiae, universam mathematicam scientiam in certas classes digestam complectens.
 2 vols. fol. Lugduni, 1583-81

Tom. 1. In Ptolemæi Quadripartiti libros comment. De judiciis et revolutionibus nativitatum ; Revolutiones annorum mundi.

2. Comment. in G. Purbachii theorice planetarum liber : Comment. in sphæram J. de Sacrobosco ; De stellis fixis ; De eclipsibus et cometis ; Calendarium astrologicum.

[Jurin, Dr.]:

- : Geometry no friend to infidelity, or a defence of Sir Isaac Newton and the British mathematicians, in a letter to the author of the Analyst By Philalethes Cantabrigiensis. 8vo. London, 1734
- [—] : The minute mathematician, or the free-thinker no just-thinker. Set forth in a second letter to the author of the Analyst By Philalethes Cantabrigiensis. 8vo. London, 1735
- : See Berkeley (Bishop); Robins (B.)

Kaiser (Frederik):

- : Verhandeling over de Komeet van Halley, hare vroegere verschijningen en de Toekomstige in het Jaar 1835, tevens inhoudende; een overzigt over alle Kometen wier omloops-tijden met meerdere of mindere juistheid zijn bepaald. 8vo. 'sGravenhage en Amsterdam, 1835
- : Redevoering over de Sterrekunde, het waardigste Voorwerp eener algemeene Beoefening; met Aanteekeningen. 8vo. 'sGravenhage en Amsterdam, 1836
- : Het Observatorium te Leiden. 8vo. Leiden, 1838
- : Das Sonnensystem und die Gesetze seiner Bewegung populär dargestellt, [übersetzt] von Dr. Ch. G. Tröbst. 8vo. Weimar, 1850
- : *Sur la détermination absolue de l'erreur personnelle dans les observations astronomiques. 8vo. Amsterdam, 1863
- : *Onderzoeken omrent den gang van het Hoofduurwerk der Sterrewacht te Leiden, de pendule Hohwii, No. 17. 8vo. Amsterdam, 1865
- : Eenige opmerkingen omrent de periodieke fouten van mikrometer-schroeven, naar aanleiding van de jongste onderzoeken aan de Sterrewacht te Leiden. 8vo. Amsterdam, 1866
- : Rapport omrent de tweede algemeene Bijeenkomst der gemagtigden voor de Graadmeting in Europa. 8vo. Amsterdam, 1867
- : *Ueber einen neuen Apparat zur absoluten Bestimmung von persönlichen Fehlern bei astronomischen Beobach-tungen. 8vo. Amsterdam, 1867
- : *Waarnemingen omrent een merkwaardigen Vuurbol vol-bragt aan de Sterrewacht te Leiden (Nov. 1865). 8vo. Amsterdam, 1866

Kaiser (Frederik) en L. Cohen Stuart:

De eischen der medewerking aan de ontworpen Graad-meting in Midden-Europa voor het Koningrijk der Neder-landen. 4to. Amsterdam, 1864

Kalendarium perpetuum juxta ritum sacri ordinis praedica-torum. 8vo. Romae, 1612

Kalendermann (Der woherfahrene), nebst einer neuen popu-lären Astronomie. 8vo. Ulm, 1849

Kampf (C. L. F.):

Ueber die Untersuchung der Microscope- und Theilungsfehler

Kampf (C. L. F.)—continued.

an den Kreisen des neuen Aequatoreals der Hamburger Sternwarte. Inaugural-Dissertation. 8vo. Altona, 1868

Kane (Elisha Kent):

- : *Astronomical Observations in the Arctic Seas
1853–55. Reduced and discussed by C. A. Schott.
4to. Washington, 1860
- : *Tidal Observations in the Arctic seas, 1853–55. Reduced and discussed by C. A. Schott. 4to. Washington, 1860

Kant (Immanuel):

Allgemeine Naturgeschichte und Theorie des Himmels, oder Versuch von der Verfassung und dem mechanischen Ursprunge des ganzen Weltgebäudes nach Newtonischen Grundsätzen abgehandelt. Vierte Auflage. 8vo. Zeitz, 1808

Karlinski (Franciscus Michaël):

Hestiae planetae minoris XLVI elementa nova ex observationibus sex oppositionum annorum 1857–1864.
4to. Cracoviae, 1865

Kasan, Observatoire de l'Université Impériale:

Observations astronomiques faites par (Jean) Simonoff et (M.) Lépounoff. Cahier 1. 4to. Kasan, 1842

Kasan, Université Impériale:

Uchenuiya Zapiski (Scientific Notes). 8vo. Kasan, 1864–82

Kästner (Abraham Gotthelf):

- : Astronomische Abhandlungen zur weiteren Ausführung der astronomischen Anfangsgründe. Sammlung 1, 2.
8vo. Göttingen, 1772–74
- : Anfangsgründe der Arithmetik, Geometrie, ebenen und sphärischen Trigonometrie, und Perspectiv. Dritte Auflage.
8vo. Göttingen, 1774

Kater (Henry): Nautical Astronomy, see Encyclopædia Metropolitana.**Kayser (E.):**

Resultate aus Beobachtungen von Sonnenflecken während der Jahre 1754–58. 8vo.

Kayser (Heinrich):

Lehrbuch der Spektralanalyse. 8vo. Berlin, 1883

Kogler (Ignatius): Scientia Eclipsium, see Briga.**Keiffenheim (Hugo):**

Die absoluten Bewegungen der Himmelskörper und die wahre Natur der Dinge. 8vo. Köln, 1868

Keill (John):

- : Introductio ad veram physicam, seu lectiones physicae habite in schola naturalis philosophiae Academie Oxoniensis An. Dom. 1700 Editio tertia. 8vo. Oxoniae, 1715
- : Introductio ad veram astronomiam, seu lectiones astronomicae habite in schola astronomica academie Oxoniensis. 8vo. Oxoniae, 1718
- : Introductiones ad veram physicam et veram astronomiam ;

Keill (John)—continued.

- Quibus accedunt trigonometria; de viribus centralibus;
de legibus attractionis. 4to. Lugduni Batavorum, 1725
- : An introduction to the true astronomy, or astronomical
lectures read in the astronomical school of the University
of Oxford Second edition. 8vo. London, 1730
- : Ditto. Fourth edition. 8vo. London, 1748
- : Ditto. *See Le Monnier.*
- : An examination of Dr. Burnet's theory of the earth, with
some remarks on Mr. Whiston's new theory of the earth
. . . . Second edition To the whole is annexed a
dissertation on the different figures of the cœlestial bodies,
&c. . . . by Monsieur de Maupertuis
8vo. London, 1734
- : An introduction to natural philosophy; or philosophical
lectures read in the University of Oxford. To which are
added the demonstrations of Monsieur Huygens's theorems
concerning the centrifugal force and circular motion. Fourth
edition. 8vo. London, 1745

Keith (Thomas):

- : An introduction to the theory and practice of plane and
spherical trigonometry, and the stereographic projection of
the sphere, including the theory of navigation. Second
edition. 8vo. London, 1810
- : A new treatise on the use of the Globes, or a philosophical
view of the Earth and Heavens Third edition.
12mo. London, 1811
- : Ditto. A new edition, by J. Rowbotham.
12mo. London, 1843
- : The complete practical arithmetician. Sixth edition.
12mo. London, 1815
- : A key to the complete practical arithmetician to
which is added an appendix, containing a synopsis of
logarithmic arithmetic. Third edition. 12mo. London, 1813

Kelly (John):

The life of John Dollond, F.R.S., inventor of the Achromatic
Telescope. With a copious appendix of all the Papers
referred to. Third edition. 4to. London, 1808

Kelly (P.):

A practical introduction to Spherics and Nautical Astronomy
. . . . containing the discovery of a projection for
clearing the lunar distances, in order to find the longitude
at sea, with a new method of calculating this important
problem. 8vo. London, 1796

Kempf (Johann Christopher):

Theoria gravitatis corporum ac motus planetarum. [Inaugural
Dissertation.] 4to. Gissae, 1745

Kempf (Paul):

Untersuchungen über die Ptolemäische Theorie der Mond-
bewegung. 8vo. Berlin, 1878

Kendall (E. Otis):

*On the longitude of several places in the United States, as deduced from the Observations of the Solar Eclipse of September 18, 1838.
4to. London [1839]

Kennedy (John):

A complete system of astronomical chronology, unfolding the Scriptures.
4to. London, 1762

Kenrick (William):

- : An account of the automaton, constructed by Orffyreus.
4to. London, 1770
- : A lecture on the perpetual motion . . . Part 1 & 2.
4to. London, 1771
- [—] : Reasons for offering a parliamentary premium for the discovery of the perpetual motion.
4to. London, n.d.

Kepler (Gabriel):

Kurtzer jedoch gründlicher Bericht dess im Christ-Monat Anno 1664 erschienenen, und von verständigen Astrologis allendhalben wargenommen grossen Cometen.
4to. 1665

Kepler (Joannes):

- : Prodromus dissertationum cosmographicarum continens mysterium cosmographicum, de admirabili proportione orbium cœlestium, deque causis celerorum numeri, magnitudinis, motuumque periodicorum genuinis & proprijs.
4to. Tubingæ, 1596
- : Ad Vitellionem paralipomena, quibus astronomia pars optica traditur; potissimum de artificiose observatione et estimatione diametrorum deliquiorumq; Solis & Lunæ.
4to. Francofurti, 1604
- : De Stella nova in pede Serpentarii, et qui sub ejus exortum de novo init trigono igneo accesserunt I. De Stella incognita Cygni narratio astronomica. II. De Jesu Christi Servatoris vero anno natalitio.
4to. Pragæ, 1606
- : Phænomenon singulare seu Mercurius in Sole. Cum digressione de causis, cur Dionysius Abbas Christianos minus justo à nativitate Christi Domini numerare docuerit: De capite & anni Ecclesiastici.
4to. Lipsiæ, 1609
- : Astronomia nova αἰτιολόγητος, seu physica coelestis, tradita commentariis de motibus stellæ Martis ex observationibus G. V. Tychonis Brahe.
fol. Pragæ, 1609
- : Ephemerides novæ motuum cœlestium, ab anno vulgaris æræ M.DCXVII (ad annum MDCXX). Ex observationibus potissimum Tychonis Brahei, hypothesibus physicis & Tabulis Rudolphinis.
4to. Lincij Austriae [1617]
- : Epitome astronomiae Copernicanæ usitata formâ quæstionum & responsionum conscripta, inq; VII. libros digesta, quorum tres hi priores sunt de doctrina sphæricâ.
8vo. Lentij ad Danubium, 1618
- : Ditto.
8vo. Francofurti, 1635
- : Harmonices mundi libri V., quorum primus Geometricus, secundus Architectonicus, tertius Harmonicus, quartus

Kepler (Joannes)—continued.

- Metaphysicus, psychologicus et astrologicus, quintus Astronomicus et metaphysicus. fol. Lincii Austriae, 1619
- : Astronomischer Bericht von zweyen im abgelauffenen 1620 Jahr gesehenen grossen und seltzamen Mondsfinsternussen; wie auch von der grossen Sonnenfinsternuss 1621.
4to. Ulm, 1621
- : Tabulæ Rudolphinæ, quibus astronomicæ scientiæ, temporum longinquitate collapsæ restauratio continetur.
2 parts in 1 vol. fol. Ulmae, 1627 [1629]
- : Epistolæ ad Joannem Kepplerum, mathematicum Cæsareum scriptæ; insertis ad easdem responsionibus Kepplerianis, quotquot hactenus reperiri potuerunt ex manuscriptis edidit (Michael Gottlieb Hanschius). fol. Lipsiæ, 1718
- : Opera omnia, edidit Ch. Frisch.
8 vols. 8vo. Francofurti et Erlangae, 1858-70
- : Dioptrice, *see* Gassendi, Institutio astronomica.
- : Life, &c., *see* Apelt, Brewster, Bruhns, Breitschwert, Förster, Reitlinger, Small, Stark, Wolf (R.), Society for the Diffusion of Useful Knowledge.

Kepler (Johann) et Jacob Bartsch:

- Tabulæ Manuales logarithmicae ad calculum astronomicum, in specie Tabb. Rudolphinarum compendiose tractandum mire utiles. . . . 8vo. Argentorati, 1700

Kerigan (Thomas):

- : A practical treatise on the eclipses of the Sun and Moon and the deflection of the Moon and planets, with remarks on the anomalies of the present theory of the tides.
8vo. London, 1844
- : The anomalies of the present theory of the tides, elucidated by additional facts and arguments with remarks on the newly-discovered planet. 8vo. London, 1847

Kersey (John):

- : The elements of that mathematical art commonly called algebra, expounded in four books.
2 vols. fol. London, 1673-74
- : The elements of that mathematical art commonly called Algebra, expounded in two books To which is added, Lectures concerning the geometrical construction of algebraical equations, and the numerical resolution of the same by the compendium of logarithms, by Dr. Edmund Halley.
fol. London, 1717

Kerz (Ferdinand):

- Die Entstehung des Sonnensystems nach der Laplace'schen Hypothese, in verschiedenen neuen Richtungen ausgeführt. Eine mathematische Abhandlung. 8vo. Darmstadt, 1875

Kew Observatory:

- : *Report of the Kew Committee, 1872-73, 1875-83.
8vo. London, 1872-83

Kew Observatory—continued.

- : *Results of the monthly observations of magnetic dip, horizontal force, and declination made . . . 1869-75.
8vo. London, 1876
— : *See also Whipple (G. M.).*

Kiefer (H.):

- : *Erdbeben in Kaukasien im Jahre 1868. 8vo. Tiflis, 1869
— : J. B. Biot's Tafeln zur Berechnung barometrischer Höhenmessungen. Neu berechnet und erweitert. 4to. Tiflis, 1874
— : *See also Moritz und Kiefer ; Tiflis, Observatorium.*

Kincaid (Sidney Bolton):

- An introduction to lunar theory. 8vo. Cambridge, 1879

Kindermann (Eberhard Christian):

- Collegium Astronomicum, als der andere Theil, oder Erklärung seiner teutschen Astronomie . . .
4to. Dresden und Leipzig, 1747

King (Philip Parker):

- : Selections from a meteorological journal kept on board H.M. Ship *Adventure* during the survey of the southern coasts of South America, 1827-30. 8vo.
— : Astronomical Observations at Tahlee, Port Stephens, New South Wales. 8vo. Tasmania, 1849
— : *Abstract from a meteorological Journal kept at Port Stephens, New South Wales, 1843-47. 8vo.
— : On the specific gravity of sea-water in different parts of the North and South Atlantic Oceans and in the South Pacific. 8vo.

Kinns (Samuel):

- Moses and Geology, or the harmony of the Bible with Science. Second edition. 8vo. London, 1882

Kirby (Joshua):

- Dr. Brook Taylor's method of perspective made easy, both in theory and practice, in two books. Third edition.
2 parts in 1 vol. 4to. London, 1768

Kirch (Christfried):

- Merkwürdige Himmels-Begebenheiten, so sich im 1736 Jahr zutragen werden. 4to. Berlin, 1736

Kircher (Athanasius):

- : Magnes, siue de Arte Magnetica, opus tripartitum . . . Editio secunda. 4to. Coloniae Agrippinæ, 1643
— : Iter extaticum coeleste . . . hac secundâ editione prælusionibus & scholiis illustratum . . . a Gaspare Schotto . . . Accessit ejusdem Auctoris iter extaticum terrestre & synopsis mundi subterranei. 4to. Herbipoli, 1660
— : Mundus Subterraneus, in xii Libros digestus. Editio tertia. 2 vols. in 1, fol. Amstelodami, 1678

Kirchhoff (Gustav):

- Researches on the solar spectrum, and the spectra of the chemical elements. Translated by H. E. Roscoe.
2 parts, 4to. Cambridge, 1862-63

Kirkby (John):

Arithmetical institutions, containing a compleat system of arithmetic, natural, logarithmical, and algebraical in all their branches. 4to. London, 1735

Kirkwood (Daniel):

- : Meteoric Astronomy : a treatise on shooting-stars, fire-balls, and aerolites. 8vo. Philadelphia, 1867
- : *On Comets and Meteors. 8vo. Philadelphia, 1869
- : Comets and Meteors : their phenomena in all ages ; their mutual relations ; and the theory of their origin. 8vo. Philadelphia, 1873
- : *On eight Meteoric Fireballs seen in the United States from July, 1876, to February, 1877. 8vo. Philadelphia, 1877
- : *On Meteoric Fireballs seen in the United States during the year ending March 31, 1879. 8vo. Philadelphia, 1879

Kirschner (J. A.):

Ueber die Bahn der Himmelskörper. 8vo. Halle und Leipzig, 1820

Kitchiner (William):

- [—] : A companion to the telescope. 12mo. London, 1811
- : Practical observations on telescopes. 12mo. London, 1815
- : Practical observations on telescopes, opera-glasses and spectacles Third edition. 12mo. London, 1818
- : The economy of the eyes, Part 2, Of telescopes ; being the results of thirty years' experiments with fifty-one telescopes of from one to nine inches in diameter. 12mo. London, 1825

Klausing (Heinrich):

Eclipsis Lunaris nuper visa et observata Wittenbergae anno MDCCXVIII die ix Septembris in qua Singularia ejusdem Eclipseos notantur solidisque Fundamentis superstruuntur. 4to. Wittenbergae, 1719

Kleiber (Joseph A.):

Astronomical theory of shooting stars [in Russian]. 8vo. St. Petersburg, 1884

Klein (Hermann J.):

- : Entwicklungsgeschichte des Kosmos nach dem gegenwärtigen Standpunkte der gesammten Naturwissenschaften. Mit wissenschaftlichen Anmerkungen. 8vo. Braunschweig, 1870
- : Handbuch der allgemeinen Himmelsbeschreibung vom Standpunkte der kosmischen Weltanschauung. 2 vols. 8vo. Braunschweig, 1871-72
 - 1, Das Sonnensystem. Zweite verbesserte Auflage.
 - 2, Der Fixsternhimmel.
- : Populäre astronomische Encyclopädie. Astronomisches Handwörterbuch ; nebst biographischen Notizen über die hierbei erwähnten Forscher. 8vo. Heilbronn, 1874
- : Anleitung zur Durchmusterung des Himmels. Astronomische Objecte für gewöhnliche Telescopa. Ein Hand- und Hülfsbuch für alle Freunde der Himmelskunde, besonders für die Besitzer von Fernrohren. 8vo. Braunschweig, 1880

Klinkerfues (Wilhelm):

- : Über eine neue Methode die Bahnen der Doppelsterne zu berechnen. Inaugural-Dissertation. 4to. Göttingen, 1855
 — : Die Aberration der Fixsterne nach der Wellentheorie. 8vo. Leipzig, 1867
 — : Theoretische Astronomie. 8vo. Braunschweig, 1871
 — : Theorie des Bifilar-Hygrometers mit gleichtheiliger Prozent-Scala. 8vo. Göttingen, 1875
 — : Ueber die Kometen-Erscheinungen von 371 v. Chr., 1668, 1843 I und 1880 I. 8vo. Göttingen, 1880

Klöden (K. F.):

Der Sternenhimmel. Eine vollständige populäre Sternenkunde mit besonderer Beziehung auf die grosse Sternwandr-karte des Landes-Industrie-Comptoirs. 8vo. Weimar, 1848

Klübor (Johann Ludwig):

Die Sternwarte zu Mannheim. 4to. Mannheim, 1811

Klügel (Georg Simon):

Anfangsgründe der Astronomie, nebst der mathematischen Geographie, Schiffahrtskunde, Chronologie und Gnomonik.
8vo. Berlin und Stettin, 1793

Kluk (V. P.):

Auflösung des Verhältnisses der Quadratur in den Kreis, als eines einzelnen Falles des allgemeinen mathematischen Grundgesetzes in formellen Körpersystemen und Kraft-eigenheiten der Naturerscheinungen. 8vo. Wien, 1861

Kluk-Kluczycki (V. P.):

Die Kometen als Trabanten der Planeten, zum Beleg für die gänzliche Reform der Himmels-Mechanik entwickelt.
8vo. Leipzig, 1873

Klüpfel (Johann Albrecht) et Johann Christian Neuffer:

De atmosphera solis, atque hinc explicandis caussis macula-rum solarium. [Inaugural Dissertation.] 4to. Tubingæ, 1746

Kmeth (Daniel):

*Lettre . . . à M. le Baron de Zach ; sur une nouvelle *Angosiade*, ou sur un délit astronomique, commis à l'Observatoire Royal de Bude en Hongrie. 8vo. Gênes, 1823

Knobel (Edward Ball):

- : *The chronology of star catalogues. 4to. London, 1877
 — : *Notes on a Persian MS. of Ulugh Beigh's catalogue of stars. 8vo. London, 1879

Knorre (Karl):

- : Der Ort des Sterns δ Ursae minoris für jeden Tag der Jahre 1823–1830. 4to. Nicolajew, 1824
 — : *Gutachten über das Werk des Herrn Prof. Dr. Sawitsch. [Practische Astronomie, &c.] 8vo.

Knorre (Victor):

Additamenta in usum commodiorem et tutiorem methodorum, quae ad orbitas planetarum paucis observationibus determinandas inserviunt. Dissertatio Inauguralis.
4to. Perolini, 1867

Knott (George):

- : *On the variable star R. Vulpeculae. 8vo. London, 1867
 — : *Micrometrical measures of double stars. 4to. London, 1877

Knott (George) and Joseph Baxendell:

On the method of observing variable stars. 8vo. London, 1863

Knowledge: an illustrated magazine of Science, plainly worded
 — exactly described. Conducted by Richard A. Proctor.
 Vol. 1-5. 4to. London, 1882-84**Kobold (H.):**

Klinkerfues'sche Constanten zur Reduction auf den scheinbaren Ort für die mittleren Tage 1884, 12^h mittlere Zeit Berlin. 8vo. Göttingen [1883]

Koch (Georg):

Micrometrische Vermessung des Sternhaufens Herschel 1712.
 Inaugural-Dissertation. 8vo. Leipzig, 1876

Koch (Julius August):

Astronomische Tafeln zur Bestimmung der Zeit, aus der beobachteten gleichen obwohl unbekannten Höhe zweyer Fixsterne. 8vo. Berlin und Stralsund, 1797

Köhler (Heinrich Gottlieb):

Logarithmisch-trigonometrisches Handbuch. 8vo. Leipzig, 1847

Kokides (Demetrius K.):

De variationibus declinationum stellarum δ Ursae Majoris et β Draconis. Dissertatio Inauguralis. 4to. Berolini, 1862

Kollmann (August Gottlob):

Dissertatio de atmosphaera Lunae. [Inaugural Dissertation.] 4to. Vitembergae, 1734

Königsberg, Königliche Universitäts-Sternwarte:

- : Astronomische Beobachtungen. Abtheilung 1-36.
 fol. Königsberg, 1815-70
 Band 1-21 herausg. von F. W. Bessel.

22-30 " " A. L. Busch.

30-36 " " E. Luther.

- : Systematisches Verzeichniss der in der Bibliothek . . . enthaltenen Bücher. 8vo. Königsberg, 1852

— : See also Luther (E.)

Konkoly (Nicolaus von):

- : Beobachtungen angestellt am astrophysicalischen Observatorium in O-Gyalla. Band 1-5. 4to. Halle, 1879-83

- : *Der neue Refraktor des astrophysicalischen Observatoriums in O-Gyalla. 4to. Leipzig, 1883

- : Praktische Anleitung zur Anstellung astronomischer Beobachtungen, mit besonderer Rücksicht auf die Astrophysik. 8vo. Braunschweig, 1883

Kortazzi (J.):

*Bestimmung der Längen-Differenz zwischen Pulkowa, Helsingfors, Åbo, Lowisa und Wiborg.

4to. St. Pétersbourg, 1871

[**Kostrowicki (le Cte.)**]:

Commentaire et discussion du système planétaire de l'astronome J. Perny Villeneuve. Par un ancien officier de l'État-Major.
4to. Vienne, 1861

Kövesligethy (Rudolf von):

*Ueber den Farbenwechsel des Sternes *a Ursæ Majoris*.
8vo. Cöln, 1882

Kowalski (Marian):

- : *Recherches sur les mouvements de Neptune, suivies des tables de cette planète. 8vo. Kasan, 1855
- : *Sur les lois du mouvement propre des étoiles du catalogue de Bradley. 8vo. 1859
- : *Recherches sur la réfraction astronomique. 8vo. Kasan, 1878

Krabbe (Johann):

Newes Astrolabium, sampt dessen Nutz und Gebrauch.
4to. Wolfenbüttel, 1525 [1625]

Kraetzer (J.):

A short description of the astronomical clock in the museum at Mentz. 12mo.

Krahl (Theodor):

De orbita cometæ tertii MDCCCLIII. Dissertatio inauguralis astronomica. 4to. Vratislaviae, 1867

Kramp (Chrétien):

Analyse des réfractions astronomiques et terrestres.
4to. Strasbourg, 1799

Kreil (Karl):

*Versuch, den Einfluss des Mondes auf den atmosphärischen Zustand unserer Erde aus einjährigen Beobachtungen zu erkennen. 4to. Prag [1841]

Kremsmünster, Sternwarte:

- : *Magnetische Beobachtungen . . . im Jahre 1855–56, von P. Augustin Reslhuber. 4to. Wien, 1858–61
- : Resultate aus den in den Jahren 1857–59, 1868–69 . . . angestellten meteorologischen Beobachtungen. Von A. Reslhuber. 8vo. Linz, 1858–72
- : Mittlere Örter von [750] Fixsternen, bezogen auf das mittlere Aequinoctium 1870° . . . von P. G. Strasser. 8vo. Kremsmünster, 1877
- : *See also* Reslhuber (A.).

Kreutz (Heinrich):

Untersuchungen über die Bahn des grossen Kometen von 1861 (1861 II.). Inaugural-Dissertation. 4to. Bonn, 1880

Krueger (Adalbert):

- : De ascensionibus rectis a Flamsteedio quadrantis muralis ope observatis. Dissertatio astronomica [inauguralis]. 8vo. Bonnae, 1854
- : *Ueber die Parallaxe des Sternes Oeltzen No. 17415,6. 4to. Helsingfors, 1863
- : *Ueber die Parallaxe des Sterns LL. 21258. 4to. Helsingfors, 1863

Krueger (**Adalbert**)—*continued.*

- : *Der Sternhaufen η Persei. Beobachtungen desselben am Bonner Heliometer nebst deren Berechnung. 4to. Helsingfors, 1865
- : *Untersuchung über die Bahn des Planeten Themis, nebst einer neuen Bestimmung der Anziehung des Jupiter (mit Fortsetzung). 4to. Helsingfors, 1866–73
- : *Ueber die mittlere Temperatur zu Helsingfors, nach den Beobachtungen des magnetisch-meteorologischen Observatoriums, 1845–56. 4to. Helsingfors, 1874
- : Minnestal öfver Friedrich Wilhelm August Argelander. 4to. Helsingfors, 1875
- : Zonenbeobachtungen der Sterne zwischen 55 und 65 Grad nördlicher Declination, angestellt an den Sternwarten zu Helsingfors und Gotha. Band I. Zonen 1–338. 4to. Helsingfors, 1883

Küchenmeister (**C. J.**):

- Die Sonnenfinsternisse : mit besonderer Bezugnahme auf die am 28. Juli d. J. stattfindende totale Sonnenfinsterniss. 8vo. Hamburg & New York, 1851

Kuhn (**Carl**):

- Ueber das Klima von München. Festrede. 4to. München, 1854

Kupffer (**Adolph Theodor**):

- : Travaux de la Commission pour fixer les mesures et les poids de l'Empire de Russie. 2 vols. 4to. St. Pétersbourg, 1841
- : Observations magnétiques, *see* St. Petersburg.

Küstner (**Friedrich**):

- *Bestimmungen des Monddurchmessers, aus neun Plejadenbedeckungen des Zeitraumes 1839 bis 1876, mit gleichzeitiger Ermittlung der Oerter des Mondes. Inaugural-Dissertation. 4to. Halle, 1880

Kutczycki : Account of eclipse of 1850, *see* Carrington (R. C.).

La Caille (**Nicolas Louis de**):

- : The elements of astronomy, deduced from observations, and demonstrated upon the mathematical principles of the Newtonian philosophy Translated from the French by John Robertson 8vo. London, 1750
- : Astronomiae Fundamenta novissimis solis et stellarum observationibus stabilita Lutetiae in Collegio Mazarinæ et in Africa ad Caput Bonæ Spei peractis. 4to. Parisiis, 1757
- : *See* Gyldén (H.) ; United States Coast Survey.
- : Lectiones elementares astronomiae geometricæ et physicæ ex editione Parisina anni MDCCCLV in Latinum traductæ a C. S. e S. J. 1 vol. and Appendix, 4to. Viennæ, Pragæ et Tergesti, 1757–62
- : Leçons élémentaires d'astronomie géométrique et physique : . . . Nouvelle édition. 8vo. Paris, 1761
- : Cœlum australe stelliferum ; seu observationes ad construendum Stellarum Australium catalogum institutæ, in Africa ad Caput Bonæ-Spei. 4to. Parisiis, 1763

La Caille (Nicolas Louis de)—continued.

- : Leçons élémentaires de mécanique, ou traité abrégé du mouvement et de l'équilibre. . . . Nouvelle édition. 8vo. Paris, 1765
- : Leçons élémentaires de mathématiques. Nouvelle édition, par M. Marie. 8vo. Paris, 1770
- : Journal historique du voyage fait au Cap de Bonne-Espérance. 12mo. Paris, 1776
- : A catalogue of 9766 stars in the Southern Hemisphere, for the beginning of the year 1750, from observations . . . made at the Cape of Good Hope in the years 1751-52. Reduced at the expense of the British Association. 8vo. London, 1847
- : *See also* Paris, Ephemerides.

La Casa (Don Vittorio de) :

- Opusecolo analitico di geodesia sublime. 8vo. Vienna, 1824

La Condamine (Charles Maurice de) :

- Mesure des trois premiers degrés du méridien dans l'hémisphère austral, tirée des observations de M^{rs}s de l'Académie Royale des Sciences, envoyées par le Roi sous l'Équateur. 4to. Paris, 1751

Lacroix (Silvestre François) :

- : Traité du calcul différentiel et du calcul intégral. Vol. 1 & 2, 4to. Paris, an V, VI (1797-98); Vol. 3 (second edition), 1819
- : Élémens de Géométrie, à l'usage de l'École Centrale des quatre-nations. Neuvième édition. 8vo. Paris, 1811
- : Traité élémentaire d'arithmétique, à l'usage de l'École Centrale des quatre-nations. Onzième édition. 8vo. Paris, 1811
- : Élémens d'Algèbre, à l'usage de l'École Centrale des quatre-nations. Onzième édition. 8vo. Paris, 1815
- : Essais sur l'enseignement en général, et sur celui des mathématiques en particulier, seconde édition. 8vo. Paris, 1816
- : Traité élémentaire du calcul des probabilités. 8vo. Paris, 1816
- : An elementary treatise on the differential and integral calculus . . . Translated from the French, with an appendix and notes [by G. Peacock and J. F. W. Herschel]. 8vo. Cambridge, 1816
- : Traité élémentaire de calcul différentiel et de calcul intégral . . . Troisième édition. 8vo. Paris, 1820

Ladies' Diary, or Woman's Almanack, 1731, 1741-1818.
9 vols. 12mo. London, 1731-1818**Lagrange (Joseph Louis de) :**

- : *Recherches sur les inégalités des satellites de Jupiter. 4to. Paris, 1766
- : *Recherches sur la manière de former des tables des planètes, d'après les seules observations. 4to. Paris, 1772

Lagrange (Joseph Louis de)—continued.

- : *Recherches sur les équations séculaires des mouvements des Nœuds, et des inclinations des orbites des planètes. 4to. Paris, 1774
- : Méchanique analytique. 4to. Paris, 1788
- : Ditto . . . Troisième édition, revue, corrigée et annotée par J. Bertrand. 2 vols. 4to. Paris, 1853-55
- : Théorie des fonctions analytiques, contenant les principes du calcul différentiel. 4to. Paris, an IX [1799]
- [—] : Leçons sur le calcul des fonctions. Nouvelle édition. 8vo. Paris, 1806
- : Œuvres, . . . publiées par les soins de J. A. Serret. Tome 1-13. 4to. Paris, 1867-82

La Hire (Philippe de):

- : La gnomonique, ou méthodes universelles pour tracer des horloges solaires, ou cadrans, sur toutes sortes de surfaces. 12mo. Paris, 1698
- : Tabulæ astronomicæ, Ludovici Magni jussu et munificentia exaratae et in lucem editæ; in quibus solis, lunæ reliquo-rumque planetarum motus ex ipsis observationibus . . . traduntur . . . Adjecta sunt descriptio, constructio & usus instrumentorum astronomiæ . . . Secunda editio. 4to. Parisiis, 1727
- : New elements of conick sections, together with a method for their description on a plane. Translated by Brian Robinson. Third edition. 8vo. London, 1729

Lais (Giuseppe):

- : Studi sul Barometro aneroide. 8vo. Roma, 1871
- : Prolegomeni allo studio delle Burrasche del Clima di Roma. 4to. Roma, 1873

La Lande (Jos. Jérôme le François de):

- : Exposition du calcul astronomique. 8vo. Paris, 1762
- : Astronomie . . . Seconde édition. 3 vols. 4to. Paris, 1771
- : Ditto, troisième édition. 3 vols. 4to. Paris, 1792
- : Tables astronomiques calculées pour le méridien de Paris, sur les observations les plus exactes, faites jusqu'à l'année 1770 [from 'Astronomie.' Tome 1]. 4to. [Paris, 1771]
- : Abrégé d'Astronomie. 8vo. Paris, 1774
- : Astronomisches Handbuch, oder die Sternkunst in einem kurzen Lehrbegriff. 8vo. Leipzig, 1775
A translation of 'Abrégé d'Astronomie.'
- : Abrégé de Navigation ; historique, théorique et pratique. 4to. Paris, 1793
- : Histoire Céleste française, contenant les observations faites par plusieurs astronomes français. Tome 1. 4to. Paris, 1801
- : Tafeln zur Reduction der Beobachtungen, see Astcn (F. E. von); Schumacher (H.C.)
- : Bibliographie astronomique ; avec l'histoire de l'Astronomie depuis 1781 jusqu'à 1802. 4to. Paris, 1803
- : Tables de logarithmes pour les nombres et pour les sinus. 12mo. Paris, 1816

La Lande (Jos. Jérôme le François de)—continued.

- : A catalogue of those stars in the *Histoire Céleste française* . . . for which tables of reduction to the epoch 1800 have been published by Prof. Schumacher. Reduced at the expense of the British Association . . . under the immediate superintendence of Francis Baily. 8vo. London, 1847
- : *See Lindhagen (D. G.).*
- : Logarithmisch-trigonometrische Tafeln . . . Herausgegeben von Heinrich Gottlieb Köhler. Dritte Ausgabe. 12mo. Leipzig, 1849
- : Positions moyennes pour l'époque de 1790,0 des étoiles circompolaires dont les observations ont été publiées par Jérôme Lalande. . . . Par Ivan Fedorenko. 4to. St. Pétersbourg, 1854
- : Tafeln der fünfstelligen Logarithmen. Vierte Ausgabe. 12mo. Leipzig, 1873
- : *See also Paris, Ephemerides.*

Lambert (Jean Henri) :

- : Système du monde . . . publié par M. Mérian . . . Seconde édition. 8vo. Berlin, 1784
- : Supplementa tabularum logarithmicarum et trigonometricarum . . . secundum ultima auctoris consilia amplificata, curante Antonio Felkel. 4to. Olispone, 1798
- : The system of the world . . . Translated from the French, by James Jacque. 8vo. London, 1800
- : *Sur les irrégularités du mouvement de Jupiter et de Saturne. 4to. Berlin, 1779

Laming (Richard) :

- *On the primary forces of Electricity. 8vo. London, 1838

Lamont (Johann von) :

- : Ueber die Nebelflecken. 4to. München, 1837
- : Ueber die Bahn des dritten Saturns-Satelliten. 4to. [1837]
- : Ueber das magnetische Observatorium der königlichen Sternwarte bei München. 4to. München, 1841
- : *Darstellung der Temperaturverhältnisse an der Oberfläche der Erde. 4to. München [1843]
- : *Beschreibung der an der Münchener Sternwarte zu den Beobachtungen verwendeten neuen Instrumente und Apparate. 4to. München, 1851
- : Magnetische Ortsbestimmungen an verschiedenen Puncten des Königreichs Bayern, und an einigen auswärtigen Stationen. Theil 1, 2. 8vo. München, 1854-56
- : Magnetische Karten von Deutschland und Bayern. fol. München, 1854
- : Untersuchungen über die Richtung und Stärke des Erdmagnetismus an verschiedenen Puncten des südwestlichen Europa. 4to. München, 1858
- : Untersuchungen über die Richtung und Stärke des Erdmagnetismus in Nord-Deutschland, Belgien, Holland, Dänemark, im Sommer des Jahres 1858 ausgeführt. 4to. München, 1859
- : *See also Munich, Sternwarte.*

Lamp (Ernst):

Der scheinbare Ort des Polarsterns α Ursae Minoris. Astronomische Dissertation. 8vo. Kiel, 1874

Lamp (Johannes):

Neue Berechnung der Parallaxe von 61 Cygni aus den Beobachtungen von Schweizer in Moskau, 1863-1866. Inaugural-Dissertation. 8vo. Kiel, 1883

Lamy (Bernard):

Traité de la Grandeur en général, qui comprend l'arithmétique, l'algèbre, l'analyse, et les principes de toutes les Sciences qui ont la Grandeur pour objet. 12mo. Paris, 1680

Lancaster (Albert):

- : *Notes météorologiques. 16mo. Bruxelles
- : Bibliographie astronomique, *see* Houzeau et Lancaster.

Landen (John):

- : Mathematical lucubrations; containing new improvements in various branches of the mathematics. 4to. London, 1755
- : A discourse concerning the residual analysis: a new branch of the Algebraic art. 4to. London, 1758
- : Mathematical memoirs respecting a variety of subjects, with an appendix containing tables of theorems for the calculation of fluents. 2 vols. 4to. London, 1780-89
- : Observations on converging series, occasioned by Mr. Clarke's translation of Mr. Lorgna's treatise on the same subject. 4to. London, 1781

Landmann (I.):

Practical geometry, for the use of the Royal Military Academy at Woolwich. Second edition. 8vo. London, 1805

Langhansen (Christopher):

De Eclipsi Solari, occasione insignis eclipseos anno hoc currente 1715 d. 3 Maji apparituræ. [Inaugural Dissertation.] 4to. Regiomonti, 1715

Langley (Samuel P.):

- : *On the minute structure of the solar photosphere. 8vo. New Haven, 1874
- : *The Solar Atmosphere, an introduction to an account of researches made at the Allegheny Observatory. 8vo. New Haven, 1875
- : *On the comparison of certain theories of Solar Structure with observation. 8vo. New Haven, 1875
- : *A proposed new method in solar spectrum analysis. 8vo. New Haven, 1877
- : *Nouvelle méthode spectroscopique. 4to. Paris, 1877
- : *On the possibility of transit observation without personal error. 8vo. New Haven, 1877
- : *On certain remarkable groups in the lower spectrum. 8vo. Boston, 1878
- : *On the temperature of the Sun. 8vo. Boston, 1878
- : *Transit of Mercury of May 6th, 1878. 8vo. New Haven, 1878

Langley (Samuel P.)—*continued.*

- : *On the Janssen Solar photograph and optical Studies. 8vo. New Haven, 1878
- : *The total solar eclipse of July 29, 1878. Observations at Pike's Peak, Colorado. 4to. Washington, 1880
- : *Address . . . before the American Association for the Advancement of Science . . . 1879. [On recent progress in solar physics.] 8vo. Salem, 1879
- : *Observations on Mount Etna. 8vo. New Haven, 1880
- : *Sur la distribution de l'énergie dans le spectre solaire normal. 4to. Paris, 1881
- : *The Bolometer. 8vo. New York, 1881
- : *The Bolometer and radiant energy. 8vo. Cambridge, 1881
- : *Observations du spectre solaire. 4to. Paris, 1882
- : *The selective absorption of solar energy. 8vo. New Haven, 1883
- : Experimental determination of wave-lengths in the invisible prismatic spectrum. 8vo. New Haven, 1884

Lansberg (Jacobus) :

Apologia pro commentationibus Philippi Lansbergii in motum terræ diurnum et annum, adversus Libertum Fromondum.
4to. Middelburgi Zelandiæ, 1633

Lansberg (Philipp van) :

- : Bedenkinghen op den daghelyckschen ende Iaerlijckschen loop vanden Aerdt-cloot. 4to. Middelburgh, 1629
- : Commentationes in motum terræ diurnum & annum, et in verum adspectabilis cœli typum . . . In Latinum versæ à Martino Hortensio, unâ cum ipsius prefatione. 4to. Middelburghi, 1630
- : Uranometriae libri tres; in quibus Lunæ, Solis, & reliquorum planetarum, & inerrantium stellarum distantiae à terra, & magnitudines, hactenus ignoratae perspicuè demonstrantur. 4to. Middelburgi, 1631
- : Tabulae motuum coelestium perpetuæ, ex omnium temporum observationibus constructæ, temporumque omnium observationibus consentientes; item novæ et genuinæ motuum coelestium theoreticæ, & astronomicarum observationum thesaurus. 3 parts in 1 vol. fol. Middelburgi [Lugduni], 1632
- : Verklaeringhe van het ghebruyck des astronomischen ende geometrischen quadrants . . . van nieus oversien ende vermeedert . . . door D. Govbard. 4to. Middelburgh [Haerlem], 1633
- : Opera omnia. 10 pts. in 1 vol. fol., Middelburgi Zelandiæ, 1635-63
- : Astrolabium; dat is . . . verklaringhe van de platte sphære van Ptolomæus, anders astrolabium ghehaemt. 4to. Middelburgh, 1635
- : Ditto. 4to. Middelburgh, 1653
- : In quadrantem tum astronomicum, tum geometricum; nec non in astrolabium introductio. fol. Middelburgi, 1635 [1636]

Lansberg (Philipp van)—continued.

- : Beschrijvingh der vlacke Sonne-Wysers Nieuwelijx oversien door Jacob Mogge.
fol. Middelburgh, 1675 [Harlemi, 1666]

Lanz (—), et D. E. Bétancourt:

- Essai sur la composition des Machines Seconde édition. 4to. Paris, 1819

La Place (Pierre Simon, Marquis de):

- : Théorie du mouvement et de la figure elliptique des planètes. 4to. Paris, 1784
— : Traité de Mécanique céleste. 5 vols. 4to. Paris, an VII [1799]–1825
— : Supplément à la théorie de l'action capillaire (2^{me} Supplément au livre X, et Suppl. au 3^{me}. Vol. de la Méc. Cel.). 4to. Paris, 1807
— : The system of the world translated from the French by J. Pond. 2 vols. 8vo. London, 1809
— : Exposition du système du monde quatrième édition, revue et augmentée par l'auteur. 2 vols. 8vo. Paris, 1813
— : A treatise upon analytical mechanics : being the first book of the Méchanique Céleste translated and elucidated with explanatory notes by the Rev. John Toplis. 8vo. Nottingham, 1814
— : Théorie analytique des probabilités Seconde édition. 4to. Paris, 1814
— : Ditto, troisième édition. 4to. Paris, 1820
— : Essai philosophique sur les probabilités Troisième édition 8vo. Paris, 1816
— : Précis de l'Histoire de l'Astronomie. 8vo. Paris, 1821
— : Mécanique céleste Translated, with a commentary, by Nathaniel Bowditch (with a memoir of the translator by his son, N. I. Bowditch). 4 vols. 4to. Boston, 1829–39
— : Œuvres complètes publiées sous les auspices de l'Académie des Sciences par MM. les Secrétaires perpétuels. Tome 1–5. 4to. Paris, 1878–82
— : Mécanique Céleste, *see* Biot (J. B.); Young (T.).
— : Memoir, *see* Poisson (S. D.); Biot (J. B.).

Lardner (Dionysius):

- : A system of algebraic geometry In two volumes. Vol. 1, containing the geometry of plane curves. 8vo. London, 1823
— : An elementary treatise on the differential and integral calculus. 8vo. London, 1825
— : An analytical treatise on plane and spherical trigonometry, and the analysis of angular sections. 8vo. London, 1826
— : A discourse on the advantages of natural philosophy and astronomy, as part of a general and professional education. 8vo. London, 1829
— : Popular astronomy from 'the Museum of Science and Art.' 8vo. London, 1856
— : Ditto, second series. 8vo. London, 1857

Lardner (Dionysius)—continued.

- : Handbook of Astronomy. 2 vols. 8vo. London, 1853-56
 — : Ditto, fourth edition, revised and edited by Edwin
 Dunkin. 8vo. London, 1875

Largeteau (G. L.) :

- *Tables de précession, d'aberration et de nutation pour 65
 étoiles principales. 8vo. Paris, 1833

Lartigue (H.) :

- Exposition du système des vents, ou traité du mouvement de
 l'air. Deuxième édition. 8vo. Paris, 1855

Lassell (William) :

- *On polishing the specula of reflecting telescopes.
 4to. London, 1874

Laughton (John Knox) :

- : Physical Geography in its relation to the prevailing winds
 and currents. 8vo. London, 1870
 — : An introduction to the practical and theoretical study of
 Nautical Surveying. 8vo. London, 1872

Laugier (Paul Auguste Ernest) :

- : *Mémoire sur l'influence du ressort de suspension sur la
 durée des oscillations du pendule. 4to. Paris, 1845
 — : *Mémoire sur quelques comètes anciennes. 4to. Paris, 1846
 — : Usage du cercle méridien portatif pour la détermination
 des positions géographiques. 4to. Paris, 1852
 — : *Mémoire sur la détermination des distances polaires des
 étoiles fondamentales. 4to. Paris, 1859

Laussedat (A.) :

- : *Rapport sur l'observation de l'Éclipse du 18 Juillet 1860,
 faite en Algérie par MM. Laussedat, de Salicis, Mannheim,
 Bour et Girard. [2 papers.] 4to. Paris, 1860
 — : *Différence de longitude de l'Observatoire de Toulouse et
 de la Citadelle de Montpellier. 4to. Paris, 1862
 — : Mémoire sur un fragment de cadran solaire trouvé en
 Phénicie. 4to.
 — : *Sur les applications utiles de la méthode graphique à
 la prédiction des éclipses de Soleil. 4to. Paris, 1870
 — : *Sur l'aurore boréale du 4 Février 1872. 4to. Paris, 1872
 — : La lunette astronomique horizontale, destinée à l'observation
 du Soleil, de ses éclipses, et des passages de Vénus sur cet astre.
 8vo. Paris, n.d.

Lavaux (Eugène) :

- Nouveau système du Monde, ou les premières forces de la
 nature deuxième édition. 8vo. Paris, 1875

Lawson (Henry) :

- : Meteorological Journal, kept at Hereford, 1841.
 8vo. Hereford, 1842
 — : A paper on the arrangement of an observatory for practical
 astronomy and meteorology. 8vo. Bath, 1844
 — : Observations on the placing of thermometers, with the
 plan of a stand, by which many of the errors arising from
 want of uniformity will be avoided. Single sheet, 8vo., 1845

Lawson (John) :

- : The two books of Apollonius Pergaeus, concerning Tangencies, as they have been restored by Franciscus Vieta and Marinus Ghetaldus The second edition, to which is now added Fermat's treatise on spherical tangencies. 4to. London, 1771
- : The two books of Apollonius Pergaeus, concerning determinate section, as they have been restored by Willebrordus Snellius to which are added the same two books by William Wales, being an entire new work. 4to. London, 1772
- : A synopsis of all the data for the construction of triangles, from which geometrical solutions have hitherto been in print, with references to the authors, where those solutions are to be found. 4to. Rochester, 1773
- [—] : A dissertation on the geometrical analysis of the antients; with a collection of Theorems and Problems, without solutions, for the exercise of young students. 8vo. Canterbury, 1774

Lax (W.) :

- Tables to be used with the Nautical Almanac for finding the latitude and longitude at sea. 8vo. London, 1821

Leadbetter (Charles) :

- : Astronomy of the satellites of the earth, Jupiter and Saturn also new tables of the motions of the satellites of Jupiter and Saturn ; to which is added a problem to find the latitude of the place by the altitude of the Sun, Moon, or Star. 8vo. London, 1729
- : Uranoscopia, or the contemplation of the heavens; being a demonstration of the equation of time, with the method of observing the solar ingresses into any point of the ecliptic, and the investigation of the aphelions and eccentricities of the planets 8vo. London, 1735
- : A compleat system of astronomy containing the description and use of the sector, the laws of spheric geometry, the projection of the sphere, the doctrine of the sphere, and the eclipses of the Sun and Moon for thirty-nine years Also new tables of the motions of the Planets Second edition. 2 vols. 8vo. London, 1742

(Le Clerc, Sebastian) :

- Pratica di Geometria (trad. di E. Bralon). 12mo. Roma, 1746

Lecoq de Boisbaudran (—) :

- Spectres lumineux : spectres prismatiques et en longueurs d'ondes, destinés aux recherches de chimie minérale. (Texte et Atlas.) 8vo. Paris, 1874

Lecount (P.) :

- A description of the changeable magnetic properties possessed by all iron bodies, and the different effects produced by the same on ship's compasses, from the position of the ship's head being altered. 8vo. London, 1820

Lecouturier (—) et A. Chapuis :

- : Carte générale de la Lune. 1 sheet, Paris, n.d.

Lecouturier (—) et A. Chapuis—*continued.*

— : La Lune. Description et topographie . . . pour servir à l'explication de la carte de la Lune des mêmes auteurs. 8vo. Paris, n.d.

Ledger (Edmund):

— : Intra-Mercurial planets. A lecture delivered in Gresham College, London. 8vo. Cambridge, 1879

— : The Sun; its planets and their satellites. A course of lectures upon the solar system, read in Gresham College, London, in the years 1881 and 1882. 8vo. London, 1882

Leeds Correspondent; a literary, mathematical, and philosophical miscellany . . . edited by J. Ryley (and J. Whitley). Vol. 1-5. 12mo. Leeds, 1815-23

Leeds Philosophical and Literary Society:

Annual Report, 1862-84. 8vo. Leeds, 1863-84

Lefébure (Auguste):

Thèse d'astronomie, sur le mouvement elliptique des astres. (Thèses Fac. Sci., Paris, No. 171.) 4to. Paris, 1853

Lefort (F.), see Paris, Observatoire.

Lefort (F.) et J. Houël:

*Note ayant pour objet de signaler les erreurs nombreuses qui existent dans les tables de logarithmes de Callet. 8vo. Paris, 1858

Legendre (Adrien Marie):

— : Essai sur la théorie des nombres . . . Seconde édition. 4to. Paris, 1808

— : Exercices de calcul intégral sur divers ordres de transcendantes, et sur les quadratures. [Tome 1.] 4to. Paris, 1811

— : Éléments de géométrie, avec des notes. Onzième édition. 8vo. Paris, 1817

— : Elements of geometry and trigonometry, with notes . . . Edited by David Brewster . . . with notes and additions, and an introductory chapter on proportion [by Thomas Carlyle]. 8vo. Edinburgh, 1824

— : Elements of geometry and trigonometry. Revised and adapted to the course of mathematical instruction in the United States, by Charles Davies. 8vo. New York, 1854

— : Arc du méridien, *see* Delambre.

Le Gentil de la Galaisière (G. H. J. J. B.):

Voyage dans les mers de l'Inde, fait par ordre du roi à l'occasion du Passage de Vénus sur le disque du Soleil le 6 Juin 1761 et le 3 du même mois 1769. 2 vols. 4to. Paris, 1779-81

Legh (Peter):

An essay on anemology and ombrology, the only possible theory for weather calculations without the mysterious arts . . . with a weather almanac for 1849. 8vo. London, n.d.

Leghorn, Regi Istituti Tecnico e Nautico:

Annali, 1877-81. Vol. 7-10. 8vo. Livorno, 1880-82

Lehardelay (Charles):

*Résultats d'Observations de la planète Saturne, faites le 1868 à 1874 à Fontenay (Calvados). 8vo. Bruxelles, 1876

Lehmann (Fr. Xav.):

Die Sternbilder des Thierkreises. 8vo. Constanz, 1852

Lehmann (Jacob Wilhelm Heinrich):

— : Abhandlung über die höchst merkwürdige, aber bisher, wie es scheint, noch zu wenig beachtete ringförmige Sonnenfinsterniss vom 7. September 1820. 8vo. Berlin, 1820

— : Ueber die sehr grossen und totalen Sonnen-Verfinsterungen auf der Erde überhaupt . . . Zweite Auflage. 4to. Hamburg, 1842

Le Hon (H.):

Manuel d'Astronomie, de Météorologie et de Géologie, à l'usage des gens du monde . . . Quatrième édition 8vo. Bruxelles et Leipzig, 1860

Leibnitz (Gottfried Wilhelm):

Opera omnia, nunc primum collecta . . . studio L. Dutens. 6 vols. 4to. Geneva, 1768

Tomus I. Theologica.

2. Logica, metaphysica, physica, chymia, &c.

3. Mathematica.

4. Philosoph., histor., jurisprudent.

5. Philologica.

6. Philologia, etymologica.

Leibnitz (Gottfried Wilhelm) et Jean Bernoulli:

Commercium philosophicum et mathematicum, 1694-1716. 2 vols. 4to. Lausanne, 1745

Leiden, Sternwarte:— : Annalen. Band 1-4. 4to. Harlem, Haag, 1868-75
Band 1-3 herausgegeben von F. Kaiser.
" 4 " " " H. G. van de Sande Bakhuyzen.

— : Verslag van den staat der Sterrewacht te Leiden : . . . 1863-70, uitgebracht door F. Kaiser. 8vo. Amsterdam, 1864

— : Ditto, 1873-74, uitgebracht door H. G. van de Sande Bakhuyzen. 8vo. Amsterdam, 1874

— : Catalogus van de Boeken [with 2 supplements]. 8vo. 'sGravenhage, 1877-82

Leipzig, Astronomische Gesellschaft:

— : Publicationen, 1-17. 4to. Leipzig, 1865-83

1. Hülftafeln zur Berechnung specieller Störungen.
2. Lesser, Tafeln der Metis.
3. Weiler, Ueber das Problem der drei Körper.
4. Houël, Tables pour la réduction du temps en parties décimales du jour.
5. Auwers, Reduction der Beobachtungen der Fundamentalsterne am Passageninstrument zu Palermo 1803-1805.
6. Rechtwinklige und Polarcoordinaten des Jupiter.
7. Auwers, Veränderliche Eigenbewegungen. Theil 2, Bestimmung der Elemente der Siriusbahn.
8. Schjellerup, Genäherte Oerter der Fixsterne, für die Epoche 1855.
9. Lesser, Tafeln der Pomona.
10. Becker, Tafeln der Amphitrite.
11. Winnecke, Bestimmung der Parallaxe des zweiten Argelander'schen Sternes.

Leipzig, Astronomische Gesellschaft—continued.

- 12. Weiler, Grundzüge einer neuen Störungstheorie.
- 13. Spörer, Beobachtungen der Sonnenflecken.
- 14. Auwers, Fundamental-Catalog für die Zonenbeobachtungen am nördl. Himmel.
- 15. Hartwig, Durchmesser der Planeten Venus und Mars.
- 16. Oppolzer, Syzygien-Tafeln für den Mond.
- 17. Auwers, Mittlere Oerter von 83 südlichen Sternen für 1875.

— : Vierteljahrsschrift, Jahrgang 1–18. 8vo. Leipzig, 1866–83

- 1. Supplementheft (Jahrg. 3). Von Asten, Hülftafeln zur Reduction der in der 'Hist. Cél. Française' enthaltenen Beobachtungen.
- 2. " (Jahrg. 4). Tafeln zur Reduction von Fixstern-Beobachtungen, 1726–50.
- 3. " (Jahrg. 14). Bruhns, Catalog der Bibliothek.

Leipzig, Fürstliche Jablonowski'sche Gesellschaft:

— : Abhandlungen, bei Begründung der Königlich-Sächsischen Gesellschaft der Wissenschaften am Tage der zweihundertjährigen Geburtsfeier Leibnizens herausgegeben.

4to. Leipzig, 1846

— : Preisschriften. 1–5, 18. 8vo. Leipzig, 1847–75

— : Jahresbericht. 8vo. Leipzig, 1875, '78, '79, '81, '82

Leipzig, Königlich-Sächsische Gesellschaft der Wissenschaften:

- : Abhandlungen der mathematisch-physischen Classe.
Band 1–12. 8vo. Leipzig, 1852–82
- : Berichte über die Verhandlungen, 1846–47. Band 1. 8vo. Leipzig, 1848
- : Berichte über die Verhandlungen, mathematisch-physische Classe, 1849–81. Band 1–33. 8vo. Leipzig, 1882

Leipzig, Königl. Universitäts-Sternwarte:

- : Geschichte und Beschreibung der Leipziger Sternwarte . . . Herausgegeben von Dr. C. Bruhns. 4to. Leipzig, 1861
- : Beobachtungen . . . mit vorausgeschickter Beschreibung der jetzigen Einrichtung dieser Sternwarte . . . von A. F. Möbius. 8vo. Leipzig, 1823
- : Resultate aus Beobachtungen. I. Beobachtungen am Meridiankreis, von Rudolf Engelmann. 4to. Leipzig, 1870
- : See also Bruhns; Engelmann; Vogel.

Leith (John):

The true physical cause of the precession of the Equinox.
8vo. Auckland [1876]

Le Jeune (Guillaume Alexandre):

Dissertatio Astronomica, exhibens definitiones ex nonnullis Pleiadum occultationibus deductas. [Inaugural Dissertation.]
8vo. Lugduni-Batavorum, 1845

Le Monnier (Pierre Charles):

- : Histoire Céleste, ou recueil de toutes les observations astronomiques faites par ordre du Roy; avec un discours préliminaire sur le progrès de l'Astronomie. 4to. Paris, 1741
- : La théorie des Comètes, où l'on traite du progrès de cette partie de l'Astronomie; avec des tables pour calculer les

Le Monnier (Pierre Charles)—continued.

- mouvements des Comètes, du Soleil, & des principales Étoiles fixes. 8vo. Paris, 1743
- [—] : Institutions astronomiques, ou leçons élémentaires d'astronomie, . . . avec de nouvelles tables d'équation corrigées, et particulièrement les tables du Soleil, de la Lune, & des satellites ; précédées d'un essai sur l'histoire de l'astronomie moderne. 4to. Paris, 1746
- A translation, with additions, of Keill's 'Introductio ad veram Astronomiam.'
- [—] : Mémoires concernant diverses questions d'Astronomie et de Physique; lus & communiqués à l'Académie Royale des Sciences, &c. 4to. Paris, 1781

Leontius, see Aratus.

Leovitius [Leowitz] (Cyprianus):

- : Ephemeridvm novvm atque insigne opvs, ab anno Domini 1556 vsq. in 1606 accuratissimè supputatum; accesserunt. I. Eclipsivm typi elegantissimi. II. Expedita ratio constitvendi cœlestis thematis, cum tabulis III. Brevis ratio geneses iudicandi IIII. Loca stellarvm fixarvm V. Themata qvatvor anni temporvm. 2 vols. in 1, fol. Avgvstæ Vindelicorvm, 1557
- : De Coniunctionibvs magnis insignioribvs sveriorvm planetarum, Solis defecionibus, & Cometis, in quarta monarchia, cum eorundem effectuum historica expositione accessit, ab anno Domini 1564, in viginti annos sequentes, prognosticon. 4to. Londini, 1573
- : De judiciis nativitatum, *see* Strauchius.

Leslie (John):

- : An experimental inquiry into the nature and propagation of heat. 8vo. London, 1804
- : Elements of geometry, geometrical analysis, and plane trigonometry. 8vo. Edinburgh, 1809
- : The philosophy of arithmetic. 8vo. Edinburgh, 1817
- : Ditto. Second edition. 8vo. Edinburgh, 1820
- : Geometrical analysis and geometry of curve lines, being volume second of a course of mathematics. 8vo. Edinburgh, 1821
- : Elements of natural philosophy . . . Vol. 1, including mechanics and hydrostatics. 8vo. Edinburgh, 1823

Lespiault (G.):

- : *Mémoire sur le mouvement des nœuds de la Lune et sur l'inégalité en latitude qui donne la mesure de l'aplatissement de la terre. 8vo. Paris, 1861
- : *Théorie géométrique de la variation des éléments des planètes. 8vo. Bordeaux, 1868

Lesser (Otto):

- : *Tafeln der Metis, mit Berücksichtigung der Störungen durch Jupiter und Saturn. 4to. Leipzig, 1865
- : *Tafeln der Pomona, mit Berücksichtigung der Störungen durch Jupiter, Saturn, und Mars. 4to. Leipzig, 1869

Leveau (Gustave):

- : *Travaux Astronomiques. 4to. Paris
- : *Recherches sur la comète périodique de D'Arrest, et détermination des éléments en 1851, 1869 et 1877. 4to. Paris [1877]
- : *Théorie de Vesta. 4to. Paris [1878]
- : *Théorie du mouvement de Vesta. 4to. Paris [1880]
- : *Sur la comète périodique de D'Arrest, et son prochain retour en 1883. 4to. Paris [1883]

Levêque (Pierre):

- : Tables générales de la hauteur et de la longitude du nonagesime, calculées pour toutes les latitudes terrestres. 2 vols. 8vo. Avignon, 1776
- : Recueil de tables astronomiques et nautiques, dressées pour le calcul des latitudes et des longitudes en mer. 8vo. Nantes, 1779

Levera (Franciscus):

Prodromus universae astronomiae restitutus; de anni Solaris, & Siderei, ac Dierum magnitudine in omni Aëro, & de reliquis periodis, motibus, & circulationibus solaribus ac etiam sidereis, ab authore exploratis (cum catalogo stellarum). fol. Romæ, 1663

Le Verrier (Urbain Jean Joseph):

- : *Mémoire sur les variations séculaires des éléments des orbites pour les sept planètes principales, Mercure, Vénus, la Terre, Mars, Jupiter, Saturne, et Uranus. 8vo. Paris [1840]
- : *Mémoire sur la détermination des inégalités séculaires des planètes. 8vo. Paris [1841]
- : *Développements sur plusieurs points de la théorie des perturbations des planètes. 4to. Paris, 1841
- : *Recherches sur l'orbite de Mercure et sur ses perturbations. Détermination de la masse de Vénus, et du diamètre du soleil. 4to. Paris, 1843
- : *Recherches sur les mouvements de la planète Herschel. 8vo. Paris, 1846
- : *Recherches sur les comètes périodiques. 4to. Paris, 1847
- : *Examen de la discussion soulevée au sein de l'Académie des Sciences au sujet de la découverte de l'attraction universelle. 4to. Paris, 1849
- : *Discours prononcés aux funérailles. 4to. Paris, 1877
- : *See also Bertrand (J.)*; Paris, Observatoire, Annales.

Lewis (Enoch):

A treatise on plane and spherical trigonometry, including the construction of the auxiliary tables; a concise tract on the conic sections, and the principles of spherical projection.
8vo. Philadelphia, 1844

Lewis (George Cornewall):

An historical survey of the Astronomy of the Ancients.

8vo. London, 1862

Lewis (Henry Carvill) :

- : *Note on the zodiacal light. 8vo. New Haven, 1880
 — : *Note on the Aurora of April 16-17, 1882. 8vo. Philadelphia, 1882

Ley (W. Clement), see London, Meteorological Office.

Leybourn (Thomas) :

- : The mathematical repository. 3 vols. (Vol. 1, second edition.) 12mo. London, 1799-1804
 — : Ditto, New series. 4 vols. London, 1806-19
 — : The philosophical repository. 2 vols. 12mo. London, 1801-4
 — : The mathematical questions proposed in the Ladies' Diary, and their original answers, together with some new solutions . . . 1704 to 1816. 4 vols. 8vo. London, 1817

Leybourn (William) :

- : Cursus Mathematicus. Mathematical sciences, in nine books: comprehending arithmetic, geometry, cosmography, astronomy, navigation, trigonometry, with the description, construction, and use of geometrical and nautical instruments. fol. London, 1690
 — : Dialling; plain, concave, convex, projective, reflective, refractive. Showing how to make all such dials and to adorn them with all useful furniture relating to the course of the sun. fol. London, 1700
 — : Mathematical institutions, in three parts. 1. Clavis, [the] key. 2. Janua, the gate. 3. Ancilla, [the] handinaid to the mathematical sciences. 4to. London, 1704
 — : The compleat surveyor, or the whole art of surveying of land. Fifth edition, by Samuel Cunn. fol. London, 1722

Leyton Observatory, Essex :

Astronomical Observations taken during the years 1862-77, at the private observatory of Joseph Gurney Barclay. Vol. 1-4. 4to. London, 1865-78

L'Hôpital, Guillaume François Antoine, Marquis de :

- [—] : Analyse des infiniment petits, pour l'intelligence des lignes courbes. 4to. Paris, 1696
 — : Suite, *see* Bougainville.
 — : Translation, *see* Stone and de l'Hôpital.
 — : An analytick treatise of Conick Sections, and their use for resolving of equations in determinate and indeterminate problems, made English by E. Stone. 4to. London, 1723

Liagre (J.) :

- : *Sur les corrections de la lunette méridienne. 4to. Bruxelles [1845]
 — : *Sul movimento delle bolle de' livelli, in consequenza del calore. 4to. Milano; 1848
 — : *Note sur l'erreur probable d'un passage observé à la lunette méridienne de l'observatoire royal de Bruxelles. 8vo. Bruxelles [1853]

Liais (Emmanuel):

- : Traité d'astronomie appliquée à la géographie et à la navigation, suivi de la géodésie pratique. 8vo. Paris, 1867
 — : L'Espace Céleste et la nature tropicale. Description physique de l'Univers d'après des observations personnelles faites dans les deux hémisphères. Préface de M. Babinet.
 8vo. Paris, n.d.

Liapounov (M.), see Kasan ; Struve (O.) et Liapounov.

Libavius (Andreas) et G. Voetius :

- Declamatio de Cometa anni 1604, et G. . . . Voetii exercitatio de prognosticis cometarum. 4to. Amstelædami, 1665

Libri (Guglielmo) :

- : Mémoires de mathématique et de physique. Tome 1.
 4to. Florence, 1829
 — : Histoire des sciences Mathématiques en Italie, depuis la renaissance des lettres jusqu'à la fin du dix-septième siècle.
 4 vols. 8vo. Paris, 1838-41
 — : Galileo Galilei. Zu seinem Gedächtniss im zweiten Säcularjahr seines Todes. 1. Sein Leben und seine Werke . . . aus dem Französischen mit Anmerkungen von F. W. Carové.
 8vo. Wiesbaden, 1842
 — : Catalogue of Library [etc.] 3 vols. 8vo. London, 1861-64

Lichtenberg (Georg Christoph) :

- Physicalische und mathematische Schriften. Band 1. (Biographie von Nicolaus Copernicus, &c.) 8vo. Göttingen, 1803

Lick Observatory :

- Report to the Trustees of Observations made on Mt. Hamilton with reference to the location of Lick Observatory, by S. W. Burnham.
 4to Chicago, 1880

Lio (Marius Sophus) :

- *Représentation der Imaginären der Plangeometrie.
 8vo. Christiania, 1869

Liebknecht (Johann Georg) :

- Stellæ Ludovicianæ noviter detectæ. [Inaugural Dissertation.]
 4to. Gissæ, 1723

Liechtenberger (Joannes) :

- Prognostique, Voorsegginghe van J. L., de welcke hy geschrevē heeft nu over de hondert ende ses en dertich Jaren, op die groote versaminghe van Saturnus ende Jupiter, die gheweest is int Jaer ons Heeren 1484. Daer-renboven oock op den Eelipsis in de Sonne ghesien int naer- volghende Iaer 1485.
 4to. 1620

Liévano (Indalecio) :

- Investigaciones Científicas.
 8vo. Bogotá, 1871

Ligowski (W.) :

- Sammlung fünfstelliger logarithmischer, trigonometrischer, nautischer und astronomischer Tafeln, nebst Erklärungen und Formeln der Astronomie, mit besonderer Rücksicht auf die Nautik.
 8vo. Kiel, 1873

Lilly (William):

- : Englands propheticall Merline, foretelling untill 1663 the actions depending upon the influence of the conjunction of Saturn and Jupiter, 164². 4to. London, 1644
- : Merlinus Anglicus junior ; the English Merlin revived, or a mathematicall prediction for this present year, 1644. Second edition. 4to. London, 1644
- : Svernatvrall sights and apparitions seen in London, June 30, 1644, interpreted. 4to. London, 1644
- : The starry messenger, or an interpretation of that strange apparition of three Suns seene in London, 19 Novemb. 1644. 4to. London, 1645
- : The Worlds Catastrophe, or Europes many mutations untill 1666 To which is added, A Whip for Wharton. 4to. London, 1647
- : An astrological prediction of the occurrences in England, part of the years 1648, 1649, 1650. 4to. London, 1648
- : Monarchy or no monarchy in England. 4to. London, 1651
- : Annus Tenebrosus, or the dark year ; or astrologicall judgements upon two lunar eclipses, and one admirable eclipse of the Sun 1652. Together with a short method how to judge the effects of eclipses. 2 parts, 4to. London, 1652
- : Merlini Anglici Ephemeris ; or astrological judgments for the year 1677-78. 8vo. London, 1677-78
- : An introduction to astrology divested of the superstitions of the seventeenth century : to which are added numerous emendations by Zadkiel. 8vo. London, 1835

Lindelöf (Laur. Leonh.):

- De orbita cometæ qui anno 1664 apparuit disputatio academica. 4to. Helsingforsiae, 1854

Lindemann (Ed.):

- *Zur Beurtheilung der Veränderlichkeit rother Sterne. 4to. St. Pétersbourg, 1882

Lindenau (Bernhard von):

- : Tabulae Veneris novae et correctae ex theoria gravitatis clarissimi de Laplace, et ex observationibus recentissimis in specula astronomica Seebergensi habitis erutae. 4to. Gotha, 1810
- : Corrections to Elements of Venus, *see* Breen (H.)
- : Tabulae Martis novae et correctae ex theoria gravitatis clarissimi De La Place et ex observationibus recentissimis erutae. 4to. Eisenberg, 1811
- : Investigatio nova orbitæ à Mercurio circa Solem descriptæ; accedunt tabulae planetæ ex elementis recens repertis et theoria gravitatis illustr. de Laplace constructæ. 4to. Gotha, 1813

Lindenau (B. von) und J. G. F. Bohnenberger:

- Zeitschrift für Astronomie und verwandte Wissenschaften.
Band 1-6. 8vo. Tübingen, 1816-18

Lindhagen (Daniel Georg):

- : *Ueber die Genauigkeit der in Lalande's Catalog, publicirt von der British Association, enthaltenen Sternörter.
8vo. St. Pétersbourg [1848]

— : *See also Pulkowa, Nicolai-Hauptsternwarte.*

Lindo (E. H.):

- A Jewish calendar for sixty-four years. 8vo. London, 1838

Lindstedt (And.):

- : Undersökning af Meridiancirkeln på Lunds Observatorium, jemte bestämning af dens ammas polhöjd. . . . [Inaugural Dissertation.] 4to. Lund, 1877
— : Beobachtungen des Mars während seiner Opposition 1877 angestellt auf der Sternwarte zu Lund. 4to. Lund, 1878
— : *Beitrag zur Integration der Differentialgleichungen der Störungstheorie. 4to. St. Pétersbourg, 1883

Linnington (R. T.):

- : A companion to the Globes; comprising an astronomical introduction, the various problems that may be performed by the globes, &c. . . . Third edition. 8vo. London, 1829
— : A compendium of Astronomy; comprising a complete treatise, adjusted to the improved state of the science, and an astronomical dictionary. 8vo. London, 1830

Linsser (Carl):

- *Vier von De l'Isle beobachtete Plejaden-Bedeckungen, bearbeitet und mit Hansen's Mond-Tafeln verglichen.
4to. St. Petersburg, 1864

Lippold (G. H. E.):

- Astronomie zur Selbstbelehrung für Nichtstudierende.
8vo. Wien, 1817

Lipsen (Friedrich):

- Ohnvorgreifliche Bedancken über den im Monath November und December anno 1680 erschienenen Cometen.
4to. Rotenburg, 1680

Lisbon, Academia Real das Sciencias :

- : Memorias (Historia e Memorias), 1780–1838. Tomo 1–12. 4to. Lisboa, 1797–1839.
— : Historia e Memorias, 2^a Serie. Tomo 1–3. 4to. Lisboa, 1843–56
— : Memorias. Classe de sciencias mathematicas, physicas e naturaes, Nova Serie. Tomo 1–6. 4to. Lisboa, 1854–81
— : Annães das Sciencias e Lettras, sciencias mathematicas, physicas, &c. Tomo 1, Março–Septembro, 1857. 8vo. Lisboa, 1857
— : Jurnal de sciencias mathematicas, physicas e naturaes. Tomo 1–7. 8vo. Lisboa, 1868–80
— : Sessão publica, 1875, '77, '80. 8vo. Lisboa, 1875–80
— : Taboadas perpetuas astronomicas para uso da navegação Portugueza. 4to. Lisboa, 1815

Liskenno (Charles):

- Lettres à Palmyre sur l'astronomie. 8vo. Paris, 1825

Listing (Johann Benedict):

- : *Ueber unsere jetzige Kenntniss der Gestalt und Grösse der Erde. 8vo. Göttingen, 1872
 — : *Neue geometrische und dynamische Constanten des Erdkörpers. Eine Fortsetzung der Untersuchung über unsere jetzige Kenntniss der Gestalt und Grösse der Erde. 8vo. Göttingen, 1878

Littrow (Joseph Johann von):

- : *Über den erweiterten Gebrauch der Multiplikationskreise. 8vo. Prag, 1820
 — : Théoretische und practische Astronomie. 2 vols. 8vo. Wien, 1821
 — : Elemente der Algebra und Geometrie. 8vo. Wien, 1827
 — : Vorlesungen über Astronomie. 2 vols. 8vo. Wien, 1830
 — : Über den gefürchteten Kometen des gegenwärtigen Jahres 1832, und über Kometen überhaupt. 8vo. Wien, 1832
 — : Die Wunder des Himmels, oder gemeinfassliche Darstellung des Weltsystems. . . . I. Theoretische Astronomie. II. Beschreibende Astronomie. III. Physische Astronomie; Astronomische Instrumente; Nachträge und Zusätze. 3 vols. and supplement, 8vo. Stuttgart, 1834–37
 — : Ditto. Vierte Auflage. Nach den neuesten Fortschritten der Wissenschaft bearbeitet von Karl v. Littrow. 8vo. Stuttgart, 1854
 — : Ditto. Anhang zur fünften Auflage. 8vo.
 — : Die Doppelsterne. 8vo. Wien, 1835
 — : Sterngruppen und Nebelmassen des Himmels. 8vo. Wien, 1835
 — : Vermischte Schriften. Herausgegeben von C. L. v. Littrow. 3 vols. 8vo. Stuttgart, 1846
 — : Atlas des gestirnten Himmels für Freunde der Astronomie. Zweite Auflage. 8vo. Stuttgart, 1854
 — : Ditto. Dritte Auflage, herausg. von K. von Littrow. 8vo. Stuttgart, 1866
 — : *See also Vienna, K.K. Sternwarte.*

Littrow (Joseph Johann und Karl Ludwig von):

- Ueber Kometen. . . . Mit einem Anhange über den im Jahre 1835 erscheinenden Halley'schen Kometen von Karl Ludwig Littrow. . . . Neue Auflage. 8vo. Wien, 1835

Littrow (Karl Ludwig von):

- : Beyträge zu einer Monographie des Halley'schen Cometen. Bey Gelegenheit seiner Erscheinung im Jahre 1835 gemeinfasslich dargestellt. 8vo. Wien, 1834
 — : Hülfs-Tafeln für die Wiener Universitäts-Sternwarte. 8vo. 1837
 — : Nachträge zu dem Verzeichnisse geographischer Ortsbestimmungen. 8vo. Leipzig, 1845
 — : *Deutschlands vorzüglichste Sternwarten. 8vo. Wien, 1848
 — : *Bericht über die in den Jahren 1847–51 ausgeführte Österreichisch-Russische Verbindungs-Triangulation. 8vo. Wien, 1852

Littrow (Karl Ludwig von)—*continued.*

- : Ditto. 4to. Wien, 1853
- : Über das allgemeine Niveau der Meere. 8vo. Wien, 1853
- : *Die Culminationspunkte der östlichen Central-Alpen. 8vo. Wien, 1853
- : *Bahnnähen zwischen den periodischen Gestirnen des Sonnensystems. 8vo. Wien, 1854
- : Beilagen zu Littrow's Kalender, 1854, 1864–1869. 8vo. Wien
- : *Beitrag zur Kenntniss der Grundlagen von Piazzi's Sternkatalog. 4to. Wien, 1855
- : *Über den Zusammenhang von Flecken und Protuberanzen der Sonne. 8vo. Wien, 1855
- : *Über lichte Fäden im dunkeln Felde bei Meridian-Instrumenten. 8vo. Wien, 1856
- : *Drei Quellen über den Kometen von 1556. 8vo. Wien, 1856
- : Bestimmung der Bahnelemente. 8vo. Wien, 1857
- : *Physische Zusammenkünfte von Asteroiden in den Jahren 1857, 1858; 1861–67. 8vo. Wien, 1857–67
- : *Der Zonen-Apparat am Mittagsrohre der Wiener Sternwarte. 8vo. Wien, 1858
- : *Privateistungen auf astronomischem Gebiete. 8vo. Wien, 1859
- : *Physische Zusammenkünfte der Planeten (1) bis (42) während der nächsten Jahre. 4to. Wien, 1859
- : *Über das Mikrometer mit lichten Linien bei den Wiener Meridian-Instrumenten. 8vo. Wien, 1860
- : *Über Herrn M. Eble's graphische Methoden der Auflösung sphärischer Dreiecke, mit besonderer Rücksicht auf sein neuestes, 'Stundenziger' oder 'Horoskop' genanntes Instrument. 8vo. Wien, 1860
- : *Über eine Modification des Hansen'schen Registrirapparates. 8vo. Wien, 1865
- : *Sternschnuppen und Kometen, Geschichte der Entdeckung des Zusammenhangs zwischen diesen beiden Gattungen von Himmelskörpern. 8vo. Wien, 1867
- : *Bestimmung der Meridiandifferenz Leipzig–Dablitz. 8vo. Wien, 1867
- : *Ditto. 4to. Wien, 1868
- : Suggestions for mariners about the use and the exactness of the methods for determining the longitude and the variation of compass by circummeridian altitudes. 8vo. Vienna, 1868
- : *Zählung der nördlichen Sterne im Bonner Verzeichnis nach Größen. 8vo. Wien, 1869
- : Ueber das Zurückbleiben der Alten in den Naturwissenschaften. 8vo. Wien, 1869
- : *Bericht über die von . . . E. Weiss ausgeführte Bestimmung der Breite und des Azimuthes zu Dablitz. 4to. Wien, 1871
- : *Bericht über die von . . . E. Weiss ausgeführte Bestimmung der Breite und des Azimuthes auf dem Laer Berge bei Wien. 4to. Wien, 1871

Littrow (Karl Ludwig von)—continued.

- : *Bericht über die von . . . C. Bruhns, W. Förster, und E. Weiss ausgeführten Bestimmungen der Meridiandifferenzen Berlin-Wien-Leipzig. 4to. Wien, 1872
- : *Zur Kenntniss der kleinsten sichtbaren Mondphasen. 8vo. [Wien, 1872]
- : *Die neue Sternwarte der Wiener Universität. 8vo. Wien, 1874
- : *See also Vienna, K.K. Sternwarte.*

Littrow (Otto von):

- : *Über eine neue Einrichtung des Spectralapparates. 8vo. Wien, 1863
- : *Über einen Heliostaten nach August's Princip. 8vo. Wien, 1863

Litwinowa-Iwaschinka (Elisabetha v.):

- Lösung einer Abbildungsaufgabe. Inaugural Dissertation. 8vo. St. Petersburg, 1879.

Liverpool Astronomical Society:

- : Abstracts of Proceedings. Vol. 1, 1882-83. 8vo. Liverpool, 1883
- : Transactions. No. 1, 2. 8vo. Liverpool, 1883-84

Liverpool Free Public Library :

- Annual Report, 1878-84. 8vo.

Liverpool Literary and Philosophical Society:

- Proceedings, 1849-83. No. 6-9, 11-37. 8vo. Liverpool, 1851-83
- No. 26 contains index to 1-25.

Liverpool Observatory :

- : Report of the Astronomer to the Marine Committee, Mersey Docks and Harbour Board, 1863-65, 1869, 1871, 1873-78, 1883. 8vo. Liverpool, 1863-83
- : Meteorological Results, *see Hartnup (J.).*

Ljunggren (Gustavus Theodor):

- Dissertatio Astronomica de Cometarum elementis, parabolice et elliptice, computandis. [Inaugural Dissertation.] 4to. Lundæ, 1835

Lloyd (Humphrey):

- Elementary treatise on the wave-theory of light. Third edition. 8vo. London, 1873

Löbel (Johann Gottlob Friedrich):

- Der Halley'sche Comet in seiner vierundzwanzigsten Wiederkunft seit dem Jahr sechszehn nach Chr. Geb. im Jahr 1835. 8vo. Nürnberg, 1835

Lockhart (James):

- : Resolution of Equations . . . Part the first. 4to. Oxford, 1837
- : Extension of the celebrated theorem of C. Sturm, whereby the roots of numeral equations may be separated from each other, with copics and examples. 4to. Oxford, 1839

Lockhart (James)—continued.

- : Resolution of equations by means of inferior and superior limits. 4to. London, 1842
 — : The nature of the roots of numerical equations. 8vo. London, 1850

Lockyer (Joseph Norman):

- : The Spectroscope and its applications . . . second edition. 8vo. London, 1873
 — : Contributions to Solar Physics. I. A popular account of inquiries into the physical constitution of the Sun, with special reference to recent spectroscopic researches; II. Communications to the Royal Society of London, and the French Academy of Sciences, with notes. 8vo. London, 1874
 — : Science primers: Astronomy . . . fourth edition. 12mo. London, 1877
 — : Studies in Spectrum analysis. 8vo. London, 1878
 — : Stargazing past and present. 8vo. London, 1878

Loewenherz (L.):

- : *Ueber Veränderlichkeit von Platin-Gewichtsstücken. 4to. Berlin, 1875
 — : Bericht über die wissenschaftlichen Instrumente auf der Berliner Gewerbeausstellung im Jahre 1879. 8vo. Berlin, 1880

Loewy [Löwy] (Maurice):

- : *Über die Bahn der Leda. 8vo. Wien, 1857
 — : *Bahnbestimmung des ersten Kometen 1857. 8vo. Wien, 1859
 — : *Éphémérides des étoiles de culmination lunaire et de longitude pour 1879, 1882-84. 4to. Paris, 1878, 1881-83
 — : Rapport sur les observatoires astronomiques de province. Année 1880-81. 8vo. Paris, 1881-82
 — : *Nouvelles méthodes pour la détermination de la position relative de l'équateur instrumental par rapport à l'équateur réel, et déclinaisons absolues des étoiles, et de la latitude absolue. 4to. Paris, 1883
 — : *Description sommaire d'un nouveau système d'équatoriaux, et de son installation à l'Observatoire de Paris. 4to. Paris, 1883
 — : *Méthode nouvelle pour la détermination des ascensions droites et déclinaisons absolues des étoiles. 4to. Paris, 1883
 — : See Paris, Observatoire.

Loewy (Maurice) et Le Clerc:

- *Détermination de la différence de longitude entre Paris et Berlin. 4to. Paris, 1879

Loewy (Maurice) et Th. von Oppolzer:

- *Détermination de la différence de longitude entre Paris et Bregenz. 4to. Paris, 1880

Loewy (Maurice) et Périgaud:

- : *Détermination de la flexion horizontale, de la flexion

Loewy (Maurice) et Périgaud—*continued.*

latérale et de la flexion de l'axe instrumental du cercle méridien de Bischoffsheim, à l'aide du nouvel appareil.

4to. Paris, 1881

— : *Étude des flexions du grand cercle méridien (flexion en distance polaire, flexion latérale, flexion de l'axe instrumental) et de la forme des tourbillons, à l'aide de l'appareil imaginé par M. Loewy.

4to. Paris, 1881

Loewy (Maurice) et François Perrier :

*Détermination télégraphique de la différence de longitude entre Paris et l'Observatoire du Dépôt de la Guerre à Alger.

4to. Paris, 1877

Loewy (Maurice) et E. Stephan :

*Détermination de la différence des longitudes entre Paris-Marseille et Alger-Marseille.

4to. Paris, 1878

Loewy (Maurice) et Henri Tresca :

— : *Notice sur un nouvel appareil, propre à l'étude de la flexion.

4to. Paris, 1882

Logarithmic and Trigonometric Tables, to seven places of decimals, containing the logarithms of the natural numbers from 1 to 100,000, and logarithmic sines, tangents, cotangents and cosines.

8vo. London, 1836

Lohrmann (Wilhelm Gotthelf) :

*De quelques-uns des principaux observatoires d'Allemagne . . . Traduit par A. Quetelet.

8vo. Bruxelles

— : Karte des Mondes, mittlere Libration, nach eigenen Messungen und Beobachtungen 1822–36. 1 sheet, Leipzig, n.d.

— : Topographie der sichtbaren Mondoberfläche . . . Erste Abtheilung. [Sections I–IV.]

4to. Dresden, 1824

— : Mondcharte in 25 Sectionen und 2 Erläuterungstafeln . . . mit Erläuterungen und selenographischen Ortsbestimmungen . . . Herausgegeben von Dr. J. F. Julius Schmidt.

fol. and 4to. Leipzig, 1878

Lohse (Oswald) :

— : *Ueber Schmidt's neuen Stern im Schwan.

8vo. Berlin, 1878

— : *Ueber einen rotirenden Spectralapparat.

4to. Berlin, 1881

— : See also Bothkamp, Sternwarte; Vogel und Lohse.

London, Admiralty Library :

Catalogue of the books.

4to. London, 1875

London, Astro-Meteorological Society :

Record. Vol. 1, No. 1, 2.

8vo. London, 1861

London, Board of Trade :

— : Report of the meteorological department, 1857, 1858, 1862.

8vo. London, 1857–62

— : Meteorological Papers, No. 1–14.

8vo. and 4to. London, 1857–65

— : Passage Table, and general sailing directions, compiled by R. FitzRoy.

8vo. London, 1859

London, Board of Trade—*continued.*

- : Swinging Ship for deviation. Compiled by R. FitzRoy.
8vo. London, 1859
- : Notes on Meteorology, 1859. Compiled by R. FitzRoy.
8vo. London, 1859
- : Barometer and Weather guide, 1858. Compiled by R. FitzRoy. Second edition.
8vo. London, 1859
- : Ditto. Fourth edition.
8vo. London, 1861
- : Barometer Manual, 1861. Compiled by R. FitzRoy. Fourth edition.
8vo. London, 1861
- : *See also* Bothkamp, Sternwarte; Meteorological Office.

London, Board of Trade, Standard Weights & Measures Department:

- : An account of the comparisons of the three Parliamentary copies of the Imperial standards.
8vo. London, 1877
- : Eleventh Annual Report of the Warden of Standards, 1876–77.
8vo. London, 1877
- : Memorandum on an examination of Standard Measures of length for the Rumford Committee of the American Academy. (By H. J. Chaney.)
fol. London, 1880
- : Calculations of densities and expansions. (By H. J. Chaney.)
8vo. London, 1883
- : Report by the Board of Trade on their proceedings and business under the Weights and Measures Act, 1878.
fol. London, 1883

London, see British Association for the Advancement of Science.

London, British Horological Institute:

- Horological Journal. Vol. 1–26. 8vo. London, 1858–82

London, Geological Society:

- : Proceedings, 1826–45. 4 vols. 8vo. London, 1834–46
- : Quarterly Journal. Vol. 1–40. 8vo. London, 1845–84

London, Institute of Actuaries:

- : Journal, No. 84–129. 8vo. London, 1872–83
- : Tables deduced from the mortality experience of life assurance companies.
8vo. London, 1872
- : Catalogue of the Library.
8vo. 1880

London Institution:

- Catalogue of the Library. 3 vols. 8vo. London, 1835–43

London, Mathematical Society, Spitalfields:

- Catalogue of books [with the rules of the Society].
8vo. London, 1821

London, Meteorological Office:

- : Report of the Meteorological Committee (Council) of the Royal Society for the years 1867–75, 1877–84.
8vo. London, 1868–84
- : Report of an Inquiry into the connexion between strong winds and barometrical differences . . . by R. H. Scott.
8vo. London, 1868
- : Report . . . on the meteorology of the North Atlantic, between the parallels of 40° and 50° N. By H. Toynbee.
8vo. London, 1869

London, Meteorological Office—*continued.*

- : Report on the use of Isobaric Curves, and a line of greatest barometric change in attempting to foretell winds by H. Toynbee. 8vo. London, 1869
- : Charts showing the surface temperature of the South Atlantic Ocean. fol. London, 1869
- : Quarterly Weather Report, 1869–80. 4to. London, 1870–83
- : Barometer Manual, compiled by R. H. Scott. 8vo. London, 1871
- : Contributions to our knowledge of the meteorology of Cape Horn and the West Coast of South America. 4to. London, 1871
- : A discussion of the meteorology of the part of the Atlantic lying north of 30° N., for the eleven days ending 8th February 1870. [With charts and diagrams.] 4to. London, 1872
- : Currents and surface temperature of the North Atlantic Ocean from the Equator to latitude 40° N., for each month of the year, with a general current chart. 4to. London, 1872
- : *Notes on the form of cyclones in the Southern Indian Ocean, and on some of the rules given for avoiding their centres. By C. Meldrum. 8vo. London, 1873
- : Contributions to our knowledge of the meteorology of the Antarctic regions. 4to. London, 1873
- : Charts of meteorological data for square 3, Lat. 0° – 10° N., Long. 20° – 30° W. fol.
- : Remarks to accompany the monthly charts of meteorological data for square 3. 4to. London, 1874
- : Report of the Proceedings of the Meteorological Conference at Leipzig. 8vo. London, 1873
- : Hourly Readings from the self-recording instruments at the seven observatories in connection with the Meteorological Office, 1874–80. fol. London.
- : Ditto. 1881–82. 4to. London, 1882–83
- : Report of the Proceedings of the Meteorological Congress at Vienna. 8vo. London, 1874
- : Report on weather telegraphy and storm warnings presented to the Meteorological Congress at Vienna by a Committee appointed at the Leipzig Conference. 8vo. London, 1874
- : Reports of the Permanent Committee of the first International Meteorological Congress at Vienna, for the years 1874, 1876, 1878. 3 parts, 8vo. London, 1875–79
- : Ditto. Supplement, 1876. 8vo. London, 1877
- : Report of the Proceedings of the Conference on Maritime Meteorology, held in London, 1874. 8vo. London, 1875
- : Instructions in the use of meteorological instruments. By R. H. Scott. 8vo. London, 1875
- : On the physical geography of the part of the Atlantic which lies between 20° N. and 10° S.; and which extends from 10° to 40° W. By H. Toynbee. 8vo. London, 1876
- : Contribution to the meteorology of Japan, by T. H. Tizard. 4to. London, 1876

London, Meteorological Office—*continued.*

- : Report of the Proceedings of the second International Meteorological Congress at Rome, 1879. 8vo. London, 1879
- : Report on the meteorology of Kerguelen Island, by Rev. S. J. Perry. 4to. London, 1879
- : Aids to the study and forecast of the weather, by W. Clement Ley. 8vo. London, 1880
- : Meteorological Observations at stations of the second order, 1878-79. 4to. London, 1880-82
- : Report of the International Meteorological Committee. Meeting at Berne, 1880. 8vo. London, 1881
- : Report on the storm of October 13-14, 1881 (by R. H. Scott). 8vo. London, 1882
- : Report of the second meeting of the International Meteorological Committee, held at Copenhagen, 1882. 8vo. London, 1883
- : Sunshine records of the United Kingdom for 1881. 8vo. London, 1883
- : Rainfall tables of the British Isles for 1866-80. Compiled . . . by G. J. Symons. 8vo. London, 1883
- : Meteorological Atlas of the British Isles. 4to. London, 1883
- : The monthly weather report for January 1884. 4to. London, 1884

London, Meteorological Society :

- : Transactions of the Meteorological Society of Great Britain, Vol. 1. 8vo. London, 1839
- : *Report of the Council of the British Meteorological Society, 1851, 1856-58. 8vo.
- : Proceedings of the British Meteorological Society, 1861-67. Vol. 1-3. 8vo. London, 1863-67
- : Proceedings of the Meteorological Society, 1867-71. Vol. 4, 5. 8vo. London, 1869-71
- : Quarterly Journal of the Meteorological Society (1871-83). Vol. 1-9. 8vo. London, 1873-83
- : Quarterly Journal of the Royal Meteorological Society, 1884. Vol. 10. 8vo. London, 1884
- : Index to the publications of the English Meteorological Societies, 1839 to 1881. 8vo. London, 1881
- : The history of English Meteorological Societies, 1823 to 1880 . . . By G. J. Symons. 8vo.
- : The snow storms of January 17th to 21st, 1881. 8vo.
- : Hints to Meteorological observers, with instructions for taking observations, and tables for their reduction. Prepared . . . by W. Marriott. 8vo. London, 1881
- : The Meteorological Record. Monthly results of observations made at the stations of the (Royal) Meteorological Society, with remarks on the weather, 1881-83. By W. Marriott. No. 1-10. 8vo. London.
- : Instructions for the observation of phenological phenomena. Second edition. 8vo. London, 1883
- : Charter & By-Laws of the Royal Meteorological Society, 1884. 8vo. London

London, Meteorological Society—continued.

- : List of Fellows, 1884. 8vo. London
 — : Catalogue of the Library. 8vo. London, 1876
- London, Nautical Almanac and Astronomical Ephemeris :**
 — : 1767–1887. 8vo. London, 1766–1883
 — : Tables requisite to be used with the Nautical Ephemeris for finding the latitude and longitude at sea. Second edition. 8vo. London, 1781
 — : Ditto. Third edition. 8vo. London, 1802
 — : *See also* Garrard (W.); Lax (W.).
 — : Ditto. Appendix to the third edition being new tables of natural sines, natural versed sines, and logarithms of numbers. 8vo.
 — : Selections from the additions that have been occasionally annexed to the Nautical Almanac from its commencement to the year 1812. 8vo. London, 1813
 — : Natural versed sines from 0° to 125° , and logarithmic versed sines from 0° to 135° , or 0^h to 9^h , used in computing lunar distances. fol. London, 1856
 — : Haversines natural and logarithmic used in computing lunar distances Edited by J. C. Hannyngton. fol. London, 1876
 — : Supplement, 1867–69 : Ephemerides of the minor planets for the years 1864–66. 8vo. London
 — : *See also* Baily (F.); South (J.).

London, Photographic Society :

- : Journal containing the Transactions of the Society, and a general record of photographic art and science. Vol. 1–16. 8vo. London, 1854–76
 — : The Photographic Journal, including the Transactions of the Photographic Society of Great Britain. New series. Vol. 1–8. 8vo. London, 1877–84

London, Physical Society :

- Proceedings, 1874–83. Vol. 1–5. 8vo. London, 1876–83

London, Royal Asiatic Society of Great Britain and Ireland :

- : Transactions. 3 vols. 4to. London, 1827–35
 — : Journal. 20 vols. 8vo. London, 1834–63
 — : Journal, new series. Vol. 1–16. 8vo. London, 1865–84
 — : Catalogue of historical manuscripts in the Arabic and Persian languages. 8vo. London, 1854

London, Royal Astronomical Society :

- : Memoirs, Vol. 1–47. 4to. London, 1822–83
 — : A general index to the first thirty-eight volumes of the Memoirs. 8vo. London, 1871
 — : Monthly Notices, containing papers, abstracts of papers and reports of the proceedings. 1827–83. Vol. 1–44. 8vo. London, 1831–84
 — : A general Index to the first twenty-nine volumes of the Monthly Notices (1827–69). 8vo. London, 1870

London, Royal Astronomical Society—continued.

- : Address and regulations of the Astronomical Society of London. 8vo. London, 1820-21
- : Charter and Bye Laws, 1831, '44, '58, '70, '80. 8vo. London
- : *Report of the Committee appointed . . . for the purpose of examining the telescope constructed by Mr. Tulley. 8vo. London, 1826
- : Statement of a plan for making a minute survey of the heavens, and for the formation and publication of some new celestial charts under the superintendence and direction of the Royal Academy of Sciences at Berlin. 8vo. London, 1826
- : New tables for facilitating the computation of precession, aberration and nutation of 2881 principal fixed stars; together with a catalogue of the same reduced to January 1, 1830 . . . to which is prefixed an introduction . . . by Francis Baily. 4to. London, 1827
- : Meridian Ephemeris of the sun and planets for the year 1836. Computed at the expense of Francis Baily. 8vo. London, 1835
- : Catalogue of the Library. [With Appendices 2-16.] 8vo. London, 1850

London, Royal Geographical Society :

- : Journal, 1831-80. Vol. 1-50. 8vo. London, 1831-80
- : General Index to the fourth 10 vols. 8vo. London, 1881
- : Proceedings. Vol. 2-5, 7-22. 8vo. London, 1858-78
- : Proceedings . . . and Monthly Record of Geography; New monthly series. Vol. 1-6. 8vo. London, 1879-84
- : Classified catalogue of the Library. 8vo. London, 1871

London, Royal Institution of Great Britain :

- : Journal. Vol. 1, 2. 8vo. London, 1830-31
- : Notices of Proceedings at the Meetings, 1851-84. Vol. 1-10. 8vo. London, 1854-84
- : Classified Catalogue of the Library. 2 vols. 8vo. London, 1857-82
- : *See also* Journal of Science and the Arts.

London, Royal Society :

- : Philosophical Transactions: giving some account of the present undertakings, studies, and labours of the ingenious in many considerable parts of the world, 1665-1775. Vol. 1-65. 4to. London, 1667-1775
- : Philosophical Transactions of the Royal Society of London, 1776-91. Vol. 66-81. 4to. London, 1776-91
- : Philosophical Transactions, 1792-99, 1801-1882 [Vol. 82-172]. 4to. London, 1792-1882
- : A general index or alphabetical table to all the Philosophical Transactions, from the beginning to July 1677. 4to. London, 1678
- : A general index to the Philosophical Transactions from the first to the end of the seventieth volume [1665-1780], by Paul Henry Maty. 4to. London, 1787
- : The Philosophical Transactions and collections to the end of the year 1700, abridg'd and dispos'd under general heads,

London, Royal Society—continued.

- in three volumes. By John Lowthorp. The fourth edition.
Vol. 1-3. 4to. London, 1731
- : Ditto. The fifth edition, in which the Latin papers are now first translated into English. Vol. 1-3. 4to. London, 1749
- : Ditto, from 1700 to 1720. By Henry Jones. The third edition . . . in which the Latin papers are now first translated into English. Vol. 4, 5. 4to. London, 1749
- : Ditto, from 1719 to 1733. By John Eames and John Martyn. Vol. 6, 7. 4to. London, 1734
Vol. 7 contains a general index to the seven volumes.
- : Ditto, from 1732 to 1744, the Latin papers translated into English. By John Martyn. Vol. 8, 9. 4to. London, 1747
- : Ditto, from 1743 to 1750, the Latin papers translated into English. By John Martyn. Vol. 10. 4to. London, 1756
- : The Philosophical Transactions from the year 1700 (where Mr. Lowthorp ends) to the year 1720, abridg'd and dispos'd under general heads. By Benj. Motte.
2 vols. 4to. London, 1721
- : Memoirs . . . being a new abridgment of the Philosophical Transactions . . . from 1665 to 1735. By Mr. Baddam. Second edition. Vol. 1-6. 8vo. London, 1739-40
- : Abstracts of the papers printed in the Philosophical Transactions . . . from 1800 to 1830. Vol. 1, 2.
8vo. London, 1832-33
- : Abstracts of the papers printed in the Philosophical Transactions . . . 1830-54 (Proceedings, No. 1-102). Vol. 3-6.
8vo. London, 1837-54
- : Proceedings, 1854-83. Vol. 7-35. 8vo. London, 1856-83
- : The Statutes of the Royal Society of London.
4to. London, 1823
- : List of the Fellows, 1878, '80, '82, '83. 4to. London, 1878-83
- : Six discourses . . . on the award of the Royal and Copley medals . . . By Sir H. Davy.
4to. London, 1827
- : Report on the adjudication of the Copley, Rumford, and Royal Medals; and appointment of the Bakerian, Croonian, and Fairchild Lectures. Compiled from original documents in the archives of the Royal Society by James Hudson.
4to. London, 1834
- : Address delivered at the Anniversary meeting of the Royal Society, 1833 and 1836, by the Duke of Sussex.
4to. London, 1833-36
- : Catalogue of the Scientific books in the Library.
8vo. London, 1839
- : Catalogue of miscellaneous literature. 8vo. London, 1841
- : Catalogue of the Scientific books in the Library.
2 vols. 8vo. London, 1881-83
- : Catalogue of Scientific papers (1800-1873). Compiled and published by the Royal Society of London. Vol. 1-8.
4to. London, 1867-79
- : The history of the Royal Society of London, for the improving of natural knowledge, by Tho. Sprat. Second edition.
4to. London, 1702

London, Royal Society—continued.

- : Ditto. The fourth edition. 4to. London, 1734
- : A review of the works of the Royal Society of London, containing animadversions on such of the papers as deserve particular observation, by Sir John Hill . . . Second edition. 4to. London, 1780
- : An authentic narrative of the dissensions and debates in the Royal Society, containing the speeches at large of Dr. Horsley, Dr. Maskelyne, Mr. Maseres, Mr. Poore, Mr. Glenie, Mr. Watson, and Mr. Maty. 8vo. London, 1784
- : History of the Royal Society from its institution to the end of the eighteenth century, by Thomas Thomson. 4to. London, 1812
- : A history of the Royal Society, with memoirs of the Presidents, compiled from authentic documents, by Charles Richard Weld. 2 vols. 8vo. London, 1848
- : An additional word on the pristine establishment of the Royal Society Club (by Admiral W. H. Smyth). 4to. London, 1860

London, Royal United Service Institution:

- : Journal. Vol. 1-27. 8vo. London, 1858-84
- : Catalogue of the Library. 8vo. London, 1865

London, Selenographical Society:

The Selenographical Journal; a monthly Bulletin of the Selenographical Society. Vol. 1-5. 8vo. London, 1879-83

London, Society of Arts:

- : Journal. Vol. 12-32. 8vo. London, 1864-84
- : Index to Vols. 21-30. 8vo. London, 1884

London, University College Library:

Catalogue of books. 3 vols. 8vo. London, 1879

Long (Roger):

Astronomy, in five books. 2 vols. 4to. Cambridge, 1742-85

Longitude:

- : An account of the proceedings, in order to the discovery of the longitude: in a letter to the Right Honourable * * * *, Member of Parliament. 4to. London, 1763
- : *Longitude by Telegraph. 8vo. 1882

Longomontanus (Christianus Severinus):

- : Cyclometria ex lunulis reciprocè demonstrata, unde tam areae quam perimetri circuli exacta dimensio, & in numeros diductio sequuta est, hactenus ab omnibus mathematicis unicè desiderata. 4to. Hafniæ, 1612
- : Disputatio philosophica quæ secunda astronomiæ est, de Sphaeræ cœlestis legitima constitutione, officio, & multiplici utilitate. [Inaug. Dissert.: præside C. S. L. . . .] 4to. Hafniæ, 1612
- : Astronomia Danica in duas partes tributa, quarum prior doctrinam de diurna apparente siderum revolutione super sphæra armillari veterum instaurata, duobus libris explicat: posterior, theorias de motibus planetarum

Longomontanus (Christianus Severinus)—continued.

complectitur. Cum appendice de ascititiis cœli phæno-
menis, nempe stellis novis et cometis.

4to. Amsterodami, 1622

— : Ditto. 2 parts in 1 vol. fol. Amsterdami, 1640

Longstreh (Miers Fisher):

*On the accuracy of the tabular longitude of the Moon, to be
obtained by the construction of new lunar tables.

4to. Philadelphia, 1851

Loomis (Elias):

- : The recent progress of Astronomy; especially in the United States. 8vo. New York, 1850
- : An introduction to practical astronomy, with a collection of astronomical tables. 8vo. New York, 1855
- : Ditto. 7th edition. 8vo. New York, 1880
- : A treatise on astronomy. 8vo. New York, 1866
- : Elements of astronomy, designed for academies and higher schools. 8vo. New York, 1869
- : *Contributions to meteorology, papers 8-19. 8vo. New Haven, 1878-83
- : Mémoires de météorologie dynamique; exposé des résultats de la discussion de cartes du temps des États-Unis, ainsi que d'autres documents, traduits . . . par M. H. Brocard. 8vo. Paris, 1880

Loomis (Francis E.):

Periodic Stars. Inaugural Dissertation. 4to. Göttingen, 1869

Lopes (Antonio de Castro):

Memoria sobre a possibilidade e conveniencia da suppressão
dos annos bissextos, escripta em Portuguez, Latim e
Francez. 8vo. Rio de Janeiro, 1881

Lorek (Emil Franz):

Die Bahn der Semele. [Inaugural-Dissertation.]
8vo. Königsberg, 1868

Lorenzoni (Giuseppe):

- : *Sull' eclisse totale del sole dell' 11 Dicembre 1871:
Calcolo preparatorio. 8vo. Venezia, 1871
- : *Sulla eclisse parziale di sole del 26 Maggio 1873.
8vo. Venezia, 1873
- : *Di un mezzo atto a rendere visibile tutta in una volta una
immagine monocromatica completa della cromosfera e delle
protuberanze solari. 8vo. Venezia, 1874
- : Giovanni Santini, la sua vita e le sue opere. Discorso
letto nella chiesa di S. Sofia in Padova. 8vo Padova, 1877
- : *Sulla determinazione delle coordinate angolari, mediante
gli strumenti astronomici, e in particolare sullo strumento
dei passaggi. 8vo. Venezia, 1878
- : *Sull' andamento del pendolo di Frodsham N. 1604, pos-
seduto dal R. Osservatorio di Padova. 8vo. Ven ezia, 1881
- : *Sulle osservazioni della Cometa b (III.) 1881 fatte al R.
Osservatorio di Padova. 8vo. Venezia, 1882
- : *L' Astronomia in questi ultimi tempi. 8vo. Venezia, 1882

Lorenzoni (Giuseppe)—continued.

— : *Sulle determinazioni di tempo eseguite ad Arcetri nell' autunno del 1882, colla osservazione dei passaggi di stelle pel verticale della Polare. 8vo. Venezia, 1884

Lorgna (Anton Maria):

A dissertation on the summation of infinite converging series with algebraic divisors. . . . Translated . . . with notes and observations. To which is added an appendix, containing all the most elegant and useful Formulae which have been investigated for the summing of the different orders of series . . . by H. Clarke. 4to. London, 1779

Loseby (E. T.):

— : On the phenomena of meteors. 12mo. Leicester, n.d.
— : Improvements in time-keepers. 8vo. London, n.d.

Lossius (Lucas):

Cisio Janus, hoc est kalendarium syllabicum.
4to. Wittebergae, 1551

Löw (Moritz), see Berlin, K. preuss. geodät. Institut.**Löw (Moritz) et E. Plantamour:**

Différence de longitude entre Genève et Strasbourg.
4to. Genève, 1879

Lowe (Edward Joseph):

— : Prognostications of the weather, or signs of atmospheric changes. 8vo. London and Nottingham, 1849
— : Natural phenomena and chronology of the seasons. 8vo. London, 1870

Lowe (Edward Joseph) and A. S. H. Lowe:

The climate of Nottingham during the year 1852.
8vo. London, 1853

Lubbock (John W.):

— : *On the comparison of various tables of annuities.
4to. Cambridge, 1829
— : Account of the 'Traité sur le flux et reflux de la mer' of Daniel Bernoulli; and a treatise on the attraction of ellipsoids. 8vo. London, 1830
— : On the determination of the distance of a comet from the earth, and the elements of its orbit. 8vo. London, 1832
— : Ditto. New edition. 8vo. London, 1835
— : On the theory of the Moon, and on the perturbations of the planets. 8vo. London, 1833
— : Ditto. New edition. 8vo. London, 1834
— : An elementary treatise on the computation of eclipses and occultations. 8vo. London, 1835
— : On the theory of the Moon, and on the perturbations of the planets. Part 2, 3, 6-10. 8vo. London, 1836-60
— : An elementary treatise on the Tides. 8vo. London, 1839
— : On the heat of vapours and on astronomical refractions. 8vo. London, 1840
— : On the determination of the coefficients A and B in the development of $\{1 - A \cos a\}^{-1}$ and $\{1 - A \cos a\}^{-2}$. 8vo. London, 1849

Lubienietski (Stanislaus de):

- : Theatrum cometicum, duabus partibus constans, quarum altera Cometas anni 1664 & 1665, variis virorum per Europam clariss., cum quibus auctor de hoc arguento contulit, observationibus [&c.] exhibit . . . altera continet historiam ccccxv cometarum a tempore diluvii ad ann. 1665. 2 parts, in 2 vols. fol. Amstelodami, 1668-66
—: Ditto. 2 parts, in 2 vols. fol. Lugduni Batavorum, 1681

Ludlam (John):

Astronomical Observations made in St. John's College, Cambridge, in the years 1767 and 1768; with an account of several astronomical instruments. 4to. Cambridge, 1769.

Ludlam (William);

- : *An account of a balance of a new construction, supposed to be of use in the woollen manufacture. 4to. London, 1766

— : Mathematical essays . . . The second edition, with additions. 8vo. Cambridge, 1787

— : The rudiments of mathematics, designed for the use of students at the Universities. Third edition. 8vo. London, 1790

Luigi (Maschi):

Leggi della rotazione diurna planetare in rapporto colla gravitazione universale e colla circumvallazione orbitale.
8vo. Parma. 1876

Lund, Observatorium:

- : *Planet- och Komet-Observationer anställda År 1867-72
 . . . utgivna af Axel Möller. 4to. Lund, 1868-73

— : *Einige Resultate aus den meteorologischen Beobachtungen
 angestellt auf der Sternwarte zu Lund in den Jahren 1741-
 1870; von A.V. Tidblom. 4to. Lund, 1876

— : Beobachtungen des Mars während seiner Opposition 1877,
 angestellt . . . von A. Lindstedt. 4to. Lund, 1878

— : See Dunér; Lindstedt; Möller.

Lundahl (Gustaf):

De numeris nutationis et aberrationis constantibus atque de
parallaxi annua stellae polaris. [Inaugural Dissertation.]
4to. Helsingforsiae, 1842.

Luther (Eduard):

- : Berechnung der auf der Königsberger Sternwarte in den Jahren 1830 bis 1838 gemachten Beobachtungen der Planeten Merkur, Venus, Mars, Jupiter und Saturn. 4to. Königsberg, 1849

— : Declinationes stellarum fundamentalium novae ex ultimis illi Bessel Observationibus derivatae. . . . [Inaugural Dissertation.] 4to. Regiomonti Pr. 1859

— : *Das Klima von Königsberg. 4to Königsberg, 1864

Luvini (Giovanni):

- : *Le diéthéroscope. 8vo. Turin, 1876
— : *Presentazione di un modello di dieteroscopio. . . Descrizione ed applicazioni. 8vo. Torino, 1876

Luyts (Joannes) :

Astronomica institutio, in qua doctrina sphærica atque theorica, intermixto usu sphærie cœlestis, & variis chronologicis, pertractantur. 4to. Trajecti ad Rhenum, 1692

Lycosthenes [or von Rufach] (Conrad) :

Prodigiorm atque ostentorum tam cœlestium quam terrestrium Chronicon, ab exordio mundi usq: ad nostra tempora. fol. Basileæ, 1557

Lydyat (Thomas) :

Prælectio Astronomica de natvra cœli et conditionibus elementorum ; tum autem de causis præcipuorum motuum cœli et stellarum. Item disquisitio physiologica de origine fontium perennium frigidorum et calidorum.

8vo. Londini, 1605

Lynn (Thomas) :

- : Horary tables, for finding the time by inspection, to facilitate the operations for obtaining the longitude at sea by chronometers and lunar observations. 4to. London, 1827
- : New star tables, adapted to practical purposes for twenty-two years, commencing January 1843. 8vo. London, 184?

Lynn (William Thynne) :

- : The first principles of natural philosophy. 8vo. London, 1863
- : Celestial motions ; a handy book of astronomy. 8vo. London, 1884
- : Ditto. Second edition. 8vo. London, 1884
- : See also Main (R.)

Lyons (Israel) :

A treatise of fluxions. 8vo. London, 1758

Macclesfield (the Earl of) :

- : *Remarks upon the solar and the lunar years, the cycle of 19 years, commonly called the golden number, the epact, and a method of finding the time of Easter. 4to. London, 1750
- : Speech in the house of Peers, March 18, 1750, at the second reading of the bill for regulating the commencement of the year. 4to. London, 1751
- : Correspondence of scientific men of the seventeenth century, including letters of Barrow, Flamsteed, Wallis, and Newton, printed from the originals in the collection of the Earl of Macclesfield. [Edited by Prof. Rigaud.] 2 vols. 8vo. Oxford, 1841
- : Ditto. Contents . . . by A. Do Morgan. 8vo. Oxford, 1842

Macdonald (James) :

The origin and the destiny of comets ; or a change in the ecliptic of the earth. 8vo. Prahran, 1869

McGrigor (D.) :

- : An analytical calculation of the Solar Eclipse, for the seventh of September, 1820. 8vo. Glasgow, 1820
- : An essay on the determination of the elements of the orbits of comets and planets. 8vo. Glasgow, 1833

Machin (John), *see* Maseres (F.); Newton (Isaac).

Mackay (Andrew):

- : The theory and practice of finding the longitude at sea or land, to which are added various methods of determining the latitude of a place, and variation of the compass, with new tables. 2 vols. in 1, 8vo. Aberdeen, 1801
- : The complete navigator, or an easy and familiar guide to the theory and practice of navigation, with all the requisite tables, &c., &c. 8vo. London, 1804

Mackey (John):

A method of finding a cube double of a cube, founded on the principles of elementary geometry. 8vo. Dublin, 1824

Mackey (Sampson Arnold):

- : The mythological astronomy of the ancients demonstrated, by restoring to their fables and symbols their original meanings. 2 parts in 1 vol. 8vo. Norwich, 1822–23
- : The original design of the ancient Zodiacal and extra-Zodiacal constellations, arranged on the present globes. 8vo. Norwich, 1834

Mackinlay (G.):

*The transit of Venus in 1882. 8vo. Woolwich, 1883

Mackintosh (Thomas S.):

*Electrical theory of the universe. 8vo. London, 1835–36

MacLaurin (Colin):

- : Geometria organica, sive descriptio linearum curvarum universalis. 4to. Londini, 1720
- : A treatise of fluxions: in two books. 2 vols. 4to. Edinburgh, 1742
- : An account of Sir Isaac Newton's philosophical discoveries . . . published from the author's manuscript papers by Patrick Murdoch. 4to. London, 1748
- : Ditto. Third edition. 8vo. London, 1775
- : A treatise of algebra, in three parts, containing:—I. The fundamental rules and operations. II. The composition and resolution of equations . . . III. The application of algebra and geometry to each other; To which is added an appendix, concerning the general properties of geometrical lines. Fourth edition. 8vo. London, 1779

Maclear (Thomas):

— : *Observations of Halley's Comet, made at the Royal Observatory, Cape of Good Hope, in the years 1835 and 1836. 4to. London, 1837

— : *Contributions to Astronomy and Geodesy. [2 parts] 4to. London, 1851–53

— : Verification and extension of La Caille's Arc of Meridian at the Cape of Good Hope. 2 vols. 4to. London, 1866

— : *See also* Cape of Good Hope, Royal Observatory.

Maclot (J. Ch.):

Mappemonde céleste, ou exposition des principes astronomiques relatifs au globe terrestre et à la connoissance générale du ciel. 8vo. Paris, 1801

Macovius (Daniel Polydorus) et Benjamin Oswaldus :

Exercitatio astronomica exhibens locum, motum, magnitudinem, causas, effectus & significationes cometæ. [Inaugural Dissertation.] 4to. Gedani, 1653

Maddy (W.) :

The elements of the theory of astronomy . . . A new edition, revised and greatly enlarged, by J. Hymers . . . 8vo. Cambridge, 1832

Madison, Washburn Observatory of the University of Wisconsin :

- : Contributions, Number 1. (List of new nebulae and double stars.) 4to. Madison, 1881
- : Publications . . . (under the superintendence of E. S. Holden). Vol. 1. 8vo. Madison, 1882

Mädler (Johann Heinrich von) :

- : Kurzgefasste Beschreibung des Mondes. Ein Auszug aus der grösseren Selenographie von W. Beer und J. H. Mädler. 8vo. Berlin, 1839
- : Astronomische Briefe. 8vo. Mitau, 1846
- : Die Centralsonne. 4to. Dorpat, 1846
- : Untersuchungen über die Fixstern-Systeme. Erster Theil. Die partiellen Systeme. Zweiter Theil. Das allgemeine System. fol. Mitau und Leipzig, 1847–1848
- : Tabula generalis stellarum duplicitum indicationem motus gyroriorum exhibentium. obl. fol. Dorpati, 1849
- : Sonne und Mond. 8vo. Leipzig, 1852
- : Der Fixsternhimmel. Eine gemeinfassliche Darstellung der neuern auf ihn sich beziehenden Forschungen. 8vo. Leipzig, 1858
- : Die Fixsternwelt . . . Zweite Auflage des Werkes : Ueber die Fixsterne im Allgemeinen und die Doppelsterne insbesondere. 8vo. Berlin, 1861
- : Der Wunderbau des Weltalls, oder populäre Astronomie . . . Nebst einem Atlas, astronomische Tafeln, Abbildungen und Sternkarten enthaltend. Fünfte Auflage. 8vo. (atlas in fol.). Berlin, 1861
- : *Über totale Sonnenfinsternisse mit besonderer Berücksichtigung der Finsterniss vom 18 Juli 1860. [Mit Nachtrag.] 4to. Jena, 1861–62
- : Kurzer Abriss der Astronomie. 8vo. Essen, 1863
- : Reden und Abhandlungen über Gegenstände der Himmelskunde. 8vo. Berlin, 1870
- : Geschichte der Himmelskunde von der ältesten bis auf die neueste Zeit. 2 vols. 8vo. Braunschweig, 1873
- : Der Mond, &c., see Beer und Mädler.
- : Dorpat Beobachtungen, see Dorpat, Sternwarte.

Madras Literary Society :

The Madras Journal of Literature and Science, 1836–40.
Vol. 4–12. 8vo. Madras, 1836–40

Madras Observatory:

- : Observed transits of the fixed stars and planets over the meridian, 1812-14. [J. Goldingham.] fol. [Madras]
- : Madras Observatory papers, by J. Goldingham. fol. Madras, 1827
- : Result of astronomical observations made by T. G. Taylor, 1831-47. Vol. 1-6. 4to. Madras, 1832-48
- : Astronomical Observations made by W. K. Worster and W. S. Jacob, for the years 1848-52. 4to. Madras, 1854
- : A general catalogue of the principal fixed stars from observations made in the years 1830-43, by T. G. Taylor. 4to. Madras, 1844
- : *A subsidiary Catalogue of 1440 stars selected from the British Association Catalogue, reduced to January 1st, 1850, from observations made at Madras in the years 1849-53. [W. S. Jacob.] 4to. (Madras, 1854)
- : Meteorological Register by J. Goldingham and T. G. Taylor, 1822-43. fol. Madras, 1844
- : Meteorological Observations, 1841-45. 4to.
- : Ditto, by T. G. Taylor, W. K. Worster, and W. S. Jacob, in the years 1846-50. 4to. Madras, 1854
- : Magnetical Observations made by T. G. Taylor, W. K. Worster, and W. S. Jacob, in the years 1846-50. 4to. Madras, 1854
- : Meteorological Observations made under the superintendence of W. S. Jacob, in the years 1851-55. 4to. Madras, 1874
- : Report of the Government Astronomer upon the proceedings of the Observatory, in connexion with the total Eclipse of the Sun on August 18th, 1868, as observed at Masulipatam, Vunpurthy, Madras, and other stations in Southern India. 8vo.
- : Administration Reports for the Madras Observatory and Meteorological Departments for 1875. By N. R. Pogson. fol. Madras, 1877

Madrid, Real Academia de Ciencias:

- : Memorias. Tomo 1-4, 5 (p. 1), 6 (p. 1, 2). 4to. Madrid, 1850-65
- : Resumen de las Actas, 1847-63. 8vo. Madrid, 1848-64

Madrid, Real Observatorio:

- : Instrucción sobre el eclipse de sol, que ha de verificarse el 18 de Julio de 1860. 4to. Madrid, 1860
- : Comunicación del director al comisario régio del mismo, participándole los principales resultados obtenidos en la observación del eclipse de sol del 18 de Julio (1860) en el Desierto de las Palmas. 8vo. Madrid, 1860
- : *Observación del eclipse de sol del 6 de Marzo de 1867. 4to. Madrid, 1867
- : Observaciones Meteorológicas, 1863-78. 8vo. Madrid, 1865-79
- : Resumen de las observaciones meteorológicas efectuadas en la Península, 1866-75. 8vo. Madrid, 1868-78
- : Anuario, año 2-17. 1861-79. 8vo. Madrid, 1860-78

Mæstlinus (Michael):

- : Epitome astronomiae, qua brevi explicatione omnia, tam ad sphæricam quam theoreticam eius partem pertineantia, ex ipsius scientiae fontibus deducta, perspicuè per quæstiones traduntur. 8vo. Tubingæ, 1610
 — : Ditto. 8vo. Tubingæ, 1624

Magellan (Jean Hyacinthe de):

- Collection de différens traités sur des instrumens d'astronomie, physique, &c. 4to. Londres, 1780

Maginus (Joannes Antonius):

- Novæ celestium orbium theorice congruentes cum obseruationibus N. Copernici. 4to. Venetiis, 1589

Magnaghi (G. B.):

- Gli Strumenti a riflessione per misurare angoli. 8vo. Milano, 1875

Mailly (Édouard):

- : *Relation d'un voyage fait en Sicile et dans le midi de l'Italie. 12mo. Bruxelles, 1859
 — : *Précis de l'histoire de l'astronomie aux Etats-Unis d'Amérique. 12mo. Bruxelles, 1860
 — : *Essai sur les institutions scientifiques de la Grande-Bretagne et de l'Irlande. Partie 1, 3, 5, 6. 12mo. Bruxelles, 1861-67
 — : *L'Espagne scientifique. 12mo. Bruxelles, 1868
 — : De l'astronomie dans l'Académie Royale de Belgique : rapport séculaire (1772-1872). 8vo. Bruxelles, 1872
 — : *Tableau de l'astronomie dans l'hémisphère austral et dans l'Inde. 8vo. Bruxelles, 1872
 — : *Adolphe Quetelet. 8vo. Bruxelles, 1874
 — : Essai sur la vie et les ouvrages de L. A. J. Quetelet. 12mo. Bruxelles, 1875
 — : *Notice sur Ernest Quetelet. 12mo. Bruxelles, 1880

Main (Robert):

- : Practical and spherical astronomy, for the use chiefly of students in the Universities. 8vo. Cambridge, 1863
 — : Rudimentary astronomy : third edition, revised and corrected to the present time by William Thynne Lynn. 8vo. London, 1882
 — : See Greenwich Observatory ; Oxford, Radcliffe Observatory.

Mairan (Jean Jacques Dortous de):

- Traité physique et historique de l'aurore boréale. (Suite des Mémoires de l'Académie, 1731.) 12mo. Amsterdam, 1735

Malcolm (Alexander):

- A new system of arithmetick, theoretical and practical, wherein the science of numbers is demonstrated. 4to. London, 1730

Manchester, Chetham Library:

- Bibliotheca Chethamensis. 3 vols. 8vo. Mancunii, 1791-1826

Manchester Free Public Libraries:

- : Annual Report, 1859-84. 8vo. Manchester
 — : Catalogue of the books in the Reference Department. 4to. London, 1864

Manchester Literary and Philosophical Society:

- : Memoirs, second series. Vol. 6-15. 8vo. London, 1842-60
 Vol. 12 contains Index to the 17 vols. of the Memoirs (Vol. 1 old series to Vol. 12 new series).
 — : Memoirs, third series. Vol. 1-7. 8vo. London, 1862-82
 — : Proceedings, Vol. 1-22. 8vo. Manchester, 1857-83
 — : Rules. 8vo. Manchester, 1861
 — : Catalogue of the books in the Library. 8vo. Manchester, 1875
 — : A centenary of science in Manchester. By R. Angus Smith. 8vo. London, 1883

Mandey (Venterus):

Synopsis mathematica universalis, or a brief system of the mathematics for young students, and such as have not arrived to a great perfection in those studies.
 8vo. London, 1709

Mandey (Venterus) and James Moxon:

Mechanick-powers, or the mistery of nature and art unvail'd, showing what great things may be perform'd by mechanick engines. 4to. London, 1696

Manetho:

Μανεθωνος Αποτελεσματικων βιβλια ΕΞ. Manethonis Apotelesmaticorum libri sex. Nunc primum ex bibliotheca Medicea editi curâ Jacobi Gronovii, qui etiam Latine vertit ac notas adjectit. 4to. Lugduni-Batavorum, 1698

Manfredi (Eustachio):

- : Instituzioni astronomiche. Opera postuma. (Opera di Manfredi, tomo 2.) 4to. Bologna, 1749
 — : De annuis inerrantium stellarum aberrationibus. 4to. Bononiæ, 1729
 — : See Bologna, Ephemerides.

Manilius (Marcus):

- : Astronomicon ad Caesarem Augustum. 8vo. Lugduni, 1551
 — : Astronomicon libri quinque, Iosephvs Scaliger Ivl. Caes. F. recensvit, ac pristino ordini suo restituit. 8vo. Lutetiae, 1579
 — : Astronomicon, a Josepho Scaligero ex vetusto codice Gemblacensi infinitis mendis repurgatum; eiusdem Josephi Scaligeri notæ. 4to. Lugduni Batavorum 1599
 — : Astronomicon, à Josepho Scaligero ex vetusto codice Gemblacensi infinitis mendis repurgatum; eiusdem Josephi Scaligeri notæ accesserunt quædam Thomæ Renesi et Ismaelis Bvlliali animaduersiones. 4to. Argentorati, 1655
 — : The Sphere of Marcus Manilius made an English poem: with annotations and an astronomical appendix. By Edward Sherburne. fol. London, 1675

Manilius (Marcus)—continued.

- : Astronomicum ; interpretatione et notis ac figuris illustravit M. Fayvus accesserunt P. D. Huetii animadversiones et Scaligeri notas. 4to. Parisiis, 1679
- : Astronomicum, ex recensione Richardi Bentleji, cum selectis variorum ac propriis notis . . . cura et studio M. Eliae Stoerber. 8vo. Argentorati, 1767
- : Himmelskugel ; Lateinisch und Deutsch, im Versmasze des Originals zum ersten Male übersetzt und mit Annerrungen begleitet von J. Merkel. 8vo. Aschaffenburg, 1844

Mann (Robert James) :

- : Meteorological observations made at Pietermaritzburg during the years 1863-65. fol.
- : The climate of Maritzburg, Natal. 12mo. Pietermaritzburg, 1864
- : A guide to Astronomical Science. 8vo. London, n.d.

Mann (W. Wilberforce) :

A new decimal metrical system founded on the earth's polar diameter. 8vo. New York, 1872

[Manneville (d'Après de)] :

Description et usage d'un nouvel instrument pour observer la latitude sur mer, appellé le nouveau Quartier Anglois. Nouvelle édition [par M. Bory]. 12mo. Paris, 1751

Mannheim, Grossherzogliche Sternwarte :

- : Astronomische Beobachtungen . . . Angestellt und herausgegeben von E. Schönfeld (und W. Valentiner). Abtheilung 1-3. 4to. Mannheim, Karlsruhe, 1862-79
- : *Barry's Fixsternbeobachtungen auf der Gr. Sternwarte zu Mannheim. Berechnet und herausgegeben von W. Valentiner. I. Beobachtungen am Passageninstrument im Jahre 1805. 8vo. Mannheim, 1878
- : Die Sternwarte zu Mannheim, beschrieben von ihrem Curator (J. L. Klüber). 4to. Mannheim, 1811
- : See also Mayer (C.)

Manning (Thomas) :

An introduction to arithmetic and algebra.

2 vols. in 1, 8vo. Cambridge, 1796-98

Marcoz (J. B. P.) :

- : Astronomie Solaire d'Hipparque, soumise à une critique rigoureuse, et ensuite rendue à sa vérité primordiale. 8vo. Paris, 1828
- : Astronomie solaire simplifiée, fondée sur les observations tant anciennes que du moyen âge, et prouvant l'exclusion des variations séculaires théoriques introduites dans les calculs des lieux du soleil. 8vo. Paris, 1832
- : Réfutation de la critique du livre intitulé astronomie solaire d'Hipparque, par J. B. P. Marcoz, insérée par M. Letronne dans le Journal des Savants, 1828-29. 8vo. [Paris, 1832]
- : Erreur des astronomes et des géomètres d'avoir admis l'accélération séculaire de la lune, en prenant pour des

Marcoz (J. B. P.)—continued.

observations réelles et légitimes les récits d'éclipses de l'Almageste, tandis qu'ils ne sont que des calculs faits par Ptolémée avec ses tables 8vo. Paris, 1833

Margetts (George):

- : Longitude tables for correcting the effect of parallax and refraction on the observ'd distance taken between the Moon and the Sun or a fixed star. 4to. London, 1790
- : Horary tables, for showing by inspection the apparent diurnal motion of the Sun, Moon, and stars, the latitude of a ship, & the azimuth, time, or altitude corresponding with any celestial object. fol. London, 1790

Marinoni (Giovanni Giacomo):

De astronomica specula domestica et organico apparatu astronomico libri duo. fol. Viennæ Austricæ, 1745

Markham (Clements R.):

- : A memoir on the Indian Surveys. 8vo. London, 1871
- : Ditto. Second edition. 8vo. London, 1878

Markree Observatory:

Catalogue of stars near the Ecliptic, observed at Markree during the years 1848 (to 1856), and whose places are supposed to be hitherto unpublished. By Edward J. Cooper. 4 vols. 8vo. Dublin, 1851–56

Marquez (Francisco de Paula):

Memoria sobre el eclipse de sol de 18 de Julio de 1860. 8vo. Madrid, 1861

Marrat (W.):

An Introduction to the theory and practice of mechanics. 8vo. Boston, 1810

Marriott (William), see London, Meteorological Society.**Martens (J. H.):**

Nachtrag zur Beschreibung der neuen freien Chronometer-Hemmung mit Ruhecyylinder und Schutz gegen unzeitgemässse Auslösung. 8vo. Freiburg, 1876

Marth (Albert):

- : Auxiliary tables for the solution of Lambert's equation, with a few remarks on the determination of cometary orbits. 4to. London, 1865
- : Solar Tables, *see* De La Rue and Marth.

Martin (Benjamin):

- : A new compleat and universal system or body of decimal arithmetick. 8vo. London, 1735
- : The young student's memorial book, or pocket library [mathematics, mechanics, &c.] 12mo. London, 1736
- : The young trigonometer's compleat guide ; being the mystery and rationale of plain (and spherical) trigonometry. 2 vols. 8vo. London, 1736
- : Logarithmologia, or the whole doctrine of logarithms, common and logistical, in theory and practice. 8vo. London, 1740

Martin (Benjamin)--continued.

- : A new and compendious system of optics, in three parts, viz.: 1. Catoptrics. 2. Dioptrics. 3. Optical instruments. 8vo. London, 1740
- : New principles of geography and navigation. fol. London, 1758
- : An essay on visual glasses fourth edition. 8vo. London, 1758
- : New elements of optics, or the theory of the aberrations, dissipation, and colours of light the properties of single and compound lenses, and the nature, construction and use of telescopes and microscopes. 8vo. London, 1759
- : A new and comprehensive system of mathematical institutions, agreeable to the present state of the Newtonian mathesis. 2 vols. 8vo. London, 1759-64
- : The young gentleman and lady's philosophy, in a continued survey of the works of nature and art. 2 vols. 8vo. London, 1759
- : Ditto. Third edition. 3 vols. 8vo. London, 1781-82
- : *Venus in the Sun: being an explication of the rationale of that great phænomenon. 4to. London, 1761
- : The philosophical grammar; being a view of the present state of experimented physiology, or, natural philosophy . . . Sixth edition. 8vo. London, 1762
- : Biographia Philosophica. Being an account of the lives, writings, and inventions, of the most eminent philosophers and mathematicians who have flourished from the earliest ages of the world to the present time. 8vo. London, 1764
- : A plain and familiar introduction to the Newtonian experimental philosophy . . . The fifth edition. 8vo. London, 1765
- : The new art of surveying by the goniometer. (Appendix . . . containing a new construction of a pantagraph.) 8vo. London, 1766
- : Institutions of astronomical calculations. Part 2. Containing the astronomy and geography of transits, and the principles of calculation, illustrated and applied to the ensuing transit of Venus in 1769. 8vo. London, 1768
- : Philosophia Britannica; or a new and comprehensive system of the Newtonian philosophy, astronomy, and geography . . . Fourth edition. 3 vols. 8vo. London, 1788
- : The description and use of both the globes, the armillary sphere, and Orrery. 8vo. London, n.d.

Martina (Luigi):

Osservazioni della Cometa apparsa in Aprile 1830, fatte nel Real Osservatorio di Palermo. 8vo.

Mascheroni (L.):

Géométrie du compas Ouvrage traduit de l'Ital'en par A. M. Carette. 8vo. Paris, 1798

Maseres (Francis) :

- : A dissertation on the use of the negative sign in algebra . . . shewing how quadratic and cubic equations may be explained, without the consideration of negative roots. To which is added . . . Mr. Machin's Quadrature of the Circle. 4to. London, 1758
- : Elements of plane trigonometry ; in which is introduced a dissertation on the nature and use of logarithms. 8vo. London, 1760
- : The principles of the doctrine of life-annuities explained in a familiar manner . . . with a variety of new tables. 8vo. London, 1783
- : Scriptores logarithmici, or a collection of several curious tracts on the nature and construction of logarithms. 6 vols. 4to. London, 1791–1807
- : The doctrine of permutations and combinations, being an essential and fundamental part of the doctrine of chances, as it is delivered by James Bernoulli in his . . . *Ars Conjectandi*, and by John Wallis . . . with some other useful mathematical tracts. 8vo. London, 1795
- : Tracts on the resolution of affected algebräick equations by Dr. Halley's, Mr. Raphson's, and Sir Isaac Newton's methods of approximation. 8vo. London, 1800
- : Tracts on the resolution of cubick & biquadratick equations. 8vo. London [1803]
- : [Scriptores optici] : J. Gregory, Optica promota ; R. Des Cartes, Dioptrice, Explicatio ovalium opticæ inservientium, cum notis F. à Schooten ; Extrait du traité de Huyghens sur la lumière ; C. Rabuel, figures des verres ; Excerpta ex lib. 2 geometriæ, R. Des Cartes. Vol. 1. 4to. London, 1823

Maskelyne (Nevil) :

- : *Concise rules for computing the effects of refraction and parallax, in varying the apparent distance of the Moon from the Sun or a star ; also an easy rule of approximation for computing the distance of the Moon from a star, the longitudes and latitudes of both being given. 4to. London, 1765
- : Instructions relative to the observation of the ensuing transit of the planet Venus over the Sun's disk, on the 3d of June 1769. 8vo. London, 1768
- : *Observations of the transit of Venus over the Sun, and the eclipse of the Sun on June 3, 1769, made at the Royal Observatory. 4to. London, 1769
- : Tables for computing the apparent places of the fixt stars, and reducing observations of the planets. fol. London, 1774
- : Tables requisite to be used with the Nautical Ephemeris for finding the latitude and longitude at sea . . . The second edition. 8vo. London, 1781
- : Ditto. Third edition. 8vo. London, 1802
- : Ditto. Appendix to the third edition, . . . being new tables of natural sines, natural versed sines, and logarithms of numbers. 8vo.

Maskelyne (Nevil)—continued.

- : *Advertisement of the expected return of the Comet of 1532
and 1661 in the year 1788. 4to. London, 1786
- : *An attempt to explain a difficulty in the theory of vision,
depending on the different refrangibility of light.
4to. London [1789]
- : An answer to a pamphlet entitled ‘a narrative of facts,
lately published by Mr. Thomas Mudge, junior, relating to
some time-keepers constructed by his father, Mr. Thomas
Mudge. 8vo. London, 1792
- : See Greenwich, Royal Observatory ; Hertzprung (S.)

Mason (Ebenezer Porter):

- *Observations on nebulae with a fourteen feet Reflector,
made by H. L. Smith and E. P. Mason during the year
1839. 4to. Philadelphia, 1841

Massimo (M.):

- *Eclisse Solare del 18 Luglio 1860 osservata in Roma, e
calcolata da M. M. . . . 4to. Roma, 1860

Massucci (Nicolo):

- Discorso . . . della correzione dell' Anno, & del nuovo
Calendario. 8vo. Roma, 1583

Matalène (P.):

- L'anti-Copernic. Astrométrie nouvelle, suivie de plusieurs
problèmes. 8vo. Paris, 1842

Mathematical magazine and philosophical repository,
containing a variety of original pieces in all parts of mathematical science, by G. W. Witchell, T. Moss, &c. Vol. 1.
8vo. London, 1761

Mathematical Monthly. Edited by J. D. Runkle. Vol. 1.
4to. Cambridge [Mass.], 1859

Mathematical Science (further researches in). . . . By the author of ‘the two discoveries.’ 8vo. Bridgwater, 1875

Mathematical Transactions and Collections; with a methodical history of mathematics; by a society of gentlemen. No. 1. 4to. London, 1762

Mathematician (the), containing many curious dissertations on the rise, progress, and improvement of geometry with a collection of problems. By a society of gentlemen. 8vo. London, 1751

Mathematician (the). Edited by T. S. Davies, W. Rutherford, and S. Fenwick. 3 vols. 8vo. London, 1845-50

Mathematische und naturwissenschaftliche Berichte aus Ungarn: mit Unterstützung der Ungarischen Akademie [&c.] Redigirt von J. Frölich. Band 1. 8vo. Berlin, 1882-83

Matthes (Carolus Johannes):

- Dissertatio mathematica de invenienda aequatione Causticarum.
[Inaugural Dissertation.] 4to. Lugduni-Batavorum, 1837

Matthews (Thomas):

A mode of trisecting a plane rectilineal angle, for 2,000 years reputed impossible, by the use of circles and straight lines only. 8vo. Horsham, 1875

Matthiessen (E. A.):

Tabula ad expeditiorem calculum logarithmi summae vel differentiae duarum quantitatum, per logarithmos tantum datarum. [Lat. & Ger.] 4to. Altonae, 1818 (1817)

Mauduit (A. R.):

A new and complete treatise of spherical trigonometry Translated by W. Crakelt. 8vo. London, 1768

Maughan (W. K.):

On the barometer and tides. 8vo. London, 1863

Maupertuis (Pierre Louis Moreau de):

— : The figure of the earth, determined from observations made by order of the French King at the Polar Circle, by de Maupertuis, Camus, Clairaut, Le Monnier, Outhier, and Celsius. 8vo. London, 1738

— : Astronomie Nautique, ou éléments d'astronomie, tant pour un observatoire fixe, que pour un observatoire mobile. 8vo. Paris, 1743

— : Ouvrages divers Éléments de Géographie. Discours sur les différentes figures des corps célestes. Discours sur la parallaxe de la lune, et lettre sur la comète. 12mo. Amsterdam, 1744

— : Œuvres.—Nouvelle édition. 4 vols. 8vo. Lyon, 1768

— : *See also* Keill (J.)

Maupertuis (Pierre Louis Moreau de) et J. Picard [&c.]:

Degré du méridien entre Paris et Amiens, déterminé par la mesure de M. Picard, et par les observations de M^{rs} de Maupertuis, Clairaut, Camus, Le Monnier. 8vo. Paris, 1740

Maurice (George):

Discours sur l'histoire de la mesure du temps. 8vo. Genève, 1831

Maurolycus (Franciscus):

— : Cosmographia in tres dialogos distincta; in quibus de forma, situ, numeroque tam cœlorum quam elementorum, aliisque rebus ad astronomica rudimenta spectantibus satis disseritur. 4to. Venetiis, 1543

— : Opuscula mathematica. 4to. Venetijs, 1575

Maury (M. F.):

— : Explanations and sailing directions to accompany the wind and current charts. Third edition. 4to. Washington, 1851

— : Ditto. Fourth edition. 4to. Washington, 1852

— : Ditto. Eighth edition. 2 vols. 4to. Washington, 1858-59

Maury (M. F.) and J. M. Gilliss:

Circular in relation to the Astronomical Expedition to Chile. (Table I. Ephemeris of Venus and her stars of comparison, 1850 & 1852. Table II. Ephemeris of Mars and its stars of comparison, 1849 and 1852. By Lieut. J. M. Gilliss.) 4to. Washington, 1849

Maxwell (Alexander):

Plurality of Worlds: or letters, notes, & memoranda, philosophical and critical; occasioned by 'a series of discourses on the christian revelation, viewed in connection with the modern astronomy, by Thomas Chalmers, D.D.'

8vo. London, 1820

Maxwell (James Clerk):

- : Theory of heat. Second edition. 8vo. London, 1872
- : Remarks on Professor Hamilton's paper, 'A law of elliptic motion.' 8vo. Liverpool, 1873

Mayer (Alfred Marshall):

- : Lecture-notes on physics. 8vo. Philadelphia, 1868
- : *The total Eclipse of August 7th, 1869. 8vo. Philadelphia, 1869
- : *Observations on the variation of the magnetic declination in connection with the Aurora of October 14, 1870. 8vo. New Haven, 1871
- : *Observations on the planet Jupiter. 8vo. Philadelphia, 1870

Mayer (Christian):

- : De novis in coelo sidereo Phaenomenis in miris stellarum fixarum comitibus Mannhemii in Specula nova Electorali recens detectis. 4to. Mannhemii, 1779
- : Solis et Lunæ eclipseos observatio astronomica . . . facta Schwezingæ in Specula nova Electorali anno 1764 diebus 17 Martii et 1 Aprilis. 4to. Mannheimii, n.d.

Mayer (Joannes Tobias):

- : Theoria lunæ juxta systema Newtonianum. 4to. Londini, 1767
- : Tabulæ motuum solis et lunæ novæ et correctæ . . . quibus accedit methodus longitudinum promota. [Edidit N. Maskelyne.] 4to. Londini, 1770
- : Opera Inedita. Vol. 1. Commentationes Societati Regiae Scientiarum oblatas, quae integrae supersunt, cum tabula selenographica complectens. Edidit et observationum appendicem adjecit Georgius Christophorus Lichtenberg. 4to. Gottingae, 1775
- : Commentatio de aberrationibus stellarum fixarum computandis. [Inaugural Dissertation.] 4to. Erlangae, 1787
- : Lunar Tables, improved by Charles Mason. 4to. London, 1787
- : Lehrbuch über die physische Astronomie, Theorie der Erde und Meteorologie. 4to. Göttingen, 1805
- : Astronomical Observations, made at Göttingen, from 1756 to 1761. [Published by order of the Commissioners of Longitude, under the superintendence of F. Mossotti.] fol. London, 1826
- : *Catalogue of stars corrected and enlarged; together with a comparison of the places of the greater part of them with those given by Bradley, and a reference to every observation of every star, by Francis Baily. fol. London [1831]
- : Grössere Mondkarte, nebst Detailzeichnungen, zum ersten

Mayer (Joannes Tobias)—*continued.*

Male herausgegeben von der Königl. Sternwarte zu Göttingen. [12 sheets of drawings.] Göttingen, 1881

Mayr (Aloys):

Ueber die tangirenden Flächen erster und zweiter Ordnung.
4to. Würzburg, 1845

Mazure Duhamel (J. A.):

Mémoire sur l'astronomie nautique. 4to. Paris, 1822

Méchain (Pierre François André) et J. B. J. Delambre:

Base du système métrique décimal, ou mesure de l'arc du méridien compris entre les parallèles de Dunkerque et Barcelone. (Suite des Mémoires de l'Institut.)

3 vols. 4to. Paris, 1806–1810

Megerlin (Peter):

Astrologische Muthmassungen von der Bedeutung des jüngst entstandenen Cometen, 1664. 4to. [Basel, 1665]

Meibauer (R. O.):

— : Ueber die physische Beschaffenheit der Sonne. [Inaugural-Dissertation.] 4to. Berlin, 1866

— : Die Sternwarte zu Greenwich. 8vo. Berlin, 1868

— : Der Novemberschwarm der Sternschnuppen. 8vo. Berlin, 1868

— : Die physische Beschaffenheit des Sonnensystems. . . . Zweite Auflage. 8vo. Berlin, 1872

[**Meibomius (Marcus):**

De Proportionibus dialogus. fol. Hafniæ, 1655

Melander (Daniel) et Paolo Frisi:

De theoria lunæ commentarii. 4to. Parmæ, 1769

Melanderhjelm (Daniel):

Conspectus prælectionum academicarum, continens fundamenta astronomiæ. 2 vols. in 1, Upsaliæ, 1779

Melbourne, Flagstaff Observatory:

— : Results of the meteorological observations taken in the colony of Victoria during the years 1859–62, and of the nautical observations collected and discussed at the Flagstaff Observatory during the years 1858–62. George Neumayer, Director. 4to. Melbourne, 1864

— : Discussion of the meteorological and magnetical observations made during the years 1858–63, by G. Neumayer. 4to. Mannheim, 1867

Melbourne, Williamstown Observatory:

Astronomical Observations made in the years 1861, 1862, and 1863, under the direction of Robert L. J. Ellery. Vol. 1. 8vo. Melbourne, 1869

Melbourne Observatory:

— : Third meteorological report. fol. Melbourne, 1858

— : Report of the Board of Visitors, together with the annual report of the Government Astronomer, 1859–83. fol. Melbourne, 1859–83

Melbourne Observatory—continued.

- : Results of astronomical observations made in the years 1863–75, under the direction of Robert L. J. Ellery. Vol. 2–5. 8vo. Melbourne, 1866–79
- : Results of Observations in meteorology, terrestrial magnetism, &c., &c., during 1872, 1874–76, together with abstracts from meteorological observations obtained at various localities in Victoria. Under the superintendence of R. L. J. Ellery. Vol. 1, 3–5. 8vo. Melbourne.
- : Monthly Record of results of observations in meteorology, terrestrial magnetism, &c., &c., taken under the superintendence of R. L. J. Ellery, 1873–83. 8vo. Melbourne.
- : First Melbourne general catalogue of 1227 stars for the epoch 1870, deduced from observations extending from 1863 to 1870 made under the direction of Robert L. J. Ellery Reduced and prepared for publication by E. J. White. 4to. Melbourne, 1874
- : Observations of Mars and comparison stars taken in the year 1877. 8vo. Melbourne.

Melbourne, Royal Society of Victoria:

- : Transactions of the Philosophical Society of Victoria, 1854–55. Vol. 1. 8vo. Melbourne, 1855
- : Transactions of the Philosophical Institute of Victoria, 1855–60. Vol. 1–4. 8vo. Melbourne, 1857–60
- : Transactions and Proceedings of the Royal Society of Victoria, 1860–82. Vol. 5–19. 8vo. Melbourne, 1860–83

In 1855 the Philosophical Society of Victoria united with the Victorian Institute, under the title of Philosophical Institute of Victoria, which in 1860 became the Royal Society of Victoria.

Melde (Franz):

- Theorie und Praxis der astronomischen Zeitbestimmung mit Zugrundlegung vorbereitender Lehren, und unter Berücksichtigung einfacher Hilfsmittel. 8vo. Tübingen, 1876

Meldola (Raphael):

- *On a cause for the appearance of bright lines in the Solar spectrum. 8vo. London, 1878

Meldrum (Charles):

- : *On the hurricanes and weather in the Indian Ocean, Jan. and Feb. 1860. 8vo. Mauritius.
- : *Notes on the form of Cyclones in the Southern Indian Ocean, and on some of the rules given for avoiding their centres. 8vo. London, 1873

Melloni (Macedonio):

- : *Elettroscopio del M M 4to. Napoli, 1854
- : Elogio storico, *see* Nobile (A.)

Melsens (H. Louis F.):

- *De l'application du Rhé-electromètre aux paratonnerres des télégraphes. 8vo. Bruxelles, 1877

Memo (Giovanni Maria):

- Tre libri della sostanza et forma del Mondo. 4to. Venetia, 1545

Ménabréa (Louis Frédéric):

- : *Mémoire sur la série de Lagrange. 4to. Turin, 1844
 — : *Mémoire sur les quadratures. 4to. Turin, 1844
 — : *Observations sur la véritable interprétation de la série de Lagrange. 4to. Turin, 1847

Mendoza y Rios (José de):

- : A complete collection of tables for navigation and nautical astronomy . . . Second edition. 4to. London, 1809
 — : Colección completa de tablas para los usos de la navegación y astronomía náutica. 4to. Madrid, 1850

Mengoli (Pietro):

Geometriæ speciosæ elementa: de potestatibus à radice binomia & residua; de innumerabilibus numerosis progressionibus; de quasi proportionibus; de rationibus logarithmicis; de proprijs rationum logarithmis; de innumerabilibus quadraturis. 4to. Bononiæ, 1659

Mercator (Gerardus):

Atlas, sive cosmographicæ meditationes de fabrica mundi et fabricati figura. Editio quarta. fol. Amsterodami, 1611

Mercator [Kaufmann] (Nicolaus):

Institutionum astronomicarum libri duo, de motu astrorum communi et proprio, . . . cum tabulis Tychonianis . . . et Rudolphinis. . . . 2 parts in 1 vol. 8vo. Londini, 1676

Mercier (Louis Sébastien):

De l'impossibilité du système astronomique de Copernic et de Newton. 8vo. Paris, 1806

Merriman (Mansfield):

- : Elements of the method of least squares. 8vo. Cambridge, 1877
 — : *A list of Writings relating to the Method of Least Squares, with historical and critical Notes. 8vo. New Haven, 1877

Messahala :

De Elementis et orbibvs celestibvs liber antiquvs ac eruditus . . . cui adiectum est scriptvm cvivsdam Hebræi de Eris; . . . item ijsdem de rebus scriptvm cvivsdam Saraceni, continens præterea præcepta ad usum tabularum Astronomicarum utilissima . . . [edidit] J. Hellerus. 4to. Noribergæ, 1549

Meteors:

Die Meteoriten Kreisreihen als Erzeuger der Kometen, Sonnenflecke, des Erdmagnetismus . . . u.s.w. 8vo. n.d.

Metius (Adrian):

Astrolabium ; hoc est astrolabii utriusque accurata descriptio. 8vo. Franekeræ, 1626

Meyer (Arnold):

Zur Theorie der unbestimmten ternären quadratischen Formen. Inaugural-Dissertation. 8vo. Zürich, 1871

Meyer (J.):

Himmel und Erde oder das Verhältniss der Erde zum Fixsternhimmel, zur Sonne und zum Mond. Ein Lehrbuch für Schule und Haus. . . . Zweite Auflage.

8vo. Leipzig, 1855

Meyer (Otto):

Ueber die Gestalt der Himmelskörper. (Programm der Realschule zu Königsberg.) 4to. Königsberg, 1869

Meyer (Wilhelm):

- : *Recherches sur Saturne, ses anneaux et ses satellites, d'après les observations faites à l'Observatoire de Genève pendant l'opposition de 1880. 4to. Genève, 1881
- : *Sur l'enregistrement des battements de secondes d'une pendule au moyen du microphone. 8vo. Genève, 1881
- : *Mémoire sur la grande comète australe du mois de Février 1880. 4to. Genève, 1882

Meyer (—):

Kosmische Messungen. (Jahresbericht über das Gymnasium zu Bunzlau.) 4to. Bunzlau, 1868

Mezger (Johann):

Tabulæ aberrationis et nutationis in ascensionem rectam et declinationem insigniorum stellarum, cum aliis tabulis Cum præfatione Christiani Mayer. 8vo. Mannhemii, 1778

Miari-Fulcis (Francesco):

*Riduzione a comune misura dei massimi e minimi barometrici annuali osservati a Padova dal 1725 al 1881. 8vo. Venezia, 1882

Michell (John):

- : *A recommendation of Hadley's quadrant for surveying. 4to. London, 1765
- : Proposal of a method for measuring degrees of longitude upon parallels of the æquator. 4to. London, 1767
- : An enquiry into the probable parallax and magnitude of the fixed stars, from the quantity of light which they afford us, and the particular circumstances of their situation. 4to. London, 1768

Michelson (Albert A.):

Experimental determination of the velocity of light. (Astronomical papers prepared for the use of the American Nautical Almanac.) 4to. Washington, 1880

Middleton (Empson E.):

- : New process of measuring the height of the Sun. 8vo. London, 1874

Middleton (J.):

- : A celestial atlas containing maps of all the constellations visible in Great Britain, with corresponding blank maps of the stars. fol. London and Norwich, n.d.
- : A companion to the celestial atlas; being a series of lessons

Middleton (J.)—continued.

on the constellations, a dissertation on the fixed stars, and conversations on the heavens. Second edition.
8vo. London, n.d.

Milan:

Effemeridi astronomiche. 1821, 1823–4, 1826–7, 1829–30,
1833–5, 1840–41, 1843–52, 1861. 8vo. Milano, 1820–1860

*Milan (Livellazione della città). 8vo. Milano, 1834

Milan, Reale Istituto Lombardo di Scienze e Lettere:

— : Memorie; classe di scienze matematiche e naturali. Vol.
10–12 (serie terza Vol. 1–3). 4to. Milano, 1867–73

— : Rendiconti. Classe di Scienze Matematiche e Naturali.
4 vols. 8vo. Milano, 1864–67

— : Rendiconti. Serie II. Vol. 1–6. 8vo. Milano, 1868–73

— : Annuario, 1864. 12mo. Milano.

Milan, Reale Osservatorio:

— : Osservazioni sull' intensità e sulla direzione della forza
magnetica istituite negli anni 1836–38 . . . da C. Kreil
e P. della Vedova. 8vo. Milano, 1839

— : Osservazioni meteorologiche eseguite . . . negli anni
1848 al 1859 inclusivi dall' Abate Giovanni Capelli.
4to. Milano, 1861

— : *See also* Schiaparelli (G. V.)

Milan, Reale Osservatorio di Brera:

Pubblicazioni. 1–23. 4to. Milano, 1873–83

Milberg (James Hermann):

Das wahre Sonnensystem. Bewegungen und Bahnen der
Gestirne nach einer neuen Auffassung wie dieselbe im
Himmelsraume, und zwar nicht in Ellipsen, statt hat.
8vo. München, 1862

Miller (J. F.):

*Synopsis of meteorological observations made at White-
haven, Cumberland, in the years 1849–52.
8vo. Edinburgh, 1850–53

Miller (Samuel H.):

The Fenland Meteorological Circular and Weather Report,
1874–75. 4to. Wisbeach, 1874–76

Miller (William Hallowes):

*On the construction of the new Imperial standard pounds;
on the comparison of the new standards with the Kilo-
gramme des Archives [&c.] 4to. London, 1857

Milliet Dechales (Claude François):

The Elements of Euclid explained . . . Seventh edition.
8vo. London, 1726

Millington (John):

An epitome of the elementary principles of natural and
experimental philosophy. Part 1 . . . Properties of
matter, mechanics, pneumatics, acoustics, hydrostatics,
hydraulics. 8vo. London, 1823

Millosevich (Elia):

- : *Nuovi studi e calcoli intorno al passaggio di Venere sul disco del Sole del 6 Dicembre 1882. 8vo. Venezia, 1874
- : *Discussione di alcune osservazioni dell' occultazione di Regolo per la luna del 26 Febbraio (1877). 8vo. Venezia, 1877
- : *Determinazione della latitudine dell' Osservatorio dell' Istituto di Marina Mercantile in Venezia. 8vo. Venezia, 1878
- : *Intorno alla vita ed ai lavori di Giovanni Santini. 4to. Roma, 1878
- : *L' aspetto delle Nebulose a proposito di alcuni disegni di Guglielmo Tempel. 8vo. Venezia, 1878
- : *Sugli eclissi di sole che saranno visibili a Venezia nel resto di questo secolo. 4to. Palermo, 1879
- : *Verificazione della latitudine di Venezia con osservazioni di stelle in meridiano. 8vo. Venezia, 1879
- : *Determinazione dell' orbita della cometa Barnard (*c.* 1881). 4to. Roma, 1882
- : *Riflessioni sulle carte celesti particolareggiate, e sulle zone speciali di cielo. 4to. Roma, 1883

Milne (David):

Essay on Comets, which gained the first of Dr. Fellowes's prizes, proposed to those who had attended the University of Edinburgh within the last twelve years.

4to. Edinburgh, 1828

Milne (Joshua):

A treatise on the valuation of annuities and assurances, on lives and survivorships, on the construction of tables of mortality, and on the probabilities and expectations of life with tables. 2 vols. 8vo. London, 1815

Milner (Thomas):

- : The heavens and the earth ; or, familiar illustrations of astronomy. 8vo. London, n.d.
- : The heavens and the earth. A popular handbook of astronomy. New edition, with revision and additions by Edwin Dunkin. 8vo. London, n.d.

Milnes (Jacob):

Sectionum conicarum elementa, nova methodo demonstrata. Editio secunda. 8vo. Oxoniae, 1712

Minto (Walter) : Life of Napier, see Buchan and Minto.**Miscellanea Analytica de seriebus et quadraturis.**

4to. Londini, 1730

Miscellanea Curiosa, containing a collection of some of the principal phenomena in nature being the most valuable discourses [etc.] read and delivered to the Royal Society. 3 vols. 8vo. London, 1726, '23, '27
Vol. 1, third edition; Vol. 3, second edition.

Miscellanea Curiosa mathematica containing mathematical essays and dissertations [and] 160 new problems. Vol. 1-2, No. 1-4. 4to. London, 1749

Miscellaneæ Curiosæ, or entertainments for the ingenious of both sexes, for 1734–35.

6 parts in 1 vol. 8vo. York, 1734–35

Miscellanea Scientifica Curiosa; consisting of essays and dissertations on the most curious and interesting subjects in natural philosophy, speculative and mixed mathematics [&c.] By a society of gentlemen. No. 1–8.

4to. London, n.d.

Mitchel (Ormsby Macknight):

- : The Sidereal Messenger, a monthly journal, devoted to astronomical science. Vol. 1–2, and Vol. 3, No. 1, 2.
4to. Cincinnati, 1848
- : Popular Astronomy. A concise elementary treatise on the sun, planets, satellites and comets. 8vo. New York, 1860
- : The planetary and stellar worlds: a popular exposition of the great discoveries and theories of modern astronomy With additions by James Glaisher. 8vo. London, n.d.
- : *See also* Burritt (Elijah).
- : Double stars, *see* Cincinnati Observatory.

Möbius (August Ferdinand):

- : De computandis occultationibus fixarum per planetas. Dissertatio astronomica [inauguralis]. 4to. Lipsiae, 1815
- : Die wahre und die scheinbare Bahn des Halley'schen Kometen bei seiner Wiederkunft im Jahre 1835 anschaulich dargestellt und allgemein fasslich erklärt.
8vo. Leipzig, 1834
- : Die Elemente der Mechanik des Himmels, auf neuem Wege, ohne Hülfe höherer Rechnungsarten dargestellt.
8vo. Leipzig, 1843
- : Die Hauptsätze der Astronomie zum Gebrauche bei seinen Vorlesungen für Gebildete zusammengestellt. Sechste Auflage.
8vo. Stuttgart, 1874
- : *See also* Leipzig, Sternwarte.

Modena, R. Osservatorio Astronomico:

Atti raccolti e ordinati da Giuseppe Bianchi. Tomo 1.
fol. Modena, 1834

Modena, Società Italiana delle Scienze:

- : Memorie di Matematica e di Fisica. Tomo 19–25
4to. Modena, 1821–55
- : Ditto. Serie seconda. Tomo 1, 2. 4to. Modena, 1862–66
- : Ditto. Serie terza. Tomo 1–5.
4to. Firenze (e Napoli), 1867–82
- : Questione della Società. 8vo. Torino, 1861

Moesta (Carl Wilhelm):

- : Informe sobre las observaciones hechas durante el eclipse solar de 30 de Noviembre de 1883.
8vo. Santiago de Chile, 1854
- : Determinacion de la latitud geografica del circulo meridiano del observatorio nacional de Santiago.
8vo. Santiago de Chile, 1854
- : Observaciones astronómicas, *see* Santiago de Chile.

Mogge (Jacob) :

Algemeene manier tot do practijck-oeffeningh der Sonnewysers.
fol. Middelburgh, 1675 [1666]

Mohammed ben Musa :

The algebra of Mohammed ben Musa, edited and translated
by Frederic Rosen. 8vo. London, 1831

Mohn (H.) :

- : Am kometbanernes indbyrdes beliggenhed besvarelso af Universitetets prisopgave for 1860. 4to. Christiania, 1861
- : *Den magnetiske declination i Christiania, udlebet af Observationer 1842-62. 8vo. Christiania, 1863
- : *Iagttagelser over Kometen 1862 II anstillede paa Christiania Observatorium. 8vo. Christiania, 1863
- : *Bewölkung in Christiania. 8vo. Berlin [1864]
- : *Nogle bemærkninger om tordenveirenes Dannelsse. 8vo. Christiania, 1868
- : *Stormen den 7de til 8de Febuar 1868. 4to. Kristiania, 1868
- : *Norges vind- og stormstatistik. 8vo. Christiania, 1869
- : *Om tordenvejr i Norge i 1868-69. 8vo. Christiania, 1869-70
- : Température de la mer entre l'Islande, l'Écosse et la Norvège. 8vo. Christiania, 1870
- : *Luftens temperatur i og udenfor Christiania samt dens forandring med højden samme steds. 8vo. Christiania, 1874
- : *Bidrag til Øst-Ishavets klimatologi og meteorologi. 8vo. Christiania, 1874
- : *See also* Norwegian North Atlantic Expedition.

Mohn (H.) og C. de Seue :

*Meteorologiske meddelser. 8vo. Christiania, 1868

Mole (John) :

Elements of algebra ; to which is prefixed a choice collection
of arithmetical questions, with their solutions.
8vo. London, 1788

Molerius (Elias) :

De Sydere novo, seu de nova stella quæ ab 8 die Octobris
anni . . . 1604 inter astra Sagittarii videri cœpit . . .
Enarratio apodeictica. 4to. 1666

Molison (A. R.) :

Against the theory of the retarding influence of tidal action
on the axial motion of the earth, and showing the true
source of tidal energy. 8vo. London, n.d.

Moll (Gerard) :

- : Oratio de vitanda, in astronomiae studio, fingendi temeritate,
et coeli observatione quam diligentissime instituenda.
[Inaugural Dissertation.] 8vo. Trajecti ad Rhenum, 1819
- : *Mercurius in Sole visus, of overgang van Mercurius over
die Zon ; den 5 Mei 1832 te Utrecht waargenomen
4to. [Amsterdam, 1833]

[Moll, H.]:

On the alleged decline of science in England. By a foreigner.
8vo. London, 1831

Möller (Axel):

- : *Undersökning af planeten Pandoras rörelse. Afdelningen I, II. 4to. Stockholm, 1870-77
- : *Elementer för Fayes Komet och efemerid för dess återkomst 1873. 8vo. Stockholm, 1872
- : *Bericht über die Resultate einer neuen Berechnung der Elemente des Faye'schen Comet. 8vo. Leipzig, 1872
- : *Redögörelse för de arbeten, som blifvit utförda på Astronomiska Observatoriet i Lund under åren 1867-1874. [Inaugural Dissertation.] 4to. Lund, 1875
- : *Elementer och efemerid för Fayeska kometens återkomst 1880. 8vo. Stockholm, 1878
- : *Nya elementer för planeten Pandora, härledda ur observationerna under 16 oppositioner 1858-77. 8vo. Stockholm, 1879
- : *See also* Lund, Observatorium.

Möller (J. C.):

Beschreibung des Saturnrings und anschauliche Darstellung der Ursachen seiner veränderlichen Lichtgestalt.
8vo. Altona, 1819

Möller (Julius):

Die jährliche Periode des atmosphärischen Niederschlages in der Schweiz. Inaugural-Dissertation. 4to. Zürich, 1883

Möller (Nicolaus):

De indubio solis motu, immotaque telluris quiete dissertatio.
4to. Kiliae Holsatorum, 1734

Molyneux (William):

- : Sciothericum telescopium, or a new contrivance of adapting a telescope to an horizontal dial for observing the moment of time by day or night with proper tables requisite thereto. 4to. Dublin, 1686
- : Dioptrica nova, a treatise of dioptricks, in two parts, wherein the various effects and appearances of spherick glasses together with their usefulness are explained. 4to. London, 1692

Monatliche Correspondenz zur Beförderung der Erd- und Himmels-Kunde:

- : Herausgegeben von Fr. von Zach.
28 vols. Gotha, 1800-1813
- : Register Angefertigt von J. G. Galle.
8vo. Gotha, 1850
- : *See* Correspondance Astronomique.

Moncalieri, R. Collegio Carlo Alberto :

- : Bullettino Meteorologico dell' Osservatorio . . . compilato dal P. Francesco Denza, 1865-80. Vol. 1-15.
4to. Torino, 1866-81
- : Associazione Meteorologica Italiana : Bullettino Mensuale

- Moncalieri, R. Collegio Carlo-Alberto—continued.**
 pubblicato per cura dell' Osservatorio Centrale del Real
 Collegio. Serie 2, 1880-83. Vol. 1-4. 4to. Torino, 1881-84
 — : *See also Denza (F.)*
- Monckhoven (D. van) :**
 — : *De l'élargissement des raies spectrales de l'hydrogène.
 4to. Paris, 1882
- : A popular treatise on photography; also a description of,
 and remarks on, the stereoscope and photographic optics,
 &c., &c. Translated by W. H. Thorntwaite. Second
 edition. 12mo. London, n.d.
- Moniteur Scientifique, Journal des Sciences pures et appliquées.**
 Tome 6-9. 4to. Paris, 1864-67
- Montano (Don Vincente) :**
 Discurso filosofi-astronomico . . . sobre el Cometa que
 apareció . . . 1689. 4to. Barcelona, 1690
- Monteiro da Rocha (J.) :**
 Mémoires sur l'Astronomie pratique . . . traduits du
 portugais. 4to. Paris, 1808
- Montémont (Albert) :**
 Lettres sur l'Astronomie, en prose et en vers.
 4 vols. 8vo. Paris, 1823
- Monteregeo, see Regiomontanus.**
- Montignot (l'Abbé) :**
 État des Étoiles fixes au second siècle, par Claude Ptolémée,
 comparé à la position des mêmes étoiles en 1786, avec le
 texte grec & la traduction françoise. 4to. Strasbourg, 1787
- Montigny (Ch.) :**
 — : [13 papers on the scintillation of stars, from Brussels
 Academy Bulletins.] 8vo. Bruxelles, v.d.
 — : *Les grandes découvertes faites en physique depuis la fin
 du XVIII^e siècle. 8vo. Bruxelles, 1882
- Montlivault (E. de) :**
 Lettre adressée à Sir Jonh Herschell [sic] sur les causes de
 l'aberration de la lumière. 4to. Tours, 1835
- Montpellier, Académie des Sciences et Lettres :**
 Mémoires de la Section des Sciences. Tome 1-10.
 4to. Montpellier, 1847-82
- Montreal, Royal Society of Canada :**
 Proceedings and Transactions, 1882-83. Vol. 1.
 4to. Montreal, 1883
- Montsouris, Observatoire Astronomique :**
 — : Annales du Bureau des Longitudes (&c.). Tome 1-2.
 4to. Paris, 1877-82
 — : *See also Paris, Bureau des Longitudes.*
- Montucla (Jean Étienne) :**
 Histoire des Mathématiques . . . Nouvelle [seconde] édi-
 tion, considérablement augmentée, et prolongée jusque vers
 l'époque actuelle. 4 vols. 4to. Paris, 1799-1802
 The third and fourth volumes completed and edited by La Lande; for
 list of contents *see De Morgan.*

Moon :

Conjectures sur la réunion de la lune à la terre, et des satellites en général à leur planète principale . . . Par un ancien officier de Marine. 8vo. Paris, 1821

Moon (rotation of the). An examination of the astronomical doctrine of the moon's rotation. 8vo. Edinburgh, 1847

Moon (Robert) :

— : Professor Challis and Professor Tardy. The new equation in hydrodynamics. 8vo. Cambridge, 1850

— : An appeal to the Cambridge Philosophical Society in connection with a recent decision of the Council of the Society. 8vo. London, 1872

Moore (E. K.) :

*Method of testing chronometers at the U.S. Naval Observatory. 8vo. Annapolis, 1884

Moore (John Hamilton) :

The new practical navigator; being an epitome of Navigation, containing the different methods of working the lunar observations, and all the requisite tables used with the Nautical Almanac . . . Twelfth edition. 8vo. London, 1796

Moore (Jonas) :

— : A new systeme of the Mathematicks; containing arithmetic, and the principles of algebra; practical geometry; trigonometry; cosmography; navigation; the doctrine of the sphere; astronomical tables; a new geography. 2 vols. 4to. London, 1681 (1680-81)

— : A mathematical compendium, or useful practises in arithmetic, geometry, and astronomy, geography and navigation. . . . 12mo. London, 1695

Moore (J. J.) :

The British mariner's vocabulary, or universal dictionary of technical terms and sea phrases. 12mo. London, 1801

Morin (Arthur Jules) :

Aide-mémoire de mécanique pratique à l'usage des officiers d'artillerie et des ingénieurs civils et militaires. 12mo. Bruxelles, 1838

Moritz (A.) :

— : *Die Sonnenfinsterniss vom 6. März (22 Februar) 1867, beobachtet in Tiflis. 8vo. St. Petersburg, 1868

— : Exercices Hypsométriques. Livr. 1. 8vo. Tiflis, 1869

— : Das Reflexions-Thermometer. 8vo. Tiflis, 1876

— : *Bemerkungen über die Meereshöhe von Tiflis. 8vo. St. Petersburg.

— : See Tiflis, Physikalischs Observatorium.

Moritz (A.) und H. Kiefer :

Sammlung von Hülfstafeln zur Berechnung barometrischer Höhenbestimmungen. [German and Russian.]

4to. Tiflis, 1870

Morley (William H.):

- : Description of a planispheric astrolabe constructed for Sháh Sultán Husain Safawí . . . comprising an account of the astrolabe generally, with notes . . . to which are added concise notices of twelve other astrolabes. fol. London, 1856
 — : *Description of an Arabic quadrant. 8vo. London, 1860

Morrison (Joseph):

- An elementary treatise on plane trigonometry, with numerous examples and applications. 8vo. Toronto, 1880

Morrison (R. J.):

- The Comet: a large lithographic map of the true course of Encke's Comet, with a letter to the members of the Royal Astronomical Society. 8vo. London, n.d.

[Morton (Pierce)]:

- : Geometry, plane, solid, and spherical, in six books: to which is added in an appendix the theory of projection, so far as it is auxiliary to geometry; with an account of the plane sections of the cone and cylinder. (Library of Useful Knowledge.) 8vo. London, 1830
 — : Ditto. Another edition. 8vo. London, 1838

Moscow, Observatoire :

- : Annales (publiées par Th. Bredichin). Vol. 1-9. 4to. Moscou, 1874-83
 — : Über den im August 1847 in Moskau entdeckten Kometen. 8vo. Moscou

Moseley (Henry):

- Lectures on astronomy delivered at King's College, London. Fourth edition. 8vo. London, 1854

Mossotti (Ottaviano Fabrizio):

- : Sur les forces qui régissent la constitution intérieure des corps. 4to. Turin, 1836
 — : Sulla costituzione del sistema stellare di cui fa parte il sole. 8vo. Corfu, 1840
 — : *Sulle proprietà degli spettri di Fraunhofer formati dai reticolini, ed analisi della luce che somministrano. 8vo. Pisa, 1845
 — : Lezioni elementari di Fisica Matematica. 2 vols. 8vo. Firenze, 1845
 — : *Discussione analitica sull' influenza che l' azione di un mezzo dielettrico ha sulla distribuzione dell' elettricità alla superficie di più corpi elettrici disseminati in esso. 4to. Modena, 1846
 — : *Sulle macchie del disco solare. 8vo. [Pisa], 1854
 — : Memoir, see Bicchierai.

Mouchez (E.), see Paris, Observatoire.**Mount Hamilton, Lick Observatory:**

- Report to the Trustees of the 'James Lick Trust' of observations made on Mt. Hamilton with reference to the location of Lick Observatory, by S. W. Burnham. 4to. Chicago, 1880

Mouton (Gabriel):

Observationes diametrorum Solis et Lunæ apparentium, meridi-anarūmque aliquot altitudinum Solis & paucarum fixarum, cum tabulā declinationum Solis. . . . Adjecta est brevis dissertatio de dierum naturalium inæqualitate [&c.].
4to. Lugduni, 1670

Mudge (Thomas), Jun.:

A reply to the answer of the Rev. Dr. Maskelyne, Astronomer Royal, to a narrative of facts relating to some time-keepers constructed by Mr. Thomas Mudge. . . . With remarks . . . by the Count de Bruhl. 8vo. London, 1792

A description, with plates, of the time-keeper invented by the late . . . T . . . M. To which is prefixed a narrative by Thomas Mudge, his son, of measures taken to give effect to the invention since the reward bestowed upon it by the House of Commons. 4to. London, 1799

Mudie (Robert):

The Heavens. 8vo. Philadelphia, 1836

Mueller (Johann):

Die Aequatorialzone des gestirnten Himmels.
1 sheet [with explanation], Freiburg, 1856

Mulcaster (J. W.):

An elementary treatise on Statics, with numerous examples and solutions. 8vo. London, 1871

Mulerius (Nicolaus):

— : Tabulæ Frisicæ lunæ-solares quadruples e fontibus Cl. Ptolemæi, Regis Alfonsi, Nic. Copernici & Tychonis Brahe recens constructæ ; quibus accessere Solis tabulæ totidem. 4to. Alemaniæ, 1611

— : Judæorum annus lunæ-solaris, et Ture-Arabum annus merè lunaris. fol. Groningæ, 1630

Müller (Friederich Christoph):

Tafeln der Sonnenhöhen für ganz Deutschland und dessen westlich und östlich benachbarte Länder. 8vo. Leipzig, 1791

Müller (H.):

Die Kepler'schen Gesetze : eine neue elementare Ableitung derselben aus dem Newton'schen Anziehungsgesetze. 8vo. Braunschweig, 1870

Müller (Hugo W.): see De La Rue and Müller.**Muller (John):**

A mathematical treatise ; containing a system of Conic Sections, with the doctrine of Fluxions and Fluents, applied to various subjects. 4to. London, 1736

Müller (W.):

— : On the use of a knowledge of astronomy and geography. 8vo. (London, 1829)

— : Geography and astronomy ; illustrated by patent cosmospheres, or globes of the universe. 8vo. (London, 1829)

Munich, Königlich - Bayerische Akademie der Wissenschaften:

- : Abhandlungen der mathematisch-physikalischen Classe. Band 1-14. 4to. München, 1832-83
 - : Bulletin, 1842-53. 12 vols. 4to. München, 1842-53
 - : Sitzungsberichte, Jahrgang 1860-70. 8vo. München, 1860-70
 - : Inhaltsverzeichniss zu Jahrgang 1860-70. 8vo. München, 1872
 - : Sitzungsberichte der mathematisch-physikalischen Classe, 1871-83. Band 1-13. 8vo. München, 1871-83
 - : Almanach, 1844, '45, '49, '55, '59, '75, '78. 12mo. München.
- Munich, Sternwarte:**
- : Astronomische Beobachtungen angestellt auf der K. Sternwarte zu Bogenhausen von J. Soldner, 1820-27. Theil 1-5. 4to. München, 1822-38
 - : Observationes Astronomicae in Specula Regia Monachiensi institutae et editae a J. Lamont, 1828-44. Vol. 6-15 (seu novae seriei vol. 1-10). 4to. Monachii, 1841-47
 - : Annalen herausgegeben von J. Lamont. Band 1-20 (der vollständigen Sammlung Band 16-35). 8vo. München, 1848-74
 - : Supplementband 1-13. 8vo. München, 1851-74

- Band 1-4. Meteorologische Beobachtungen.
5. Verzeichniss von 9412 Aequatorial-Sternen zwischen +3° und -3° Declination.
 - 6, 7. Meteorologische Beobachtungen.
 8. Verzeichniss von 6323 telescopischen Sternen zwischen +3° und +9° Declination.
 9. Verzeichniss von 4793 telescopischen Sternen zwischen -3° und -9° Declination.
 11. Verzeichniss von 3571 telescopischen Sternen zwischen +9° und +15° Declination.
 12. Verzeichniss von 4093 telescopischen Sternen zwischen -9° und -15° Declination.
 13. Verzeichniss von 5563 telescopischen Sternen nördlich von +15° und südlich von -15° Declination.

- : Nachweise über die an der Münchener Sternwarte von 1840 bis 1869 beobachteten Zonen. 8vo.
- : Jahrbuch, 1838, 1840-41, von J. Lamont. Jahrg. 1, 3, 4. 12mo. München, 1837-40.
- : Jahres-Bericht, 1852, 1854, 1858. 8vo. München.
- : *Resultate des magnetischen Observatoriums in München während der dreijährigen Periode 1843-45, von J. Lamont. 4to. München, 1846
- : *Resultate aus den meteorologischen Untersuchungen, nebst Andeutungen über den Einfluss des Clima von München auf die Gesundheits-Verhältnisse der Bewohner, von J. Lamont. 4to. München, 1857

Munich, Sternwarte—continued.

- : Meteorologische und magnetische Beobachtungen . . .
 Jahrgang 1882. 8vo. München, 1883
 — : See Lamont, J.

Murdoch (Patrick):

- Mercator's sailing, applied to the true figure of the earth ;
 with an introduction, concerning the discovery and deter-
 mination of that figure. 4to. London, 1741

Murray (W. Keith):

- Description of an astronomical observatory at Ochter-
 tyre, Perthshire. 4to.

Musschenbroek (Peter van):

- : Physicæ experimentales et geometricæ de magnete, tuborum
 capillarium, vitreorumque speculorum attractione, magni-
 tudine terræ, cohærentia corporum firmorum dissertationes;
 ut et ephemerides meteorologicae ultrajectinæ.
 4to. Lugduni Batavorum, 1729

- : The elements of natural philosophy translated by
 John Colson. 2 vols. 8vo. London, 1744

- : Cours de physique expérimentale et mathématique . . .
 Traduit par Sigaud de la Fond. 3 vols. 4to. Paris, 1769

Mylius (Albert de):

- Description of a planetarium, or astronomical machine . . .
 invented, and partly executed, by Phil. Matthew
 Hahn 8vo. London, 1791

Nagelius (Paulus):

- Stellæ prodigiosæ seu cometæ Das ist, des neuen
 Cometen und Wunder-Sterns in 1618 erschienen
 warhaftige Deutung 4to. 1619

Nagy (Károly):

- : Mémoire sur le système solaire, et sur l'explication des
 phénomènes célestes. 8vo. Paris, 1862
 — : Considérations sur les comètes ou éléments d'une cométo-
 logie. 8vo. Paris, 1862
 — : Die Sonne und die Astronomie. 8vo. Leipzig, 1866

Namur (A.):

- Tables de logarithmes à 12 décimales, jusqu'à 434 milliards,
 avec preuves . . . précédées d'une introduction théorique
 et d'une notice sur l'usage des tables par P. Mansion.
 8vo. Bruxelles, 1877

Napier [Neperus], (John), Baron of Merchistoun :

- : Mirifici Logarithmorum canonis constrvctio, et eorum ad
 natvrales ipsorum numeros habitudines Quibus
 accessere Propositiones ad triangula sphærica faciliore cal-
 culo resoluenda. Vnà cum annotationibus Henrici
 Briggii. 4to. Lugduni, 1620
 — : De arte logistica . . . libri qui supersunt. [Edited by
 Mark Napier.] 4to. Edinburgi, 1839
 — : Life, see Buchan and Minto.

Naples, Reale Osservatorio (Specola Reale) :

- : Ragguglio. 4to. Napoli, 1821
 — : Comentarij Astronomici . . . di Carlo Brioschi. Vol. 1
 (in 2 parts). 4to. Napoli, 1824-26
 — : Annuario, 1846, 1860. 12mo. Napoli.

Naples, Società Reale (Accademia delle Scienze) :

- : Atti della Reale Accademia delle Scienze, sezione della Società Reale Borbonica. Vol. 2, 5, 6. 4to. Napoli, 1825-51
 — : Memorie della Reale Accademia delle Scienze, dal 1852 in avanti ripartite nelle tre classi di matematiche, scienze naturali, e scienze morali, 1852-57. 2 vols. 4to. Napoli, 1856-57
 — : Atti dell' Accademia delle scienze fisiche e matematiche. Vol. 1, 3-9. 4to. Napoli, 1863-82
 — : Rendiconto delle adunanze e de' lavori dell' Accademia. Tomo 5-9, no. 49-51. 4to. Napoli, 1846-50
 — : Nuova serie. Anno 1-6. 4to. Napoli, 1852-57
 — : Rendiconto dell' Accademia delle Scienze fisiche e matematiche. Anno 1-21. 4to. Napoli, 1862-82

Napoléon (Prince) :

- *Expériences sur la direction des courants de l'océan Atlantique septentrional. 4to. Paris, 1856

Nares (G. S.) :

- Arctic expedition : Report of Proceedings. fol. London, 1876

Narrien (John) :

- : An historical account of the origin and progress of Astronomy. With plates, illustrating chiefly the ancient systems. 8vo. London, 1833
 — : Practical astronomy and geodesy ; including the projections of the sphere and spherical trigonometry, for the use of the Royal Military College. 8vo. London, 1845

Nasmyth (James) and James Carpenter :

- The Moon : considered as a planet, a world, and a satellite . . . Second edition. 4to. London, 1874

Natal Observatory, see Durban.**Natani (Leopold) :**

- Der Himmel und die Weltkörper. Eine Uebersicht der Astronomie und der Hülfswissenschaften derselben. 8vo. Berlin, 1863

Nature. A weekly illustrated Journal of Science. Vol. 1-29.
4to. London, 1870-84**Naturforscher (der) : Wochenschrift zur Verbreitung der Fortschritte in den Naturwissenschaften. Herausgegeben von W. Sklarek. Jahrgang 7-17.** 4to. Berlin, 1874-84**Nautical Almanac (the). See London.****Neison (Edmund) :**

- The Moon and the condition and configurations of its surface. 8vo. London, 1876

Nell (A. M.) :

Der Planetenlauf; eine graphische Darstellung der Bahnen der Planeten, um mit Leichtigkeit ihren jedesmaligen Ort unter den Gestirnen auf eine Reihe von Jahren voraus zu bestimmen.

8vo. [with atlas of 5 plates, fol.] Braunschweig, 1858

Neptune, Discovery of :

*Investigation of the rival claims of Adams and Le Verrier to the discovery of the new planet Astræa.

8vo. London, 1846

Nesbit (A.) :

— : A complete treatise on practical land-surveying.

8vo. York, 1810

— : A treatise on practical mensuration. 8vo. London, 1816

Neuchatel, Société des Sciences Naturelles :

Bulletin. 1870-83. Tome 9-13. 8vo. Neuchatel, 1873-83

Neumayer (Georg) :

— : Results of the magnetic Survey of the Colony of Victoria, executed during the years 1858-64. 4to. Mannheim, 1869

— : Anleitung zu wissenschaftlichen Beobachtungen auf Reisen, mit besonderer Rücksicht auf die Bedürfnisse der kaiserlichen Marine. 8vo. Berlin, 1875

— : *See also* Melbourne Observatory.

Newcastle-upon-Tyne, Literary and Philosophical Society :

Catalogue of the library. 8vo. Newcastle, 1848

Newcomb (Simon) :

— : *On the secular variations and mutual relations of the orbits of the asteroids. 4to. Cambridge [U.S.], 1860

— : *An investigation of the orbit of Neptune, with general tables of its motion. 4to. Washington, 1866

— : *Investigation of the distance of the Sun, and of the elements which depend upon it, from the observations of Mars made during the opposition of 1862, and from other sources. 4to. Washington, 1867

— : *Description of the transit circle of the United States Naval Observatory, with an investigation of its constants. 4to. Washington, 1867

— : *Théorie des perturbations de la lune qui sont dues à l'action des planètes. 4to. Paris [1871]

— : *On the Right Ascensions of the Equatorial fundamental Stars, and the corrections necessary to reduce the Right Ascensions of different Catalogues to a mean homogeneous system. 4to. Washington, 1872

— : *On the possible variability of the earth's axial rotation, as investigated by Mr. Glasenapp. 8vo. New Haven, 1874

— : Investigation of corrections to Hansen's tables of the Moon, with tables for their application. [American Transit of Venus papers, part 3.] 4to. Washington, 1876

— : *On the mean motion of the Moon. 8vo. New Haven, 1877

— : *Researches on the motion of the Moon, made at the United States Naval Observatory, Washington. Part 1. Reduc-

Newcomb (Simon)—*continued.*

- tion and discussion of observations of the Moon before
1750. 4to. Washington, 1878
- : Popular Astronomy. 8vo. London, 1878
- : Ditto. Second edition. 8vo. London, 1883
- : Populäre Astronomie; deutsche vermehrte Ausgabe, bearbeitet durch R. Engelmann. 8vo. Leipzig, 1881
- : On the recurrence of solar eclipses, with tables of eclipses from B.C. 700 to A.D. 2300. 4to. Washington, 1879
- : Observations of the transit of Venus, December 8–9, 1874, made and reduced under the direction of the Commission created by Congress. Part. I. General discussion of results. 4to. Washington, 1880
- : Discussion and results of observations on transits of Mercury, 1677–1881. 4to. Washington, 1882
- : Catalogue of 1098 standard clock and zodiacal stars. 4to. Washington [1882]
- : Report to the Secretary of the Navy on recent improvements in astronomical instruments. 8vo. Washington, 1884
- : Development of the perturbative function and its derivatives. 4to. Washington, 1884
- : *See also* Washington, U. S. Naval Observatory.

Newcomb (Simon) and Edward S. Holden:

- : Astronomy for students and general readers. (American Science Series.) Second edition. 8vo. New York, 1880
- : Astronomy. (American Science Series, Briefer Course.) Second edition. 8vo. New York, 1881

Newcomb (Simon) and John Meier:

- : A transformation of Hansen's lunar theory compared with the theory of Delaunay. 4to. Washington, 1880
- : Formulae and tables for expressing corrections to the geocentric place of a planet. 4to. Washington, 1883

New Haven, Connecticut Academy of Arts and Sciences: Transactions. Vol. 1–5. 8vo. New Haven, 1866–82**New Haven, Yale College Observatory:**

Report for the years 1880–83. 8vo. New Haven, 1881–83

New South Wales, Royal Society:

- : Transactions of the Philosophical Society of New South Wales, 1862–65. 8vo. Sydney, 1866
- : Transactions of the Royal Society of New South Wales, 1867–74. Vol. 1–8. 8vo. Sydney, 1868–75
- : Transactions and Proceedings of the Royal Society of New South Wales, 1875. Vol. 9. 8vo. Sydney, 1876
- : Journal and Proceedings of the Royal Society of New South Wales, 1876–82. Vol. 10–16. 8vo. Sydney, 1877–83
- The title of the Society was changed to 'Royal Society' in 1867.

Newton (Hubert Anson):

- : *An account of two meteoric fireballs, observed in the United States August 2 and 6, 1860. 8vo. New Haven, 1862
- : *On November Star-showers. 8vo. New Haven, 1864

Newton (Hubert Anson)—continued.

- : *Abstract of a memoir on Shooting Stars. 8vo. New Haven, 1865
- : *On certain recent contributions to Astro-Meteorology. 8vo. New Haven, 1867
- : *On the origin of Comets. 8vo. New Haven, 1878

Newton (Hubert Anson) and A. W. Phillips :

- *On the Transcendental Curves $\sin y \sin mx = a \sin x \sin nx + b$. 8vo. New Haven

Newton (Isaac) :

- : Philosophiae naturalis principia mathematica. 4to. Londini, 1687
- : Ditto. Editio ultima, auctior et emendatior [a R. Cotes]. 4to. Amstælodami, 1714
- : Ditto. . . . Perpetuis commentariis illustrata, communis studio T. Le Seur & F. Jacquier. 3 vols. 4to. Genevæ, 1739–42
- : Ditto. . . . Editio altera. 3 vols. 4to. Coloniae Allobrogum, 1760
- : Ditto. . . . Editio nova. 4 vols. 8vo. Glasgnæ, 1822
- : The Mathematical principles of natural philosophy Translated into English by Andrew Motte; to which are added The laws of the Moon's motion according to gravity, by John Machin. 2 vols. 8vo. London, 1729
- : The mathematical principles of natural philosophy. . . . translated into English by Andrew Motte; to which are added Newton's System of the World, a short comment on, and defence of, the Principia, by W. Emerson, with the laws of the Moon's motion by J. Machin. New Edition by W. Davis. 3 vols. 8vo. London, 1803
- : Ditto. 3 vols. 8vo. London, 1819
- [—] : Principes mathématiques de la philosophie naturelle, par feu Madame la Marquise Du Chastellet. 2 vols. 4to. Paris, 1759
A translation of the Principia, with Commentary.
- : De mundi systemate. [Principia, lib. III.] 4to. Londini, 1731
- : The first three sections of Newton's Principia, with copious notes and illustrations, and a great variety of deductions and problems. By Rev. John Carr. 8vo. London, 1821
- : Analysis per quantitatam series, fluxiones, ac differentias, cum enumeratione linearum tertii ordinis. [Ed. W. Jones.] 4to. Londini, 1711
- : Optice; sive de reflexionibus, refractionibus, inflexionibus & coloribus lucis, libri tres. Latine reddidit Samuel Clarke. Editio secunda. 8vo. Londini, 1719
- : Universal Arithmetick, or a treatise of arithmetical composition and resolution; to which is added Dr. Halley's method of finding the roots of equations arithmetically. Translated by J. Raphson and revised and corrected by S. Cunn. Second edition. 8vo. London, 1728
- : Optical lectures read in the publick schools of the University of Cambridge, . . . 1669 . . . Translated into English out of the original Latin. 8vo. London, 1728

Newton (Isaac) — *continued.*

- : *Lectiones opticæ, annis 1669, 1670 & 1671 in scholis publicis habitæ, et nunc primum ex MSS. in lucem edite.*
 4to. Londini, 1729
- : *Opticks; or a treatise of the reflections, refractions, inflections and colours of light.* Fourth edition.
 8vo. London, 1730
- : *A treatise of the method of fluxions and infinite series, with its application to the geometry of curve lines.*
 8vo. London, 1737
- : *Opuscula mathematica, philosophica, et philologica. Collegit partimque Latinè vertit ac recensuit Joh. Castillioneus.*
 3 vols. 4to. Lausannæ & Genevæ, 1744
- : *Two treatises of the quadrature of curves and analysis by equations of an infinite number of terms, explained . . . translated into English, with a large commentary [&c.] . . . by John Stewart.* 4to. London, 1745
- : *Universal Arithmetick, or a treatise of arithmetical composition and resolution . . . Translated by J. Raphson, and revised and corrected by S. Cunn. To which is added a treatise upon the measures of ratios by J. Maguire . . . with a series of notes by Rev. T. Wilder.* 8vo. London, 1769
- : *Enumeratio Linearum tertii ordinis; sequitur illustratio ejusdem tractatus, auctore Jacobo Stirling.* 8vo. Paris, 1797
- : *Apologie du sentiment de Monsieur le Chevalier Newton sur l'ancienne chronologie des Grecs, contenant des réponses à toutes les objections qui y ont été faites jusqu'à présent.* Par Monsieur le chevalier S—t.
 4to. Francfort sur le Mein, 1757
- : *Opera quæ exstant omnia, comentariis illustrabat Samuel Horsley.* 5 vols. 4to. Londini, 1779-85
- : *Discoveries, see Maclaurin.*
- : *Philosophy, see Algarotti, Domckius, Pemberton, Voltaire, Whiston.*
- : *Principia, see Emerson, Rigaud, Wright.*
- : *Réfutation de Neuton, see Banières.*
- : *Resistance of solids, see Robinson (C.)*
- : *Newton and Flamsteed, see Whewell.*
- : *De Analysis promota, &c. See Commercium Epistolicum.*
- : *Life, see Brewster, Grant, Turnor, Soc. Diff. Useful Knowledge.*

Newton (Isaac) and Roger Cotes :

Correspondence . . . including letters of other eminent men, now first published from the originals in the library of Trinity College, Cambridge . . . by J. Edleston, M.A.
 8vo. London & Cambridge, 1850

Newton (T.) :

A short treatise on the conic sections. 8vo. Cambridge, 1794

New York, Astor Library :

Annual Report, 1880-84. 8vo. New York

New York Chamber of Commerce:

- On the expediency and practicability of a time and weather Observatory in the City of New York. 8vo. New York, 1857

New York, Columbia College:

- The School of Mines Quarterly. Vol. 5, No. 3, 4; Vol. 6, No. 1.
8vo. New York, 1884

New York, Meteorological Observatory:

- Annual Report for 1876-78, by Daniel Draper, Director.
8vo. New York, 1877-79

Nichol (John Pringle):

- : The phenomena and order of the solar system.
8vo. Edinburgh, 1838
- : Views of the architecture of the heavens Fourth edition.
8vo. Edinburgh, 1843
- : The Stellar Universe; views of its arrangements, motions, and evolutions.
8vo. Edinburgh, 1848
- : Thoughts on some important points relating to the system of the world.
8vo. Edinburgh, 1848
- : The architecture of the heavens Ninth edition, entirely revised and greatly enlarged.
8vo. London, 1851

Nicholson (Peter):

- : An introduction to the method of increments, expressed by a new form of notation, shewing more intimately its relation to the fluxional analysis.
8vo. London, 1817
- : Essays on the combinatorial analysis, shewing its application to some of the most useful and interesting problems of algebra.
8vo. London, 1818
- : The rudiments of algebra.
12mo. London, 1819
- : Essay on involution and evolution; . . . with an Appendix, showing the use of figurate numbers and arithmetical equivalents in the extraction of roots. 8vo. London, 1820
- : Analytical and arithmetical essays, consisting of continued fractions—figurate numbers the transformation of equations . . . finite differences, indeterminate equations, and the combinatorial analysis.
8vo. London, 1821

Nicholson (Peter) and J. Rowbotham :

- : A practical system of Algebra, designed for the use of schools and private students.
12mo. London, 1824
- : Ditto. Key.
12mo. London, 1825
- : Ditto. Second edition.
12mo. London, 1831

Nicholson's Journal, see Journal of Natural Philosophy.

Nicolaus Rensbergensis:

- Astronomia Teutsch.
4to. Augspurg, 1568

Nicollet (J. N.):

- : *Mémoire sur la libration de la lune.
8vo. Paris [1818]
- : *Addition au mémoire sur la libration de la lune.
8vo. Paris.

Nicomachus of Gerasa:

- Νικομάχου Γερασινοῦ Ἀριθμητικῆς βιβλία δύο. Nicomachi Gerasini arithmeticæ libri duo: nunc primū typis excusi, in lucem eduntur.
4to. Parisiis, 1538

Niesten (L.):

- : *Observations sur l'aspect physique de la planète Mars pendant l'opposition de 1877. 4to. Bruxelles, 1878
 — : *Recherches sur les couleurs des étoiles doubles. 8vo. Bruxelles, 1879

Nieuwentyt (Bernard):

The religious Philosopher, or the right use of contemplating the works of the Creator, designed for the conviction of atheists and infidels translated . . . by J. Chamberlayne. To which is prefixed a letter to the translator by J. T. Desaguliers. Fifth edition. Vol. I.
 8vo. London, 1745

Nitikin (Basil) and Prochor Souvoroff:

Elements of plane and spherical trigonometry.
 4to. London [1786]

Nobile (Antonio):

- : *Modo di determinare le differenze di Longitudini geografiche per via delle stelle cadenti. 4to. 1840
 — : *Memoria . . . sulle stelle cadenti. 4to. Napoli, 1841
 — : *Memoria sulle maree del Golfo di Napoli. 4to. Napoli, 1842
 — : *Elogio storico di Macedonio Melloni. 4to. Napoli, 1855

Nobile (Arminio):

- : *Saggio di un nuovo metodo per l' osservazione delle distanze scambievoli delle stelle multiple. 4to. Napoli, 1875
 — : *Misure di angoli di posizione di alcuni sistemi di stelle multiple. 4to. Napoli, 1875
 — : *Sulle due stelle multiple 1263 Σ e σ Coronæ. 4to. Napoli, 1876
 — : Terza determinazione della latitudine geografica del R. Osservatorio di Capodimonte. 4to. Napoli, 1883

Noble (S.):

The astronomical doctrine of a plurality of worlds irreconcilable with the popular systems of theology, but in perfect harmony with the true Christian religion.

8vo. London, 1828

Noël (François):

Observationes mathematicæ et physicæ in India et China factæ . . . ab anno 1684 usque ad annum 1708.
 4to. Pragæ, 1710

Nollet (Jean Antoine):

- : Lectures in experimental philosophy. Translated . . . by John Colson. 8vo. London, 1752
 — : Leçons de physique expérimentale. 5^{me} édition.
 5 vols. 12mo. Paris, 1759-65

Nonius (Petrus):

Opera ; que complectuntur primū dvos libros, in qvorum priore tractantur pulcherrima Problemata: in altero . . . regulæ & instrumenta artis navigandi . . . Annotationes in Aristotelis problema mechanicum de motu/ navigii : . . . Item in G. Purbachii planetarum theoricas annotationes: . . . De Erratis Orontii Finæi: . . . De crepusculis.
 fol. Basileæ, 1592

Norman (Robert):

The newe attractive, shewing the nature, propertie, and manifold vertues of the loadstone. 8vo. London, 1720

Normand (J. A.):

— : Note sur la détermination de la parallaxe solaire. 8vo. Paris, 1874

— : Mémoire sur les occultations d'étoiles par les planètes. 4to. Paris, 1876

— : Navigation stellaire. 4to. Paris, 1883

Norton (William A.):

An elementary treatise on astronomy : in four parts, containing a systematic and comprehensive exposition of the theory, and the more important practical problems, with solar, lunar, and other astronomical tables . . . (second edition). 8vo. New York, 1845

Norway, Norwegische Commission der Europäischen Gradmessung:

— : Geodätische Arbeiten, Heft 1-3. 4to. Christiania, 1882

— : Geodätische Arbeiten, Heft 4, 5 (Vandstandsobservationer, Heft 1, 2). 4to. Christiania, 1882-83

Norwegian North Atlantic Expedition, 1876-78:

Part 1-10. 4to. Christiania, 1880-83

Part 1. Chemi, H. Tornæ.

2, 3. Zoologi, R. Collett, D. C. Danielssen, og J. Koren.

4. Historisk Beretning, &c., C. Wille.

5. Astronomiske Observationer, H. Mohn; Magnetiske Obs., C. Wille; Geografi, &c., H. Mohn.

6-8. Zoologi, D. C. Danielssen, J. Koren, G. A. Hansen, H. Friile.

9. Chemi. L. Schmelck.

10. Meteorologi. H. Mohn.

Norwood (Matthew):

The Seaman's Companion, being a plain guide to the understanding of arithmetic, geometry, trigonometry, navigation, and astronomy, applied chiefly to Navigation. . . . Second edition. 4to. London, 1671

Norwood (Richard):

— : The Sea-man's practice, contayning a fvndamentall probleme in navigation experimentally verified. 4to. London, 1644

— : Ditto. Eighth edition. 4to. London, 1668

— : Trigonometrie, or the doctrine of triangles: . . . whereunto is annexed . . . a treatise of the application thereof in the three principal kindes of sayling (and a triangular canon logarithmicall, or a table of artificiall sines, tangents, &c.) Second edition. 2 parts in 1 vol. 4to. London, 1651

Novara:

Reise der österreichischen Fregatte Novara um die Erde in den Jahren 1857-59 unter den Befehlen des Commodore B. von Wüllerstorff-Urbair. Nautisch-physicalischer Theil.

4to. Wien, 1862-1865

Nürnberger (Joseph Emil):

Populäres astronomisches Handwörterbuch, oder Versuch einer alphabetisch geordneten Erklärung der vornchmsten Begriffe und Kunstmärter der Astronomie.

2 vols. 8vo. Kempten, 1848

Nursingrow (Ankitam Venkata):

— : Solar eclipses, and the great partial eclipse of the 17th August 1868 visible at Vizagapatam. 8vo.

— : Results of meteorological observations (at Daba Gardens, Vizagapatam), 1872, 75-77, 79-82. 8vo. Calcutta, 1873-83

Nyrén (Magnus):

— : *Détermination du coefficient constant de la précession au moyen d'étoiles de faible éclat. 4to. St. Pétersbourg, 1870

— : *Bestimmung der Nutation der Erdachse. 4to. St. Pétersbourg, 1872

— : *Die Polhöhe von Pulkowa. 4to. St. Pétersbourg, 1873

— : *Das Aequinoctium für 1865°, abgeleitet aus den am Passageninstrumente und am Verticalkreise in den Jahren 1861-70 in Pulkowa angestellten Sonnenbeobachtungen.

4to. St. Pétersbourg, 1876

— : *See also* Pulkowa, Nicolai Hauptsternwarte.

Nyrén (Magnus) und V. Fuss:

*Bestimmung der Längen-Differenz zwischen den Sternwarten Stockholm und Helsingfors, ausgeführt im Sommer 1870. 4to. St. Pétersbourg, 1871

Nystrom (John W.):

Principles of Dynamics. 8vo. Philadelphia, 1874

Observatories :

Description of the public and private observatories in London and its vicinity. 12mo. London, 1851

Observatory (The), a monthly review of Astronomy. Edited by W. H. M. Christie (and E. W. Maunder). Vol. 1-7. 8vo. London, 1878-84

Observing Astronomical Society:

Report of observations made by the members, 1869-1870. 8vo. Bristol, 1871

Oehl (Edmund):

Versuch einer Theorie über Kometen. 8vo. Wien, 1868

Oclzen (Wilhelm):

— : Argelanders Zonen-Beobachtungen vom 45° bis 80° nördlicher Declination, in mittleren Positionen für 1842° nach gerader Aufsteigung geordnet. 8vo. Wien, 1851-52
Vol. 1 and 2 of series 3 of 'Annalen der K.K. Sternwarte in Wien.'

— : Argelanders Zonen-Beobachtungen vom 15° bis 31° südlicher Declination in mittleren Positionen für 1853. 8vo. Wien, 1857-58

In Vienna 'Sitzungsberichte,' Bd. 26, 27, 29, 31.

— : *Vergleichungen zwischen den Zonenbeobachtungen von Bessel und Argelander. 8vo. Wien, 1854

— : *Ergänzungen zur 'Histoire céleste Française' und einigen anderen Sternkatalogen. 8vo. Wien, 1854

Oertling (August):

— : *Ueber die Prüfung plan-paralleler Gläser, und Beschreibung des dabei in Anwendung gebrachten Instrumentes.
4to. Berlin, 1843

— : *Beschreibung eines neuen Spiegelkreises. 4to. Berlin, 1844

Ogilby (William):

New theory of the figure of the earth, considered as a solid of revolution, founded on the direct employment of the centrifugal force, instead of the common principles of attraction and variable density. 4to. London, 1872

O Gyalla, Astrophysicalisches Observatorium:

Beobachtungen . . . herausgegeben von N. von Konkoly.
Band 1-5. 4to. Halle, 1879-83

Olbers (Wilhelm):

— : *Verzeichniss aller bisher berechneten Cometenbahnen.
4to. Altona, 1823

— : Abhandlung über die leichteste und bequemste Methode die Bahn eines Cometen zu berechnen . . . von Neuem herausgegeben von J. F. Encke. 8vo. Weimar, 1847

— : Nachtrag . . . von J. G. Galle. 8vo. Leipzig, 1864

Olbers (Wilhelm) und Friedrich Wilhelm Bessel:

Briefwechsel . . . Herausgegeben von Adolph Erman.
2 vols. 8vo. Leipzig, 1852

Oliver (A.), Comets, see Winthrop and Oliver.

Olivet (l'Abbé d'):

Histoire de l'Académie Françoise depuis 1652 jusqu'à 1700.
Tome 2. 4to. Paris, 1729

Olmsted (Denison):

The mechanism of the heavens. 8vo. London, 1859

Olsen (Ole Theodore):

The Fisherman's Nautical Almanac, 1882-84. 12mo. Grimsby

Oltmanns (Jabbo):

*Ueber die wahre Epoche der grossen von Herodot erwähnten Sonnenfinsterniss am Flusse Halys. 4to. [Berlin, 1813]

Olufsen (C. F. R.), Tables du soleil, see Hansen et Olufsen.

Ommaney (Erasmus):

*Address delivered at the Plymouth meeting of the British Association for the Advancement of Science, to the Geographical Section. 8vo. London, 1877

Opelt (O. Moritz):

Der Mond. Populäre Darstellung der Verhältnisse und Erscheinungen welche von diesem Körper bekannt sind . . . Nebst einer Karte der sichtbaren Oberfläche des Mondes, in fortschreitender Phase dargestellt, und einer Namen- und Höhenkarte. 8vo. [with 2 maps], Leipzig, 1879

Oppolzer (Theodor von):

— : *Berichte (2, 4, 6) der zur Beobachtung der totalen Sonnenfinsterniss des Jahres 1868 nach Aden unternommenen österreichischen Expedition. 8vo. Wien, 1868-69

Oppolzer (Theodor von).—continued.

- : *Beobachtung des Venusdurchgangs (1874, December 8) in Jassy und Bestimmung der geographischen Breite des Beobachtungsortes. 8vo. Wien, 1875
- : *Entwicklung der Differentialquotienten der wahren Anomalie und des Radiusvector nach der Excentricität in nahezu parabolischen Bahnen. 8vo. Berlin, 1878
- : *Neue Methode zur Bestimmung der Bahnelemente gleicher Wahrscheinlichkeit für einen kleinen Planeten aus der Beobachtung einer Erscheinung. 8vo. Berlin, 1878
- : Lehrbuch zur Bahnbestimmung der Kometen und Planeten. 2 vols. 4to. Leipzig, 1870–80
- : Ditto. Band 1, zweite . . . Auflage. 4to. Leipzig, 1882
- : *Syzygien-Tafeln für den Mond, nebst ausführlicher Anweisung zum Gebrauche derselben. 4to. Leipzig, 1881
- : Ist das Newton'sche Attractionsgesetz zur Erklärung der Bewegungen der Himmelskörper ausreichend? Hat man Veranlassung, dasselbe nur als Näherungsausdruck zu bezeichnen? 4to. Salzburg, 1881
- : *Ueber einige Relationen zwischen den Combinationssummen der Quadrate der geraden und ungeraden Zahlen. 8vo.
- : Détermination de longitude, *see* Loewy et Oppolzer.

Ordnance Survey, *see* United Kingdom.

Orff (Colonel von) et E. Plantamour:

Différence de longitude entre les observatoires de Genève et de Bogenhausen près Munich. . . . 4to. Genève, 1879

Oriani (Barnaba):

*Elementi di trigonometria sferoidica. 4to. Bologna, 1806

Oriani (Barnaba) e Giuseppe Piazzi:

*Corrispondenza Astronomica. fol. Milano, 1874

Origanus (David):

— : Ephemerides novæ annorvm xxxvi, incipientes ab anno Χριστογεννια 1595, quo Ioannis Stadii maxime aberrare incipiunt, & desinentes in annum 1630. Quibus præmissa est introvctio, sev compendiaria Ephemeridum enarratio. 4to. Francofurti ad Viadrum, 1599

— : Novæ motuum cœlestium Ephemerides Brandenburgicæ annorvm LX, incipientes ab anno 1595, & desinentes in annum 1655 (1624) . . . cum introductione . . . pleniore, in qua Chronologica, Astronomica & Astrologica ex fundamētis ipsis tractantur.

Vols. 1 and 2, 4to. Francofurti cis Viadrum, 1609

Ormorthwaite (Lord):

Astronomy and geology compared. 8vo. London, 1872

Orontius Finæus. *see* Finæus.

Orsan (A. Le Vengeur d'):

Our satellite: a selenography according to the present state of sciencee. No. 1. fol. London, 1862

Ossipofsky (T.) :

Recherches sur les phénomènes lumineux qu'on aperçoit quelquefois au ciel dans des positions déterminées par rapport au soleil ou à la lune. 4to. St. Pétersbourg, 1828

Oswaldus, Comet 1652-53, see Macovius.

Ottley (William Young) :

*Observations on a manuscript in the British Museum containing Cicero's translation of the Astronomical poem by Aratus, accompanied by drawings of the constellations. 4to. London, 1835

Otto (Andreas) :

De Terra. [Inaugural Dissertation.] 4to. 1659

Oudemans (Johann Abraham Christian) :

- : Dissertatio astronomica inauguralis, exhibens observationes, ope instrumenti transitorii portabilis institutas. 4to. Lugduni Batavorum, 1852
- : *Mémoire sur l'orbite de la comète périodique découverte par M. d'Arrest le 27 Juin 1851. 4to. Amsterdam, 1854
- : *Zweijährige Beobachtungen der meisten jetzt bekannten veränderlichen Sterne. 4to. Amsterdam, 1856
- : Verslag van de geographische dienst in Nederlandsch Indië, 1858-59. 4to. Batavia, 1860
- : Verslag van de bepaling der geographische ligging van die plaatsen op Java, waar telegraafkantoren gevestigd zijn. 4to. Batavia, 1862
- : Die Triangulation von Java, ausgeführt vom Personal des geographischen Dienstes in Niederländisch Ost-Indien. Abtheilung 1, 2. 4to. Batavia und Haag, 1875-78
- : Détermination, à Utrecht, de l'azimut d'Amersfoort. 4to. La Haye, 1881
- : *Sur une meilleure méthode pour faire les mesures héliométriques à l'occasion d'un passage de Vénus sur le soleil. 8vo. Amsterdam, 1876

Oughtred (William) :

- : The key of the mathematicks new forged and filed; together with a treatise of the resolution of all kinde of affected æquations in numbers, with the rule of compound usury, and a most easie art of delineating all manner of plaine Sun-Dyalls. 2 parts in 1 vol. 8vo. London, 1647
- : Trigonometrie, or the manner of calculating the sides and angles of triangles, by the mathematical canon demonstrated. 4to. London, 1657
- : Opuscula mathematica hactenus inedita. 8vo. Oxonii, 1677
- : Clavis mathematicæ denuo limata, sive potius fabricata, cum aliis quibusdam ejusdem commentationibus (Elementi decimi Euclidis declaratio; de solidis regularibus; Theorematum in libris Archimedis de sphera & Cylindro declaratio, Horologia scioterica). Editio quinta. 4 parts in 1 vol. Oxoniæ, 1693

Outhier (Reginald):

- : Journal d'un voyage au nord en 1736 & 1737.
4to. Paris, 1744
— : Ditto. 12mo. Amsterdam, 1746

Overley (Isaac):

- Measuring made easy (with a table of logarithms).
8vo. London, 1739

Oxford, Radcliffe Library:

- : Catalogue of books on Natural Science to 1872.
4to. Oxford, 1877
— : Additions, to 1883. 4to. Oxford.

Oxford, Radcliffe Observatory:

- : Astronomical Observations made in the years 1840–52 by Manuel J. Johnson. Vol. 1–13. 4to. Oxford, 1842–54
— : Astronomical and meteorological observations made in the years 1853–64, under the superintendence of Manuel J. Johnson (and the Rev. Robert Main). Vol. 14–24.
4to. Oxford, 1855–67
— : Results of Astronomical and meteorological observations made in the years 1865–80 under the superintendence of the Rev. Robert Main (and Edward James Stone). Vol. 25–38. 4to. Oxford, 1868–83
— : Report of the Radcliffe Observer to the Board of Trustees, 1861–75. 4to. Oxford, 1861–75
— : Ditto, 1883. 4to. Oxford, 1883
— : The Radcliffe catalogue of 6317 stars, chiefly circumpolar, reduced to the epoch 1845°, formed from the observations made under the superintendence of Manuel John Johnson with introduction by the Rev. Robert Main. 4to. Oxford, 1860
— : Second Radcliffe Catalogue, containing 2386 stars; deduced from Observations extending from 1854 to 1861 reduced to the epoch 1860, under the superintendence of the Rev. Robert Main. 4to. Oxford, 1870

Oxford, University Observatory:

- : Report of the Savilian Professor of Astronomy to the Board of Visitors, 1877–82. 4to. Oxford, 1877–82
— : Astronomical Observations made under the direction of C. Pritchard. No. 1. 8vo. Oxford, 1878

Oxley (Thomas):

- The gem of the astral sciences, or mathematics of celestial philosophy. 8vo. London [1848]

Ozanam (Jacques):

- : Récréations mathématiques et physiques, qui contiennent plusieurs problèmes d'arithmétique, de géométrie, d'optique, de gnomonique, de cosmographie, de mécanique, de pyrotechnie, & de physique. 2 vols. 8vo. Paris, 1694
— : Usage de l'Instrument universel, pour résoudre promptement & très-exactement tous les problèmes de la géométrie pratique sans aucun calcul. 8vo. Paris, 1700
— : Cursus mathematicus; or a compleat course of the mathe-

Ozanam (Jacques) -continued.

maticks done into English, with improvements and additions by J. T. Desaguliers.

5 vols. 8vo. London and Oxford, 1712 (1725)

— : La trigonométrie rectiligne et sphérique, avec les tables des sinus, tangentes et sécantes et les tables des logarithmes des sinus et des tangentes nouvelle édition.

8vo. Paris, 1765

— : Recreations in mathematics and natural philosophy lately recomposed and greatly enlarged . . . by M. Montucla . . . Translated . . . with many additions and observations by Charles Hutton. 4 vols. 8vo. London, 1803

Padua, Osservatorio della R. Università :

— : *Osservazioni astronomiche. No. 2. 8vo. Venezia, 1882

— : See also Lorenzoni (G.); Santini (G.)

Paduanus (Fabritius) :

Tractatus duo : alter de ventis, alter per brevis de terræmotu.
4to. Bononiae, 1601

Pagan (Blaise François de) :

Les tables astronomiques données pour la juste suppuration des planètes, des éclipses, & des figures célestes.
Avec les méthodes de trouver facilement les longitudes.

4to. Paris, 1681

Pagel (Louis) :

La latitude par les hauteurs hors du méridien. Méthode facile et courte pour déterminer la position de l'observateur par les hauteurs.

8vo. Paris, 1847

Palagi (Alessandro) :

*Della ecclisse totale di sole del 22 Dicembre, 1870.
4to. Bologna, 1871

Palermo, Accademia di Scienze e Lettere :

Atti, nuova serie. Vol. 1. 4to. Palermo, 1845

Palermo, Società degli Spettroscopisti Italiani :

Memorie. Raccolte e pubblicate per cura del Prof. P. Tacchini.

Vol. 1-8, 4to. Palermo, 1872-79

Vol. 9-12, 4to. Roma, 1880-83

Palermo, Specola Astronomica (R. Osservatorio) :

— : Della Specola Astronomica de' Regj Studj di Palermo libri 1-5, di Giuseppe Piazzi.

fol. Palermo, 1792-94

— : Del Real Osservatorio di Palermo libri 6-9 (di G. Piazzi e N. Cacciatore).

fol. Palermo, 1806-26

— : Giornale astronomico e meteorologico del Reale Osservatorio di Palermo, pubblicato dal Prof. Domenico Ragona.

Vol. 1, 2. 4to. Palermo, 1855-57

— : *Osservazioni meteorologiche fatte nell' anno 1844.

4to. Palermo [1845]

— : Osservazioni meteorologiche, 1864.

4to. Palermo.

— : Bulletino meteorologico, 1865-79.

Vol. 1-15.

4to. Palermo, 1865-81

— : Pubblicazioni, 1881-83. G. Cacciatore, Direttore.

4to. Palermo, 1882-83

Palermo, Specola Astronomica (R. Osservatorio)—continued.

- : Annuario, 1842–46. Anno 1–5. 12mo. Palermo
 — : Effemeridi astronomiche di Palermo, 1855–56, pubblicate dal Prof. Ragona. 8vo. Palermo, 1854–55
 — : Storia Celeste dal 1792 al 1813. 9 vols. Vienna, 1845–49
 Vol. 4–12 of ‘Annalen der K. K. Sternwarte in Wien,’ Ser. 2.
 — : See Martina (L.), Piazzi (G.), Ricci (A.).

Palladium (the), Gentleman and Lady's Palladium, British Palladium [&c.], 1749–65, 1771–79. 12mo. London, 1749–79
 Many changes of title.

Palmer (John):

The Catholique planisphaer, which Mr. Blagrave calleth the mathematical jewel, briefly and plainly described, in five books. . . . Hereunto is added a brief description of the eros-staf, and a catalogue of eclipses. 4to. London, 1658

Palmieri (L.):

Incendic Vesuviano, see Guarini (Giovanni).

Pape (Carl Ferd.):

- : *Untersuchung über die Erscheinungen des grossen Cometen vom Jahre 1858. 4to. Altona, 1858
 — : *Ueber die Genauigkeit der Beobachtungen der Rectascensionen bei Anwendung chronographischer Apparate. 4to. Altona, 1860

Paramatta Observatory:

- : A catalogue of 7385 stars, chiefly in the southern hemisphere, prepared from observations made in the years 1822–26 at the Observatory, Paramatta, New South Wales, founded by Lieut. Gen. Sir T. Brisbane. . . . The computations made and the catalogue constructed by W. Richardson. 4to. London, 1835
 — : See also Rümker (Carl).

Parc Astronomique (Notice sur le) de la Société Technomatique, où se trouve en ce moment la plus grande lunette du monde. 8vo. Paris, 1856

Pardies (Ignace Gaston):

- : Œuvres de mathématique, contenant les élémens de géométrie, discours du mouvement local, la statistique, et deux machines propres à faire les cadrans. 2 parts in 1 vol. 12mo. La Haye, 1690–91
 — : Short, but yet plain elements of geometry and plain trigonometry rendered into English by John Harris. Second edition. 8vo. London, 1702

Paris, Académie des Sciences (Institut de France):

- : Mémoires de mathématique et de physique, 1692–93. Nouvelle édition. 2 vols. 12mo. Amsterdam, 1723
 — : Histoire de l'Académie (et Mémoires de mathématique et de physique), 1699–1714; 1716–57. 12mo. Amsterdam, 1706–69

- Paris, Académie des Sciences (Institut de France)—continued.**
- : Table générale des matières contenues dans l'Histoire et les Mémoires, 1699–1751. 4 vols. 12mo. Amsterdam, 1741–60
 - : Histoire . . . avec les mémoires de mathématique et de physique. 1719, 1724–25. 4to. Paris, 1721–27
 - : Recueil d'Observations faites en plusieurs voyages par ordre de sa Majesté pour perfectionner l'astronomie et la géographie, avec divers traités astronomiques. Par Messieurs de l'Académie Royale des Sciences. 8 parts in 1 vol. fol. Paris, 1693
 - : Histoire de l'Académie Françoise depuis 1652 jusqu'à 1700, par l'Abbé d'Olivet. Tome 2. 4to. Paris, 1729
 - : Mémoires de l'Institut National des Sciences (Lettres) et Arts. Sciences mathématiques et physiques. Tome 1–6. 4to. Paris, an 6 [1798]–1806
 - : Mémoires présentés à l'Institut des Sciences, Lettres et Arts par divers savans, et lus dans ses assemblées. Sciences mathématiques et physiques. 2 vols. 4to. Paris, 1805–1811
 - : Mémoires de la classe des sciences mathématiques et physiques, 1806–1815. 8 vols. 4to. Paris, 1806–1818
 - : Mémoires de l'Académie . . . des Sciences. Tome 1–33. 4to. Paris, 1818–61
 - : Mémoires présentés par divers savants. Sciences mathématiques et physiques. Tome 1–17. 4to. Paris, 1827–62
 - : Comptes-Rendus hebdomadaires des séances. Tome 1–98. 4to. Paris, 1835–84
 - : Annuaire de l'Institut pour 1860. 12mo. Paris, 1860
 - : Recueil de Mémoires, Rapports et documents relatifs à l'observation du passage de Vénus sur le Soleil. Tome 1, 2, Parts 1 and 2; Tome 3, Part 3. 4to. Paris, 1877–82
 - : Connaissance des Temps . . . publiée par ordre de l'Académie Royale des Sciences, 1686, 1762–65, 1769, '71, '73, '77, '81, '84. 8vo. Paris, 1685–1781
- Paris, Bureau des Longitudes:**
- : Connaissance des Temps, ou des mouvements célestes, à l'usage des astronomes et des navigateurs . . . 1806, 1807, 1810–41, '43–56, '58–85. 8vo. Paris, 1804–83
 - The vol. for 1806 contains Index to the vols. for 1760 to 1805.
 " 1822 " " 1806 to 1822.
 " 1867 " " 1823 to 1867.
 - : Annales du Bureau des Longitudes et de l'Observatoire Astronomique de Montsouris. Tome 1. 4to. Paris, 1877
 - : Annales du Bureau des Longitudes. Travaux faits à l'Observatoire Astronomique de Montsouris (section navale), et mémoires divers. Tome 2. 4to. Paris, 1882
 - : *Éphémérides des étoiles de culmination lunaire et de longitude pour 1879, 1882–83. Par M. Loewy. 4to. Paris, 1878–82
 - : Annuaire, 1828–37, 44–48, 50, 52–54, 58, 70–84. 12mo. Paris.
 - : Observations astronomiques, see Paris, Observatoire.

Paris, Bureau des Longitudes—continued.

— : Tables Astronomiques, *see* Burckhardt ; Bouvard ; Bouvard et Delambre ; Damoiseau ; Delambre et Bürg.

Paris, Comité International des Poids et Mesures :

— : Procès-Verbaux des séances, 1875–83. 8vo. Paris, 1876–84

— : Travaux et Mémoires du Bureau International des Poids et Mesures. Tome 1, 2. 4to. Paris, 1881–83

Paris, Conférence Internationale du Passage de Vénus [1882] :

Procès-Verbaux. fol. Paris, 1881

Paris, École Polytechnique :

Journal. Cahier 1–9, 11–54. Tome 1–28.

4to. Paris, an III [1795]–1884

Paris, Observatoire :

— : Ephémérides des mouvements célestes . . . pour le méridien de la ville de Paris, 1715–1800. Par Desplaces (La Caille, La Lande). Tome 1, 2, 4–9. 4to. Paris, 1716–92

— : Histoire Céleste, ou recueil de toutes les observations astronomiques faites par ordre du Roy ; avec un discours préliminaire sur le progrès de l'astronomie, par M. Lo Monnier. 4to. Paris, 1741

— : Extrait des observations astronomiques et physiques faites par ordre de sa Majesté . . . 1785–91. Le Comte de Cassini, directeur. 4to. Paris, 1786–91

— : Observations Astronomiques faites à l'Observatoire Royal [1810–28], publiées par le Bureau des Longitudes. Tome 1, 2. fol. Paris, 1825–38

— : Observations Astronomiques [1837–46], publiées par le Bureau des Longitudes. 10 vols. fol. Paris, 1837–46

— : Atlas des mouvements généraux de l'Atmosphère, 1864–65. obl. fol. Paris, 1868–69

— : Atlas des orages de l'année 1865. fol. Paris, 1866

— : Atlas météorologique. 1866–74. fol. Paris, 1867–75

— : Bulletin astronomique . . . publié par Ch. Delaunay. Tome 1 (and v.n. of Tome 2). 8vo. Paris, 1872–73

— : Bulletin International. v.n. 4to. Paris, 1875–78

— : Annales . . . publiées par U. J. Le Verrier (et sous la direction de M. le Contre-Amiral Mouchez). Mémoires. Tome 1–17. 4to. Paris, 1855–83

Tome 1. Le Verrier, Recherches astronomiques (Calcul des fonctions, coordonnées astronomiques; mouvement des corps célestes; calcul des perturbations).

2. Le Verrier, Recherches astronomiques (Développement des fonctions; perturbations; éléments des orbites; étoiles fondamentales).

3. Villarceau, Détermination des orbites des planètes et des comètes; Le Verrier, Recherches astronomiques.

4. Le Verrier, Recherches astronomiques (Théorie et tables du Soleil); Lefort, Grandes tables logarithmiques et trigonométriques calculées au bureau du Cadastre.

5. Le Verrier, Recherches astronomiques (Théorie et tables de

Paris, Observatoire—continued.

- Mercure); Foucault, Construction des télescopes en verre argenté; Serret, Théorie du mouvement de la terre, anomalie excentrique, &c.; Roche, Atmosphère des comètes.
- Tome 6. Le Verrier, Recherches astronomiques (Théorie et tables de Vénus et Mars).
7. Villarceau, Mouvement et compensation des chronomètres; Puiseux, Inégalités à longues périodes; Desains et Charault, Recherches magnétiques; Bourget, Fonction perturbatrice; Villarceau, Lunette méridienne; Loewy, Orbite de la planète Eugénie; Barbier, Thermométrographes.
 8. Déterminations des longitudes et latitudes; Hoüel, Développement des fonctions; Wolf, Équation personnelle.
 9. Villarceau, Détermination des longitudes et latitudes; Hirn, Le gyroscope; Bourget, Mouvement vibratoire d'une corde; Sébillot, Astrolabe Persan; Fouqué, Dissolutions salines; Villarceau, Chercheur parallactique; Traversées entre la France et le Mexique.
 10. Le Verrier, Recherches astronomiques (Actions mutuelles de Jupiter et de Saturne); Wolf et André, Contacts de Mercure et de Vénus avec le bord du Soleil.
 11. Le Verrier, Recherches astronomiques (Variations séculaires des éléments de Jupiter, Saturne, Uranus et Neptune; Théorie de Jupiter et de Saturne).
 12. Le Verrier, Recherches astronomiques. (Tables de Jupiter et Saturne).
 13. Le Verrier, Recherches astronomiques; Cornu, Vitesse de la lumière; Rayet, Observations magnétiques.
 14. Le Verrier, Recherches astronomiques (Tables d'Uranus et Neptune); Leveau, Comète de d'Arrest; Périgaud, Méthode de Hansen; Gournerie, Observations de Bouguer; Wolf, Description des Pléiades.
 15. Éloge et travaux de Le Verrier; Leveau, Théorie de Vesta; Villarceau, Pendule à réversion; Tisserand, Fonction perturbatrice, Perturbations de Pallas par Jupiter.
 16. Callandreau, Perturbations d'une petite planète; Radau, Réfractions astronomiques; Loewy et Périgaud, Etude des flexions du grand cercle méridien; Tisserand, Parallaxe du Soleil; Mouvements séculaires des plans des orbites de trois planètes.
 17. Gogou, Inégalité lunaire à longue période; Leveau, Mouvement de Vesta; Wolf, Étalons de poids et mesures; Schulhof et Bossert, Orbite de la comète de 1812; Leveau, Comète de d'Arrest.
-
- : Annales . . . publiées par U. J. Le Verrier (et sous la direction de M. le Contre-Amiral Mouchez). Observations, Tome 1-24 (1800-1869) et Année 1870-80.
4to. Paris, 1858-83
- : Rapport annuel sur l'état de l'Observatoire . . . 1879-83
. . . par l'Amiral Mouchez. 4to. Paris, 1880-84
- : Service Météorologique des Ports. Lettre du Directeur . . . à M. Airy. 4to. Paris, 1860
- : Mémoire sur l'état actuel de l'Observatoire Impérial

Paris, Observatoire —continued.

- présenté par les astronomes à son exc. le Ministre de l'Instruction Publique. 4to. Paris, 1870
- : Notes administratives [par U. J. Le Verrier]. 4to. Paris.
- : Rapport présenté à la Commission d'Inspection par le directeur de l'Observatoire (Ch. Delaunay), le 31 Mai, 1872. 4to. Paris.
- : Éphéméride pour la recherche de la Comète de 1812 (Pons), par Schulhof et Bossert (1882, Août—1883, Févr.). 2 sheets fol. Paris.
- : Atlas écliptique (par MM. Chacornac, Paul et Prosper Henry, &c.) [incomplete]. 54 sheets, Paris, v.d.

Paris, Société Mathématique de France :

Bulletin. Tome 1—11. Année 1872—83. 8vo. Paris, 1875—83

Paris, Société Philomathique :

- : Bulletin . . . série 6, 1873—76. Tome 10—12. 8vo. Paris, 1874—77
- : Ditto. Série 7, 1876—83. Tome 1—7. 8vo. Paris, 1877—83

Pariset (G. H.) :

Essai sur la nature des orbites des comètes. 8vo. Paris, 1867

Parker (George) :

Eland's tutor to astrology, or astrology made easie . . . tenth edition. 12mo. London, 1704

Parker (John A.) :

Second lecture on polar magnetism: its astronomical origin, its period of revolution, and the synodical period of the earth identical. 8vo. New York, 1869

Parkhurst (Henry M.) :

- : Astronomical tables, comprising logarithms from 3 to 100 decimal places, and other useful tables. 12mo. New York, 1875
- : Ditto. Revised edition. 12mo. New York, 1881

Parkinson (Stephen) :

A treatise on optics. Third edition. 8vo. London, 1870

Parkinson and Frodsham :

A brief account of the Chronometer, with remarks on those furnished by P . . . & F . . . to the expeditions of Captains Ross, Parry, Sabine, King, Lyon, Foster [&c.] 8vo. London, n.d.

Parpart (A. von) :

Bericht an eine Königl. Preuss. Academie der Wissenschaften zu Berlin über die auf der Sternwarte zu Storlus während der Sonnenfinsterniss vom 28. Juli 1851 angestellten astronomischen und meteorologischen Beobachtungen.

8vo. Culm, 1851

Parry (William Edward) :

- : Journal of a voyage for the discovery of a North-west passage from the Atlantic to the Pacific, performed in the years 1819—20 in His Majesty's ships *Hecla* and *Griper*;

Parry (William Edward) —continued.

- with an appendix containing the scientific and other observations. 4to. London, 1821
- : Journal of a second voyage for the discovery of a North-West passage from the Atlantic to the Pacific, performed in the years 1821–23, in His Majesty's ships *Fury* and *Hecla*. 4to. London, 1824
- : A supplement to the Appendix of Captain Parry's voyage for the discovery of a North-West passage in the years 1819–20, containing an account of the subjects of Natural History. 4to. London, 1824
- : Appendix to Captain Parry's Journal of a second voyage for the discovery of a North-West passage from the Atlantic to the Pacific. 4to. London, 1825

Parry (William Edward), H. Foster, and J. C. Ross :

- *Observations and experiments made at Port Bowen in the years 1824–25 on the figure of the earth, on magnetism, and atmospherical refraction. 4to. London, 1826

Partridge (John) :

- : Μικροπαναστρων; or an astrological Vade Mecum, briefly teaching the whole art of astrology. 12mo. London, 1679
- : Merlinus Liberatus: an almanac for 1726, 1752, 1760–61. 12mo. London, 1726–61

Partridge (Seth) :

- The description and use of an instrument, called the double scale of proportion. 8vo. London, 1692

Pascal-Newton (la question). Soupçons d'un Bouquiniste.
8vo. Liège, 1867**Pasquich (Johann) :**

- Epitome elementorum astronomiae sphaerico-calculatoriae.
2 parts and appendix in 1 vol. 4to. Viennae, 1811

Pauilhé (A. O.) :

- Astronomie des gens du monde, ou exposition du système planétaire avec l'explication des phénomènes célestes. Ouvrage mis à la portée des personnes qui ne sont pas versées dans les mathématiques . . . Seconde édition.
8vo. Paris, 1824

Paul (H. M.) :

- *A determination of the semi-diameter of the Moon from two occultations of the Pleiades observed on July 6, 1877, and September 6, 1879. 4to. Washington, 1883

Payne (William) :

- : An introduction to geometry, containing the most useful propositions in Euclid, and other authors. Second edition.
12mo. London, 1768
- : Elements of trigonometry, plain and spherical, applied to the most useful problems in heights and distances, astronomy and navigation. 8vo. London, 1772

Peacock (D. M.):

A system of conic sections, adapted to the study of natural philosophy. Second edition. 8vo. London, 1817

Peacock (George):

- : A collection of examples of the applications of the differential and integral calculus. Part 1, 2. 8vo. Cambridge, 1820
- : Ditto. Part 3. Examples of the applications of the calculus of finite differences, by J. F. W. Herschel. 8vo. Cambridge, 1820
- : Life of Thomas Young. 8vo. London, 1855

Pearson (James):

- : *Observations on the phenomena of the tides as observed at Fleetwood, Lancashire: with illustrations from the tides of Rathmullan, Co. Donegal. 8vo. Dublin, 1877
- : *Computation of tides at Fleetwood: results of theory and observation. 8vo. Dublin, 1878
- : *Computation of tides at Fleetwood: discussion of corresponding phenomena in different years, &c. Computation of occultations and eclipses. 8vo. Dublin, 1879
- : An elementary treatise on the tides, based on that of the late Sir J. W. Lubbock. 8vo. London, 1881

Pearson (John B.):

A series of observed lunar distances, with explanations and analysis. obl. fol. Cambridge, 1879

Pearson (William):

An introduction to practical astronomy; containing tables recently computed, for facilitating the reduction of celestial observations, and a popular explanation of their construction and use. 2 vols. 4to. London, 1824-29

Pechüle (C. F.):

Expédition Danoise pour l'observation du passage de Vénus, 1882; publié par ordre du ministère de l'Instruction Publique. 8vo. Copenhague, 1883

Peck (William):

The coming transit of Venus on December 6, 1882, illustrated with charts and diagrams. 4to. Edinburgh, 1882

Peirce (Benjamin):

- : *The latitude of the Cambridge Observatory in Massachusetts. 4to. Cambridge, 1846
- : Tables of the moon, constructed from Plana's theory, with Airy's and Longstreh's corrections, Hansen's two inequalities of long period arising from the action of Venus, and Hansen's values of the secular variations of the mean motion and of the motion of the perigee. Arranged in a form designed by Benjamin Peirce . . . under the superintendence of C. H. Davis. 4to. Washington, 1853
- : Tables of the moon's parallax, constructed from Walker's and Adams's formulæ, arranged as a supplement to the first edition of Peirce's Tables of the Moon, under the superintendence of C. H. Davis. 4to. Washington, 1854
- : Physical and celestial mechanics, . . . developed in four

Peirce (Benjamin)—continued.

systems of analytic mechanics, celestial mechanics, potential physics, and analytic morphology : [Part 1], A system of analytic mechanics. 4to. Boston, 1855

Peirce (C. S.) :

- : The papers on logic, read before the American Academy of Sciences, 1867. 8vo. 1867
- : Photometric researches, *see* Harvard College Observatory.
- : Ellipticity of the earth, *see* U.S. Coast Survey.

Pekin :

Observationes astronomicæ ab anno 1717 ad annum 1752 a patribus Societatis Jesu Pekini Sinarum factæ, et a Augustino Hallerstein . . . collectæ atque operis editionem ad fidem autographi manuscripti curante Maximiliano Hell. 2 parts, 4to. Vindobonæ, 1768

Pemberton, (Henry) :

- : A view of Sir Isaac Newton's philosophy. 4to. London, 1728
- : *See also* Robins (B.)

Penny Cyclopædia (the) of the Society for the diffusion of Useful Knowledge. 27 vols. roy. 8vo. 1833–43

- : Supplement. 2 vols. roy. 8vo. 1851
- : Second supplement. roy. 8vo. 1858

Penrose (Francis Cranmer) :

On a method of predicting by graphical construction occultations of stars by the moon, and solar eclipses, for any given place . . . fol. London, 1869

Peralta (Pedro de) :

Observationes astronomicæ habitæ Limæ. (Observatio Lunaris deliquii . . . 1717.) 4to. Limæ, 1717

Perigal (Henry) :

- : Experimental researches in kinematics, designed to exemplify and elucidate the laws of motion, by the organical development of their representative, or characteristic curves, the resultants of combinations of movements. 3 vols. 8vo. London, 1838–42
- : Notes on the kinematic effects of revolution and rotation with reference to the motions of the moon and of the earth. 8vo. London, 1846–49
- : The Moon controversy: facts *v.* definitions. 8vo. London, 1856
- : Revolution and rotation. 8vo. 1864
- : On the misuse of technical terms. (Rotation and revolution.) 8vo. n.d.
- : Classification of bi-circloids, curves of two curvatures (in the same plane), the resultants of two circular movements. 8vo. n.d.

Périgaud (—) et Maurice Loewy :

- : *Détermination de la flexion . . . du cercle méridien de Bischoffsheim. 4to. Paris, 1881
- : *Étude des flexions du grand cercle méridien. 4to. Paris, 1881

- Periódico Mensual de Ciencias Matemáticas y Físicas.**
 Tomo 1, No. 1-6. 4to. Cadiz, 1848
- Perlachius (Andreas) :**
 Ephemerides . . . pro anno . . . 1531.
 4to. [Viennæ Austriae, 1530]
- Perrey (Alexis) :**
 — : Détermination de l'orbite d'une étoile d'un système binaire dans son mouvement autour de l'autre. 4to. Dijon, 1837
 — : Théorie du mouvement d'un corps solide autour d'un point fixe. 4to. Dijon, 1838
 — : *Sur la détermination de l'orbite des planètes et des comètes. 8vo. Paris [1853]
- Perrier (François) et Maurice Loewy :**
 *Détermination télégraphique de la différence de longitude entre Paris et . . . Alger. 4to. Paris, 1877
- Perrotin (J.) :**
 Visite à divers observatoires d'Europe : notes de voyage. 8vo. Paris, 1881
- Perry (Stephen Joseph) :**
 — : *Notes of a Voyage to Kerguelen Island to observe the transit of Venus, December 8, 1874. 8vo. Roehampton, 1876
 — : Report on the meteorology of Kerguelen Island. 4to. London, 1879
- Posaro, Osservatorio Meteorico e Magnetico Valerio :**
 Bullettino Mensile. Serie 2, Vol. 1. 4to. Bologna, 1875
- Pesth, see Buda-Pesth.**
- Potavius (Dionysius) :**
 Uranologion, sive systema variorum authorum qui de sphaera ac sideribus, eorumque motibus Graecè commentati sunt. Sunt autem horum libri :
 Gemini } Isagoge ad Arati
 Achillis Tatii } Phænomena.
 Hipparchi libri tres, ad Aratum.
 Ptolenæi de apparetiiis.
 Theodori Gazæ, de Mensibus.
 Maximi }
 Isaaci Argyri duplex } Computi.
 S. Andreæ Crotensis }
 . . . Acesserunt variarum dissertationum libri octo.
 2 parts in 1 vol. fol. Lutetiae Parisiorum, 1630
- Peters (Christian August Friedrich) :**
 — : *Numerus constans nutationis ex aseensionibus rectis stellæ polaris in Specula Dorpatensi annis 1822 ad 1838 observatis deductus. 4to. Petropoli, 1842
 — : *Über Professor Mädler's Untersuchungen über die eigenen Bewegungen der Fixsterne. 4to. St. Pétersbourg, 1848
 — : *Recherches sur la parallaxe des étoiles fixes. 4to. St. Pétersbourg, 1848
 — : *Ueber Bessels Bestimmung der Parallaxe von 61 Cygni

Peters (Christian August Friedrich)—continued.

- aus Beobachtungen am Heliometer der Königsberger Sternwarte. 8vo. [St. Pétersbourg], 1849
- : Ueber die eigene Bewegung des Sirius. [Inaugural-Dissertation.] 4to. Königsberg, 1851
- : *Bestimmung der Abweichungen des Greenwicher Passagen-Instruments vom Meridiane, für den Zeitraum vom 2. September 1750 bis zum 16. Juli 1762. 4to. Danzig, 1855
- : Zeitschrift für populäre Mittheilungen aus dem Gebiete der Astronomie und verwandter Wissenschaften. Band 1, 2. 8vo. Altona, 1860–63
- : Ueber die Bestimmung des Längenunterschiedes zwischen Altona und Schwerin, ausgeführt im Jahre 1858 durch galvanische Signale. 4to. Altona, 1861
- : Bestimmung des Längenunterschiedes zwischen den Sternwarten von Kopenhagen und Altona. 4to. Kjöbenhavn, 1877

Peters (C. F. W.):

*Resultate aus Pendelbeobachtungen. 2 parts. 4to. Kiel, 1880

Peters (C. H. F.):

Celestial charts made at the Litchfield Observatory of Hamilton College, Clinton, N.Y. No. 1–20. obl. fol. n.d.

Petit (Frédéric) :

Traité d'Astronomie pour les gens du monde, avec des notes complémentaires pour les candidats au Baccalauréat, aux Écoles spéciales et à la licence ès Sciences mathématiques.
2 vols. 8vo. Paris, 1866

Petit (P.), see Du Hamel (J. B.).**Petrosemolo (G.):**

- : *Sulla determinazione del segno di $d\delta$ nell' equazione delle altezze corrispondenti. 8vo. Livorno, 1880
- : *Dimostrazione elementare di un nuovo metodo di J. J. Åstrand per la riduzione della distanza lunare. 8vo. Livorno, 1880
- : *Dimostrazione del metodo di Lyon per la riduzione delle distanze lunari, e formole per calcolare la tavola occorrente. 8vo. Livorno, 1881

Peurbach, see Purbach.**Pew (Richard):**

Observations on the art of making gold and silver; or the probable means of replenishing the nearly exhausted mines of Mexico, Peru, and Potosi. 4to. Salisbury, 1796

Pezelius (Christopher):

Præcepta genethliaca, sive de prognosticandis hominum nativitatibus commentarius eruditissimus.

4to. Francofurti, 1607

Pfaff (J. W.):

- : Das Licht und die Weltgegenden, samt einer Abhandlung über Planeten-Conjunctionen und den Stern der drey Weisen. 8vo. Bamberg, 1821

Pfaff (J. W.)—*continued.*

- : De dimensione coeli secundum principia W. Herschelii. [Inaugural dissertation.] 4to. Erlangae, 1825
- : W. Herschels Entdeckungen und die Fortschritte seiner Zeitgenossen in der Astronomie und den ihr verwandten Wissenschaften. Erste Abtheilung. 8vo. Stuttgart, 1828

Pfeil (L. von) :

Kometische Strömungen auf der Erdoberfläche.

8vo. Berlin, 1879

Philadelphia, Academy of Natural Sciences :

Proceedings, 1862–70.

8vo. Philadelphia, 1862–70

Philadelphia, American Philosophical Society . . . for promoting useful knowledge :

- : Transactions, Vol. 1–6. 4to. Philadelphia, 1789–1809
- : New Series, Vol. 1–15. 4to. Philadelphia, 1818–81
- : Proceedings, 1838–82. Vol. 1–20. 8vo. Philadelphia, 1840–83
- : Catalogue of the Library. Part 1–3. 8vo. Philadelphia, 1868–78

Philadelphia, Franklin Institute :

Journal, Third Series. Vol. 21–87.

8vo. Philadelphia, 1851–84

Philadelphia, Magnetic and Meteorological Observatory at the Girard College :

*Discussion of the magnetic and meteorological observations made . . . 1840–45. By A. D. Bache. 4to. Washington, 1859–62

Phillipps (Henry) :

The geometrical sea-man; or the art of navigation performed by Geometry . . . Second edition. 4to. London, 16[57]

Phillips (John²) :

*Notices of some parts of the surface of the Moon.

4to. London [1868]

Phillips (Lawrence Barnett) :

Horological rating tables for ascertaining the daily rate of watches and chronometers. 4to. London, 1871

Phillips (Richard) :

- : Twelve essays on the proximate causes of the material phenomena of the universe. 8vo. London, 1821

- : Natural philosophy. 8vo. London, 1827

- : Protest against the prevailing principles of natural philosophy, with developement of a common-sense system. 8vo. London, n.d.

- : Additional protest in regard to Kepler's laws, especially the first. 8vo. London [1830]

- : Essay on the physico-astronomical causes of the geological changes on the earth's surface, and of the changes in terrestrial temperature. . . . With a preface by W. D. Saull. 8vo. London [1832]

Phillips (William):

Eight familiar lectures on Astronomy, intended as an introduction to the science, for the use of young persons, and others not conversant with the mathematics.

8vo. London, 1817

Philosophical Magazine:

- : Comprehending the various branches of Science, the liberal and fine arts, agriculture, manufactures and commerce. By Alexander Tilloch. Vol. 1-42. 8vo. London, 1798-1813
- : Philosophical Magazine and Journal, comprehending the various branches of Science, the liberal and fine arts, agriculture, manufactures and commerce. By Alexander Tilloch (and Richard Taylor). Vol. 43-68. 8vo. London, 1814-26
- : *See* Journal of Natural Philosophy.
- : Philosophical Magazine, or annals of chemistry, mathematics, astronomy, natural history and general science. By Richard Taylor and Richard Phillips. (New and united series of the Philosophical Magazine and Annals of Philosophy.) Vol. 1-11. 8vo. London, 1827-32
- : *See* Annals of Philosophy.
- : General Index to the Philosophical Magazine, or annals of chemistry, mathematics, astronomy, natural history and general science, Vol. 1-11. (United series of the Philosophical Magazine and Annals of Philosophy.) 8vo. London, 1835
- : The London and Edinburgh (and Dublin) Philosophical Magazine and Journal of Science. Conducted by Sir David Brewster, Richard Taylor, Richard Phillips, and Sir Robert Kane. New and united series of Philosophical Magazine, (Annals of Philosophy) and Journal of Science. Vol. 1-37. 8vo. London, 1832-50
- : *See* Edinburgh Philosophical Journal.
- : General Index to the London and Edinburgh Philosophical Magazine and Journal of Science. Vol. 1-12 (1832-1838). 8vo. London, 1839
- : The London, Edinburgh and Dublin Philosophical Magazine and Journal of Science. Conducted by Sir Brewster, R. Taylor, R. Phillips, Sir R. Kane, and W. Francis. Fourth Series. Vol. 1-50. 8vo. London, 1851-75
- : Ditto. Conducted by Sir R. Kane, Sir W. Thomson, and W. Francis. Fifth Series. Vol. 1-17. 8vo. London, 1876-84

Phipps (Constantine John):

A voyage towards the North Pole, 1773. 4to. London, 1774

- Photographic Journal (Journal of the Photographic Society).**
- Vol. 1-16. 8vo. London, 1854-76
 - : Including the Transactions of the Photographic Society. New Series. Vol. 1-8. 8vo. London, 1877-84

Piazzi (Giuseppe):

- : Praecipuarum stellarum inerrantium positiones mediae

Piazzi (Giuseppe)—continued.

ineunte seculo XIX. Ex observationibus habitis in specula Panormitana ab anno 1792 ad annum 1802.

fol. Panormi, 1803

— : Praecipuarum stellarum inerrantium positions mediae in eunte saeculo XIX. Ex observationibus habitis in specula Panormitana ab anno 1792 ad annum 1813.

fol. Panormi, 1814

— : *Further list of errors in Piazzi's Catalogue of Stars.
8vo. London

— : See also Bianchi (G.) ; Littrow (K. L.) ; Palermo, Specola Astronomica.

— : *Saggio sui movimenti proprii delle Fisse. 4to. Bologna, 1804

[—] : Della Cometa del 1811. Osservata nella specola di Palermo dai 9 Settembre ai 11 Gennaro 1812. 8vo. Palermo, [1812]

— : Lehrbuch der Astronomie . . . Aus dem Italienischen übersetzt von J. H. Westphal. 2 vols. 8vo. Berlin, 1822

— : Éloges sur, see Campagna (G.) ; Filippini (A.)

Piazzi (Giuseppe) e Oriani (Barnaba) :

*Corrispondenza Astronomica. 4to. Milano, 1874

Picard (Jean), P. L. M. de Maupertuis [and others] :

Degré du Méridien entre Paris et Amiens, déterminé par la mesure de M. Picard, et par les observations de M^{rs}s de Maupertuis, Clairaut, Camus, Le Monnier. 8vo. Paris, 1740

Piccolomini (Alessandro) :

— : De la sfera del Mondo libri quattro: . . . De le stelle fisse libro vno, con le sve figvre e con le sve tauole.
4to. Venetia, 1548

— : La prima parte dele Theoriche ò vero speculationi dei pianeti. 4to. Vinegia, 1558

— : De le stelle fisse libro vno, dove di tvtte le XLVIII immagin celesti minutissimamente si tratta . . . et oltre a questo ci son tavole, con nuoua inuention fabricate.
4to. Venetia, 1570

Pick (Adolf Jos.) :

*Über die Sicherheit barometrischer Höhenmessungen.
8vo. Wien, 1855

Pickering (Edward C.) :

— : *Dimensions of the fixed stars, with especial reference to binaries and variables of the Algol type.
8vo. Cambridge, 1880

— : *New planetary Nebulae. 8vo. New Haven, 1880

— : *Large telescopes. 8vo. Boston, 1881

— : *Variable Stars of short period. 8vo. Cambridge, 1881

— : *A plan for securing observations of the variable stars.
8vo. Cambridge, 1882

— : *The wedge photometer. 8vo. 1882

— : *Observations of the transit of Venus, December 5 and 6, 1882, made at the Harvard College Observatory.
8vo. Cambridge, 1883

— : *Mountain Observatories. 8vo. 1883

Pickering (Edward C.)—continued.

- : First circular of instructions for observers of variable stars.
8vo. 1883
- : *Sir William Herschel's observations of variable stars.
8vo. 1884
- : *See* Harvard College Observatory.

Pickering (Edward C.), Arthur Searle & O. C. Wendell:

- *Photometric measurements of the variable stars β Persei
and D.M. $81^{\circ} 25'$ made at the Harvard College Observatory.
8vo. Cambridge, 1881

Pickering (John):

- Eulogy on Nathaniel Bowditch including an analysis
of his scientific publications. 8vo. Boston, 1838

Pickering (William H.):

- *Photometric researches. 8vo. Cambridge [U.S.], 1880

Piddington (Henry):

- : *Researches on the gale and hurricane in the Bay of Bengal,
June 3–5, 1839. 8vo. Calcutta, 1839
- : Notes on the law of storms, as applying to the tempests of
the Indian and Chinese seas. 8vo. Calcutta, 1840

Piedmont and Savoy:

- Opérations géodésiques et astronomiques pour la mesure d'un
arc du parallèle moyen, exécutées en Piémont et en Savoie
par une Commission composée d'officiers et d'astronomes
Piémontais et Autrichiens, en 1821–23.
2 vols. 4to. Milan, 1825

Pietermaritzburg:

- Meteorological Observations made during 1863–65.
(By R. J. Mann.) fol.

Pigorini (Pietro):

- *Necrologia del Prof. A. Colla. 8vo. Parma, 1857

Pihl (O. A. L.):

- : Micrometric examination of stellar cluster in Perseus.
4to. Christiania, 1869
- : *On magnets. 8vo. Christiania, 1878

Pilarik (Esaias) et Matthias à Schmidegg:

- Dissertatio astronomica de eclipsi Lunæ. [Inaugural Disser-
tation.] 4to. Wittebergae, 1680

Pina Vidal (Adriano Augusto de):

- Tratado elementar de optica. 8vo. Lisboa, 1874

Pingré (Alex. Guillaume):

- Cométographie, ou traité historique et théorique des comètes.
2 vols. 4to. Paris, 1783–84

Pisa:

- Observationes siderum habitæ Pisis in Specula Academica
ab anno LXXIV ad annum xc vertentis saeculi XVIII
. . . in lucem editæ a Josepho (et Francisco) Slop de
Cadenberg. 4 vols. 4to. Pisis, 1778–95

Pitatus (Petrus) :

Almanach Novum . . . superadditis annis quinque supra ultimas hactenus in lucem editas Ioannis Stoeberi Ephemeridas 1551 ad futurum Christi annum 1556. Isagogica in celestem Astronomicam disciplinam; tractatus tres per breues de electionibus, reuolutionibus annorum, & mutatione aeris: item horariæ tabulæ. 4to. Tubingæ, 1544

Pitiscus (Bartholomæus) :

— : Trigonometriæ, sive de dimensione triangulorum libri quinque; item problematum variorum, nempe geodæticorum, altimetricorum, geographicorum, gnomonicorum, astronomorum libri decem . . . Editio secunda (access. Canon Triangulorum).

2 parts, 4to. Augustæ Vindelicorum, 1608 (1609)

— : Ditto. Editio tertia, cui recens accessit problematum architectonicorum liber unus. 3 parts, 4to. Francofurti, 1612

Pittei (Costantino) :

— : *Ricordo del Prof. G. B. Donati. 8vo. Firenze, 1873

— : *Congresso Internazionale di Meteorologia a Roma. 8vo. Roma, 1879

— : Rapports présentés au deuxième Congrès Météorologique International de Rome. 8vo. Florence, 1879

Plana (Giovanni) :

— : *Mémoire sur l'intégration de l'équation linéaire

(1) . . . $\frac{dy}{dx^n} + A_{n-1} \frac{d^{n-1}y}{dx^{n-1}} + A_{n-2} \frac{d^{n-2}y}{dx^{n-2}} . . . + A_1 \frac{dy}{dx} + A_0 = X$
dans le cas particulier où le polynôme

$Z = z^n + A_{n-1}z^{n-1} + A_{n-2}z^{n-2} . . . + A_1z + A_0$ renferme un nombre quelconque de racines égales. 4to. Torino, 1826

— : *Note sur un mémoire de M. de Laplace, ayant pour titre : *Sur les deux grandes inégalités de Jupiter et Saturne.* 4to. Torino 1827

— : *Mémoire sur la partie coëfficient de la grande inégalité de Jupiter et Saturne qui dépend du carré de la force perturbatrice. 2 parts, 4to. Turin, 1828-29

— : *Méthode élémentaire pour découvrir et démontrer la possibilité des nouveaux théorèmes sur la théorie des transcendantes elliptiques publiés par M. Jacobi. 4to. Torino 1829

— : *Mémoire sur le développement des termes du cinquième ordre qui font partie du coëfficient de la grande inégalité de Jupiter et Saturne. 4to. Turin, 1832

— : Théorie du mouvement de la lune. 3 vols. 4to. Turin, 1832

— : *Mémoire sur le mouvement d'un pendule dans un milieu résistant. 4to. Turin, 1835

— : *Mémoire sur trois intégrales définies. 4to. Bruxelles, 1837

— : *Mémoire sur une nouvelle manière de déterminer les intégrales définies . . . 8vo. Bruxelles, 1837

— : *Mémoire sur la chaleur des gaz permanens. 4to. Turin, 1842

— : *Recherches analytiques sur la découverte de la loi de la

Plana (Giovanni)—continued.

- pesanteur des planètes vers le soleil, et sur la théorie de leur mouvement elliptique. 4to. Turin, 1848
- : *Mémoire sur l'équation séculaire du moyen mouvement de la lune. 4to. Turin, 1856
- : *Mémoire sur un rapprochement nouveau entre la théorie moderne de la propagation linéaire du son, . . . et la théorie des pulsions, exposée par Newton. 4to. Turin, 1857
- : *Mémoire sur le mouvement conique à double courbure d'un pendule simple dans le vide. 4to. Turin, 1858
- : *Note sur le procès de Galilée. 4to. Turin, 1858
- : *Mémoire sur la théorie des nombres. 4to. Turin, 1860
- : [Four letters to Sir J. W. Lubbock on the secular acceleration.] 4to. Turin, 1860
- : *Réflexions sur les objections soulevées par Arago contre la priorité de Galilée pour la double découverte des taches solaires noires et de la rotation uniforme du globe du Soleil. 4to. Turin, 1860
- : *Mémoire sur l'intégration des équations différentielles relatives au mouvement des comètes établies suivant l'hypothèse de la force répulsive définie par Monsieur Faye, et suivant l'hypothèse d'un milieu résistant dans l'espace. 4to. Turin, 1861
- : *Mémoire sur la loi du refroidissement des corps sphériques, et sur l'expression de la chaleur solaire dans les latitudes circumpolaires de la terre. 4to. Turin, 1863
- : *Mémoire sur l'expression du rapport, qui (abstraction faite de la chaleur solaire) existe, en vertu de la chaleur d'origine, entre le refroidissement de la masse totale du globe terrestre et le refroidissement de sa surface. 4to. Turin, 1863

Planets (Method of Finding the Rotary Motions of the).
8vo. Circular, n.d.**Plantamour (Émile):**

- : *Sur la détermination des hauteurs par le baromètre. 8vo. Genève, 1855
- : *De la température à Genève d'après vingt années d'observations (1836 à 1855). 4to. Genève, 1857
- : *Note sur la comète de Donati. 8vo. Genève, 1858
- : *Mesures hypsométriques dans les Alpes. 4to. Genève, 1860
- : *Observation de l'éclipse totale de soleil du 18 Juillet 1860 à Castellon de la Plana (Espagne). 8vo. Genève, 1860
- : Du climat de Genève. 4to. Genève, 1863
- : *Note sur les variations périodiques de la température et de la pression atmosphérique au Grand St.-Bernard. 8vo. Genève, 1862
- : *Recherches sur la distribution de la température à la surface de la Suisse pendant l'hiver 1863-64. 8vo. Zurich, 1864
- : *Expériences faites à Genève avec le pendule à réversion. 4to. Genève, 1866
- : *Des anomalies de la température observées à Genève . . . 1826-65. 4to. Genève, 1867

Plantamour (Émile) — *continued.*

- : Nouvelles expériences faites avec le pendule à réversion, et détermination de la pesanteur à Genève et au Righi-Kulm. 4to. Genève 1872
- : Observations faites dans les stations astronomiques Suisses. 4to. Genève, 1873
- : Recherches expérimentales sur le mouvement simultané d'un pendule et de ses supports. 4to. Genève, 1878
- : *See Geneva Observatory; Hirsch et Plantamour.*

Plantamour (Émile) et A. Hirsch :

- Détermination télégraphique de la différence de longitude entre des stations Suisses. 4to. Genève, 1872

Plantamour (Émile) et Moritz Löw :

- Détermination télégraphique de la différence de longitude entre Genève et Strasbourg, exécutée en 1876. 4to. Genève, 1879

Plantamour (Émile) et Colonel von Orff:

- Détermination télégraphique de la différence de longitude entre les Observatoires de Genève et de Bogenhausen, près Munich, exécutée en 1877. 4to. Genève, 1879

Plantamour (Émile) et Rudolf Wolf :

- Détermination télégraphique de la différence de longitude entre l'Observatoire de Zurich et les stations astronomiques du Pfänder et du Gäbris. 4to. Genève, 1877

Plantamour (Émile), R. Wolf et A. Hirsch :

- Détermination télégraphique de la différence de longitude entre la station astronomique du Righi-Kulm et les observatoires de Zurich et de Neuchatel. 4to. Genève, 1871

Plantamour (Ph.) :

- *Sur le déplacement de la bulle des niveaux à bulle d'air. 4to. Paris, 1878

Plarr (Gustave) :

- : Essai d'une théorie de la figure de la terre, basée sur le calcul de l'attraction des sphéroïdes hétérogènes. [Inaugural Dissertation.] 4to. Strasbourg, 1850
- : Sur le calcul de la chaleur solaire reçue en un point quelconque de la surface de la terre, dans l'hypothèse d'une absorption de la chaleur par l'atmosphère. 4to. Paris [1856]

Playfair (James) :

- A system of chronology. fol. Edinburgh, 1784

(Playford, John) :

- Vade mecum, or the necessary companion. Containing Sir S. Morland's perpetual almanac [&c.]. 8vo. London, 1680

Pliny (Plinius Secundus) :

- The historie of the world, commonly called the Natvrall Historie of C. Plinius Sevndvs. Translated into English by Philemon Holland. 2 vols. in 1, fol. London, 1601

Pluche, (Noel Ant.):

[—] : Spectacle de la nature, or nature delineated, being philosophical conversations . . . translated by J. Kelly, D. Bellamy, and J. Sparrow. Third edition.

5 vols. 12mo. London, 1743-53

— : The history of the heavens, considered according to the notions of the Poets and Philosophers, compared with the doctrines of Moses . . . Translated . . . by J. B. de Freval.

2 vols. 8vo. London, 1752

Plummer (John Isaac):

Introduction to Astronomy for the use of science classes and elementary and middle-class schools. 8vo. Glasgow, 1876

Plummer (William E.):

*On the orbit of Denning's Comet (1881, V). 4to. Dublin, [1884]

Pogson (Norman R.):

— : *On the Madras survey of the southern heavens.

8vo. Madras, 1863

— : *See also* Madras Observatory.

Pohl (Joseph Johann):

*Beobachtungen während der Sonnenfinsterniss am 28ten Juli 1851. 8vo. Wien, 1852

Pohl (Joseph Johann) und J. Schabus:

— : *Tafeln zur Vergleichung und Reduction der in verschiedenen Längenmassen abgelesenen Barometerstände.

8vo. Wien, 1852

— : *Tafeln zur Reduction der in Millimetern abgelesenen Barometerstände auf die Normaltemperatur von 0° Celsius.

8vo. Wien, 1852

Pointer (John):

A rational account of the weather, shewing the signs of its several changes and alterations, together with the philosophical reasons of them. 8vo. Oxford, 1723

Poisson (Siméon Denis):

— : *Analyse de la partie du traité sur la chaleur de M. Poisson qui se rapporte à la chaleur terrestre. 8vo. Genève, 1835

— : Discours prononcé aux obsèques de M. le Marquis de Laplace. 4to. [Paris, 1827]

Pole (William):

— : *Memoranda on the great Comet of 1844-45.

8vo. [Bombay], 1845

— : *Description of the prismatic clinometer, a new pocket instrument for measuring vertical angles. 8vo. London, 1853

— : *Narrative of the Astronomical expedition to Spain for observing the total Eclipse of the Sun, July 18, 1860.

8vo. London, 1860

Poli (Giuseppe Saverio):

Elementi di Fisica sperimentale. 4 vols. 8vo. Venezia, 1819

Polydore (Épaminondas En.):

Explication du calendrier perpétuel (du nouveau style) à deux couleurs. 12mo. Smyrne, 1882

[Pombrient (l'Abbé de)]:

Nouvelles vues sur le système de l'univers. 8vo. Paris, 1751

Pond (John):

Observations and Catalogue, *see* Greenwich.

Pontanus (Joannes Jovianus):

Liber de Meteoris : cum interpretatione Viti Amerbachij.
8vo. Argentorati, 1539

Pontécoulant (Philippe Gustave Doulcet de):

- : A history of Halley's Comet; with an account of its return in 1835, and a chart, showing its situation in the heavens. Translated . . . by C. Gold. 12mo. London, 1835
- : *Mémoire sur la théorie de la lune, et spécialement sur les inégalités lunaires à longues périodes. 8vo. Paris, 1837
- : Traité élémentaire de physique céleste, ou précis d'Astronomie théorique et pratique, servant d'introduction à l'étude de cette science. 2 vols. 8vo. Paris, 1840
- : Populäre Astronomie für Alle, welche ohne mathematische Vorkenntniss über die Einrichtung des Weltgebäudes theoretisch und praktisch vollkommen belehrt sein wollen. . . . Aus dem Französischen von F. Nork. 2 vols. 12mo. Stuttgart, 1846
- : Théorie analytique du système du monde. 4 vols. (Vol. 1 and 2, second edition). 8vo. Paris, 1856-46
- : *Notice sur la comète de Halley et sur ses apparitions successives de 1531 à 1910. 4to. Paris, 1864

Porro (J.):

La Tachéométrie, ou l'art de lever des plans et de faire les nivellments avec beaucoup de précision, et une économie de temps considérable. Nouvelle édition. 8vo. Paris, 1858

Porta (Joannes Baptista):

De Æris transmutationibus libri IIII. 4to. Romæ, 1614

Portius (Leonardus):

De Sestertio, Talentis, Pecunijs, ponderibus, mensuris, stipendijs militaribus antiquis, ac provinciarum regum populi Romani . . . libri duo. 4to. n.d.

Portraits:

Volume containing various portraits (chiefly of Astronomers) and other prints. fol.

Postel (Guillaume):

Signorum Coelestium vera configvratio aut asterismus, stellarumve per suas imagines aut configurationes dispositio, & in eum ordinem quem illis Deus præfixerat, restitutio et significationum expositio. 4to. Parisiis, 1553

Potsdam, Astrophysikalisches Observatorium :

Publicationen. Band 1-3. 4to. Potsdam, 1879-83

Potter (John):

- : A system of practical mathematics. 8vo. London, 1753
- : Ditto. Second edition. 8vo. London, 1757

Pouillet-Delisle (A. Ch. M.):

Application de l'algèbre à la géométrie. 8vo. Paris, 1809

Powalky (Carl R.):

—: Neue Untersuchung des Venusdurchganges von 1769 zur Bestimmung der Sonnenparallaxe. [Inaugural-Dissertation.] 4to. Kiel, 1864

—: *Discussion nouvelle du passage de Vénus de 1769, en vue de la détermination de la parallaxe Solaire. 8vo. Paris, 1865.

—: *See also* United States Coast Survey.**Powell (Baden):**

—: A general and elementary view of the undulatory theory, as applied to the dispersion of light, and some other subjects. 8vo. London, 1841

—: *On necessary and contingent truth, considered in regard to some primary principles of mathematical and mechanical science. 8vo. Oxford, 1849

Power (Henry):

Experimental Philosophy, in three books, containing New Experiments, Microscopical, Mercurial, Magnetical. 4to. London, 1664

Prague, K. K. Sternwarte:

—: Magnetische und meteorologische Beobachtungen, 1867–73. Jahrgang 28–34. 4to. Prag, 1868–74

—: Astronomische, magnetische und meteorologische Beobachtungen, 1874–82. Jahrgang 35–43. 4to. Prag, 1875–83

Pratt (Henry):

—: *On the rotation-period of Jupiter. 8vo. London, 1880

—: *The belts of Saturn. 8vo. London, 1884

—: *Abnormal appearance of Jupiter's satellite IV while in transit on March 12; and occultations of λ Geminorum and κ Cancri. 8vo. London, 1884**Pratt (Henry F. A.):**

An eccentric and centric force: a new theory of projection. 8vo. London, 1862

Pratt (John H.):

A treatise on attractions, Laplace's functions, and the figure of the earth. Third edition. 8vo. Cambridge, 1865

Prescot (Bartholomew):

The system of the universe, in which the unchangeable obliquity of the ecliptic, the solar and lunar equations, deduced from circular orbits [&c.] . . . are mathematically demonstrated on the basis of the first chapter of Genesis. Book the Second. 8vo. Liverpool, 1823

Prestel (M. A. F.):

—: Der gestirnte Himmel, bezogen auf den Horizont von Nordwestdeutschland. 8vo. Emden, 1848

—: Das astronomische Diagramm; ein Instrument mittelst dessen der Stand und Gang einer Uhr, das Azimuth terrestrischer Gegenstände, die Mittagslinie, die Abweichung der Magnetnadel, der Auf- und Untergang der

Prestel (M. A. F.)—continued.

Gestirne bestimmt und andere Aufgaben gelöst werden können.

8vo. [with diagram in fol.]. Braunschweig, 1859

Preuss (E. W.):

Astronomische Beobachtungen auf des Herrn Capitain Otto v. Kotzebue zweiten Reise um die Welt in den Landungsplätzen angestellt. . . . Herausgegeben von W. Struve.

4to. Dorpat, 1830

Price (Arthur Wellington):

A familiar treatise upon the Longitude, determining and simplifying by easy rules the best methods by which accuracy and facility can be ensured, particularly at sea.

8vo. London, 1854

Price (Bartholomew):

A treatise on infinitesimal calculus, containing differential and integral calculus, calculus of variations, applications to algebra and geometry and analytical mechanics.

4 vols. 8vo. Oxford, 1852-62

Vol. 1. Differential calculus.

2. Integral calculus and calculus of variations.

3. Statics and dynamics of material particles.

4. The Dynamics of material systems.

Priestley (Joseph):

— : The history and present state of discoveries relating to vision, light, and colours. 4to. London, 1772

— : Experiments and observations on different kinds of air, and other branches of natural philosophy connected with the subject. 3 vols. 8vo. Birmingham, 1790

Prince (Charles Leeson):

— : Observations upon the climate of Uckfield, constituting a meteorological record for the district from 1843 to 1870. 8vo. London, 1871

— : Observations upon the late great Comet [1882 II] and transit of Venus, made at Crowborough, Sussex, in the year 1882. 8vo. Lewes, 1883

Pritchard (Charles):

— : *Éloge of Struve, astronomer of Dorpat and Pulkowa. 8vo. London, 1865

— : *Sir John Herschel. An éloge read at the anniversary meeting of the Royal Astronomical Society. 8vo. London, 1872

Probert (John), method of calculating an eclipse, see Fenning (D.).

Proclus (Diadochus):

— : Sphæra, Astronomiam discere incipientibus utilissima, nouiter ex græco recognita. 4to. Bononiæ, 1525 (1526)

— : De sphæra, see Henischius (G.); Valderus (J.).

— : Philosophical and mathematical commentaries on the first book of Euclid's Elements: to which are added a history of the restoration of Platonic Theology by the latter Platonists, and a translation from the Greek of Proclus's Theological Elements. 2 vols. 4to. London, 1792

Proctor (Richard Anthony):

- : Saturn and its system: containing discussions of the motions (real and apparent) and telescopic appearance of the planet Saturn, its satellites, and rings; the nature of the rings; the 'great inequality' of Saturn and Jupiter; and the habitability of Saturn. 8vo. London, 1865
- : The handbook of the stars: containing the places of 1500 stars, from the first to the fifth magnitude inclusive 8vo. London, 1866
- : The stars, in twelve maps on the gnomonic projection, collected, in duplicate, in four plates. fol. London, 1866
- : The constellation-seasons, an easy guide to the knowledge of the stars; exhibiting, in twelve planispheres, the appearance of the heavens at any hour of the night all the year round. 4to. London, 1867
- : Sun-views of the earth, or the seasons illustrated. 4to. London, 1867
- : Remarks on Browning's Stereograms of Mars. 8vo. London, 1869
- : A star atlas for the library, the school, and the observatory. Showing all the stars visible to the naked eye in twelve circular maps on the equidistant projection with two index plates. fol. London, 1870
- : Ditto. Fourth edition. fol. London, 1877
- : Light science for leisure hours. A series of familiar essays on scientific subjects, natural phenomena, &c., &c. 8vo. London, 1871
- : The Sun: ruler, fire, light, and life of the planetary system. 8vo. London, 1871
- : Ditto. Third edition. 8vo. London, 1876
- : Essays on astronomy; a series of papers on planets and meteors, the Sun and Sun-surrounding space, stars and star cloudlets: and a dissertation on the approaching transits of Venus. Preceded by a sketch of the life and work of Sir John Herschel. 8vo. London, 1872
- : The Moon: her motions, aspect, scenery, and physical condition. 8vo. London, 1873
- : Ditto. Second edition. 8vo. London, 1878
- : The orbs around us: a series of familiar essays on the Moon and planets, meteors and comets, the Sun and coloured pairs of suns. Second edition. 8vo. London, 1875
- : A new star atlas for the library, the school, and the observatory, in twelve circular maps, with two index plates. Fourth edition. 8vo. London, 1875
- : Half-hours with the stars: a plain and easy guide to the knowledge of the constellations Eighth edition. 4to. London, 1877
- : The Spectroscope and its work. 8vo. London, 1877
- : Simple lessons for home use: Astronomy. 12mo. London, 1877
- : Other worlds than ours: the plurality of worlds studied under the light of recent scientific researches Fourth edition. 8vo. London, 1878

Proctor (Richard Anthony)—*continued.*

- : Half-hours with the telescope; a popular guide to the use of the telescope as a means of amusement and instruction . . . Sixth edition. 8vo. London, 1878
- : The universe of stars: presenting researches into, and new views respecting, the constitution of the heavens. Second edition. 8vo. London, 1878
- : Transits of Venus. A popular account of past and coming Transits from the first observed by Horrocks A.D. 1639 to the transit of A.D. 2012. . . . Third edition. 8vo. London, 1878

Prowe (Leopold):

- : Zur Biographie von Nicolaus Copernicus . . . I. Ueber die Thorner Familien Kopernik und Watzelrodo. II. Ueber die Zeit der Geburt und des Todes von Nicolaus Copernicus. 4to. Thorn, 1853
- : Nicolaus Copernicus in seinen Beziehungen zu dem Herzoge Albrecht von Preussen. Vortrag gehalten . . . am 19. Februar 1855. 8vo. Thorn, 1855
- : De Nicolai Copernici patria. 4to. Thoruni, 1860
- : *Die Abhängigkeit des Copernicus von den Gedanken griechischer Philosophen und Astronomen. 8vo. Thorn, 1865
- : Nicolaus Copernicus. Band 1: das Leben. Theil 1, 2. 8vo. Berlin, 1883

Ptolemy (Claudius):

- : Almagestū Cl. Ptolemei Pheludiensis Alexandrini Astronomorum principis: Opus ingens ac nobile omnes Celorū motus continens. Felicibus Astris eat in lucem: Ductu Petri Liechtenstein Coloniensis Germani. fol. Venetiis, 1515
- : Κλ.Πτολεμαίου Μεγάλης Συντάξεως Βιβλ. τγ' Θέωνος Ἀλεξανδρέως εἰς τὰ αὐτὰ ‘Υπομνημάτων Βιβλ. ιδ. [S. Grynae et J. Camerario editoribus.] 2 parts in 1 vol. fol. Basilea, 1538
- : Κλανδίου Πτολεμαίου Μαθηματικὴ Σύνταξις. Composition Mathématique . . . (ou Astronomie Ancienne): traduite pour la première fois du Grec en Français . . . par M. Halma, et suivie des notes de M. Delambre. [Gr. & French.] 2 vols. 4to. Paris, 1813-16
- : État des étoiles fixes au second siècle, par Claude Ptolémée, comparé à la position des mêmes étoiles en 1786, avec le texte grec & la traduction françoise, par M. l'Abbé Montignot. 4to. Strasbourg, 1787
- : Περὶ κριτηρίου καὶ ἡγεμονικοῦ . . . Tractatus de iudicandi facultate et animi principatv. Access. de illius patria & astronomiae sedibus Olympiodori & Theodori testimonia . . . nunc primum in lucem edidit, Latinè reddidit, & commentariis illustrauit Ismael Byllialdus. 4to. Parisiis, 1663
- : Ἀρμονικῶν Βιβλ. γ'. Harmonicorum libri tres . . . nunc primum Graece editus. Johannes Wallis . . . edidit. 4to. Oxonii, 1682
- : Omnia quæ extant opera, præter Geographiam . . . summa cura & diligentia castigata ab Erasmo Osualdo Schrekhenfuchlio, & ab eodem Isagoica in Almagestum præfatione. . . . fol. Basileæ, 1551

Ptolemy (Claudius)—continued.

- : Planisphærivm ; Iordanī planisphærivm ; Federici Commandini Vrbinatis in Ptolemæi planisphærivm commentarijs. 2 vols. 4to. Venetiis, 1558
- : *See also* Commandinus (F.)
- : Geographicæ enarrationis libri octo, Josepho Moletio interprete. 4to. [Venetiis, 1562]
- : The quadripartite, or four books concerning the influences of the stars to which are added variety of notes and illustrations by John Whalley. Second edition. 8vo. London, 1786
- : Ptolemy's tetrabiblos, or quadripartite, being four books of the influence of the stars with a preface, explanatory notes, and an appendix, containing extracts from the Almagest [&c.]. . . By J. M. Ashmand. 8vo. London, 1822
- : *See also* Junctinus.

Puiseux (V.), see Paris, Observatoire.**Puissant (Louis) :**

- : Traité de géodésie, ou exposition des méthodes astronomiques et trigonométriques, appliquées soit à la mesure de la terre, soit à la confection du canevas des Cartes et des plans. 4to. Paris, 1805
- : Méthode générale pour obtenir le résultat moyen d'une série d'observations astronomiques faites avec le cercle répétiteur de Borda. 4to. Paris, 1823

Pulkowa, Nicolai-Hauptsternwarte :

- : Catalogue de 514 étoiles doubles et multiples découvertes sur l'hémisphère céleste boréal et catalogue de 256 étoiles doubles principales, où la distance des composantes est de 32 secondes à 2 minutes. fol. St. Pétersbourg, 1843
- : Description de l'Observatoire Astronomique central de Poulkova, par F. G. W. Struve (with vol. of plates). 4to. St. Pétersbourg, 1845
- : Recueil de mémoires présentés à l'Académie des Sciences par les astronomes de Poulkova, ou offerts à l'Observatoire Central par d'autres astronomes du pays. Publié par W. Struve (et O. Struve). Vol. 1, 2. 4to. St. Pétersbourg, 1853-59

- Vol. 1. Productions littéraires des astronomes de Poulkova; W. Struve.
Recherches sur les parallaxes des étoiles fixes; C. A. F. Peters.
Theilungsfehler des Vertikalkreises der Pulk. Sternwarte; do.
Neue Reduction der Königsberger Declinationen; W. Döllen.
De numero constante aberrationis et parallaxi annua stellae polaris;
D. G. Lindhagen.
Parallaxe de l'étoile Groombridge 1830; O. Struve.
Catalogue revu et corrigé des étoiles doubles et multiples; do.
Résultats du voyage en Perse fait par le Capt. Lemm; do.
Sur les dimensions des anneaux de Saturne; do.
Observations du Soleil &c. à Dorpat; W. Struve et M. Liapounov.
Dilatation de la glace; W. Struve.
- Vol. 2. Expéditions chronométriques, 1845-46; O. Struve.
Positions géographiques; do.
Beobachtungen des Biela'schen Cometen, 1852; do.

Pulkowa, Nicolai-Hauptsternwarte—continued.

- : Übersicht der Thätigkeit der Nicolai-Hauptsternwarte während der ersten 25 Jahre ihres Bestehens, von Otto Struve. 4to. St. Petersburg, 1865
- : Observations de Poulkova, publiées par Otto Struve. Vol. 1-7, 9, 11, 13. 4to. St. Pétersbourg, 1869-81
- Vol. 9. Contains:—
Observations des étoiles doubles du catalogue de W. Struve ; O. Struve.
Observations des étoiles doubles découvertes à Poulkova ; do.
- : Ascensions droites moyennes des étoiles principales pour l'époque 1845° (extr. du vol. 1 des Observations). 4to. St. Pétersbourg, 1869
- : Déclinaisons moyennes corrigées des étoiles principales pour l'époque 1845°, par Magnus Nyrén. (Supplément . . . au vol. 4 des Observations.) 4to. St. Pétersbourg, 1875
- : Mesures micrométriques corrigées des étoiles doubles, par Otto Struve. (Supplément au vol. 9 des Observations.) 4to. St. Pétersbourg, 1879
- : Jahresbericht, . . . 1863-68, '71-73, '75-82. 8vo. St. Petersburg, 1863-82
- : Tabulæ refractionum in usum Speculæ Pulcovensis congestæ. 8vo. Petropoli, 1870
- : Vierstellige Logarithmen der trigonometrischen Functionen in Zeit ausgedrückter Winkel. 4to. St. Petersburg, 1882
- : Librorum in Bibliotheca Speculae Pulcovensis anno 1858 exente contentorum catalogus systematicus. Edendum curavit et praefatus est Otto Struve. 4to. Petropoli, 1860
- : Ditto. Pars secunda, ab Ed. Lindemann. 4to. Petropoli, 1880
- : See F. G. W. Struve ; O. Struve.

Pullen (Joseph):

A lecture on Astronomy read . . . on the opening of Gresham College, November 2, 1843. 8vo. London, 1843

Purbach (Georg):

- : Tabulae Eclypsium Magistri Georgij Peurbachij, Tabula Primi mobilis Joannis de Monteregio. (Elimatum denuo & recognitum sūma cum diligentia a Georgio Tannstetter.) fol. Viennæ, 1514
- : Novæ Theorice planetarvm Georgii Peurbachij Astronomi celeberrimi Temporis importunitato & hominum iniuria locis compluribus conspurcatæ, à Petro Apiano . . . iam ad omnem ueritatem redactæ, & eruditis figuris illustratæ. 8vo. Ingolstadij, 1528
- : Tractatvs Georgii Pevrbachii svper propositiones Ptolemaei de Sinibus & Chordis : item compositio Tabularum Sinuum . . . & Tabulæ Sinuum duplices per . . . Regiomontanum. fol. Norimbergæ, 1541
- : Theoricae novae planetarvm Georgii Pvrbacchii Germani ab Erasmo Reinholdo Salueldensi pluribus figuris auctæ, & illustratæ scholijs . . . Inserta item methodica tractatio de illuminatione Lunæ. 8vo. Vitembergæ, 1542

Purbach (Georg) —continued.

- : Theoricae novae planetarvm . . . quibus accesserunt Ioannis de Monterégio disputationes, super deliramenta Theoricarum Gerardi Cremonensis. Item Joannis Essler . . . Specvlvm Astrologorvm . . . Quæstiones verò in Theóricas Planetarum Purbachij, authore Christiano Vrstisio. 2 parts, 8vo. Basileæ, 1596
- : Theoriæ novæ planetarum . . . ab Erasmo Reinhodo Salveldensi plvribvs figyris avctæ et illustratæ scholijs . . . Inserta item methodica tractatio de illuminatione Lunæ. 8vo. Wittembergæ, 1601

— : *See also Junctinus; Nonius.*

— : Life, *see Gassendi.*

Puschl (Carl) :

- Über die latente Wärme der Dämpfe. 8vo. Wien, 1883

Puteanus (Erycus) :

- De Cometa Anni MDCLXVIII novo mundi spectaculo, Libri duo. Paradoxologia. 12mo. Coloniæ, 1619

Pyne (Thomas) :

- A glance at the heavens, or sketch of modern Astronomy. 8vo. London, 1852

Pyramids :

- A dissertation on the antiquity, origin, and design of the principal pyramids of Egypt. 4to. London, 1833

Quadrant :

- The use of the mathematical instrument called a quadrant . . . as also the use of a nocturnal . . . Eighth edition. 8vo. London, 1722

Quadri (Giovanni Lodovico) :

- Tavole gnomoniche per delineare orologi a sole. 4to. Bologna, 1733

Quarterly Journal of pure and applied Mathematics. No. 1. 8vo. London, 1855**Quarterly Journal of Science,** and annals of mining, metallurgy, engineering, industrial arts, manufactures, and technology. Edited by James Samuelson and William Crookes (&c.). Vol. 1-7. 8vo. London, 1864-70**— : Ditto. New Series.** Edited by William Crookes. Vol. 1-8. 8vo. London, 1871-78

Continued as the—

— : Journal of Science, and annals of biology, astronomy, geology, industrial arts, manufactures, and technology. Edited by William Crookes. Third Series. Vol. 1-5. 8vo. London, 1879-83**Quetelet (Ernest) :**

— : *Recherches sur les Médianes. 4to. Bruxelles [1852]

— : *L'éclipse de soleil du 18 Juillet 1860, observations faites à l'observatoire royal de Bruxelles. 8vo. Bruxelles, 1860

— : *Sur le mouvement propre de quelques étoiles. 4to. Bruxelles [1863]

Quetelet (Ernest) - continued.

- : *Sur l'Aurore Boréale du 4 Février 1872. 8vo. Bruxelles, 1872
 — : *La tempête du 12 Mars 1876. 8vo. Bruxelles, 1876
 — : *Notice sur l'observatoire royal de Bruxelles. 12mo. Bruxelles.

Quetelet (Ernest), F. Terby, et G. Bernaerts :

- *Notes sur la Comète de Coggia. 8vo. Bruxelles, 1874

Quetelet (Lambert Adolphe Jacques) :

- : *Résumé d'une nouvelle théorie des caustiques, suivi de différentes applications à la théorie des projections stéréographiques. 4to. Bruxelles [1825]
 — : Correspondance mathématique et physique. Tome 3-11. 8vo. Bruxelles, 1827-39
 — : *Description de plusieurs observatoires d'Angleterre. 8vo. Bruxelles, 1828
 — : Notes extraites d'un voyage scientifique, fait en Allemagne pendant l'été de 1829. 8vo. Bruxelles, 1830
 — : *Recherches sur l'intensité magnétique de différens lieux de l'Allemagne et des Pay-Bas. 4to. Bruxelles, 1830
 — : *Lettre . . . sur la construction de l'Observatoire de Bruxelles. 8vo. Bruxelles, 1831
 — : *Sur la latitude de l'Observatoire de Bruxelles. 4to. Bruxelles, 1836
 — : *Mémoire sur les variations diurne et annuelle de la température, et en particulier de la température terrestre à différentes profondeurs. [2 papers.] 4to. Bruxelles, 1837-40
 — : *Rapport sur les observations de marées faites en 1835. 4to. Bruxelles, 1838
 — : *Sur la longitude de l'Observatoire Royal de Bruxelles. 4to. Bruxelles, 1839
 — : *Catalogue des principales apparitions d'étoiles filantes. [2 papers.] 4to. Bruxelles, 1839-42
 — : *Second mémoire sur le magnétisme terrestre en Italie. 4to. Bruxelles, 1840
 — : *Observations des phénomènes périodiques, 1841-68. 4to. Bruxelles, 1841-68
 — : Instructions pour l'observation des phénomènes périodiques. 4to. Bruxelles, 1842
 — : Letters . . . on the theory of probabilities, as applied to the moral and political sciences. . . . Translated from the French by Olinthus Gregory Downes. 8vo. London, 1849
 — : *Sur le climat de la Belgique. [2 papers.] 4to. Bruxelles, 1849-57
 — : *Mémoire sur les variations périodiques et non périodiques de la température. 4to. Bruxelles, 1853
 — : *Sur la comète de Donati. 8vo. Bruxelles, 1858
 — : *Éclipse de soleil du 15 Mars 1858. 8vo. Bruxelles, 1858
 — : Histoire des Sciences mathématiques et physiques chez les Belges. 8vo. Bruxelles, 1864
 — : Sciences mathématiques et physiques chez les Belges, au commencement du xix^e Siècle. 8vo. Bruxelles, 1866

Quetelet (Lambert Adolphe Jacques)—continued.

- : Météorologie de la Belgique comparée à celle du globe. 8vo. Bruxelles, 1867
 — : *Sir John F. W. Herschel. 8vo. Bruxelles, 1870
 — : *Notice sur Charles Babbage. 8vo. Bruxelles, 1873
 — : [16 papers on meteors from Brussels Acad. Bulletin.] 8vo. Bruxelles, v.d.
 — : *Simon Stevin. 4to.
 — : Funérailles de. 8vo. Bruxelles, 1874

Quintella (Ignacio da Costa):

- Annaes de Marinha Portugueza. Primeira parte. Tomo 1, 2.
 4to. Lisboa, 1839-40

Racine (Amédée):

- Tables pour calculer la latitude d'un lieu par des observations de la polaire. 4to. [Paris] 1824

Radau (Rodolphe):

- : *Sur un théorème de mécanique. 4to. Paris, 1868
 — : *Théorème sur les équations différentielles du premier ordre. 4to. Paris, 1868
 — : *See also* Paris, Observatoire.

Raganoothachary (Chintamanny):

- : *On the total eclipse of the sun on December the 11th, 1871, as visible in the Madras presidency. 8vo. London, 1871
 — : The Transit of Venus [in the form of a dialogue]. 8vo. [1874]
 — : Ditto [in Hindustani and Telugu]. 8vo. [1874]

Ragona-Scinà (Domenico):

- : Relazione sull' ecclissi totale del Sole del 28 Luglio 1851, osservata in Rixthöft. 8vo. Berlino [1851]
 — : Osservazioni sulla seconda cometa del 1854. 4to. Palermo, 1854
 — : Lezioni, memorie, ed articoli intorno a varii argomenti di astronomia sferica e teorica. Vol. 1. 8vo. Palermo, 1857
 — : *Rivista meteorologica del 1857. 8vo. 1857
 — : *Su taluni nuovi fenomeni di colorazione soggettiva. 4to. Palermo, 1858
 — : *Sulla terza cometa del 1854; osservazioni e risultati. 4to. Palermo, 1858
 — : *Sull' oculare a separazione di immagini applicato all' equatoreale del R. Osservatorio di Modena. 8vo. Cherbourg, 1867
 — : *Stelle meteoriche di Agosto 1867. 4to. Roma, 1867
 — : *See also* Palermo, Specola Astronomica.

Rambosson (J.):

- Astronomy translated by C. B. Pitman.

8vo. London, 1875

Ramchundra:

- : A treatise on problems of maxima and minima, solved by algebra. 8vo. Calcutta, 1850
 — : Ditto. Reprinted under the superintendence of Augustus de Morgan. 8vo. London, 1859

Ramsay (Alexander), *see* Scientific Roll.

Ramsbottom (Richard):

Fractions anatomized, or the doctrine of parts made plain and easy to the meanest capacity. 12mo. London, 1762

Ramsden (Jesse):

— : Description of an engine for dividing mathematical instruments. 4to. London, 1777

— : Description of an engine for dividing strait lines on mathematical instruments. 4to. London, 1779

Ransome (Arthur) and G. V. Vernon:

*On the influence of atmospheric changes upon disease. 4to. Manchester, 1861

Rantzovius (Henricus):

Catalogvs Imperatorvm, Regvm ac Principvm qui astrologiam artem amarunt, ornarunt & exercuerunt: quibus addita sunt astrologicae quædam prædictiones Adiectvs est praeterea tractatus de annis climactericis edita à Theophilo Silvio. 8vo. Antverpiæ, 1580

Ranyard (Arthur Cowper):

— : *Note on the presence of particles of meteoric dust in the atmosphere. 8vo. London, 1879

— : Observations made during total solar eclipses, collated by A. C. R . . . (Mem. R.A.S., vol. 41.) 4to. London, 1879

Raper (Henry):

— : Tables of logarithms to six places, containing logarithms of numbers from 1 to 10,000, and of sines, tangents and secants for every half-minute, with proportional parts for seconds. 8vo. London, 1846

— : The practice of navigation and Nautical Astronomy (with supplement). 8vo. London, 1840

— : Ditto. Second edition. 8vo. London, 1842

— : Ditto. Third edition. 8vo. London, 1849

— : Ditto. Fourth edition. 8vo. London, 1852

— : Ditto. Fifth edition. 8vo. London, 1856

— : Ditto. Sixth edition. 8vo. London, 1857

Raphson (Joseph):

Historia fluxionum, sive tractatus originem & progressum peregregiae istius methodi brevissimo compendio (et quasi synopticè) exhibens. 4to. London, 1715

Rausch (Chr.):

Populäre Astronomie für Schule und Haus. 8vo. Lübeck, 1853

Rayet (G.):

— : *Les cadrans solaires coniques. 8vo. Paris, 1875

— : *Rapport sur une mission astronomique en Italie. 8vo. Paris, 1876

— : *Observations pluviométriques et thermométriques faites dans le Département de la Gironde, 1882-83. 8vo. Bordeaux, 1883

— : Astronomie pratique et Observatoires, *see* André et Rayet.

(Raymond H.):

Leçons d'un père à son fils, sur les systèmes du monde ; ou
l'hypothèse Copernicienne démontrée par les machines de
Loysel, avec explications. 8vo. Paris, 1805

Rebeur-Paschwitz (Ernst von):

Über die Bewegung der Kometen im widerstehenden Mittel,
mit besonderer Berücksichtigung der sonnennahen Kome-
ten. Inaugural-Dissertation. 4to. Berlin, 1883

Reccard (Gotthilf Christian):

Abhandlung von der grossen Sonnen-Finsterniss welche sich
im Jahr 1764 ereignen wird. 4to. Berlin, 1763

Recorde (Robert):

- [—] : The whetstone of witte, whiche is the seconde parte of Arithmetike ; containyng the extraction of Rootes : the Cossike practise, with the rule of Equation, and the woorkes of surde nombrs. 4to. London, 1557
- : The pathewaie to knowledge, containing the first principles of Geometrie, as thei maie moste aptly bee applied vnto practise, bothe for use of instrumentes Geometricall and Astronomicall ; and also for proiection of plattes of euery kinde. . . . 2 parts, 4to. London, 1574
- : Record's arithmeticke, or the ground of arts . . . augmented by John Dee, and since enlarged . . . by John Mellis. 8vo. London, 1658

Reddie (James):

- : The mechanics of the heavens, and the new theories of the Sun's electro-magnetic and repulsive influence. 8vo. London, 1862
- : Vis inertiae victa, or fallacies affecting science : an essay towards increasing our knowledge of some physical laws. 8vo. London, 1862
- : Victoria toto celo ; or modern astronomy recast : being a paper on the theoretical motions of the Earth, Sun, Moon, and planets. 8vo. London, 1863

Redhill. Catalogue of 3735 circumpolar stars observed 1854-56 . . . by R. C. Carrington. fol. London, 1857

Regiomontanus [Johann Müller]:

- : [Ephemerides astronomicæ, ab anno 1475 ad annum 1506.] (Title wanting.) 4to. [Norimbergæ] 1474
- : Ephemerides (ab anno 1482 ad annum 1506). 4to. Venetiis (E. Ratdolt) 1481
- : Tabule directionū profectionūque . . . in nativitatibus multum vtile (compositæ 1467 : Joannis Angeli diligenti correctione). 4to. Augustæ Vindelicorum (E. Ratdolt), 1490
- : Tabvlæ directionvm profectionumque, non tam astrologiæ iudiciariæ, quam tabulis instrumentisque innumeris fabri-candis utiles ac necessariæ. Eiusdem . . . tabvla sinuum, per singula minuta extensa 4to. Tubingæ, 1550
- : Ditto. 4to. Tubingæ, 1559
- : Disputationes contra Cremonensia deliramenta, & Tabula primi mobilis, see Purbach.

Regiomontanus [Johann Müller]—continued.

— : *See also* Schoner ; Life, *see* Gassendi.

Reich (Ferdinand) :

— : Fallversuche über die Umdrehung der Erde angestellt in dem drei Brüderschachte bei Freiberg.

8vo. Freiberg, 1832

— : *Neue Versuche mit der Drehwaage. 8vo. Leipzig, 1852

Reimann (Eugen) :

Die Höhenbestimmung der Sternschnuppen.

8vo. Breslau, 1870

Reinhold (Erasmus) :

— : Prvtenicæ Tabvlæ cœlestivm motvvm. 4to. Tvbiningæ, 1551

— : Ditto. 4to. Tvbiningæ, 1562

— : *See also* Sacrobosco ; Purbach.

Reinieri (Vincentio) :

Tabulae motuum cœlestium universales serenissimi magni
ducis Etruriae Ferdinandi II. auspiciis primo editæ, &
Mediceæ nuncupatae. Nunc vero auctæ, recognitæ, atque
. . . . D. Bernardini Fernandez jussu ac sumptibus
recusæ. fol. Florentiae, 1647

Reis (Paul) :

Die Sonne. Zwei physikalische Vorträge nebst einer
neuen Sonnenflecken-Theorie. 8vo. Leipzig, 1869

[Reisch (Gregorius)] :

Margarita philosophica, cū additionibus nouis ab auctore
suo studiosissima reuisiōe tertio superadditis.

4to. Basileæ, 1508

Reitlinger (Edmund) :

Johannes Kepler : vier Bücher in drei Theilen . . . unter
Mitwirkung von C. W. Neumann, . . . und dem Heraus-
geber, K. Gruner. Erster Theil. 8vo. Stuttgart, 1868

Rensbergensis (Nicolaus) :

Astronomia Teutsch. 4to. Augspurg, 1568

Repulsion :

A preliminary treatise on the law of repulsion as a universal
law of nature; in which the Mosaic history of creation is
vindicated and sustained. 8vo. Philadelphia, 1853

Resal (H.) :

Traité élémentaire de mécanique céleste. 8vo. Paris, 1865

Reslhuber (Augustin) :

— : Die Constanten von Kremsmünster. 4to. Linz, 1853

— : *Über das magnetische Observatorium in Kremsmünster,
und die von den Jahren 1839–50 aus den Beobachtungen
abgeleiteten Resultate. 4to. Wien, 1854

— : Bericht über die Kometen von den Jahren 975, 1264 und
1556. 8vo. Linz, 1857

— : Ueber die Witterungs-Anzeigen in den Kalendern.
4to. Linz, 1857

Reslhuber (Augustin)—continued.

- : *Leistungen eines nach der Erfindung des Herrn K. Kreil construirten Kupferdraht-Thermometrographen. 4to. Wien, 1858
- : Untersuchungen über den Druck der Luft. 8vo. Linz, 1858
- : *Bericht über die am 21. und 29. April 1859 zu Kremsmünster beobachteten Nordlichter. 8vo. Wien, 1859
- : *Bericht über die im Jahre 1859 auf dem magnetischen Observatorium zu Kremsmünster beobachteten Störungen. 8vo. Wien, 1860
- : Magnetische Beobachtungen, *see* Kremsmünster.

Respighi (Lorenzo):

- : *Sulle osservazioni circumzenitali delle stelle. 4to. Bologna, 1863
- : *Sulla latitudine dell' Osservatorio di Bologna. 4to. Bologna, 1863
- : *Intorno l' influenza del moto dei mezzi rifrangenti sulla direzione dei raggi luminosi. 4to. Bologna, 1863
- : *Sulla velocità della luce dedotta dagli eclissi dei satelliti di Giove, e dell' aberrazione delle stelle. 4to. Roma, 1868
- : *Sulla latitudine dell' Osservatorio della Romana Università sul Campidoglio. [2 papers.] 4to. Roma, 1868-77
- : *Sulla scintillazione delle stelle. 1, 2. 4to. Roma, 1868-69
- : *Osservazioni degli spettri delle stelle per mezzo di un grande prisma applicato all' obiettivo dell' equatoriale dell' Osservatorio del Campidoglio. 4to. Roma, 1869
- : *Sulle osservazioni spettroscopiche del bordo e delle protuberanze solari, fatte all' Osservatorio del Campidoglio. (1-5, 7.) 4to. Roma, 1870-77
- : *Sul cannocchiale zenitale dell' Osservatorio della R. Università sul Campidoglio. 4to. Roma, 1871
- : *Osservazione dell' eclisse totale del 12 Dicembre 1871 a Poodocottah nell' Indostan. 4to. Roma, 1872
- : *Sulla nota del Prof. P. Secchi intitolata 'Sull' ultima eclisse del 12 Dicembre 1871.' 4to. Roma, 1872
- : *Osservazioni del diametro solare fatte al R. Osservatorio del Campidoglio nel 1876. 4to. Roma, 1877

Reuss (August Christian):

Dissertatio physica de terræ motuum caussis. [Inaugural Dissertation.] 4to. Tubingæ, 1773

Reuss (Jerem. Dav.):

Repertorium Commentationum a Societatibus litterariis editarum secundum disciplinarum ordinem.

16 vols. 4to. Gottingae, 1801-21

- Tomus 1. Historia Naturalis.
 2. Botanica et mineralogia.
 3. Chemia.
 4. Physica.
 5. Astronomia.
 6. Economia.
 7. Mathesis, mechanica, &c.
 8. Historia, geographia, &c.

Reuss (Joram. Dav.)—continued.

Tomus 9. *Philologia, &c.*

10-16. *Scientia et ars medica et chirurgica.*

Revue Scientifique de la France et de l'Étranger:

— : Série 2. 1871-81. 19 vols. 4to. Paris, 1871-80

— : Série 3. 1881-83. Tome 2-6. 4to. Paris, 1881-83

— : Table des Matières contenues dans les 14 premiers volumes
(1864 à 1874). 8vo. Paris, 1875

Rey (J.):

Himmel und Erde. Erste Einführung in die Himmelskunde
und in die mathematische Geographie. 8vo. Zürich, 1868

Reyer (Eduard):

Beitrag zur Physik der Eruptionen und der Eruptiv-Gesteine.
8vo. Wien, 1877

Reynard (Francis):

Geometria legitima, or an elementary system of theoretical
geometry. 8vo. London, 1813

**Rheinwald (Karl Christian), P. A. Offterdinger et J. H.
Doerner:**

De influxu Lunæ in partes Terræ mobiles. [Inaugural-Dissertation.] 4to. Tubingæ, 1769

Rhode (J. G.):

Versuch über das Alter des Thierkreises und den Ursprung
der Sternbilder. 4to. Breslau, 1809

Ricca (Vincenzo Saporito):

La corona solare e l'eclisse del 22 Dicembre 1870.
4to. Palermo, 1871

Riccioli (Giovanni Battista):

— : Almagestum novum, astronomiam veterem novamque complectens, observationibus aliorum et propriis, novisque theorematibus problematibus ac tabulis promotam.

Tomus 1 in 2 vols. fol. Bononiæ, 1653 (1651)

— : Geographiae et hydrographiae reformatæ libri duodecim.
fol. Bononiæ, 1661

— : Astronomiæ reformatæ tomii duo, quorum prior observationes, hypotheses, et fundamenta tabularum, posterior præcepta pro usu tabularum astronomicarum, et ipsas tabulas astronomicas cii continet. [Accedit catalogus fixarum.] 2 vols. in 1, fol. Bononiæ, 1665

— : Argomento fisico matematico . . . contra il moto diurno della terra, confirmato con l'occasione della risposta alle considerazioni sopra la forza dell detto argomento fatto da S. de gli Angeli. 4to. Bologna, 1668

Ricci (A.):

— : *Osservazioni astrofisiche del pianeta Giove eseguite nel Regio Osservatorio di Palermo. 4to. Roma, 1882

— : *Osservazioni astrofisiche della grande Cometa del 1882, eseguite nel Regio Osservatorio di Palermo. 4to. Roma, 1883

Richards (T.):

New South Wales in 1881, being a brief statistical and descriptive account of the colony up to the end of the year.
8vo. Sydney, 1882

Riddle (Edward):

- : Observations on the present state of nautical astronomy. 8vo. London, 1821
- : *Observations on the practical inutility of Messrs. Yarrow and Lynn's new methods of finding the longitude. 8vo. London, 1826
- : *A description of Barclay's Hydrostatic Quadrant, and an account of observations made with it. 8vo. London, 1826
- : A treatise on navigation and nautical astronomy with an extensive series of examples for exercise, and all the tables requisite in nautical computations. 8vo. London, 1824
- : Ditto. Second edition. 8vo. London, 1831
- : Ditto. Third edition. 8vo. London, 1836
- : Ditto. Sixth edition. 8vo. London, 1855
- : Ditto. Seventh edition. 2 vols. 8vo. London, 1859
- : Ditto. Eighth edition, revised by A. Escott. 2 vols. 8vo. London, 1864

Riel (Karl):

Die Sternenwelt in ihrer geschichtlichen Entfaltung
Erste Abtheilung, der Fixsternhimmel. 8vo. Leipzig, 1866

Rigaud (J.):

Stephen Peter Rigaud A Memoir. 8vo. Oxford, 1883

Rigaud (Stephen Peter):

- : Some account of Halley's Astronomiae cometice synopsis, which contains his investigation of the orbits of comets. 8vo. Oxford, 1835
- : On the arenarius of Archimedes. 8vo. Oxford, 1837
- : Historical essay on the first publication of Sir Isaac Newton's Principia. 8vo. Oxford, 1838
- [—] : Mean heights of the barometer and thermometer, with the fall of rain at the observatory, Oxford, during each month of the years 1828 to 1836. 8vo.
- : See also Bradley's miscellaneous works ; Macclesfield collection.

Rignano (Duca di):

*De' passaggi di Mercurio sul disco solare ed in ispecie di quello del 1832 osservato in Roma nella Specola Massima. 8vo. Roma, 1835

Riha (J.):

*Bericht (3.) der zur Beobachtung der totalen Sonnenfinsterniss des Jahres 1868 nach Aden unternommenen österreichischen Expedition. 8vo. Wien, 1868

Ringelberg (Joachim):

Institutiones Astronomicæ ternis libris contentæ.
8vo. Venetijs, 1535

Ringwood (Alexander):

Means by which the height of clouds can be obtained by one observer.
12mo. Adelaide, 1877

Rinonapoli (Michele):

*Errori delle tavole lunari, dedotti dalle osservazioni dell' eclisse solare del 28 Luglio 1851. 4to. Napoli, 1852

Rio de Janeiro, Observatoire Impérial:

- : Bulletin Astronomique et Météorologique, 1881-83.
4to. Rio de Janeiro, 1881-83
- : Annales . . . Extrait du 1^{er} volume (Passage de Mercure, &c.). Tome 1. Description de l'Observatoire.
4to. Rio de Janeiro, 1881-82

— : *See also Cruls (L.)*.

Ritchie (Frederick J.):

*Description of the clock-trigger for the time-gun signal in Edinburgh Castle. 8vo. Edinburgh, 1861

Ritgen (Ferd. Aug. Maria Fr. von):

Betrachtung der Kometen als Sterne in früher Gestaltungszeit.
8vo. Giessen, 1860

Ritter (Élie):

*Nouvelle méthode pour déterminer les éléments de l'orbite des astres qui circulent autour du soleil. 4to. Genève, 1855

Rivard (Dominique François):

- : Trigonométrie rectiligne et sphérique, avec la construction des tables des sinus, des tangentes, des sécantes et des logarithmes. Troisième édition. 8vo. Paris, 1750
- : Traité de la sphère et du calendrier. Septième édition, revue et augmentée par Puissant. 8vo. Paris, 1816

Robert (Henri):

Les mouvements des corps célestes et les principaux phénomènes qui en résultent démontrés à l'aide des appareils cosmographiques . . . Deuxième édition. 8vo. Paris, 1852

Roberts (Edward):

Tide-tables for the port of Hong Kong for the year 1883.
8vo. London.

Roberts (Edward), A. W. Baird (& M. W. Rogers):

Tide-tables for the Indian ports for the years 1881-83.
8vo. London.

Robertson (Abram):

- : Sectionum Conicarum libri septem; accedit tractatus de sectionibus conicis, et de scriptoribus qui earum doctrinam tradiderunt. 4to. Oxonii, 1792
- : A geometrical treatise of Conic Sections: . . . to which is added a treatise on the primary properties of conchoids, the cissoid, the quadratrix, cycloids, the logarithmic curve, and the logarithmic, Archimedean and hyperbolic spirals.
8vo. Oxford, 1802
- : Elements of Conic Sections deduced from the Cone, and designed as an introduction to the Newtonian philosophy.
8vo. Oxford, 1818

Robertson (Frank):
Engineering Notes.

8vo. London, 1873

Robertson (John):

- : A treatise of such mathematical instruments as are usually put into a portable case with a short account of the authors who have treated on the proportional compasses and sector. Second edition. 8vo. London, 1757
- : The elements of navigation ; containing the theory and practice ; with all the necessary tables. To which is added a treatise of marine fortifications Second edition. 2 vols. in 1, 8vo. London, 1764

Robins (Benjamin):

- : A discourse concerning the nature and certainty of Sir Isaac Newton's method of fluxions, and of prime and ultimate ratios. 8vo. London, 1735
- : Mathematical tracts . . . In two volumes. Vol. 1, new principles of gunnery ; Vol. 2, discourse on the methods of fluxions, and of prime and ultimate ratios.

2 vols. 8vo. London, 1761

Robins (Benjamin), Philalethes Cantabrigiensis and H. Pemberton :

[A discussion relating to Sir Isaac Newton's method of fluxions, in a series of articles from 'The present state of the Republic of letters' for 1735-37.] 8vo. London, 1735-37

Robinson (Christopher):

A view of Sir Isaac Newton's method for comparing the resistance of solids. 8vo. London, 1734

Robinson (Thomas Romney):

- : *On the longitude of the Armagh Observatory, given by fifteen chronometers of Arnold and Dent, &c. 4to. Dublin, 1839
- : *On the difference of longitude between the Observatories of Armagh and Dublin, determined by rocket signals. 4to. Dublin, 1840
- : *An account of the Earl of Rosse's great telescope [2 papers]. 8vo. Dublin, 1847-50
- : *Description of an improved anemometer for registering the direction of the wind, and the space which it traverses in given intervals of time. 4to. Dublin, 1851
- : *On the probable errors of the eye and ear in transit observations. 8vo. Dublin, 1853
- : *The speculum. [Article from 'Nichol's Physical Sciences.'] 8vo. Glasgow.
- : Observations and Catalogues of stars, see Armagh Observatory.

Robinson (Thomas Romney) and Thomas Grubb:

*Description of the great Melbourne telescope. 4to. London, 1869

Robison (John):

- : Elements of mechanical philosophy. Vol. 1, including dynamics and astronomy. 8vo. Edinburgh, 1804

Robison (John)—continued.

— : Ditto. With notes by David Brewster. 4 vols. 8vo. Edinburgh, 1822

Roblin (Justin):

Explication du zodiaque de Denderah, des pyramides et de la Genèse. 8vo. Caen, 1861

Robson (Thomas Charles):

A treatise on marine surveying. 8vo. Edinburgh, 1834

Roche (Edouard):

— : *Note sur la variation de la pesanteur à l'intérieur de la terre. 4to. Montpellier, 1855

— : *Réflexions sur la théorie des phénomènes cométaires à propos de la comète de Donati. 8vo. Paris, 1860

— : *Nouvelles recherches sur la figure des atmosphères des corps célestes. 4to. Paris, 1862

— : Recherches sur les offuscations du soleil et les météores cosmiques. 4to. Paris, 1868

— : See also Paris, Observatoire.

Rodwell (George Farrer):

A dictionary of science, comprising astronomy, chemistry, dynamics, electricity, heat, hydrodynamics, hydrostatics, light, magnetism, mechanics, meteorology, pneumatics, sound, and statics. Preceded by an essay on the history of the physical sciences. 8vo. London, 1871

Roger (Émile):

Recherchés sur le système du monde. 4to. Paris, 1862

Rogers (William A.):

— : *The determination of geographical latitude from observations in the prime vertical. 8vo. New Haven, 1869

— : *On the variability of personal equation in transit observations. 8vo. New Haven, 1869

— : *Catalogue of 618 stars observed at the astronomical observatory of Harvard College . . . 1871-75. 4to. Cambridge, 1880

— : *On the present state of the question of standards of length. 8vo. Boston, 1880

— : *On a method of determining the index error of a meridian circle, at any instant, depending upon the observed polar distance of *Polaris*. 8vo. Boston, 1883

— : *Studies in metrology. Part 1. 8vo. Boston, 1883

— : *On the reduction of the different star catalogues to a common system. 8vo. Boston, 1883

Rohault (Jacques):

Physica, Latinè vertit, recensuit, & adnotationibus . . . , amplicavit & ornavit Samuel Clarke. Editio quarta. 8vo. Londini, 1718

Roias (Joannes de):

Commentariorum in Astrolabium quod Planisphærium vocant, libri sex, nunc primum in lucem editi. 4to. Lutetiae, 1550

Rolleston (Frances):

- : Mazzaroth, or the constellations. Part 1-4.
 8vo. London, 1862-65
 — : The testimony of the stars to truths revealed in the Bible.
 Abridged from . . . ‘Mazzaroth, or the constellations,’
 by Caroline Dent. 8vo. London, 1879

Rollwyn (J. A. S.):

- : Astronomy simplified for general reading, with numerous new explanations and discoveries in Spectrum Analysis, &c. &c. 8vo. London [1870]
 [—] : Comets, and the New Comet of 1874; with a complete popular account of all that is known of these wonderful bodies, which are so great a perplexity to science.
 8vo. London, 1874

Romano (Antonio):

- Esposizione di quattro nuove scoperte: il moto perpetuo o continuato per quattro leggi e per due sistemi diversi.
 8vo. Como, 1870

Rome, Accademia de' Lincei:

- Memorie istorico-critiche . . . raccolte e scritte da D. Baldassare Odescalchi. 4to. Roma, 1806

Rome, Accademia Pontificia de' Nuovi Lincei:

- : Atti. Anno 25-34 (1871-81). Tomo 25-34. 4to. Roma, 1872-81
 — : Triplice omaggio alla santità di Papa Pio IX. nel suo giubileo episcopale, offerto dalle tre Romane Accademie . . . (Scienze: Accad. Pontif. de' Nuovi Lincei). 4to. Roma, 1877

Rome, Reale Accademia dei Lincei:

- : Atti. Tomo 25, sessione 4-6; Tomo 26, sessione 3, 4.
 4to. Roma, 1872-74
 — : Atti, Serie 2. 1873-76. Vol. 1-3. 4to. Roma, 1875-76
 — : Atti, Serie 3: Memorie della classe di scienze fisiche, matematiche e naturali. Vol. 1-13. 4to. Roma, 1877-82
 General Index in 10th vol.
 — : Atti, Serie 3: Transulti. Vol. 1-8. 1876-84.
 4to. Roma, 1877-84

Rome, Osservatorio del Collegio Romano:

- : Effemeridi della cometa d' Halley, calcolate secondo i diversi elementi dei Signori Damoiseau e Pontécoulant.
 4to. Roma, 1835
 — : Nuova cometa di breve periodo . . . di cui si attende probabilmente il ritorno verso la fine del presente anno 1836
 4to. Roma, 1836
 — : Memoria intorno ad alcune osservazioni fatte alla Specola del Collegio Romano nel corrente anno, 1838. 4to. Roma.
 — : Memoria intorno a parecchie osservazioni fatte nella Specola dell' Università Gregoriana in Collegio Romano dagli astronomi della Compagnia di Gesù, 1839. 4to. Roma, 1840
 — : Annali dell' Osservatorio astronomico diretto dai Padri della Compagnia di Gesù, Vol. 1. (Osservazioni meteorologiche 1782-1842; Memoria intorno a parecchie osservazioni fatte . . . 1842.) 4to. Roma, 1840

Rome, Osservatorio del Collegio Romano—continued.

- : Osservazioni fatte nella Specola nell' Università Gregoriana in Collegio Romano, diretto dai P.P. della Compagnia di Gesù. Anno 1843. 4to. Roma
- : Memorie dell' osservatorio 1850-51. 2 vols. 4to. Roma, 1851-52
- : Memorie 1852-55. Descrizione del nuovo Osservatorio: Memoria sui lavori eseguiti dal 1852 a tutto Aprile 1856 del P. Angelo Secchi. 4to. Roma, 1856
- : Memorie del Nuovo Osservatorio dall' Aprile 1856 al Settembre 1857 pubblicate dal P. A. Secchi. 4to. Roma, 1857
- : Memorie Nuova Serie pubblicate dal P. A. Secchi, 1857-63. Vol. 1, 2. 4to. Roma, 1859-63
- : Catalogo di 1321 [1221] stelle doppie misurate col grande equatoreale di Merz dal P. A. Secchi. 4to. Roma, 1860
- : *Serie seconda delle misure micrometriche fatte 1863-66 dal P. A. Secchi. 4to. Roma, 1868
- : *Terza serie delle misure micrometriche delle stelle doppie, fatte, 1872-74, dal P. G. Stanislao Ferrari. 4to. Roma, 1875
- : Osservazioni magnetiche e meteorologiche, 1862-71. 4to. Roma
- : Bullettino Meteorologico con Corrispondenza e Bibliografia per l' avanzamento della fisica terrestre, compilato dal P. Angelo Secchi. Vol. 1-17. 4to. Roma, 1862-78
- : Pontificia Università Gregoriana: continuazione del Bullettino Meteorologico dell' Osservatorio del Collegio Romano [Edited by G. S. Ferrari]. Vol. 18-21. 4to. Roma, 1879-82
- : Stelle del Catalogo di Baily dal polo boreale fino a 30° di decl. australe, contrassegnate secondo i loro diversi colori. [12 maps.] Fasc. 1. obl. fol. n.d.

Rome, Società degli Spettroscopisti Italiani:

Memorie. Raccolte e pubblicate per cura del Prof. P. Tacchini. Vol. 1-12. 4to. Palermo e Roma, 1872-83

Rome, Ufficio Centrale di Meteorologia Italiana:

Annali, Serie 2. Vol. 1, 3. 1879-81. 4to. Roma, 1880-83

Ronayne (Philip):

A treatise of algebra, in two books. . . . Second edition. 8vo. London, 1727

Rosa (Paolo):

Studii intorno ai diametri solari. 4to. Roma, 1873

Rosa (Philipp Georg):

Dissertatio chimico-medica de theriaca coelesti. [Inaugural-Dissertation.] 4to. Jenae, 1703

Roscoe (Henry E.):

- : Lessons in elementary chemistry. 12mo. London, 1866
- : Spectrum analysis. Six lectures, delivered in 1868, before the Society of Apothecaries of London. Second edition. 8vo. London, 1870

Rosen (P. G.):

*Studien und Messungen an einem Zöllner'schen Astro-Photometer.
8vo. St. Petersburg, 1869

Rosencreutzer (Marcus Friederich):

Astronomia Inferior, oder septem planetarum terrestrium spagyrica recensio : das ist Erzehlung und Erwehlung der sieben irdischen Planeten 8vo. Nürnberg, 1674

Rösler (Gottlieb Friedrich):

Handbuch der praktischen Astronomie für Anfänger und Liebhaber. 2 vols. 8vo. Tübingen, 1788

Ross (John):

- : A voyage of discovery . . . in His Majesty's ships *Isabella* and *Alexander*, for the purpose of exploring Baffin's Bay, and inquiring into the probability of a North-West passage. 4to. London, 1819
- : Narrative of a second voyage in search of a North-West passage, and of a residence in the Arctic regions, during the years 1829-33; . . . including the reports of James Clark Ross, and the discovery of the Northern Magnetic Pole. [With Appendix.] 4to. London, 1835
- : A short treatise on the deviation of the mariner's compass. 8vo. London, 1849
- : Description and use of the royal Clarence Sextant. 4to. n.d.

Rosse (Alexander):

The new planet no planet ; or the earth no wandring star, except in the wandring heads of Galileans ; here the earth's immobility is asserted, and Copernicus his opinion, as erroneous, ridiculous, and impious, fully refuted.

4to. London, 1646

Rosse (Earl of):

- : *Preliminary note on some measurements of polarization of the light coming from the Moon and from the planet Venus. 8vo. Dublin, 1877
- : *On some recent improvements made in the mountings of the telescopes at Birr Castle. 4to. London, 1880
- : *Observations of nebulæ and clusters of stars made with the six-foot and three-foot reflectors at Birr Castle, from the year 1848 up to the year 1878. . . . Part 1-3. 4to. Dublin, 1880

Rossel (É. P. É. de):

- : A practical treatise on finding the latitude and longitude at sea ; with tables designed to facilitate the calculations. Translated from the French by Thomas Myers . . . to which are subjoined an extensive series of practical examples, an introduction to the tables, and some additional tables, by the translator. 8vo. London, 1815
- : Traité des calculs de l'astronomie nautique, avec des Tables destinées à en faciliter l'usage. 8vo. Paris, n.d.
- : See also Bézout, Traité de navigation ; Biot (J. B.), Traité d'astronomie physique.

Rossi (Gaetano):

Soluzione esatta e regolare del difficilissimo problema della quadratura del circolo. 8vo. Londra, 1804

Rost (Johann Leonhard):

- : Der aufrichtige Astronomus. 4to. Nürnberg, 1727
- : Atlas portatilis coelestis, oder compendiöse Vorstellung des gantzen Welt-Gebäudes, in den Anfangs-Gründen der wahren Astronomie. 8vo. Nürnberg, 1743
- : Astronomisches Handbuch . . . Neue Auflage herausgegeben von Georg Friederich Kordenbusch. 4 vols. 4to. Nürnberg, 1771-74

Rothman (R. W.):

- : *On an ancient observation of a winter solstice. 4to. Cambridge, 1830
- : *Account of observations of Halley's Comet. 4to. Cambridge, 1838

Rowe (John):

An introduction to the doctrine of fluxions . . . Second edition. 8vo. London, 1757

Rowland (David):

A brief description of the patent double sextant and circle. 8vo. London, 1840

Rowning (John):

- : Preliminary discourse to an intended treatise on the fluxional method. 8vo. London, 1756
- : Compendious system of natural philosophy, with notes, containing the mathematical demonstrations and some occasional remarks. . . . Sixth edition. 2 vols. 8vo. London, 1767-65
- : Ditto. Seventh edition. 2 vols. 8vo. London, 1772
- : *Directions for making a machine for finding the roots of equations universally; with the manner of using it. 4to. London, 1771

Royal Engineer Stations:

- : Abstracts from the meteorological observations taken at the stations of the Royal Engineers in the years 1853-59. Edited by H. James. 2 vols. 4to. London, 1855-62
- : Abstracts from the meteorological observations taken in the years 1860-61 at the Royal Engineer Office, New Westminster, British Columbia. Edited by H. James. 4to. London, 1862

Rubenson (R.):

*Om stormen den 30 Maj 1865, och följande dagar. 8vo. Stockholm, 1866

Rugby School Natural History Society:

Report for the years 1871-83. 8vo. Rugby, 1872-84

Rumford (Benjamin Thompson, Count):

- : Essays, political, economical and philosophical . . . fourth edition. Vol. 1-3. 8vo. London, 1798-1802
- : Complete works . . . Published by the American Academy of Arts and Sciences. 4 vols. 8vo. Boston, 1870-75

Rumford (Benjamin Thompson, Count)—continued.

— : Memoir with notices of his daughter. By G. E. Ellis. 8vo. Philadelphia [1873]

Rümker (Carl Ludwig):

- : Preliminary catalogue of fixed stars intended for a prospectus of a catalogue of the stars of the Southern hemisphere from the observations made in the Observatory at Paramatta. 4to. Hamburg, 1832
- : Ueber die Oerter sphärischer Dreiecke. 4to. Hamburg, 1834
- : Mittlere Oerter von 12,000 Fix-Sternen, für den Anfang von 1836, abgeleitet aus den Beobachtungen auf der Hamburger Sternwarte. oblong fol. Hamburg, 1843
- : Handbuch der Schifffahrts-Kunde, mit einer Sammlung von Seemanns-Tafeln Vierte Auflage. 8vo. Hamburg, 1844
- : Ditto. Fünfte Auflage. 8vo. Hamburg, 1850
- : Ditto. Sechste Auflage. 8vo. Hamburg, 1857
- : Längen-Bestimmung durch den Mond: eine nautisch-astronomische Abhandlung. 8vo. Hamburg, 1849
- : *See also* Hamburg, Sternwarte.

Rümker (Georg):

Die totale Sonnenfinsterniss am 18. Juli 1860, beobachtet zu Castellon de la Plana. 4to. Hamburg, 1861

Runkle (John D.):

*New tables for determining the values of the coefficients in the perturbative function of planetary motion, which depend upon the ratio of the mean distances. [With] Asteroid supplement. 4to. Washington, 1855

Rush (George):

Account of ascents in the *Nassau* and *Victoria* balloons, 1838, 1849 & 1850 and an appendix by W. H. Jones, consisting of tables for the measurement of heights by the barometer. 8vo. London, 1851

Russell (Henry Chamberlaine):

- : *Observations on the stars and nebula about η Argus. 8vo. Sydney, 1871
- : Climate of New South Wales: descriptive, historical, and tabular. 8vo. Sydney, 1877
- : *Storms on the coast of New South Wales. 8vo. Sydney, 1878
- : *Papers read before the astronomical section of the Royal Society of New South Wales, 1878-79. 8vo. Sydney, 1879-80
- : *The Wentworth hurricane. 8vo. Sydney, 1880
- : *Some new double stars and southern binaries. 8vo. Sydney, 1880
- : *The 'Gem' cluster in Argo. 8vo. Sydney, 1880
- : *Note upon a sliding-scale for correcting barometer readings to 32° Fah. and mean sea level. 8vo. Sydney, 1880

Russell (Henry Chamberlaine)—continued.

- : *Thunder and hail storms in New South Wales. 8vo. Sydney, 1881
- : *Recent changes in the surface of Jupiter. 8vo. Sydney, 1881
- : *Transit of Mercury, November 8th, 1881. 8vo. Sydney, 1882
- : *The spectrum and appearance of the recent comet [Comet b, 1881]. 8vo. Sydney, 1882
- : *Results of double star measures made at the Sydney Observatory, New South Wales, 1871 to 1881. 8vo. Sydney, 1882
- : *See also* Sydney Observatory.

Russell (John):

- A description of the Selenographia; an apparatus for exhibiting the phenomena of the Moon. 4to. London, 1797

Russia:

- : Nachricht von der Vollendung der Gradmessung zwischen der Donau und dem Eismeere. 8vo. St. Petersburg, 1853
- : *See* St. Petersburg.

Rutherford (John):

- A sketch on the loftiest science presented to the human mind; comprising an abstruse problem in nautical astronomy, with the key to its solution. 8vo. London, 1861

Rutherford (William):

- : *Computation of the ratio of the diameter of a circle to its circumference to 208 places of figures. 4to. London, 1841
- : The complete solution of numerical equations; in which, by one uniform process, the imaginary as well as the real roots are easily determined. 4to. London, 1849
- : Mathematical papers on statical friction and revetments. 8vo. Woolwich, 1859

Rutherford (William) and Stephen Fenwick:

- Elementary propositions in the geometry of co-ordinates, both of two and three dimensions. 4to. London, 1843

Rutherford (W.), S. Fenwick, and T. S. Davies:

- An elementary course of mathematics, prepared for the Royal Military Academy, by order of the Master-General and Board of Ordnance 2 vols. 8vo. London, 1853

Rutherford (T.):

- A system of natural philosophy, being a course of lectures in mechanics, optics, hydrostatics, and astronomy. 2 vols. 4to. Cambridge, 1748

Ryan (Matthew):

- The celebrated theory of parallels: demonstration of the celebrated theorem, Euclid I, Axiom 12; with appendix, containing the philosophy of the demonstration, together with the partial refutation of Sir William Hamilton's Philosophy of the Unconditioned or Infinite. 8vo. Washington, 1866

Sabine (Edward):

- : *Report on the variations of the magnetic intensity observed at different points of the earth's surface.
8vo. London, 1838
- : *Report on the magnetic isoclinal and isodynamic lines in the British Islands. 8vo. London, 1839
- : Magnetic observations. 8vo. n.d.
- : *See Colonial Magnetic Observatories, Cape of Good Hope, Hobarton, St. Helena, Toronto.*

Sabler (G.):

Beschreibung der zur Ermittelung des Höhenunterschiedes zwischen dem Schwarzen und dem Caspischen Meere in den Jahren 1836 und 1837 von G. Fuss, A. Sawitsch und G. Sabler ausgeführten Messungen zusammengestellt von G. Sabler. Herausg. von W. Struve. 4to. St. Petersburg, 1849

Sacrobosco or Sacrobusto (Joannes de):

- : Sphericū opusculū. Cōtraq: cremonēsia ī planetarum theoricas delyramēta Joānis de mōte regio disputationes tā acuratiss. q: vtiliss. Nec nō georgij purbachij ī eorūdē mot' planetarum acuratiss. theorice
4to. [Venetiis] E. Ratdolt, 1482
- : Sphaera Mvndi. (Sphäricū opusculū una cū additioib⁹ nōnullis Cōtraq: cremonēsia ī planetarum theoricas delyramēta Ioānis de mōteregio disputaēs ttā acuratiss. q' utilis. Nec nō Georgii purbachii ī eorūdē motus planetarum accuratis. theoreticæ) 4to. Venetiis, 1490
- : Opusculum Johannis de sacrobusto sphericū, cum notabili commento atq: figuris, textum declarantibus vtilissimis (per Wenceslaum Fabri de Budweysz correctum).
4to. Lipeck, 1499
- : Sphæra Iani de Sacrobvsto astronomiae ac cosmographiae candidatis scitu apprimē necessaria, per Petrum Apianum accuratissima diligentia denuo recognita ac emendata.
8vo. Ingolstadii, 1526
- : Sphaerae tractatus Joannis de Sacro Bvsto ; Gerardi Cremensis theoricæ planetarvm veteres ; Georgii Pvrbachii theoricæ planetarvm novae Joannis Baptistæ capuani sipontini expositio in sphæra & theoreticis [&c.]
fol. Venetiis, 1531
- : Libellvs de sphæra. Accessit eivsdem avtoris compvtvs ecclesiasticus cum prefatione Philippi Melanthonis. (Access. Themata quæ continent methodicam Tractationem de horizonte rationali ac sensibili [&c.], auctore Erasmo Reinholdo.) 8vo. Vitebergæ, 1545
- : Ditto. 8vo. Vitebergæ, 1558-78
- : Sphæra emendata. Eliæ Vineti Santonis scholia in eandem Sphærām, ab ipso auctore restituta. Adjunximus huic libro compendium in Sphærām per P. Valerianum et Petri Nonii demonstrationem.
8vo. Parisiis, 1569

Sacrobosco or Sacrobusto (Joannes de)—continued.

- : Quæstiones novæ in libellum de Sphaera . . . in gratiam studiosæ iuuentutis collectæ ab Ariele Bicardo. 8vo. Parisiis, 1569
- : Libellus . . . de anni ratione, seu vt vocatur vulgo, Computus ecclesiasticus. Cvm præfatione Philippi Melanchthonis. 8vo. Lutetiae, n.d.
- : Opusculum . . . sphericum cum notabili cōmēto a Magnifico viro domio Wenceslao Fabri de Budrveysz medicine Doctore edito, cumq : figuris textum declarantibus vtilissimis. 4to. (no place nor date)
- : De Arithmetica, *see* Halliwell ; Sphaera, *see* Clavius ; Junctinus.

Šafárik (—) :

- *Über die Sichtbarkeit der dunklen Halbkugel des Planeten Venus. 8vo. Prag, 1873

Safford (Truman Henry) :

- : *A new method for correcting a planet's orbit. 4to. Cambridge, Mass., 1857
- : *The observed motions of the companion of Sirius considered with reference to the disturbing body indicated by theory. 8vo. Cambridge, Mass., 1863
- : *On the Right Ascension of the Pole Star, as determined from observation. 8vo. Cambridge, Mass., 1864
- : Investigation of corrections to the Greenwich planetary observations from 1762 to 1830, prepared for the office of the American Ephemeris 4to. Washington, 1883
- : *See* Harvard College Observatory.

Saigeay (Jacques Frédéric) et Coulvier Gravier :

- Recherches sur les étoiles filantes. 8vo. Paris, 1847

Saint (W.) :

- Remarks on the elements of the true arithmetic of infinities by Thomas Taylor (the Platonist). 8vo London (1811)

St. Helena, Hon. East India Company's Observatory :

- : Astronomical Observations . . . 1831. By Manuel J. Johnson. 4to. St. Helena, 1832
- : A catalogue of 606 principal fixed stars . . . by Manuel J. Johnson. 4to. London, 1835

St. Helena, Magnetical and Meteorological Observatory :

- Observations . . . printed . . . under the superintendence of Lieut.-Col. Edward Sabine, 1840-49. 2 vols. 4to. London, 1847-60

St. Petersburg :

- : Annuaire Magnétique et Météorologique du Corps des Ingénieurs des Mines de Russie, ou Recueil d'observations magnétiques et météorologiques faites dans l'étendue de l'empire de Russie, et publiées . . . par A. T. Kupffer, 1837-46. 10 vols. 4to. St. Pétersbourg, 1839-49
- : Observations météorologiques et magnétiques faites dans l'empire de Russie, rédigées et publiées . . . par A. T. Kupffer. Tome 1. 4to. St. Pétersbourg, 1837

St. Petersburg—continued.

- : Recueil d'observations magnétiques faites à St. Pétersbourg et sur d'autres points de l'empire de Russie, par A. T. Kupffer et ses collaborateurs.
4to. St. Pétersbourg, 1837
- : Travaux de la Commission pour fixer les mesures et les poids de l'empire de Russie. Rédigés par A. T. Kupffer.
2 vols. 4to. St. Pétersbourg, 1841
- St. Petersburg, Académie Impériale des Sciences:**
- : Commentarii Academiae Scientiarum Imperialis Petropolitanae 1726–46. Tom. 1–14. 4to. Petropoli, 1728–51
- : Novi Commentarii Academiae Scientiarum Imperialis Petropolitanae. 1747–75. Tom. 1–20. 4to. Petropoli, 1750–76
- : Acta Academiae Scientiarum Imperialis Petropolitanae. 1777–82. 12 vols. 4to. Petropoli, 1778–86
- : Nova Acta Academiae Scientiarum Imperialis Petropolitanae. 1783–90. Tom. 1–8. 4to. Petropoli, 1787–94
- : Mémoires, Tome 10, avec l'Histoire de l'Académie pour les années 1821–22. 4to. St. Pétersbourg, 1826
- : Recueil des Actes de la séance solennelle de l'Académie . . . tenue à l'occasion de sa fête séculaire . . . 1826.
4to. St. Pétersbourg, 1827
- : Recueil des Actes des séances publiques . . . 1827–48.
4to. St. Pétersbourg, 1828–49
- : Mémoires présentés . . . par divers savants et lus dans ses assemblées. Tome 1–9. 4to. St. Pétersbourg, 1831–59
- : Mémoires . . . 6^{me} Série, sciences mathématiques, physiques et naturelles. Tome 1, 2.
4to. St. Pétersbourg, 1831–33
- : Mémoires . . . sixième série, sciences mathématiques, physiques et naturelles, Tome 3–9. Première partie, sciences mathématiques et physiques, Tome 1–7.
4to. St. Pétersbourg, 1838–59
- : Mémoires, Série 7. Ouvrages astronomiques et géodésiques publiés dans la série. Tome 1, No. 1—Tome 31, No. 15.
4to. St. Pétersbourg, 1859–83
- : Compte Rendu, 1852–57. 8vo. St. Pétersbourg, 1853–58
- : Recueil des Mémoires présentés . . . par les astronomes de Pulkova, ou offerts à l'Observatoire Central par d'autres astronomes du pays. Publié par W. Struve et O. Struve.
Vol. 1, 2. 4to. St. Pétersbourg, 1853–59
- : Mélanges mathématiques et astronomiques tirés du Bulletin. Tome 1–6. [The Astronomical Papers only].
8vo. St. Pétersbourg, 1859–83
- : Bulletin. Tome 1–28. 4to. St. Pétersbourg, 1860–83
- : Tableau général méthodique et alphabétique des matières contenues dans les publications de l'Académie . . . 1^{re} partie, Publications en langues étrangères.
8vo. St. Pétersbourg, 1872

Salentin (L. M.):

Diamètre du tourbillon du soleil déterminé par les inclinaisons des orbites de ses planètes. 8vo. Paris, 1857

Salisbury (Thomas) :

Mathematical collections and translations containing
Galileus Galileus, his system of the world [&c.]
2 vols. in 1, fol. London, 1661

Sandeman (Patrick) :

Meteorological observations, chiefly intended to explain the
origin of the rainy seasons near the Equator, and changes
of the seasons and courses of the winds in more northerly
latitudes. 8vo. Greenock, n.d.

San Fernando, Observatorio Real de Marina :

- : Almanaque náutico y Efemérides astronómicas para el año
de 1830-32, 1834-50, 1855-64, 1867-85.
8vo. Madrid, 1827-83
- : Observaciones hechas en el Observatorio Real . . .
1833-35. 3 vols. in 1, fol. San Fernando, 1835-36
- : Anales del (Instituto y) Observatorio publicados de
orden de la superioridad por el Director C. Pujazon.
Sección 2. Observaciones meteorológicas, 1870-82.
fol. San Fernando, 1870-83
- : Anales Sección 1. Observaciones astronómicas :
eclipse de Sol de 22 de Diciembre de 1870.
fol. San Fernando, 1871
- : Formulas nuevas para calcular la aberracion de los planetas
(y de los cometas) por Don Josef Sanchez Cerquero.
8vo.

Sang (Edward) :

- : *Nouveau calcul des mouvements elliptiques.
4to. Turin, 1879
- : On the comet's [Comet b, 1881] close approach to the star
B.A.C. 1881 (Camelopardus H 21). 8vo. Edinburgh, 1881
- : See Shortrede (R.), Traverse tables.

Santiago de Chile :

*A catalogue of 1963 stars, reduced to the beginning of the
year 1850, together with a catalogue of 290 double stars.
The whole from observations made 1850-52 by the
U.S. Naval Astronomical Expedition James M.
Gilliss, superintendent. 4to. Washington, 1870

Santiago de Chile, Observatorio Nacional :

- : Observaciones astronómicas hechas en los años de
1853-60, por C. G. Moesta. Tomo 1, 2.
4to. Santiago de Chile, 1859-75
- : Observaciones meridianas i micrométricas relativas al
planeta Marte al tiempo de su oposición en 1862.
fol. Santiago, 1863
- : Observaciones meteorológicas verificadas en el Observatorio
Astronómico de Santiago (i en Valparaíso) en los años
1868-64, por C. G. Moesta. 8vo. Santiago de Chile, 1863-65

Santini (Giovanni) :

- : *Teoria del nuovo pianeta Vesta, ricavata dalle opposizioni
degli anni 1808-14. 4to. Verona, 1816

Santini (Giovanni)—*continued.*

- : Elementi di Astronomia, con le applicazioni alla geografia, nautica, gnomonica, e cronologia. 2 vols. 4to. Padova, 1819-20
- : Ditto. Edizione secunda. 2 vols. 4to. Padova, 1830
- : *Osservazioni intorno all' ecclisse solare del giorno 7 Settembre dell' anno 1820. 4to. Modena, 1824
- : *Osservazioni intorno alla cometa apparsa agli ultimi di Dicembre dell' anno 1823, fatte nell' Regio Osservatorio di Padova. 4to. Padova, 1825
- : Teorica degli stromenti ottici destinati ad estendere confini della visione naturale. 2 vols. 8vo. Padova, 1828
- : *Ritorno della cometa periodica di Biela al suo perielio nell' anno 1832. 4to. Padova, 1833
- : *Calcolo delle variazioni prodotte negli elementi ellittici della cometa detta di Biela dall' azione di Giove, di Saturno e della Terra 1832-39. 4to. Padova, 1835
- : *Ricerche intorno alla massa di Giove determinata mediante le digressioni del suo quarto satellite. 4to. Modena, 1836
- : *Opuscoli astronomici intorno alle comete osservate dall' anno 1830 fino all' anno 1835. 4to. Padova, 1836
- : *Descrizione del circolo meridiano dell' I. R. Osservatorio di Padova, seguita da un Catalogo di stelle fisse per l'anno 1840. 4to. Padova, 1840
- : *Posizioni medie delle stelle fisse ridotte al principio dell' anno 1840. 4to. Padova, 1840
- : *Considerazioni intorno al calcolo degli oculari per i cannocchiali astronomici. 4to. Venezia, 1842
- : *Osservazioni intorno alle comete apparse nell' anno 1843 fatte nell' I. R. Osservatorio di Padova. 4to. Modena, 1844
- : *Calcolo delle perturbazioni della cometa di breve periodo appellata di Biela 1846-52. 4to. Venezia, 1851
- : *Sul progresso degli Studii Astronomici negli ultimi tempi. 8vo. Venezia, 1853
- : *Descrizione di un oculare composto da cinque lenti pe' cannocchiali della terza specie, appellati terrestri. 8vo. Padova, 1855
- : *Annotazioni intorno alla cometa periodica di Biela, ed alla III Cometa del 1854. 8vo. Venezia, 1855
- : *Dei diversi metodi per determinare le longitudini geografiche 8vo. Padova [1855]
- : *Osservazioni della ecclisse solare del giorno 28 Luglio 1851 fatte in diversi osservatorii di Europa, calcolate per G S 4to. Venezia, 1856
- : *Intorno ai micrometri formati nell' campo oscuro di un cannocchiale con linee chiare e punti luminosi dietro i progetti proposti dal Sig. Simone Stampfer. 8vo. Venezia, 1857
- : *Posizioni medie di 2706 stelle pel 1 Gennajo 1860 distribuite nella zona compresa fra 10° e $12^{\circ} 30'$ di declinazione australe, dedotte dalle osservazioni fatte negli anni 1856-58 nell' I. R. Osservatorio di Padova. 4to. Venezia, 1858

Santini (Giovanni)—continued.

- : *Intorno alla cometa periodica di Biela di cui attendesi il ritorno al perielio nel prossimo meso di Maggio 1859.
8vo. Venzia, 1859
- : *Esperimento Astronomico eseguito sul picco di Teneriffa nel 1856 dal Prof. C. Piazzi-Smith. 8vo. Padova, 1860
- : *Posizioni medie di 2246 stelle distribuite nella zona compresa fra li $12^{\circ} 30'$ e li 15° di declinazione australe dedotte dalle osservazioni fatte dal Sig. Trettenero nell' I. R. Osservatorio di Padova, 1857-61. 4to. Venezia, 1862
- : *Cenni storici intorno alla misura dell' arco dell' meridiano di $25^{\circ} 20'$ eseguita in Russia 1812-52. 8vo. Padova, 1862
- : *Delle recenti ricerche intorno alla vera figura della Terra. 4to. Venezia, 1863
- : *Relazione intorno alle attrazioni locali risultanti nei contorni di Mosca, dietro il confronto delle posizioni geodesiche con le osservazioni astronomiche istituite in diversi punti di quel circondario. 4to. Venezia, 1865
- : *Delle interpolazioni e quadrature meccaniche per gli usi astronomici. 4to. Venezia, 1866
- : *Cenni relativi alle osservazioni stellari postume del fu Prof. Virgilio Trettenero seguite da una relazione del recente catalogo di stelle del Sig. Lamonte di Monaco.
8vo. Venezia, 1867
- : *Notizie intorno agli apparati magneto-elettrici per la determinazione delle longitudini geografiche.
8vo. Padova, 1867
- : *Posizioni medie di 1425 stelle pel principio del 1860 distribuite nella zona compresa fra 0° e 3° di declinazione australe, dedotte dalle osservazioni fatte dal Prof. Trettenero nel R. Osservatorio di Padova 1861-63.
4to. Venezia, 1870

— : [Life], see Millosevich, Lorenzoni.

Sarsi (Lotario), see Grassi.

Saturn's Rings:

The meteoric theory of Saturn's rings, considered with reference to the solar motion in space. By S. M. D.
8vo. Dublin, 1867

Sauer (Martin):

An account of a geographical and astronomical expedition to the northern parts of Russia performed by Commodore Joseph Billings in the years 1785-94.
4to. London, 1802

Saunders (Richard):

The astrological judgement and practice of physiek.
8vo. London, 1677

Saunderson (Nicholas):

- : The elements of algebra, in ten books To which is prefixed an account of the author's life and character.
2 vols. 4to. Cambridge, 1741-40
- : The method of fluxions, applied to a select number of useful problems.
8vo. London, 1756

Saussure (Horace Bénédict de) :

Essais sur l'Hygrométrie.

4to. Neuchatel, 1783

Savérien (Alexandre) :

- : Dictionnaire universel de mathématique et de physique, où l'on traite de l'origine, du progrès de ces deux sciences & les arts qui en dépendent, & les diverses révolutions qui leur sont arrivées jusqu'à notre tems. 2 vols. 4to. Paris, 1753
- : Histoire des Philosophes modernes. Seconde édition. 8 vols. 12mo. Paris, 1762-73

Savile (Henry) :

Prelectiones tresdecim in principium elementorum Euclidis, Oxonii habitæ, MDCXX. 4to. Oxonii, 1621

Sawitsch (Alexei) :

- : Abriss der practischen Astronomie, vorzüglich in ihrer Anwendung auf geographische Ortsbestimmung . . . aus dem Russischen übersetzt von Dr. W. C. Goetze. 2 vols. in 1, 8vo. Hamburg, 1850-51

- : (Theory of Probabilities : in Russian). 8vo. St. Petersburg, 1857
- : Die Anwendung der Wahrscheinlichkeitstheorie auf die Berechnung der Beobachtungen und geodätischen Messungen, oder die Methode der kleinsten Quadrate . . . Deutsch bearbeitet von C. G. Lais. 8vo. Mitau und Leipzig, 1863

Sawyer (Edwin F.) :

*First catalogue of radiant points of meteors.

8vo. New Haven, 1879

Sawyer (F. E.) :

The climate of Brighton ; being a summary of meteorological observations made in the town to the end of 1870, by S. Barker, E. Rowley, and F. E. Sawyer. 12mo. Brighton, 1871

Sayce (A. H.) :

*The astronomy and astrology of the Babylonians, with translations of the tablets relating to these subjects.

8vo. London, 1874

Scaliger (Josephus Justus) :

- : Opvs novvm de emendatione temporvm in octo libros tribvtvm. fol. Lvtetiæ, 1583
- : Cyclometrica elementa duo. fol. Lugduni Batavorum, 1594
- : In Mesolabium. fol. Lugduni Batavorum, 1594
- : Opvs de emendatione temporvm : hac postrema editione . . . addita vetervm Græcorvm fragmenta selecta. 2 parts in 1 vol. fol. Genevæ, 1629

Scarpellini (Caterina) :

- : *Ipotesi sulla fisica e meccanica celeste secondo il sistema fluidale-elettro-magnetico. 4to. Roma, 1859
- : *Il grande eclisse solare del 18 Luglio 1860. 4to. Roma, 1860
- : *Sur les étoiles filantes du 10 août 1862. Lettre à M. Ad. Quetelet. 8vo. Bruxelles, 1862

Scarpellini (Erasmo Fabri):

- : *Sopra alcuni nuovi riflettori lavorati in Roma per uso di grandi telescopii. 4to. Roma, 1835
 — : Ditto. Seconda edizione, accresciuta di un appendice per cura di Pietro Biolchini. 8vo. Roma, 1838
 — : *Cenno necrológico dell' astronomo P. Giovanni Inghirami. 8vo. Roma.
 — : *Memorie di Niccold Cacciatore. 8vo. Roma.

Schaeberle (J. M.):

- *On the remarkable Aurora of September 12-13, 1881.
 8vo. New Haven, 1881

Schaub (Franz):

- : *Beobachtungen der totalen Sonnenfinsterniss am 7. Juli 1842 in der österreichischen Monarchie und Turin.
 4to. Wien, 1843
 — : Magnetische Beobachtungen im östlichen Theile des Mittelmeeres ausgeführt im Jahre 1857. 4to. Triest, 1858
 — : Leitfaden für den Unterricht in der nautischen Astronomie in der kais. kön. Marine Zweite Auflage.
 8vo. Wien, 1860

Scheibel (Johann Ephraim):

- Einleitung zur mathematischen Bücherkenntniss. Stück 13-16 (Astronomische chronologische Bibliographie, xv. und xvi. Jahrhundert).
 8vo. Breslau, 1784-86

Scheiner (Christoph):

- : Rosa Vrsina, sive sol ex admirando facularum & macularum suarum phænomeno varius, neenon circa centrum suum & axem fixum ab ortu in occasum conuersione quasi menstrua, super polos proprios, libris quatuor mobilis ostensus. fol. Bracciani, 1630
 — : Oculus; hoc est fundamentum opticum, in quo ex accurata oculi anatomie radius visualis eruitur; sua visioni in oculo sedes decernitur; anguli visorii ingenium aperitur [&c.] 4to. Londini, 1652

Schellen (Heinrich):

- : Die Spectralanalyse in ihrer Anwendung auf die Stoffe der Erde und die Natur der Himmelskörper Zweite Auflage. 8vo. Braunschweig, 1871
 — : Ditto. Dritte Auflage.
 2 vols. 8vo. Braunschweig, 1883
 — : Spectrum analysis in its application to terrestrial substances, and the physical constitution of the heavenly bodies Translated by Jane and Caroline Lassell. Edited, with notes, by William Huggins.
 8vo. London, 1872

Scherffer (Carl):

- : Institutionum geometricarum pars prima (secunda, tertia et quarta), sive geometria elementaris, conscripta in usum tironum. 4 parts in 1 vol. 4to. Vindobonæ, 1770
 — : Institutiones astronomiae theoreticæ, conscriptæ in usum tironum. 4to. Vindobonæ, 1777

Schiaparelli (Giovanni V.):

- : *Notizie sulla vita e sugli scritti di Francesco Carlini.
8vo. Milano, 1863
- : *Intorno al corso ed all'origine probabile delle stelle meteoriche. Lettere al P. A. Secchi. 4to. Roma, 1866
- : *Note e riflessioni intorno alla teoria astronomica delle stelle cadenti. 4to. Firenze, 1867
- : *Sulla velocità delle meteore cosmiche nel loro movimento a traverso dell' atmosfera terrestre. 8vo. Milano, 1868
- : *Alcune principali radiazioni meteoriche dedotte dalle osservazioni di stelle cadenti fatte a Bergamo dal sig. G. Zezioli . . . 1867-69. 8vo. Milano, 1870
- : *Alcuni risultati preliminari tratti dalle osservazioni di stelle cadenti pubblicate nelle Effemeridi degli anni 1868, 1869, 1870 [2 papers]. 8vo. Milano [1870]
- : Entwurf einer astronomischen Theorie der Sternschnuppen . . . Aus dem Italienischen übersetzt und herausgegeben von Georg von Boguslawski. 8vo. Stettin, 1871
- : *Il periodo undecennale delle variazioni diurne del magnetismo terrestre considerato in relazione colla frequenza delle macchie solari. Risultati di 38 anni di osservazioni fatte a Milano. 4to. Palermo, 1874
- : *Sul calcolo di Laplace intorno alla probabilità delle orbite cometarie iperboliche. 8vo. Milano, 1874
- : *Osservazioni astronomiche e fisiche sull'asse di rotazione e sulla topografia del pianeta Marte fatte nella reale Specola di Brera in Milano coll' Equatoriale di Merz durante l' opposizione del 1877. 4to. Roma, 1878
- : *Osservazioni astronomiche e fisiche sull'asse di rotazione e sulla topografia del pianeta Marte fatte nella reale Specola di Brera in Milano coll' Equatoriale di Merz. Memoria seconda. 4to. Roma, 1881
- : *Osservazioni sulla topografia del pianeta Marte fatte a Milano coll' equatoriale di Merz durante l' opposizione 1881-82. Communicazione preliminare. 4to. Roma, 1882
- : *Misure di alcune principali Stelle doppie di rapido movimento orbitale eseguite negli anni 1875-1882 col Refrattore di Merz del R. Osservatorio di Brera in Milano.
4to. Milano, 1882

Schiaparelli (Giovanni V.) e Francesco Denza :

*Sulla grande pioggia di Stelle cadenti prodotta dall'a cometa periodica di Biela osservata 27 Nov. 1872. 8vo. Milano, 1872

Schier (Carl H.):

Globus coelestis Arabiens, qui Dresdae in Regio Museo mathematico asservatur.
4to. Lipsiae, 1865

Schiller (Julius):

Cælum Stellatum Christianum, ad maiorem Dei Omnipotentis, Sanctæque Eius . . . Ecclesiae Gloriam, obductis Gentilium simulachris, Eidem Domino et Creatori suo, postliminio quasi restitutum . . . Sociali operâ J. Bayeri Vranometriam nouam . . . suppeditantis. . . .
obl. fol. Augustæ Vindelicorum, 1627

Schilling (Mag. O.) et Adolph P. Weller:

De meritis Tychonis Brahe in Astronomiam Mechanicam
Dissertatio [Inauguralis]. 4to. Upsaliæ, 1792

Schimko (Johann Gottlieb):

Die Planetenbewohner, und ihre . . . verschiedene geistige
Vollkommenheit, mit besonderer Rücksicht auf des Men-
schen physischen und geistigen Zustand. 8vo. Olmütz, 1856

Schio (Almerico da):

Di due astrolabi in caratteri eufici occidentali trovati in Val-
dago (Veneto). 4to. Venezia, 1880

Schjellerup (H. C. F. C.):

- : Stjernefortegnelse indeholdende 10,000 Positioner af tele-
skopiske Fixstjerner imellem — 15 og + 15 Graders Dekli-
nation. 4to. Kjöbenhavn, 1864
- : *Genäherte Örter der Fixsterne. 4to. Leipzig, 1867
- : *Bidrag til bedömmelsen af de moderne maaneelementers
paalidelighed. 8vo. Kjöbenhavn, 1874
- : See Al Sufi, Description des étoiles fixes.

Schläfli (Ludwig):

- : Lösung einer Pendel-Aufgabe. (Zum Lections-Katalog der
Berner Hochschule, 1867.) 4to. Bern, 1867
- : Einige Zweifel an der allgemeinen Darstellbarkeit einer
willkürlichen periodischen Function einer reellen Variablen
durch eine trigonometrische Reihe. [Inaugural-Disses-
tation.] 4to. Bernæ, 1874

Schlagintweit (Hermann von):

*Optische Erscheinungen der Atmosphäre. 8vo. Leipzig [1850]

Schlegel (Gustave):

- : Uranographie Chinoise ou preuves directes que l'astrono-
mie primitive est originaire de la Chine, et qu'elle a été
empruntée par les anciens peuples occidentaux à la sphère
chinoise. 2 vols. 8vo. La Haye & Leyde, 1875
- : Atlas céleste chinois et grec d'après le Tien-Youen-Li-Li.
fol. La Haye & Leyde, 1875
- : *Réponse aux critiques de l'Uranographie Chinoise.
8vo. La Haye, 1880

Schmalcalder (—) :

A short explanation of the use and advantages of the patent
repeating theodolite. 8vo. London, 1818

Schmerbauch (Gottlieb Heinrich):

Cogitationes rationales de systemate mundi. [Inaugural-
Dissertation.] 4to. Vitebergae, 1737

Schmick (J. Heinrich):

- : Der Mond als glänzender Beleg für die kosmisch bewirkte
säkulare Umlegung verschiebbarer Bestandtheile der Welt-
körper. 8vo. Leipzig, 1876
- : Sonne und Mond als Bildner der Erdschale erwiesen durch
ein klares Zeugniss der Natur. Einige Verwendungen
dieses Ergebnisses. 8vo. Leipzig, 1878

Schmidt (Johann Friedrich Julius):

- : Beobachtung der totalen Sonnenfinsterniss vom 28sten Juli 1851 zu Rastenburg in Ostpreussen. 4to. Bonn, 1852
- : Das Relief der sichtbaren Halbkugel des Mondes, angefertigt von Th. Dicker. 8vo. Bonn [1854]
- : Das Zodiacallicht. Uebersicht der seitherigen Forschungen nebst neuen Beobachtungen über diese Erscheinung in den Jahren 1843 bis 1855. 8vo. Braunschweig, 1856
- : Der Mond. Ein Ueberblick über den gegenwärtigen Umfang und Standpunkt unserer Kenntnisse von der Oberflächengestaltung und Physik dieses Weltkörpers. 8vo. Leipzig, 1856
- : Resultate aus elfjährigen Beobachtungen der Sonnenflecken. 4to. Wien und Olmütz, 1857
- : *Ueber die Bewegung dunkler und heller Flecken auf Jupiter. 4to. Altona, 1865
- : *Beobachtung der Meteore in der Nacht des 13.—14. November 1866. 8vo. Wien, 1866
- : Über Rillen auf dem Monde. 4to. Leipzig, 1866
- : *Über Feuermeteore 1842 bis 1867. 8vo. Wien, 1867
- : Charte der Gebirge des Mondes, nach eigenen Beobachtungen in den Jahren 1840—1874. 25 Blätter. (fol. 4to.), Berlin, 1878
- : Erläuterungsband. 4to. Berlin, 1878
- : See also Athens Observatory; Lohrmann's Mondcharthe.

Schmitz (J. W.):

- : De l'état stationnaire de la philosophie naturelle, ou indications des recherches à faire dans l'astronomie et la physique. 8vo. Paris et Bruxelles, 1837
- : Natur-Astronomie für jeden gesunden Menschenverstand. 8vo. Köln, 1857

Schomburg (Heinrich):

Geoscopiae Selenitarum, h.e. disuersus astronomici de figura, magnitudine [&c.], telluris è lunâ spectatae. Pars prima.
[Inaugural Dissertation.] 4to. Jenæ, 1654

Schoner (Johann):

Tabvlæ astronomicæ, qvas uulgo, quia omni difficultate & obscuritate carent, Resolvtae uocant. Ex quibus cum erraticorum, tum etiam fixorum siderum motus facilime calculari possunt Ratio duodecim domorum cœli, Authore Ioanne de Monte regio. Præfatio Philippi Melanchthonis. 4to. Norimbergæ, 1536

Schönfeld (Eduard):

- : Nova elementa Thetidis, deducta ex observationibus annorum 1852 et 1853. [Inaugural Dissertation.] 4to. Bonnac, 1854
- : *Beobachtungen von veränderlichen Sternen. Angestellt auf der königlichen Sternwarte zu Bonn. 8vo. Wien, 1861
- : *Catalog von veränderlichen Sternen mit Einschluss der neuen Sterne. Mit Noten. 8vo. Mannheim [1866]

Schönenfeld (Eduard)—*continued.*

- : Zweiter Catalog von veränderlichen Sternen. Mit Noten.
8vo. [Mannheim, 1874]
— : Frédéric Argelander (traduit par E. Mailly).
8vo. (Bruxelles).

Schoof (W. G.):

- Improvements in the lever-escapement for watches and marine
chronometers. 8vo. London, 1874

Schooten (Fr. van):

- Tabulæ Sinuum, tangentium, secantium, ad radium
10000000. 16mo. Amsterdam, 1627

Schöpffer (Carl):

- Die Bewegungen der Himmelskörper. Neue und unwiderlegliche Beweise dass unsere Erde im Mittelpunkte des Weltalls steht, und Sonne, Mond und Sterne sich um dieselbe bewegen. 8vo. Braunschweig, 1854

Schorr (F.):

- : Der Vorübergang der Venus vor der Sonnenscheibe am 9. December 1874 und die Bestimmung der Entfernung der Sonne. 8vo. Braunschweig, 1873
— : Der Venusmond und die Untersuchungen über die früheren Beobachtungen dieses Mondes. 8vo. Braunschweig, 1875

Schram (Robert):

- *Hilfstafeln für Chronologie. 4to. Wien, 1883

Schreckenfuchs (E. O.), *see* Garcæus; Ptolemy.

Schröder (G.):

- Sonnenflecken-Beobachtungen im Januar 1861. Inaugural-Dissertation. 8vo. Göttingen, 1861

Schröder (J. F. L.):

- Oratio de majoribus corporum coelestium permutationibus,
quatenus ex iis progressum naturæ in his corporibus formandis suspicari licet. [Inaugural Dissertation.]
8vo. Trajecti ad Rhenum, 1816

Schroeder (Karl):

- La rotation souterraine de la masse ignée, ses causes et ses
conséquences. 8vo. Paris, 1856

Schrön (Ludwig):

- Seven-figure logarithms of numbers from 1 to 108,000, and of
sines, cosines, tangents, cotangents, to every 10 seconds of
the quadrant. . . . Fifth edition with a description
of the tables added by A. De Morgan. 4to. London, 1865

Schröter (Johann Hieronymus):

- : Beobachtungen über die Sonnenfackeln und Sonnenflecken
samt beylæufigen Bemerkungen ueber die scheinbare Flæche,
Rotation und das Licht der Sonne. 4to. Erfurt, 1789
— : Selenotopographische Fragmente zur genauern Kenntniss
der Mondflæche, ihrer erlittenen Veränderungen und Atmo-
sphäre, sammt den dazu gehörigen Specialcharten und Zeich-
nungen. 2 vols. 4to. Göttingen, 1791-1802

Schröter (Johann Hieronymus) — *continued.*

- : Aphroditographische Fragmente, zur genauern Kenntniss des Planeten Venus; sammt beygefügter Beschreibung des Lilenthalischen 27-füssigen Telescops, mit practischen Bemerkungen und Beobachtungen über die Grösse der Schöpfung. 4to. Helmstedt, 1796
- : Lilenthalische Beobachtungen der neu entdeckten Planeten Ceres, Pallas und Juno. 8vo. Göttingen, 1805
- : Kronographische Fragmente zur genauern Kenntniss des Planeten Saturn, seines Ringes und seiner Trabanten. Erster Theil. 8vo. Göttingen, 1808
- : Beobachtungen des grossen Cometen von 1807; sammt einem Nachtrage zu den aphroditographischen Fragmenten. 8vo. Göttingen, 1811
- : Areographische Beiträge zur genauern Kenntniss und Beurtheilung des Planeten Mars, in mathematisch-physischer Hinsicht . . . Herausgegeben von H. G. van de Sande Bakhuyzen. 8vo. [with Atlas in fol.], Leiden, 1881
- : Areographische Fragmente, *see* Terby (F.).

Schubart (Th.) :

Description et notices sur l'installation et l'entretien des Météorographes graveurs de Van Rysselberghe & Schubart.
8vo. Gand, 1880

Schubert (E.) :

- : Tables of Harmonia computed for the American Ephemeris and Nautical Almanac. 4to. Washington, 1869
- : Tables of Parthenope computed for the American Ephemeris and Nautical Almanac. 4to. Washington, 1871

Schubert (Friedrich Theodor) :

- : Populäre Astronomie. Erster Theil. Geschichte der Astronomie und sphärische Astronomie.
8vo. St. Petersburg, 1804
- : Traité d'astronomie théorique.
3 vols. 4to. St. Pétersbourg, 1822

Schubert (Gotthilf Heinrich von) :

- : Die Urwelt und die Fixsterne. Eine Zugabe zu den Ansichten von der Nachtseite der Naturwissenschaft.
8vo. Dresden, 1822
- : Ditto . . . zweite . . . Auflage.
8vo. Dresden und Leipzig, 1839
- : Lehrbuch der Sternkunde für Schulen und zum Selbstunterrichte. . . . Dritte Auflage. 8vo. Erlangen, 1847

Schubert (T. F. de) :

- : Exposé des travaux astronomiques et géodésiques exécutés en Russie dans un but géographique jusqu'à l'année 1855, avec supplément. 4to. St. Pétersbourg, 1858
- : *Essai d'une détermination de la véritable figure de la Terre. 4to. St. Pétersbourg, 1859
- : *Sur l'influence des attractions locales dans les opérations géodésiques. 4to. Altona, 1860

Schulhof et Bossert, see Paris, Observatoire.

Schultz (Hermann):

- : Declinations-Bestimmungen mit dem Dollond'schen Durchgangs-Instrumente auf der Berliner Sternwarte. 4to. Berlin, 1858
- : *Mars-Beobachtungen 1862. 8vo. Upsala, 1862
- : *Mikrometrisk bestämning af 104 stjernor inom telescopiska stjerngruppen 20 Vulpeculae. 4to. Stockholm, 1873
- : *Micrometrical observations of 500 Nebulae. 4to. Upsala, 1874
- : *Om komparations-stjernorna vid nebulos-observationerna i Upsala. 8vo. Stockholm, 1875
- : *Normalorter och oskulerande element för planeten Alexandra (54). 8vo. Stockholm, 1875
- : Astronomiska observations-konsten. 8vo. Upsala, 1878
- : Sferiska astronomins grundbegrepp. 8vo. Upsala, 1879

Schultzen (Georg):

Figur und Himmelsgestalten den Sonnenfinsterniss und grossen Gegenscheine der obern drey Planeten Saturni, Jovis und Martis, so sich begeben am 29. Martii, 17. Aprilis und 13. Juni altes Calenders im Jahr Christi MDCXXXIII.
4to. Leipzig.

Schulze (Gottlob Leberecht):

- : Das veranschaulichte Weltsystem, oder die Grundlehren der Astronomie und deren leichte und sichere Veranschauung durch eigenthümliche Versinnlichungswerzeuge dargestellt und nachgewiesen. 8vo. Leipzig, 1838
- : Astronomia per Nicolaum Copernicum instaurata religionis et pietatis Christianae per Martinum Lutherum ad scripturae sacrae normam repurgatae egregia adjutrix. [Inaugural Dissertation.] 8vo. Budissae, 1830

Schulze (L. R.):

- : Über den Lauf des D'Arrest'schen Cometen. [Inaugural-Dissertation.] 4to. Schwerin, 1862
- : *Elemente des ersten Cometen vom Jahre 1830, mit Berücksichtigung von 319 Beobachtungen. 8vo. Leipzig, 1873

Schumacher (Heinrich Christian):

- : Nachricht über den Apparat, dessen er sich zur Messung der Basis bei Braack im Jahre 1820 bedient hat. (Schreiben an Olbers.) 4to. Altona, 1821
- : Ephemeris of the distances of the four planets Venus, Mars, Jupiter and Saturn from the Moon's center for 1823 ('25, '27) . . . to which are annexed tables for finding the latitude by the polar-star for 1823, '27, '29. 4to. Copenhagen, 1821-27
- : Astronomische Abhandlungen. Heft 1-3. 4to. Altona, 1823-25
- : Sammlung von Hülftafeln, zweites Heft; Tafeln zur Reduction der in der 'Histoire Céleste' enthaltenen Beobachtungen. 8vo. Copenhagen, 1825

Schumacher (Heinrich Christian) — continued.

- : Journal of observations made for ascertaining the time of the place, in the observatory which was erected at Helgoland for that purpose. 4to. Altona, 1825
- : De Latitudine Speculae Havniensis brevis disquisitio. [Inaugural Dissertation.] 4to. Altonae, 1827
- : Distances of the Sun and the four planets Venus, Mars, Jupiter, and Saturn from the Moon calculated according to Mr. Bessel's method, together with their places for every day in the years 1835-37, to which is added an Ephemeris of the Moon [for 1835] the culmination of the Moon for every day in 1835 (and 1837) and tables for finding the latitude by the pole-star for 1835-37. 8vo. Copenhagen, 1834-37
- : Jahrbuch für 1836-41, 1843-44. 8vo. Stuttgart, 1836-44
- : Astronomische Hülftafeln (Tables auxiliaires astronomiques), 1821, 1823-29. 8 vols. 8vo. Copenhagen
- : See also Astronomische Nachrichten.

Schumacher (Heinrich Christian) und Carl Friedrich Gauß :

- Briefwechsel . . . Herausgegeben von C. A. F. Peters.
6 vols. 8vo. Altona, 1860-63

Schumann (G. A.) :

- Das Wissenswürdigste von den physischen Erscheinungen an den Weltkörpern, vorzüglich an der Erde. . . . Zweiter Theil, Von der Natur der Himmelskörper.
8vo. Quedlinburg und Leipzig, 1833

Schur (Wilhelm) :

- *Bestimmung der Masse des Planeten Jupiter aus Heliometer-Beobachtungen der Abstände seiner Satelliten.
4to. Halle, 1882

Schütte (Wilhelm) :

- Der Sternhimmel: eine populäre Darstellung des Weltgebäudes.
4to. Leipzig, 1877

Schwarz (Bernhard) :

- *Astronomische Untersuchung über eine von Archilochus und einer in einer assyrischen Inschrift erwähnte Sonnenfinsterniss.
8vo. Wien, 1883

Schwedoff (Théodore) :

- : Idées nouvelles sur l'origine des formes cométaires.
8vo. Odessa, 1877
- : Illusions astronomiques. I. Force répulsive du soleil. II. Matière spécifique cométaire. III. Le vide interplanétaire. IV. Conclusion. 8vo. Odessa, 1878
- : Théorie mathématique des formes cométaires. . . . Première partie : formes fondamentales. 8vo. Odessa, 1880
- : Les configurations de la grande comète de 1882 a, prédictes d'après la théorie des ondes cosmiques. fol. Odessa, 1882
- : Sur l'origine de la grêle. 8vo. Odessa, 1882

Schweigger (Joh. Salomo Christoph) :

- *Ueber die Natur der Sonne mit Beziehung auf v. Soemmerings Sonnenbeobachtungen. 8vo. Halle, 1829

Schweizer (Gottfried) :

- : *Bericht . . . ueber die Expedition nach Machnowka, behufs der Beobachtungen der totalen Sonnenfinsterniss des Jahres 1851. 8vo. Moskau, 1851
- : *Untersuchungen ueber die in der Naehe von Moskau stattfindende Local-Attraction. 8vo. Moskau, 1863

Schwerd (Friedrich Magnus) :

- : Die Beugungerscheinungen aus den Fundamentalgesetzen der Undulationstheorie, analytisch entwickelt, und in Bildern dargestellt. 4to. Mannheim, 1835
- : *See also* Speyer, Sternwarte.

Schwilgué (Th.) :

- Kurze Beschreibung der astronomischen Uhr des Strasburger Münsters. 12mo. Strasburg, 1857

Schinck (G.) :

- Mappa coelestis sive tabulae quinque inerrantium septimum ordinem non excedentium et usque ad xxx gradum decl. austr. pertinentium. fol. Lipsiae, 1843

Schyanoff (Alexandre) :

- Essai sur la métaphysique des forces inhérentes à l'essence de la matière, et introduction à une nouvelle théorie atomodynamique. . . . Deuxième édition. 8vo. Kiew, 1868

Science. An Illustrated Journal. Vol. 1-3.

4to. Cambridge, Mass., 1883-84

Science Observer. A Journal for Scientists. Vol. 1-4.

8vo. Boston, 1877-82

Scientific Memoirs, selected from the transactions of foreign Academies of Science and learned Societies, and from foreign Journals. Edited by Richard Taylor. Vol. 1, Vol. 2, Part 5, 6.

8vo. London, 1837-39

Scientific Opinion. Jan.-June, 1870.

4to. London.

Scientific Roll, and Magazine of systematized Notes. Conducted by Alexander Ramsay. No. 1-11.

8vo. London, 1880-83

Scoresby (William) :

- Magnetical investigations. Part 1. 8vo. London, 1739

Scott (Robert H.) :

- : Instructions in the use of meteorological instruments. 8vo. London, 1875

— : *See also* London, Meteorological Office.

Searle (Arthur) :

- *The zodiacal light. 8vo. Philadelphia [1883]

Secchi (Angelo) :

- : *Ricerche di reometria elettrica. 8vo. Roma, 1850

- : *Sopra un nuovo fotometro destinato specialmente a misurare l' intensità relativa della luce delle stelle. 4to. Roma, 1851

Secchi (Angelo)—*continued.*

- : *Sopra le osservazioni fatte alla Specola del Collegio Romano durante l' eclisse del 28 Luglio 1851. 4to. Roma, 1852
- : *Researches on electrical rheometry. 4to. Washington, 1852
- : *Sulle apparenze osservate nell' anello di Saturno nel 1850 e 1851. 4to. Roma, 1852
- : *Pontificia corrispondenza meteorologica telegrafica in Roma. 4to. Roma, 1855
- : *Ricerche sulla luce elettrica. 8vo. Torino, 1856
- : *Osservazioni di Saturno e suoi anelli. 4to. Roma, 1856
- : *Intorno ad un nuovo barometrografo. 4to. Roma, 1857
- : Misura della base trigonometrica eseguita sulla Via Appia . . . 1854-55. 4to. Roma, 1858
- : *Sulle Macchie Solari e del modo di determinare la profondità. 4to. Roma, 1858
- : Quadro fisico del sistema solare. 8vo. Roma, 1859
- : *Sulla eclisse solare del 18 Luglio 1860. 8vo. Roma, 1860
- : Relazione delle osservazioni fatte in Spagna durante l' eclisse totale del 18 Luglio 1860. 8vo. Roma, 1860
- : Catalogo di 1321 [1221] stelle doppie misurate col grande equatoriale di Merz all' Osservatorio del Collegio Romano e confrontate colle misure anteriori. 4to. Roma, 1860
- : *Alcune ricerche meteorologiche sulle tempeste occorse nel 1859-60. 4to. Roma, 1860
- : *Osservazioni e ricerche astronomiche sulla grande cometa del Giugno 1861. 8vo. Roma, 1861
- : *Intorno alla relazione che passa tra i fenomeni meteorologici e le variazioni del magnetismo terrestre. Memoria 2. 4to. Roma, 1862
- : *Sulle fotografie del sole fatte durante l' eclisse totale del 18 Luglio 1860. 4to. Roma [1862]
- : *L' unità delle forze fisiche; saggio di filosofia naturale. 8vo. Roma, 1864
- : *Ricerche sulla corrente elettrica, e sue analogie coi fenomeni idraulici. 4to. Roma, 1864
- : *Les découvertes spectroscopiques dans leurs rapports avec la recherche de la nature des corps célestes. (Traduit par A. Gautier.) 8vo. Genève, 1865
- : *Le scoperte spettroscopiche in ordine alla ricerca della natura de' corpi celesti. 8vo. Roma, 1865
- : *Sulle condizioni igieniche del Clima di Roma. 8vo. Roma, 1865
- : *Sugli spettri prismatici delle stelle fisse. 4to. Firenze, 1867
- : La météorologie et le météorographe à l'Exposition universelle. 8vo. Paris, 1867
- : *Ricerche sulle macchie solari e i loro movimenti. 8vo. Roma, 1867
- : *Le recenti scoperte astronomiche. 8vo. Roma, 1868
- : *Sull' ultima pubblicazione del prof. Volpicelli intorno alla cecità del Galileo. 8vo. Roma, 1868
- : *Sull' epocha vera e la durata della cecità del Galileo. 8vo. [Roma, 1868]

Secchi (Angelo)—*continued.*

- : *On stellar spectrometry. 8vo. London [1868]
- : *Sugli spettri prismatici delle stelle fisse. (Memorie 1 e 2.) 8vo. Roma, 1868
- : *Sulla grande nebulosa di θ' Orionis. 4to. Firenze, 1868
- : *Serie seconda delle misure micrometriche fatte all' equatoriale di Merz del Collegio Romano dal 1863 al 1866 inclusive. Stelle doppie e nebulose. 4to. Roma, 1868
- : Ditto, serie terza, *see* Ferrari.
- : *Fisica solare. Sulle ultime scoperte spettroscopiche fatte nel sole. 8vo. Roma, 1869
- : *Sugli spettri prismatici de' corpi celesti. Memoria 3. (Ricerche spettrali sul sole.) 4to. Firenze, 1870
- : *Sul Sole. 8vo. Roma, 1870
- : *Rapporto della Commissione per la misura del meridiano centrale Europeo negli Stati Pontifici. 4to. Roma, 1871
- : *Sulle protuberanze solari e le facole. 4to. Roma, 1871
- : *Sopra un nuovo metodo spettroscopico. 4to. Roma, 1871
- : *Ricerche Solari. 4to. Roma, 1871
- : *Sulla distribuzione delle protuberanze intorno al disco solare [&c.]. *Communicazioni* 3-13. 4to. Roma, 1871-75
- : *Sugli spettri prismatici de' corpi celesti. 4to. Roma, 1872
- : Note spettroscopiche sul sole e gli altri corpi celesti. 8vo. Roma, 1872
- : *Sull' Aurora Elettrica del 4 Febbraio 1872. 4to. Roma, 1872
- : *Sull' ultima eclisse del 12 Dicembre 1871. 4to. Roma, 1872
- : Die Sonne. Die wichtigeren neuen Entdeckungen über ihren Bau, ihre Strahlungen, ihre Stellung im Weltall und ihr Verhältniss zu den übrigen Himmelskörpern Autorisierte deutsche Ausgabe und Originalwerk herausgegeben von Dr. H. Schellen. 2 vols. 8vo. Braunschweig, 1872
- : *Riassunto delle osservazioni sulle protuberanze solari e la loro distribuzione fatte all' Osservatorio del Collegio Romano nell' anno 1871. 8vo. Pisa, 1872
- : *Il traforo delle Alpi nella catena del Moncenisio al Colle di Frejus. 4to. Roma, 1872
- : *Di alcuni fenomeni accaduti nella scarica di un fulmine in Alatri. 4to. Roma, 1872
- : *Le stelle cadenti del 27 Novembre 1872. 4to. Roma, 1873
- : *Cenni sulle macchie solari e la loro teoria. 8vo. Roma, 1873
- : *Intorno a due critiche fatte dal Sig. Bertrand ad alcuno teoria solari del P. Angelo Secchi. 8vo. Roma, 1874
- : *Studi fisici sulle comete del 1874. 8vo. Roma, 1874
- : *Note relative à l'observation du passage de Vénus devant le Soleil au moyen du spectroscope. 4to. Paris [1874]
- : Le Soleil . . . Deuxième édition, revue et augmentée. 2 vols. 8vo. with atlas of plates. 4to. Paris, 1875-77
- : *Sulla pioggia osservata al Collegio Romano dal 1825 al 1874. 4to. Roma, 1875

Secchi (Angelo)—*continued.*

- : *Studi fisici fatti all' Osservatorio del Collegio Romano sulle comete di Tempel (II) e Coggia (III) nel 1874. Seconda comunicazione. 4to. Roma, 1875
- : *Su gli ultimi avanzamenti dell' astronomia fisica e in particolare sulle macchie solari. 8vo. Roma, 1875
- : *Sull' ultimo passaggio di Venere avanti al sole nel Dicembre 1874. 4to. Roma, 1875
- : *Prodromo di un catalogo fisico delle stelle colorate. 4to. Palermo, 1876
- : *Di alcuni fatti relativi all' origine della grandine. 4to. Roma, 1876
- : Les étoiles, essai d'astronomie sidérale. 2 vols. 8vo. Paris, 1879
- : *Un orologio solare antico. 8vo.
- : Determinazione di longitudine, *see* Fergola e Secchi.
- : *Progetto di un monumento meteorologico da erigersi in Roma alla memoria del P. Angelo Secchi. 4to. Roma.
- : *See also* Rome, Collegio Romano ; Life, *see* Cacciatore (G.) ; Ferrari (G. S.).

Sector, The description and use of the, the crosse-staffe, and other instruments, for such as are studious of mathematical practise. 4to. London, 1624

Sédillot (J. J.), Instruments des Arabes, *see* Aboul Hhassan Ali.

Sédillot (L. Amédée) :

- : *Nouvelles recherches pour servir à l'histoire de l'astronomie chez les Arabes. 8vo. Paris, 1836
- : *Mémoire sur les instruments astronomiques des Arabes. 8vo. Paris, 1841
- : *Mémoire sur les systèmes géographiques des Grecs et des Arabes. 4to. Paris, 1842
- : *Sur la détermination de la troisième inégalité lunaire, ou variation, par les Arabes. 4to. Paris, 1843
- : *De la latitude de la lune. 4to. Paris, 1844
- : *Sur la découverte de la variation. 4to. Paris, 1844
- : *Réponse à quelques observations nouvelles sur la découverte de la variation, ou troisième inégalité lunaire, par les astronomes arabes du X^e siècle. 4to. Paris, 1845
- : Matériaux pour servir à l'histoire comparée des sciences mathématiques chez les Grecs et les Orientaux. 2 vols. 8vo. Paris, 1845-49
- : Courtes observations sur quelques points de l'histoire de l'astronomie et des mathématiques chez les Orientaux. 8vo. Paris, 1863
- : *Sur l'origine de la semaine planétaire, et de la spirale de Platon. 4to. Rome, 1874
- : *Sur les emprunts que nous avons faits à la science arabe, et en particulier de la détermination de la troisième inégalité lunaire, ou variation, par Aboul-Wéfà de Bagdad. 4to. Rome, 1875

Sédillot (L. Amédée)—*continued.*

[—] : Note relative à une édition des Tables Astronomiques d'Ooug-Beg, commencée en 1839. 8vo.

— : *See also* Paris, Observatoire.

Seeliger (Hugo):

— : Zur Theorie der Doppelsternbewegungen. Inaugural-Dissertation. 8vo. Leipzig, 1872

— : *Untersuchungen über die Bewegungsverhältnisse in dem dreifachen Sternsystem ζ Cancri. 4to. Wien, 1881

Séguin (Ainé):

Considérations sur les lois qui président à l'accomplissement des phénomènes naturels rapportés à l'attraction Newtonienne. 8vo. Paris, 1861

Seibt (Wilhelm), *see* Berlin, K. preuss. geodät. Institut.

Seidel (Ludwig):

— : *Untersuchungen über die gegenseitigen Helligkeiten der Fixsterne erster Grösse, und über die Extinction des Lichtes in der Atmosphäre. 4to. München, 1852

— : *Untersuchungen über die Lichtstärke der Planeten Venus, Mars, Jupiter und Saturn verglichen mit Sternen, und über die relative Weisse ihrer Oberflächen. 4to. München, 1859

Seinsheim (Philippus L. B. de):

Disquisitio astronomica de correctione calendarii. [Inaugural Dissertation.] 4to. Ingolstadtii, 1699

Selenographical Society:

The Selenographical Journal, Vol. 1–5. 8vo. London, 1879–83

[Seller (John)]:

Practical Navigation, or an introduction to the whole art. 4to.

Semler (Christian Gottlieb):

— : Vollständige Beschreibung von dem neuen Cometen des 1742sten Jahres, samt einer astronomischen Wiederlegung das der Stern der Weisen kein Comet gewesen 8vo. Halle, 1742

— : Vollständige Beschreibung des Sterns der Weisen, wobey zugleich der grosse Unterschied desselben von einem Cometen gezeiget, und von der wahren Zeit der Geburt Christi Mit A. N. Grischows Tage-Register von dem Cometen des 1743sten Jahres. 8vo. Halle, 1743

Sepulveda (Joannes Genesius) Cordubensis:

De correctione anni mensivmque Romanorvm commentatio. 8vo. Lutetiæ Parisiorum, 1547

Serooskerken (R. C. van Tuyll):

Disputatio mathematica inauguralis de latitudine ex obser-vatis duabus astrorum altitudinibus computanda.

4to. Trajecti ad Rhenum, 1823

Serpieri (Alessandro):

*La luce zodiacale, sue leggi e teoria cosmico-atmosferica, dedotte dalle osservazioni di G. Jones. 4to. Palermo, 1876

Serret (Joseph Alfred), *see* Paris, Observatoire.

Sestini (Benedetto):

- : Memoria sopra i colori delle stelle del Catalogo di Baily. 4to. Roma, 1845
- : A treatise of analytical geometry. 8vo. Washington, 1852
- : *Observations on Solar Spots, made at the Observatory of Georgetown College, 1850. 4to. Washington, 1853
- : A treatise on Algebra. 12mo. Baltimore, 1855
- : Ditto. Second edition. 12mo. Baltimore, 1855
- : Elements of Geometry and Trigonometry. 8vo. Baltimore, 1856

Settimanni (César):

- : D'une nouvelle méthode pour déterminer la parallaxe du soleil. 8vo. Florence, 1869
- : D'une seconde nouvelle méthode pour déterminer la parallaxe du soleil. 8vo. Florence, 1870
- : Nouvelle théorie des principaux éléments de la lune et du soleil. 4to. Florence, 1871
- : Supplément. 4to. Florence, 1874

Seue (C. de):

- Windrosen des südlichen Norwegens. 4to. Kristiania, 1876

Sexe (S. A.):

- Le Glacier de Boium en Juillet 1868. 4to. Christiania, 1869

Sextant:

- The description and use of a new astronomical instrument for taking altitudes of the Sun and Stars at sea, without an horizon [&c.]. 4to. London, 1735

Seydler (August):

- *Über die Bahn der Dione (106) [2 papers]. 8vo. Wien, 1872-77

Seyffarth Gustav. :

- : Beitraege zur Kenntniss der Literatur, Kunst, Mythologie und Geschichte des alten Aegypten. 8vo. Leipzig, 1833
- : *Corrections of the present theory of the Moon's motions, according to the classic eclipses. 8vo. Philadelphia, 1877

Shadwell (Charles F. A.):

- : Tables for facilitating the approximate prediction of occultations and eclipses for any particular place. 8vo. London, 1847
- : Tables for facilitating the determination of the latitude at sea by the simultaneous altitudes of two stars. 8vo. London, 1849
- : Tables for facilitating the determination of the latitude and time at sea by observations of the stars. . . . New edition. 8vo. London, 1854
- : Notes on the management of chronometers and the measurement of meridian distances. 8vo. London, 1855
- : Ditto. New edition. 8vo. London, 1861
- : Tables for facilitating the reduction of lunar observations. 8vo. London, 1860

Shadwell (Charles F. A.)—continued.

- : Formulae of navigation and nautical Astronomy. [Set of cards in case.] London, 1856
 — : Ditto. Revised editions. 1869 and 1878
 — : Notes on interpolation, mathematical and practical. 8vo. London [1879]

S[sharp], A[braham]:

Geometry improv'd: 1. by a large and accurate table of segments of circles . . . with compendious tables for finding a true proportional part, and their use . . . exemplify'd in making out logarithms or natural numbers from them, to sixty figures, there being a table of them for all primes to 1100, true to 61 figures. 2. A concise treatise of polyedra, or solid bodies of many bases. 4to. London, 1717

Sharpless (Isaac):

*The latitude of Haverford College Observatory. 8vo. Philadelphia, 1883

Sheepshanks (Richard):

- : Tables containing the logarithms of A, B, C, D, for every day in the year 1829. 8vo. London, 1829
 — : Tables for facilitating astronomical reductions. 4to. London, 1846
 — : A reply to Mr. Babbage's letter to the *Times* 'on the planet Neptune and the Royal Astronomical Society's Medal.' 8vo. London, 1847
 — : A letter to the Board of Visitors of the Greenwich Royal Observatory, in reply to the calumnies of Mr. Babbage . . . with correspondence prefixed. 8vo. London, 1860 (1854)
 — : *Memoir. 8vo. London, 1856

Shepheard's Kalender (the), newly augmented and corrected.
fol. [London].**(Shepherd, Antony):**

Tables for correcting the apparent distance of the Moon and a star from the effects of refraction and parallax. Published by order of the Commissioners of Longitude.

4to. Cambridge, 1772

Sherwin (Henry):

- : Mathematical tables. . . The third edition, carefully revised and corrected, by William Gardiner. 8vo. London, 1741
 — : Ditto. The fourth edition. 8vo. London, 1761

Shires (William):

The principles of mechanics, in three lectures; designed as an introduction to this branch of the mathematics.

8vo. London, 1818

Shortrede (Robert):

- : Compendious logarithmic tables, embracing logarithms to numbers and numbers to logarithms, with logarithmic sines and tangents to every five minutes of the quadrant. 8vo. Edinburgh, 1844
 — : Logarithmic tables to seven places of decimals, containing

Shortrede (Robert)—continued.

- logarithms to numbers from 1 to 120,000; numbers to logarithms from 10 to 1,000,000; logarithmic sines and tangents to every second of the circle, with arguments in space and time, and new astronomical and geodesical tables. 8vo. Edinburgh, 1844
- : Logarithmic tables to seven places of decimals, containing logarithmic sines and tangents to every second of the circle, with arguments in space and time. 8vo. Edinburgh, 1849
- : Traverse tables to five places for every 2' of angle up to 100 of distance. Edited by Edward Sang. 4to. Edinburgh, 1864

Sidereal heavens (a theory of the structure of the), including an explanation of the phenomena of the via lactea and nebulæ, founded on a new astronomical doctrine. 4to. London, 1842

Sidereal Messenger (the). A monthly journal devoted to Astronomical Science. Edited by O. M. Mitchel. Vol. 1, 2, and Vol. 3, No. 1, 2. 4to. Cincinnati, 1846-48

Sidereal Messenger (the). Conducted by Wm. W. Payne. Vol. 1, 2. 8vo. Northfield, Minn., 1883-84

Sidler (Georg):

- : Die Theorie der Kugelfunktionen. (Programm der Berner Kantonsschule, 1861.) 4to. Bern, 1861
- : Zur Dreiteilung eines Kreisbogens. (Programm der Berner Kantonsschule, 1876.) 4to. Bern, 1876

Siemens (Charles William):

- : *On the dependence of radiation on temperature. 8vo. London, 1883
- : On the conservation of solar energy: a collection of papers and discussions. 8vo. London, 1883
- : *On the conservation of solar energy: reply . . . to Mr. E. H. Cook. 8vo. London, 1883

Sigorgne (Pierre):

- : Praelectiones astronomiae Newtonianae, ad usum studiosae juventutis. . . . Edidit Aug. Frid. Boeckius. 8vo. Tubingae, 1769
- : Institutions Newtoniennes. . . . Seconde édition. 8vo. Paris, 1769
- : Institutiones astronomiae Newtonianæ. 8vo. Tubingæ, 1780

Silliman (Benjamin):

- First principles of chemistry. 8vo. Philadelphia, 1866

Silliman's Journal, *see* American Journal of Science.

Simmler (Rudolph Theodor):

- Beiträge zur chemischen Analyse durch Spectralbeobachtungen. 8vo. Chur, 1861

Simmons (G. Harvey):

- Meteorological Tables for the reduction of barometrical and hygrometrical observations [&c.]. 8vo. London, 1861

Simms (Frederick W.):

A treatise on the principal mathematical instruments employed in surveying, levelling, and astronomy.
8vo. London, 1834

Simms (William):

- : The achromatic telescope, and its various mountings, especially the equatorial : to which are added some hints on private observatories. 8vo. London, 1852
- : The sextant and its applications ; including the correction of observations for instrumental errors, and the determination of latitude, time and longitude by various methods, on land and at sea. 8vo. London, 1858

Simon (T. C.):

Scientific certainties of planetary life ; or, Neptune's light as great as ours, with various other hitherto unconsidered facts connected with the residence of moral agents in the worlds that surround the stars. 8vo. London, 1855

Simonelli (Jacob Philip), Ignatius Kegler, et Melchior a Briga:

Scientia Eclipsium ex imperio et commercio Sinarum illustrata, complectens Integras constructiones astronomicas J. P. Simonelli ; Observationes Sinicas &c. Ignatii Kegler ; Investigationes ordinis eclipsium Melchioris a Briga.

4 parts in 2 vols. 4to. Romæ et Lucæ, 1744-47

Simonoff (Ivan):

- : *Sur l'emploi des hauteurs correspondantes en mer. 8vo. St. Pétersbourg 1840
- : Recherches sur l'action magnétique de la terre. 8vo. Kazan, 1840

Simotta (George):

A theater of the planetary hovres for all dayes of the yeare, wherein may be gathered from the earth vnder the cœlestiall influences divers sorts of hearbs . . . for the vse of physick . . . the Sunne rising, and to finde the determinate houre of it. Translated out of Greeke . . . fitted to our calculation (by G. Baker). 4to. London, 1631

Simpson (Thomas):

- : A new treatise of fluxions, wherein the direct and inverse method are demonstrated after a new, clear, and concise manner, with their application to physics and astronomy. 4to. London, 1737
- : The nature and laws of chance. 4to. London, 1740
- : Essays on several curious and useful subjects in speculative and mix'd mathematicks, illustrated by a variety of examples. 4to. London, 1740
- : The doctrine of annuities and reversions, deduced from general and evident principles ; with useful tables, shewing the values of single and joint lives, &c. 8vo. London, 1742
- : Trigonometry, plane and spherical ; with the construction and application of logarithms. 8vo. London, 1748
- : The doctrine and application of fluxions, containing, besides

Simpson (Thomas)—continued.

- what is common on the subject, a number of new improvements in the theory. 2 vols. 8vo. London, 1750
- : Select exercises for young proficients in the mathematicks. 8vo. London, 1752
- : A treatise of algebra to which is added the geometrical construction of a great number of linear and plane problems, with the method of resolving the same numerically. Second edition. 8vo. London, 1755
- : Ditto. Eighth edition. 8vo. London, 1804
- : Miscellaneous tracts on some curious and very interesting subjects in mechanics, physical astronomy, and speculative mathematics; wherein the precession of the equinox, the nutation of the earth's axis, and the motion of the Moon in her orbit, are determined. 8vo. London, 1757
- : Elements of geometry, with their application to the mensuration of superficies and solids; to the determination of the maxima and minima of geometrical quantities Second edition. 8vo. London, 1760

Simson (Robert):

- : Opera quædam reliqua, scilicet, 1. Apollonii Pergæi de sectione determinata 2. Porismatum liber 3. De logarithmis liber. 4. De limitibus quantitatum et rationum fragmentum. 5. Appendix, pauca continens problemata ad illustrandam præcipue veterum geometrarum analysin post auctoris mortem edita cura vero J. Clow. 4to. Glasguæ, 1776
- : A treatise concerning Porisms Translated from the Latin by John Lawson. 4to. Canterbury, 1777
- : Elements of the conic sections. A new edition. 8vo. Glasgow, 1817
- : See also Apollonius; Euclid; Life, see Trail (W.).

Sinding (E. A. H.):

*Magnetiske undersøgelser foretagne i 1868.

8vo. Christiania, 1870

Singapore, East India Company's Magnetical Observatory:

Meteorological observations made by C. M. Elliott, in the years 1841–45. 4to. Madras, 1850

Sirigattus (Franciscus):

De ortu et occasu signorum libri duo. 4to. Lugduni, 1536

Sirius: Zeitschrift für populäre Astronomie. Herausgegeben von Rudolf Falb (und Hermann J. Klein). Band 9–17 (neue Folge, Band 4–12). 8vo. Leipzig, 1876–84
Skertchly (Sydney B. J.):

The physical system of the universe: an outline of physiography. 8vo. London, 1878

Slafter (Edmund F.):

History and causes of the incorrect latitudes as recorded in the journals of the early writers, navigators and explorers, relating to the Atlantic coast of North America, 1535–1740.

8vo. Boston, 1882

Slawinsky (Piotra):

- : *Poczatki Astronomii teoretycznej i praktycznej.* 8vo. Wilnie, 1826
 — : **Notice sur les observatoires en Angleterre.* 4to. Vilna, 1835
 — : *Remarques sur les observations faites à l'Observatoire de Vilna au cercle répétiteur de Reichenbach, de dix-huit pouces de diamètre.* 4to. Vilna, 1835

Slop (J. et F.): see Pisa.

Slusius [Sluse] (René François):

Mesolabum, seu duæ mediae proportionales inter extremas datas per circulum et per infinitas hyperbolas, vel ellipses et per quamlibet exhibitæ, ac problematum omnium solidorum effectio per easdem curvas; accessit pars altera de analysi, et miscellanea. 4to. Leodii Eburonum, 1668

Small (Robert):

An account of the astronomical discoveries of Kepler, including an historical review of the systems which had successively prevailed before his time. 8vo. London, 1804

Smeaton (John):

— : Experimental enquiry concerning the natural powers of wind and water to turn mills and other machines [&c.]. 8vo. London, 1796

— : Reports . . . made on various occasions, in the course of his employment as a civil engineer. 3 vols. 4to. London, 1812

Smee (Alfred):

— : New definition of the Voltaic circuit, with formulæ for ascertaining its power under different circumstances. 8vo. London, 1842

— : On the intimate rationale of the Voltaic force . . . Second edition. 8vo. London, 1842

Smith (James):

A new treatise of fluxions. 8vo. London, 1737

Smith (John):

Horological disquisitions, discovering the true nature of time, or the reasons why all days from noon to noon are not alike twenty-four hours long. Second edition. 8vo. London, 1708

Smith (Robert):

A compleat system of Opticks, in four books . . . to which are added remarks upon the whole. 2 vols. 4to. Cambridge, 1738

Smith (Robert Angus):

A centenary of science in Manchester. (For the hundredth year of the Literary and Philosophical Society of Manchester.) 8vo. London, 1883

Smithsonian Institution, see Washington.

Smyth (Charles Piazzi):

— : **Notice of the orbit of the binary star α Centauri, as recently determined by Capt. W. S. Jacob.* 4to. Edinburgh, 1848

Smyth (Charles Piazzi)—continued.

- : *On the determination of the true strength and direction of the wind at sea. 4to. Edinburgh, 1848
- : *Contributions to a knowledge of the Zodiacal Light. 4to. Edinburgh, 1852
- : *On the total solar eclipse of 1851. 4to. Edinburgh, 1852
- : Teneriffe, an Astronomer's experiment: or, specialities of a residence above the clouds. 8vo. London, 1858
- : *Report on the Teneriffe astronomical experiment of 1856. 4to. Edinburgh, 1858
- : *Experiences with a free-revolver stand for a telescope at sea, during a voyage to Teneriffe in the summer of 1856. 8vo. London, 1857
- : *Suggested explanation of Messrs. Carrington and Hodgson's recently observed solar phenomenon. 8vo. London, 1860
- : *On the methods adopted to secure extreme accuracy in the Edinburgh Castle time-gun signal. 8vo. Edinburgh, 1861
- : *On the reputed meteorological system of the Great Pyramid. 4to. Edinburgh, 1864
- : *Exhibition of a series of photographs illustrating the land of Egypt, the great pyramid [&c.]. 8vo. Edinburgh, 1866
- : *On intensified gravity in centrifugal governors of driving clocks and steam-engines. 8vo. Glasgow, 1869
- : *On an equal surface projection for maps of the world, and its applications to certain anthropological questions. 8vo. Edinburgh, 1870
- : A poor man's photography at the Great Pyramid in the year 1865: compared with that of the ordnance survey establishment . . . under the order of Col. Sir Henry James. 8vo. London, 1870
- : *End-on illumination in private spectroscopy, and its applications to both blow-pipe flames and electric illuminated gas-vacuum tubes. 8vo. Edinburgh, 1879
- : *Carbon and carbo-hydrogen, spectroscopied and spectrometed in 1879. 8vo. London, 1879
- : *The solar spectrum in 1877 and 1878, with some practical idea of its probable temperature of origination. 4to. Edinburgh, 1879
- : *Gaseous spectra in vacuum tubes under small dispersion and at low electric temperature; including an appendix by A. S. Herschel. 4to. Edinburgh, 1881
- : Madeira Spectroscopic; being a revision of 21 places in the red half of the solar visible spectrum, with a Rutherford diffraction grating. 4to. Edinburgh, 1882
- : *On the constitution of the lines forming the low-temperature spectrum of oxygen. 4to. Edinburgh, 1882
- : Observations, see Edinburgh, Royal Observatory.

Smyth (William Henry):

- : *Account of a private observatory recently erected at Bedford. 4to. London [1830]

Smyth (William Henry)—continued.

- : A cycle of celestial objects, for the use of naval, military, and private astronomers. 2 vols. 8vo. London, 1844
 Vol. 1, Prolegomena. Vol. 2, The Bedford Catalogue.
- : Ditto. Second edition. Revised, condensed and greatly enlarged by George F. Chambers. [The Bedford Catalogue only.] 8vo. Oxford, 1881
- : *Description of an astrological clock belonging to the Society of Antiquaries. 4to. London, 1848
- : Supplement. 4to. London, 1851
- : *Ædes Hartwellianæ*, or notices of the manor and mansion of Hartwell. 4to. London, 1851
- : Addenda to the *Ædes Hartwellianæ*. 4to. London, 1864
- : [Speculum Hartwellianum.] The cycle of celestial objects continued at the Hartwell Observatory to 1859, with a notice of recent discoveries, including details from the *Ædes Hartwellianæ*. 4to. London, 1860
- : An additional word on the pristine establishment of the Royal Society Club. 4to. London, 1860
- : Sidereal Chromatics: being a reprint, with additions, from the 'Bedford cycle of celestial objects' and its 'Hartwell continuation' on the colours of multiple stars. 8vo. London, 1864

Smythies (John Kinnersley):

- Essay on the theory of attraction. 4to. London, 1850

Snart (John):

- The power of numbers exemplified by the laws of permutation. 8vo. London, 1819

Snellius (Willebrord):

- : Apollonius Batavus, seu exsuscitata Apollonii Pergaei περὶ Διωρισμένης τομῆς geometria. 4to. Lugodini, 1608
- : Eratosthenes Batavus de terræ ambitus vera quantitate. 4to. Lugduni Batavorum, 1617
- : Cœli & siderum in eo errantium observationes Hassiace, illustrissimi principis Wilhelmi Hassiae Lantgravii auspiciis quondam institutæ; et spicilegium biennale ex observationibus Bohemicis Tychonis Brahe . . . quibus accesserunt J. Regiomontani & B. Walteri Observationes Noribergicae. 4to. Lugduni Batavorum, 1618

Sniadecki (Jean-Baptiste):

- Discours sur Nicolas Kopernik. 8vo. Paris, 1820

Snooke (W. Drew):

- Brief astronomical tables, constructed on a simple plan for the expeditious calculation of eclipses in all ages, designed for the purpose of verifying dates. 8vo. London, 1852

Snow (Robert):

- : Observations of the Aurora Borealis from September 1834 to September 1839. 12mo. London, 1842
- : A manual chiefly of definitions, introductory to the plane astronomy of the globes. 8vo. London, 1847

Società degli Spettroscopisti Italiani:

Memorie. Raccolte e pubblicate per cura del Prof. P. Tacchini. Vol. 1-12. 4to. Palermo e Roma, 1872-83

Società Italiana delle Scienze:

- : Memorie di matematica e di fisica. Tomo 19-25. 4to. Modena, 1821-55
- : Ditto. Serie seconda. Tomo 1, 2. 4to. Modena, 1862-66
- : Ditto. Serie terza. Tomo 1-5. 4to. Firenze (e Napoli), 1867-82
- : Questione della Società. 8vo. Torino, 1861

Society for Opposing the Endowment of Research, Extracts reprinted by the. 8vo. London, 1881

Society for the Diffusion of Useful Knowledge:

- : Library of useful knowledge : Natural philosophy. 3 vols. 8vo. London, 1829-34
Vol. 3 contains astronomy, history of astronomy, mathematical geography, physical geography, and navigation.
- : Six maps of the stars. fol. London, 1830
- : Six maps of the stars [large maps]. London, 1836
- : The Stars in six maps, on the gnomonic projection. Originally designed and arranged by Sir John Lubbock, Bart., and published under the superintendence of the S. D. U. K. fol. London, n.d.
- : An explanation of the gnomonic projection of the sphere, and of such points of astronomy as are most necessary in the use of astronomical maps. By A. De Morgan. 8vo. London, 1836
Companion to the Society's maps of the Stars.
- : Lives of eminent persons ; consisting of Galileo, Kepler, Newton, &c. 8vo. London, 1833
- : Tables of logarithms. 12mo. London, 1839
- : See Barlow (P.), Mathematical Tables ; De Morgan (A.) ; Penny Cyclopædia.

Socoloff (A.):

*Sur la queue du 1^{er} type de la comète de 1858, V.
8vo. Moscou, 1884

Sodargna (Antonio):

Annotazioni sul canto XVIII dell' Iliade ossia dimostrazione del vero sistema planetario conosciuto ed allegoricamente descritto da Omero. 8vo. Venezia, 1847

Sœmmering (S. Th.): Maculæ Solis, *see* Thilo (L.).**Sofka (Franz Octav):**

Die kosmischen Abkühlungen : ein meteorologisches Prinzip.
8vo. Wien, 1863

Sohncke (Leonhard A.):

- : Bibliotheca Mathematica. Verzeichniss der Bücher über die gesammten Zweige der Mathematik welche vom Jahre 1830 bis Mitte des Jahres 1854 erschienen sind. 8vo. Leipzig, 1854
- : *Vortrag über Sternschnuppen und Kometen.
4to. Königsberg, 1867

Sohncke (Ludwig Adolph):

De motu corporum coelestium in medio resistente Dissertatio
[Inauguralis]. 4to. Regiomontii Prussorum, 1833

Somerville (Mary):

- : Mechanism of the heavens. 8vo. London, 1831
- : On the connexion of the physical sciences. . . . Second edition. 8vo. London, 1835
- : Physical Geography. 2 vols. 8vo. London, 1848

Sonnenschmidt (Hermann):

Kosmologie. Geschichte und Entwicklung des Weltbaues,
unter Zugrundelegung der neuesten Forschungen der Wis-
senschaft. 8vo. Leipzig, 1878

Souchon (Abel):

Traité d'astronomie pratique, comprenant l'exposition du
calcul des éphémérides astronomiques et nautiques.
8vo. Paris, 1883

Souciet (E.):

Observations mathématiques, astronomiques, géographiques,
chronologiques, et physiques, tirées des anciens livres
Chinois, ou faites nouvellement aux Indes et à la Chine,
par les pères de la Compagnie de Jésus, rédigées et publiées
par . . . E. S. Tome 1. . . . 4to. Paris, 1729

Soulas (A. L.):

La levée des plans et l'arpentage rendus faciles. Deuxième
édition. 12mo. Paris, 1820

Sourdon (Huet de):

Éléments d'astronomie, propres à servir d'explication et de
développement à la machine astronomique. 8vo. Paris, 1807

South (James):

- : Practical observations on the Nautical Almanac and Astro-
nomical Ephemeris. 8vo. London, 1822
- : *Corrections in Right Ascension of 37 stars of the Green-
wich Catalogue. 8vo. London, 1823
- : *Inquiry how far the opinions generally entertained of the
inutility of observations of Jupiter's third and fourth satel-
lites are well or ill founded. 8vo. London, 1824
- : *An inquiry how far it would be advisable that the daily
corrections in Right Ascension and North Polar distance of
the forty-six zero stars should be computed annually at the
public expense. 8vo. London, 1824
- : *Astronomical phenomena, arranged in the order of suc-
cession, for . . . 1824. 8vo. London.
- : *On the discordances between the Sun's observed and com-
puted right ascensions as determined at the Blackman Street
Observatory during the years 1821-22. 4to. London, 1826
- : *Observations of the apparent distances and positions of
458 double and triple stars, made in the years 1823, 1824,
and 1825. 4to. London, 1826
- : Refutation of the numerous misstatements and fallacies con-

South (James)—continued.

- tained in a paper presented to the Admiralty by Dr. Thomas Young. 8vo. London, 1829
- : Reply to a letter in the *Morning Chronicle* relative to the interest which the British Government evinces in the promotion of astronomical science. 8vo. London, 1829
- : Charges against the President and Councils of the Royal Society. 8vo. London, 1830
- : A letter to the Fellows of the Royal and the Royal Astronomical Societies, in reply to the obituary notice of the late Rev. Richard Sheepshanks. . . . With an appendix, containing the copy of a memorandum presented by the Earl of Rosse to the Council of the Royal Society. 8vo. London, 1856
- : *Review of a letter from Sir James South 'to the Fellows of the Royal and the Royal Astronomical Societies, in reply to the obituary notice of the late Rev. Richard Sheepshanks. . . .' 8vo. London, 1856

South (James) and J. F. W. Herschel :

- *Observations of the apparent distances and positions of 380 double and triple stars, made in the years 1821, 1822, and 1823. 4to. London, 1825

South Kensington Museum :

- : Conferences held in connection with the special loan collection of scientific apparatus, 1876. 2 vols. 8vo. London.
- : Catalogue of the special loan collection of scientific apparatus. 8vo. London, 1877

Späth (Johann Leonhard) :

- Ueber die Entstehung und Ausbildung des Sternhimmels, oder die Cosmogonie in Grundlegung der neuesten Beobachtungen nach eigenen Ansichten aufgestellt. 8vo. Nürnberg, 1815

Spence (William) :

- : Outlines of a theory of algebraical equations, deduced from the principles of Harriott, and extended to the fluxional or differential calculus. 8vo. London, 1814
- : Mathematical Essays . . . edited by John F. W. Herschel, with a biographical sketch of the author. 4to. London, 1819

Speyer, Sternwarte :

- Astronomische Beobachtungen angestellt auf der Sternwarte des Königl. Lyzeums . . . von F. M. Schwerd, . . . 1826-27. Abtheilung 1, 2. 4to. Speyer, 1829-30

Spiller (Philipp) :

- Die Entstehung der Welt und die Einheit der Naturkräfte. 8vo. Berlin, 1870

Spinola (Francesco) :

- De Intercalandi ratione corrigenda, & de tabellis quadratorum numerorum, à Pythagoreis dispositorum. 8vo. Venetiis, 1562

Spittler (Johann Friedrich) :

- De parallaxi longitudinis atque latitudinis planetarum. [Inaugural Dissertation.] 4to. Tubingæ, 1756

Spörer (G.):

- : *Beobachtungen . . . über die Sonnenflecken (Anclain).
8vo. Berlin, 1865
- : *Beobachtungen der Sonnenflecken zu Anclain. Part 1 & 2.
4to. Leipzig, 1874-76

Spottiswoode (William):

- Polarisation of light. 12mo. London, 1874

Sprat (Thomas), Bishop of Rochester:

- : The history of the Royal Society of London for the improving of natural knowledge. Second edition.
4to. London, 1702
- : Ditto. Fourth edition. 4to. London, 1734

Squarcialupus (Marcus), De Cometis, see Erastus and others.

Squire (Jane):

- A proposal for discovering our longitude. [English and French.] 4to. London, 1742

Stadius (Joannes):

- : Ephemerides novæ et exactæ . . . ab anno 1554 ad annum 1570. 4to. Coloniae Agrippinæ, 1556
- : Ephemerides novæ, auctæ, et repurgatae . . . ab anno 1554 usque ad annum 1600. 4to. Coloniae Agrippinæ, 1570

Standards of Weight and Measure:

- : Report of the Commissioners appointed to consider the steps to be taken for restoration of the standards of weight and measure. fol. London, 1841
- : See also Airy (G. B.); London, Board of Trade; Paris, Comité International.

Stanley (William Ford):

- A descriptive treatise on mathematical drawing instruments.
8vo. London, 1866

Star Catalogues: See Knobel (E. B.), Chronology of star catalogues.

Star Charts:

- Al Sūfi: Description des étoiles fixes. Trad. avec notes par H. C. F. C. Schjellerup, 1874.

- Argelander (F. W. A.): Atlas des nördlichen gestirnten Himmels. 1863

- : Uranometria Nova, stellæ per medianam Europam solis conspicuae. 1843.

- Bayer (J.): Uranometria, omnium asterismorum continens schemata. 1661.

- Bazley (T.): The stars in their courses. 1878.

- Behrmann (C.): Atlas des südlichen gestirnten Himmels. 1874.

- Berlin, Akademische Sternkarten. 1859.

- Bishop's Ecliptic Charts. Epoch 1825.

- Bode (J. E.): Représentation des astres. 1782.

- : Uranographia, sive astrorum descriptio. 1801.

- Carrington (R. C.): Circumpolar charts for 1855.

- Dien (Ch.): Atlas Céleste. n.d. [Epoch 1860.]

- Doppelmaier (J. G.): Atlas coelestis. 1742.

Star Charts—continued.

- Flamsteed (J.): *Atlas cœlestis*. 1781.
 — : *Atlas cœleste* (Fortin). 1776.
 Goldbach (C. F.): *Neuester Himmelsatlas*. 1799.
 Gould (B. A.): *Uranometria Argentina*. 1879.
 Green (J.): *Astronomical Recreations: Position and mythological history of the constellations*. 1824.
 Harding (K. L.): *Atlas novus coelestis*. 1822.
 — : *Neuer Himmelsatlas: neue Ausgabe*. 1856.
 Heis (E.): *Atlas Cœlestis novus: stellæ per medium Europam solis oculis conspicuae*. 1872.
 — : *Atlas Cœlestis Eclipticus ad delin. Lumen Zodiacale*. 1878.
 — : *Fünf Sterncharthen zum Einzeichnen der Sternschnuppen*. 1868.
 Herschel (J. F. W.): *Results of astronomical observations made at the Cape of Good Hope*. 1847.
 Hevelius (J.): *Firmamentum Sobiescianum, sive Uranographia*. 1690.
 Hoffmann (K. F. V.): *Vollständiger Himmelsatlas*. 1835.
 Houzeau (J. C.): *Uranométrie générale. Atlas de toutes les étoiles visibles à l'œil nu*. 1878. [Brussels, *Annales de l'Observatoire, nouv. sér., Tom. I.*]
 Jamieson (A.): *Celestial Atlas*. 1822.
 Littrow (J. J.): *Atlas des gestirnten Himmels*. 2nd ed. 1854; 3rd ed. 1866.
 Middleton (J.): *Celestial Atlas, of stars visible in Great Britain*. 1840.
 Paris, Observatoire: *Atlas écliptique, par Chacornac, Henry, &c.*
 Peters (C. H. F.): *Celestial Charts*. n. d. [Epoch 1860.]
 Piccolomini (A.): *De la sfera del mondo*. 1st ed. 1548; 2nd ed. 1570.
 Proctor (R. A.): *The Stars in 12 maps*. 1866.
 — : *Constellation Seasons: guide to the knowledge of the stars*. 1867.
 — : *Large Star Atlas*. fol. 1870.
 — : *A new Star Atlas*. 8vo. 1875.
 — : *Half Hours with the stars: guide to the Constellations*. 1877.
 Rome, Collegio Romano: *Stelle del catalogo di Baily, contrassegnate secondo loro diversi colori*. n. d.
 Rost (J. L.): *Atlas portatilis cœlestis*. 8vo. 1743.
 Schiller (J.): *Cœlum Stellatum Christianum*. 1627.
 Schlegel (G.): *Atlas cœleste Chinois et Grec*. 1875.
 Schwinck (G.): *Mappa cœlestis*. 1843.
 Society for the Diffusion of Useful Knowledge: *Six maps of the stars*. [Small] 1830; n.d.; [large] 1836.
 Turin Academy, *Atlante di carte celesti*. n.d. [Epoch 1880.]
 Wollaston (F.): *A portraiture of the heavens as they appear to the naked eye*. 1811.
- Stark (Paul):**
 Johannes Kepler. Sein Verhältniss zur schwäbischen Heimath 1596–1619. 8vo. Gotha, 1868
- Stars (the) and the Earth; or, thoughts upon space, time, and eternity.** 2 parts, 8vo. London, 1846–47
 — : *Ditto. 6th edition.* 2 parts, 8vo. London, 1854
- Steell (Robert):**
 A treatise of conic sections. 8vo. Dublin, 1723

Steffens (Johann Heinrich):

Die grosse Sonnenfinsterniss im Jahr 1820, nebst allgemeinen und besonderen Betrachtungen über Sonn- und Mondfinsternisse. 8vo. Wien, 1820

Stehr (L.):

Das Weltsystem, erforscht und durch Berechnung bewiesen. . . . Zweite Auflage. 8vo. Berlin, 1872

Steinheil (Carl August von):

Copie des Meter der Archive zu Paris. 4to. München, 1844

Stella (Rupertus):

The astrologian's guide in horary astrology. 12mo. London, 1832

Stephan (É.):

Rapport sur l'observation de l'éclipse de soleil du 18 août 1868. 8vo. Paris, 1869

Stephan (É.) et Maurice Loewy:

*Détermination de la différence des longitudes entre Paris-Marseille et Alger-Marseille. 4to. Paris, 1878

Stern (Moriz A.):

Himmelskunde. Volksfasslich bearbeitet. 8vo. Karlsruhe, 1844

Stevin (Simon):

— : Les Œuvres Mathématiques . . . où sont insérées les mémoires mathématiques esquelles s'est exercé le . . . Prince Maurice de Nassau, Prince d'Aurenge. Le tout revue, corrigé & augmenté par Albert Girard. 2 vols. in 1, fol. Leyde, 1634

— : Life, see Quetelet (L. A. J.).

Stewart (Balfour):

The conservation of energy: being an elementary treatise on energy and its laws. Third edition. 8vo. London, 1874

Stewart (Matthew):

— : Some general theorems of considerable use in the higher parts of mathematics. 8vo. Edinburgh, 1746

— : Propositiones geometricæ, more veterum demonstratæ, ad geometriam antiquam illustrandam et promovendam idoneæ. 8vo. Edinburgi, 1763

Stieber (Friedrich Carl Gustav):

*Die wahre Gestalt der Planeten- und Kometenbahnen. 4to. Dresden, 1864

Stirling (James):

— : Lineæ tertii ordinis Neutonianæ, sive illustratio tractatus D. Neutoni de enumeratione linearum tertii ordinis; cui subjungitur solutio trium problematum. 8vo. Oxoniae, 1717

— : Methodus differentialis, sive tractatus de summatione et interpolatione serierum infinitarum. 4to. Londini, 1730

Stirrup (Thomas):

Horometria, or the compleat diallist. . . . The second edition. 4to. London, 1659

Stockholm, Kongliga Svenska Vetenskaps Akademie:

- : Handlingar. Ny Föld, 1855-79. Bandet 1-17.
 — : Bihang till Handlingar. Bandet 1-5. 4to. Stockholm, 1858-81
 — : Öfversigt af Kongl. Vetenskaps-Akademiens Förhandlingar, 1844-80. Årgången 1-37. 8vo. Stockholm, 1845-81
 — : Lefnadsteckningar. Bandet 1, 2. 8vo. Stockholm, 1869-78

Stockholm, Observatorium:

Astronomiska Iakttagelser och Undersökningar . . . Utgifna af Hugo Gyldén. Bandet 1. 4to. Stockholm, 1880

Stockwell (John N.):

- : A treatise on the secular equations of the Moon's mean motion. 8vo. Cambridge [U.S.], 1867
 — : Theory of the Moon's motion. 4to. Philadelphia, 1875
 — : Ditto. 2nd edition. 4to. Philadelphia, 1877
 — : The theory of the Moon's motion deduced from the law of universal gravitation. 4to. Philadelphia, 1881

Stöffler [Stoefflerus, Stoefflerinus] (Johann):

- : Elvecidatio fabricae vsvsque Astrolabii . . . nuper Ingeniose cōcinnata atque in lucem edita. fol. Oppenheyrm, 1513 (1512)
 — : Tabulæ Astronomicæ. Verarum mediарumque coniunctionū & oppositionum Solis & Lunæ exactissima supputatio pro omni tempore. Et toti propemodum Europæ accommoda. Cyclorum patrum antiquorum de coniunctionū & oppositionū reditu imperfectio & fere redargutio. Eclipsium luminarium prædictio. Eiusdem Instrumenti astrologici additio. fol. Tubingæ, 1514
 — : Der Römisch Kalender . . . Cristlicher Kirchen zu Ere Uñ dem Groszmechtigsten Maximiliano Römischen Keyser &c. zu Ewiger gedechnus Auch Gemeynem volck zu unterrichtung Gerechēt und geordent. fol. Oppenheyrm, 1518
 — : Calendarium Romanum magnum, Cæsareæ maiestati dicatum. [1518-1579.] fol. Oppenheyrm, 1518
 — : Ephemerides, 1544-5, see Pitatus, Almanach novum.

Stokes (George Gabriel):

Mathematical and physical papers. 2 vols. Cambridge, 1880-83

Stone (Edmund):

A new mathematical dictionary. 8vo. London, 1726

Stone (Edm.) and G. F. A. de l'Hôpital:

- : The method of fluxions both direct and inverse : the former being a translation from the celebrated Marquis De l'Hôpital's *Analyse des infiniment petits*, and the latter supply'd by the translator, E . . . S 8vo. London, 1730
 — : See also L'Hôpital (G. F. A. de).

Stone (Edward James):

- : [Address on the transit of Venus, delivered at the meeting of the subscribers to the South African Public Library.] 8vo. Cape Town, 1872

Stone (Edward James)—*continued.*

- : *Places of eight close southern circumpolar stars.
8vo. Cape Town, 1874
- : Cape Catalogues and Observations, *see* Cape of Good Hope, Royal Observatory.
- : Radcliffe Observations, *see* Oxford.
- Stone (Ormond):**
- : *On the extra-meridian determination of time by means of a portable transit instrument. 8vo. Cincinnati
- : Measures of double stars, *see* Cincinnati Observatory.

Stonyhurst College Observatory:

- Results of meteorological and magnetical observations, 1865.
8vo. Clitheroe

Storer (W.):

- Syllabus to a course of optical experiments on the syllepsis optica, or the new optical principles of the royal delineator analysed.
4to. [London, 1782]

[Stow, John]:

- A hermit's idea that the stars are the homes of the heavenly hosts.
4to. London, 1862

Strachan (R.):

- Principles of weather forecasts and storm prevision. 2nd edition.
8vo. London, 1868

Strachey (Edward):

- Bija Ganita, or the algebra of the Hindus. 4to. London, 1813

Strasbourg (Cathédrale de):

- : Description abrégée de l'horloge astronomique.
12mo. Strasbourg, 1854

— : *See also* Schwilgué (Th.).

Strasser (P. G.):

- Mittlere Örter von [750] Fixsternen, bezogen auf das mittlere Aequinoctium 1870° abgeleitet aus den Beobachtungen der Sternwarte Kremsmünster. 8vo. Kremsmünster, 1877

Stratford (William Samuel):

- *On the elements of the orbit of Halley's Comet, at its appearance in the years 1835 and 1836. 8vo. London, 1837

Strauchius [Strauch] (Ægidius):

- : Aphorismi astrologici methodice in usum docentium et discientium collecti; accessit Cypriani Leovitii de judiciis nativitatum doctrina Editio secunda.
12mo. Wittebergæ, 1675
- : Tabulæ sinuum, tangentium, logarithmorum et per universam mathesin. Auctiores & correctissimæ. . . . Acces- sere Leonh. Christ. Sturmii tabulæ planæ novæ.
8vo. Amstelodami, 1700
- : Tabellen der Sinuum, Tangentium, Logarithmorum, und zu der gantzen Mathesi [mit] L. C. Sturmii Tabellen.
8vo. Amsterdam, 1700

The same work as the foregoing, with introduction in German.

Strauchius [Strauch] (*Aegidius*)—continued.

- : *Astrognosia synoptice et methodice in usum gymnasiorum et academiarum adornata; addita sunt asterismorum et planetarum schemata Editio quinta.*

12mo. Vitembergæ, 1722

Streete (Thomas):

- : *Astronomia Carolina, a new Theorie of the Cœlestial Motions. Composed according to the Best Observations and most Rational Grounds of Art. Yet farre more Easie, Expedite and Perspicuous than any before Extant. With exact and most Easie Tables thereunto, and Precepts for the Calculation of Eclipses, &c.* 4to. London, 1661

- : *Astronomia Carolina, with exact and most easy tables and rules for the calculation of eclipses. The third edition to which is added a series of observations on the planets, chiefly of the Moon, made in order to find out the Lunar Theory *a posteriori*, being a proposal how to find the longitude, &c. By Dr. Edmund Haley [sic].*

4to. London, 1716

Streit (Johann):

- De problematis Kepleriani solutionibus. Dissertatio Inauguralis astronomica.* 8vo. Gryphisvaldiae, 1861

Strode (Thomas):

- A New and Easie Method to the Art of Dyalling. Containing I. All Horizontal Dyals, all upright Dyals, Reflecting Dyals, Dyals without Centres, Nocturnal Dyals, Upright Declining Dyals II. The most Natural and Easie Way of Describing the Curve-Lines of the Sun's Declination on any Plane.* 4to. London, 1688

Struve (Friedrich Georg Wilhelm von):

- : *Der Ort des Sterns δ Ursae minoris in seiner oberen Culmination für jeden Tag der Jahre 1820, 1821, 1822.* 8vo. Dorpat, 1821

- : **Catalogus 795 stellarum duplicitum ex diversorum astronomorum observationibus congestus in specula Dorpatensi.* 4to. Dorpati, 1822

- : *Beschreibung des auf der Sternwarte der kaiserlichen Universität zu Dorpat befindlichen grossen Refractors von Fraunhofer.* fol. Dorpat, 1825

- : *Catalogus novus stellarum duplicitum et multiplicitum maxima ex parte in specula Universitatis Caesareae Dorpatensis detectarum.* fol. Dorpati, 1825

- : *Beschreibung der von der Universität zu Dorpat veranstalteten Breitengradmessung in den Ostseeprovinzen Russlands, ausgeführt und bearbeitet in den Jahren 1821–31.* 2 parts, 4to. Dorpat, 1831

- : *Ueber Doppelsterne nach den auf der Dorpater Sternwarte von 1824 bis 1837 angestellten Micrometermessungen.* 8vo. St. Petersburg, 1837

- : *Stellarum duplicitum et multiplicitum Mensuræ Micrometricæ per magnum Fraunhoferi tubum annis a 1824 ad 1837 in Specula Dorpatensi institutæ.* fol. Petropoli, 1837

- : **Additamentum in Mensuras Micrometricas Stel-*

Struve (Friedrich Georg Wilhelm von) —*continued.*

- larum Duplicium adjecta est disquisitio de parallaxi annua stellae a Lyrae. 4to. St. Pétersbourg, 1839
- : Beobachtungen des Halley'schen Cometen bei seinem Erscheinen im Jahre 1855 auf der Dorpater Sternwarte angestellt. fol. St. Petersburg, 1839
- : *[Rapport sur le] Mémoire sur l'évaluation numérique de la constante de la précession des équinoxes eu égard au mouvement propre du centre de gravité du système solaire dans l'espace. 8vo. St. Pétersbourg [1841]
- : *Table des positions géographiques principales de la Russie. 4to. St. Pétersbourg, 1843
- : Catalogue de 514 étoiles doubles et multiples découvertes sur l'hémisphère céleste boréal par la grande lunette de l'Observatoire central de Poulkova, et catalogue de 256 étoiles doubles principales où la distance des composantes est de 32 secondes à 2 minutes. fol. St. Pétersbourg, 1843
- : *Notice sur l'instrument des passages de Repsold établi à l'Observatoire de Poulkova. 4to. St. Pétersbourg [1843]
- : Expédition Chronométrique exécutée . . . entre Poulkova et Altona pour la détermination de la longitude géographique relative de l'Observatoire Central de Russie. 4to. St. Pétersbourg, 1844
- : *Rapport . . . sur le mémoire de C. A. F. Peters; Numerus Constans nutationis. 4to. St. Pétersbourg, 1844
- : *Ueber den Flächeninhalt der 37 westlichen Gouvernements und Provinzen des Europäischen Russlands. 4to. St. Petersburg, 1845
- : *Astronomische Ortsbestimmungen in der Europäischen Türkei, in Kaukasien und Klein-Asien. 4to. St. Petersburg, 1845
- : Description de l'Observatoire Astronomique central de Poulkova. [With vol. of plates.] 4to. St. Pétersbourg, 1845
- : *Rapport . . . sur une mission scientifique. 4to. [1847]
- : Études d'Astronomie Stellaire. Sur la voie lactée et sur la distance des étoiles fixes. 8vo. St. Pétersbourg, 1847
- : *Sur la dilatation de la glace. 4to. St. Pétersbourg, 1848
- : Stellarum fixarum imprimis duplicium et multiplicium positiones mediae pro epocha 1830°, deductae ex observationibus meridianis annis 1822 ad 1843 in Specula Dorpatensi institutis. fol. Petropoli, 1852
- : Exposé historique des travaux exécutés . . . pour la mesure de l'arc du méridien entre Fuglenæs $70^{\circ} 40'$ et Ismail $45^{\circ} 20'$. . . Suivi de deux rapports de M. Lindhagen 4to. St. Pétersbourg, 1852
- : *Positions du Soleil, de la Lune et des planètes observées à Dorpat depuis 1822 jusqu'à 1838, calculées par W. Struve et M. Liapunow. 4to. St. Pétersbourg, 1853
- : Arc du méridien de $25^{\circ} 20'$ entre le Danube et la Mer Glaciale, mesuré, depuis 1816 jusqu'en 1855, sous la direction de C. de Tenner, N. H. Selander, C. Hansteen, F. G. W. Struve. 2 vols. 4to. St. Pétersbourg, 1860-57

Struve (Friedrich Georg Wilhelm von)—*continued.*

- : *Vergleichungen der Wiener Masse mit mehreren auf der K. Russischen Hauptsternwarte zu Pulkowa befindlichen Masseneinheiten. (Mit Nachtrag von K. von Littrow.)
8vo. Wien, 1861
- : A summary or index of the measurements in the ‘Stellarum duplicitum et multiplicium mensuræ micrometricæ’; ‘Additamentum in . . . Mensuras micrometricas’ . . . including all the stars in the ‘Synopsis observationum de stellis duplicitibus in Specula Dorpatensi, 1814–24 . . .’ and in the ‘II. Mensuræ micrometricæ.’ (Dun Echt Obs. Publications, vol. I.) 4to. Dun Echt, 1876.
- : See Dorpat; Pulkowa. Life, *see* Pritchard (C.).
- Struve (Hermann):**
- : *Über den Einfluss der Diffraction an Fernröhren auf Lichtscheiben. 4to. St. Pétersbourg, 1882
- : *Zur Theorie der Talbot’schen Linien. 4to. St. Pétersbourg, 1883
- Struve (Ludwig):**
- *Resultate aus den in Pulkowa angestellten Vergleichungen von Procyon mit benachbarten Sternen.
4to. St. Pétersbourg, 1883
- Struve (Otto von):**
- : *Bestimmung der Constante der Praecession, mit Berücksichtigung der eigenen Bewegung des Sonnensystems.
4to. St. Petersburg, 1842
- : *Détermination des positions géographiques de Novgorod, Moscou, Riazan, Lipetsk, Voronéje et Toulá.
4to. St. Pétersbourg, 1843
- : *Observations de la Comète de Biela.
8vo. St. Pétersbourg, 1846
- : *Résultats géographiques du voyage en Perse, fait par le Capitaine Lemm en 1838 et 1839. 4to. St. Pétersbourg, 1851
- : Narratio de Parallaxi Stellae a Lyrae. [Inaugural Dissertation.]
4to. Petropoli, 1852
- : *Sur les dimensions des anneaux de Saturne.
4to. St. Pétersbourg, 1852
- : *Expéditions chronométriques de 1845 et 1846.
4to. St. Pétersbourg, 1853
- : *Beobachtungen des Biela’schen Cometen im Jahre 1852
angestellt am grossen Refractor der Pulkowaer Sternwarte.
4to. St. Petersburg, 1854
- : *Positions géographiques déterminées en 1847 par le Lieutenant-Colonel Lemm dans le pays des Cosaques du Don.
4to. St. Pétersbourg, 1855
- : Éloge de P. H. Fuss.
4to. St. Pétersbourg, 1857
- : *Nouvelle détermination de la parallaxe annuelle des étoiles a Lyrae et 61 Cygni.
4to. St. Pétersbourg, 1859
- : *Beitrag zur Feststellung des Verhältnisses von Kepler zu Wallenstein.
4to. St. Petersburg, 1860
- : Übersicht der Thätigkeit der Nicolai-Hauptsternwarte während der ersten 25 Jahre ihres Bestehens.
4to. St. Petersburg, 1865

Struve (Otto von)—continued.

- : *Beobachtungen des grossen Kometen von 1861.
4to. St. Pétersbourg, 1868
- : Tabulae Auxiliares ad transitus per planum primum verticale reducendos inservientes. 8vo. Petropoli, 1868
- : Tabulae quantitatum Besselianarum pro annis 1750–1884 computatae. 8vo. Petropoli, 1869–79
- : *Mittheilung über unternommene Beobachtungsreihen zur Vergleichung von Mikrometermessungen.
8vo. Leipzig, 1876
- : *Études sur le mouvement relatif des deux étoiles du système de 61 Cygni. 4to. St. Pétersbourg, 1880
- : See Pulkowa, Nicolai Hauptsternwarte.

Struve (Otto von) et M. Liapunow:

- *Observations de la grande Nébuleuse d'Orion, faites à Cazan et à Poulkova.
4to. St. Pétersbourg, 1862

Struve (O. von) et A. Winnecke :

- : *Pulkowaer Beobachtungen des grossen Cometens von 1858. Abth. 1, Beobachtungen am Refractor von O.... S.... Abth. 2, Beobachtungen am Heliometer, nebst Untersuchungen über die Natur der Cometens, von A.... W....
4to. St. Petersburg, 1859

Student (the), containing many curious receipts and preparations, striking experiments, discoveries and improvements in the arts and sciences. No. 1–4.
12mo. Liverpool, 1797–1800

Student and Intellectual Observer of Science, Literature, and Art. Vol. 1–5. 8vo. London, 1868–71

Surgeon (William):

- Scientific researches, experimental and theoretical, in electricity, magnetism, galvanism, electro-magnetism, and electro-chemistry.
4to. Bury, 1850

Sturm (Johann Christoph):

- Mathesis enucleata, or the elements of the mathematics (and an introduction to specious analysis, or the new geometry).
2 parts in 1 vol. 8vo. London, 1700

Sturm (Leonth. Christ.): Tabulae planè, see Strauchius.

Stürmer (Johann Christoph.):

- Vorstellung der grossen Sonnenfinsterniss und der partialen Mondfinsterniss 1804, auf den Nürnbergischen Meridian und die benachbarte Gegend entworfen.
4to. Nürnberg, 1803

Sussex (Duke of):

- Addresses delivered at the Anniversary Meeting of the Royal Society, 1833 and 1836.
4to. London, 1833–36

Svanberg (Jöns):

- Exposition des opérations faites en Lapponie, pour la détermination d'un arc du méridien, en 1801, 1802 et 1803.
8vo. Stockholm, 1805

Swan (William):

- : *On the red prominences seen during total eclipses of the Sun. 4to. Edinburgh, 1852
- : *On the total eclipse of the Sun, July 28, 1851, observed at Göteborg; with a description of a new position micrometer. 4to. Edinburgh, 1852

Swedenborg (Emanuel):

Concerning the earths in our solar system, which are called planets, and concerning the earths in the starry heaven.
Translated from the Latin. 8vo. London, 1787

Swedish Calculating Machine:

Specimens of tables calculated, stereomoulded, and printed by machinery. 8vo. London, 1857

Switzerland, Schweizerische Geodätische Commission:

- : Das Schweizerische Dreiecknetz . . . Erster Band. Die Winkelmessungen und Stationsausgleichungen. 4to. Zürich, 1881
- : *See also* Hirsch et Plantamour, Nivellement de la Suisse; Wolf (R.), Geschichte der Vermessungen in der Schweiz.

Sydney Observatory:

- : Astronomical Observations made . . . in the year 1859, by W. Scott. 8vo. Sydney, 1860
- : Astronomical and Meteorological observations made . . . in the year 1860, by W. Scott. 8vo. Sydney, 1861
- : Results of astronomical observations made . . . in the years 1877 and 1878, under the direction of H. C. Russell. 8vo. Sydney, 1881
- : Meteorological Observations made at the Government Observatory, Sydney (and an abstract from the Country Stations), 1867-77, under the direction of G. R. Smalley (and H. C. Russell). 8vo. Sydney, 1867-77
- : Abstract of Meteorological Observations made in New South Wales during 1865 and 1866, under the direction of George R. Smalley. 8vo. Sydney, 1869
- : Abstract of Meteorological Observations made in New South Wales up to the end of 1869, with remarks on the climate. By H. C. Russell. 8vo. Sydney, 1871
- : Results of Meteorological Observations made in New South Wales, 1870, 1871, 1873-79. 8vo. Sydney, 1871-80
- : Results of rain (and river) observations made in New South Wales during 1878-82. 8vo. Sydney, 1879-83
- : Report of the Astronomer for 1859, 1865, 1872. fol. Sydney.
- : *Results of double star measures made . . . 1871 to 1881, under the direction of H. C. Russell. 8vo. Sydney, 1882
- : Longitude of, *see* Tebbutt (J.).

Sydney, Royal Society of New South Wales:

- : Transactions of the Philosophical Society of New South Wales, 1862-65. 8vo. Sydney, 1866
- : Transactions of the Royal Society of New South Wales, 1867-74. Vol. 1-8. 8vo. Sydney, 1868-75

Sydney, Royal Society of New South Wales—*continued*.

- : Transactions and Proceedings of the Royal Society of New South Wales, 1875. Vol. 9. 8vo. Sydney, 1876
- : Journal and Proceedings of the Royal Society of New South Wales, 1876–82. Vol. 10–16. 8vo. Sydney, 1877–83
The Title of the Society was changed to 'Royal Society' in 1867.
- : *Anniversary address, by H. C. Russell. 8vo. Sydney, 1883

Sykes (Arthur Ashley):

- A dissertation on the eclipse mentioned by Phlegon, or an enquiry whether that eclipse had any relation to the darkness that happened at our Saviour's passion.
8vo. London, 1732

Sykes (William Henry):

- *Storm warnings, their importance and practicability.
8vo. London, 1867

Sylvester (Jas. Joseph):

- : *Analytical development of Fresnel's optical theory of crystals. 8vo. London, 1837
- : *Memoir on rational derivation from equations of coexistence, that is to say, a new and extended theory of elimination. Part 1. 8vo. London, 1839
- : *On a theory of the syzygetic relations of two rational integral functions. 4to. London, 1853
- : Outlines of (seven) lectures on the partitions of numbers. 8vo. Woolwich, 1859
- : *Outline trace of the theory of Reducible Cyclodes, i.e. a particular family of successive involutes to a circle whose determination depends on the solution of an Algebraico-Diophantine equation, and of the number and classification of the forms of such family for any given order of succession. 8vo. London, 1869
- : Address delivered . . . at Johns Hopkins University, Feb. 22, 1877. 8vo. Baltimore, 1877

Symons (G. J.), see London, Meteorological Office, and Meteorological Society.

Table for determining the apparent time from observed altitudes of the Sun or a Star.

8vo. printed at the head-quarters of the army in France, 1818

Table of $\log \frac{\sin P}{\sin I'}$ to every second of time as far as 1^h 00^m.
4to. Poona, 1842

Tables. (Article from the English Cyclopædia, Vol. 7.)
4to. London, 1861

Tables (general) of equations of equal altitudes. 8vo.

Tabulæ astronomicæ and astrologicæ, or an Ephemeris of the celestial motions for the years 1657–58, [with] a tutor to astrologie. By W. E., Philomath. 12mo, London, n.d.

Tacchini (Pietro):

- : *Sulla equazione personale. 8vo., 1869
- : Sull' eclisse totale di sole del 22 Dicembre 1870, visibile dalla Sicilia. 8vo.

Tacchini (Pietro)—*continued.*

- : *Il sole e le Aurore Boreali osservate in Palermo nell'
 Aprile 1871. 4to. Palermo, 1871
- : *Forme delle protuberanze : regioni del magnesio e del ferro
 sulla superficie del sole. 8vo. Palermo, 1872
- : Il passaggio di Venere sul sole dell' 8-9 Dicembre 1874,
 osservato a Muddapur nel Bengala . . . pubblicata a
 spese del Ministero della pubblica Istruzione. 4to. Palermo, 1875
- : *Sull'Eclisse totale di Sole del 17 Maggio 1882, osservato a
 Sohage in Egitto. 4to. Roma, 1882

Tacchini (Pietro) ed A. Nobile:

- *Determinazione Telegrafica della differenza di longitudine
 fra gli Osservatorii di Napoli e Palermo. 4to. Napoli, 1874

Tacquet (Andreas):

- The Elements of Arithmetick, in three books ; the seventh,
 eighth and ninth of Euclid. 8vo. London, n.d.

Tacubaya, Observatorio Astronómico:

- Anuario, 1884-85. 12mo. México, 1883-84

Taintor (E. C.):

- Catalogue of 384 Transit Stars. 8vo. Shanghai, 1878

Taisnier (Joannes):

- Astrologiae Iudiciariæ ysagogica et totius divinatricis artis
 encomia, cum nonnullis Habrahami Iudæi & Lucae Gaurici
 dictis. 8vo. Coloniæ, 1559

Tait (Peter Guthrie): Natural Philosophy, *see* Thomson and
Tait.**Tasmania, Royal Society:**

- : Papers and Proceedings of the Royal Society of Van
 Diemen's Land. Vol. 2, Part 2, and Vol. 3, Part 2 (and
 Report . . . for the year 1852). 8vo. Hobart Town, 1853-59

- : Monthly Notices of papers and proceedings (and Reports)
 of the Royal Society of Tasmania, 1863-74. 8vo. Hobart Town, 1864-75

- : Papers and proceedings and report, 1875-81. 8vo. Hobart Town, 1876-82

Tate (Thomas):

- The principles of mechanical philosophy applied to industrial
 mechanics. 8vo. London, 1853

Taylor (Brook):

- : Method of perspective made easy, both in theory and practice,
 in two books . . . By Joshua Kirby. Third edition.
 2 parts in 1 vol. 4to. London, 1768

- : New principles of linear perspective. Fourth edition.
 8vo. London, 1811

Taylor (John):

- The great pyramid : why was it built ? & who built it ?
 12mo. London, 1859

Taylor (John) and Richard Sheepshanks:

Correspondence respecting the Liverpool Observatory (with supplement). 8vo. London, 1845

Taylor (Michael):

- : A sexagesimal table, exhibiting at sight the result of any proportion where the terms do not exceed sixty minutes; also tables of the equation of second difference, and tables for turning the lower denominations of English money, weights and measures into sexagesimal of the higher and vice versa, and the sexagesimal table turned into seconds as far as the 1000th column. 4to. London, 1780
- : Tables of logarithms of all numbers from 1 to 101,000, and of the sines and tangents to every second of the quadrant; with a preface and precepts for the explanation and use of the same by Nevil Maskelyne. 4to. London, 1792

Taylor (Richard):

Scientific memoirs, selected from the Transactions of foreign Academies of science and learned societies, and from foreign journals. Vol. 1, Vol. 2, Part 5, 6. 8vo. London, 1837-39

Taylor (Thomas Glanville), see Madras Observatory; Dababta.

Taylor (Thomas Glanville) and J. Caldecott:

*Observations on the direction and intensity of the terrestrial magnetic force in Southern India. 8vo. Madras, 1839

Teale (James):

A dynamical theory of the universe. 8vo. Manchester, 1868

Tobbutt (John):

- : Meteorological Observations made at the private Observatory . . . Windsor, New South Wales, in the years 1863-81. fol. Sydney, 1868-82
- : *On the progress and present state of astronomical science in New South Wales. 8vo. Sydney [1870]
- : *On a new and remarkable variable star in the constellation Ara. 8vo. Sydney, 1877
- : *Note on the opposition-magnitudes of Uranus and Jupiter. 8vo. Sydney, 1880
- : *On the orbit-elements of Comet I, 1880 (Great Southern Comet). 8vo. Sydney, 1880
- : *On the longitude of the Sydney Observatory. 8vo. Sydney, 1880
- : *On the variable star R. Carinae. 8vo. Sydney, 1881
- : *On Comet II, 1881. 8vo. Sydney, 1881
- : *On the star Lacaille 2145. 8vo. Sydney, 1881

Telegraphic Journal, Vol. 1-7. 8vo. London, 1872-79

Telescope (Gregorian):

Das älteste Gregorianische Spiegelteleskop datirt nicht vom Jahre 1674, sondern vom Jahre 1670. 4to. Leipzig.

Télescopes dioptriques, depuis Galilée jusqu'à ce jour. 8vo.

[Templeman (Joseph)]:

Table showing the mean temperature at St. John's, Newfoundland (1834-37). [single sheet]

Tennant (James F.):

- : Total eclipses [with special reference to the eclipse of 1868]. 8vo. Calcutta.
- : *On the eclipse of August 1868. 8vo. London, 1867
- : An account of the metrical system of weights and measures, with an attempt to explain its advantages, and the reasons for selecting it for India. 8vo. Calcutta, 1870
- : Report on the preparations for and observations of the Transit of Venus, as seen at Roorkee and Lahore, on December 8, 1874. 4to. Calcutta, 1877
- : *Account of the verification of some standard weights, with considerations on standard weights in general. 8vo. Calcutta, 1880

Terby (François):

- : *Études sur la planète Mars. [10 papers from 'Bulletin de l'Académie de Bruxelles.']. 8vo. Bruxelles, 1873-80
- : *Observations de Jupiter et de Mars, faites à Louvain pendant l'opposition de ces planètes en 1873. 8vo. Bruxelles, 1873
- : *Configuration des taches de la Planète Mars à la fin du dix-huitième siècle, d'après les dessins inédits de J. H. Schroeter. 8vo. Bruxelles, 1873
- : *Areographische Fragmente. Manuscrit et dessins originaux et inédits de l'astronome J. H. Schroeter, de Lilenthal. 4to. Bruxelles, 1873
- : *Remarques sur l'aspect de la planète Jupiter pendant son opposition en 1874, et sur le passage des satellites II et III et de leurs ombres pendant la soirée du 25 Mars. 8vo. Bruxelles, 1874
- : *Sur l'aspect de l'ombre du 2^{me} satellite de Jupiter le 25 Mars 1874. 8vo. Bruxelles, 1875
- : *Aréographie ou étude comparative des observations faites sur l'aspect physique de la planète Mars depuis Fontana (1636) jusqu'à nos jours (1873). 4to. Bruxelles, 1875
- : *Observations des Comètes b et c de 1881 faites à Louvain. 8vo. Bruxelles, 1881
- : *Note sur l'Aurore Boréale du 2 Octobre 1882. 8vo. Bruxelles, 1882
- : *Note sur l'Aurore Boréale du 17 Novembre 1882. 8vo. Bruxelles, 1882
- : *Aspect de la grande comète de 1882 . . . observée à Louvain. (Notice 1-3.) 8vo. Bruxelles, 1882-83
- : *Observations de la Lumière Zodiacale et d'un petit bolide, à Louvain. 8vo. Bruxelles, 1883
- : *Sur l'existence et sur la cause d'une périodicité mensuelle des Aurores Boréales. 8vo. Bruxelles, 1883

Tessan (U. de):

Physique du voyage de la Vénus pendant les années 1836-39.
5 vols. Paris, 1842-44

Teyler (Musée):

- : Archives, Vol. 1-5. 8vo. Haarlem, 1868-78
 — : Série 2, Part 1-3. 8vo. Haarlem, 1881-82

Thacker (Anthony):

- A miscellany of mathematical problems. Vol. 1.
 8vo. Birmingham, 1743

Thalén (Tobias Robert):

- *La longitude terrestre déterminée au moyen de signaux galvaniques. 4to. Upsala, 1856

Theodosius Tripolitæ:

- Sphaericorum libros tres, Ernestus Nizze recognovit, Latine redditos emendavit, commentariis instruxit, appendicibus et indice auxit. 8vo. Berolini, 1852

Theon (of Alexandria):

- : Θεωνος Αλεξανδρεως Υπομημα εις το πρωτον [και το δευτερον] της Πτολεμαιου Μαθηματικης Συνταξεως. Commentaire . . . sur le premier (et le second) livre de la composition mathématique de Ptolémée, traduit pour la première fois du grec en français . . . par M. l'Abbé Halma. [Gr. & Fr.] 2 vols. 4to. Paris, 1821

Tome 1. Première partie des développemens de la trigonométrie sphérique d'Hipparche et de Ptolémée.

2. Seconde partie de la trigonométrie sphérique d'Hipparche et de Ptolémée [&c.].

- : See also Aratus [&c.] par Halma ; Valderus.

Theon (of Smyrna):

- Tῶν κατὰ μαθηματικὴν . . . Eorum, quae in mathematicis ad Platonis lectionem utilia sunt, expositio. . . Opus nunc primum editum, Latina versione, ac notis illustratum ab Ismaele Bvllialdo. 4to. Lutetiae Parisiorum, 1644

Theophilus (Christianus):

- Cometen-Propheten: ein kurtzer doch ausführlicher Bericht, von der Comet-Sternen Natur und Würkung; samt einer Erzählung aller Cometen und ihrer Geschichten. 4to. Nürnberg, 1665

Thévenot (Arsène):

- Biographie de Charles-Eugène Delaunay. 8vo. Troyes, 1878

Thiele (T. N.):

- : Castor. Calcul du mouvement relatif et critique des observations de cette étoile double. [Kjöbenhavns Universitet Festskrifter.] 8vo. Kjöbenhavn, 1879

- : Sur la compensation de quelques erreurs quasi-systématiques par la méthode des moindres carrés. 4to. Copenhague, 1880

Thieme (Friedrich Eduard):

- Populäre Astronomie. 8vo. Plauen, 1853

Thilo (Ludwig):

- De tabulis iconographicis quibus maculae solis mensibus anni 1826 sex posterioribus et anni 1827 sex prioribus a viro illustrissimo S. Th. Scenmerring observatae adumbrantur. 4to. Francofurti ad Mænum, 1828

[Thompson, (T. Perronet)]:

Geometry without axioms, or the first book of Euclid's elements, with alterations and familiar notes; with an intercalary book in which the straight line and plane are derived from properties of the sphere, with an appendix, containing notices of methods proposed for getting over the difficulty in the 12th axiom of Euclid. Fourth edition.

8vo. London, 1833

Thomson (David):

Lunar and horary tables, for new and concise methods of performing the calculations necessary for ascertaining the longitude.

8vo. London, 1824

Thomson (Thomas):

—: History of the Royal Society, from its institution to the end of the eighteenth century. 4to. London, 1812

—: *See also* Annals of Philosophy.

Thomson (William):

Mathematical and physical papers. Vol. 1.

8vo. Cambridge, 1882

Thomson (William) and Peter Guthrie Tait:

Treatise on natural philosophy. New edition. Vol. 1, Part 1, 2.

8vo. Cambridge, 1879-83

Thresher (William):

Astrology. [Title wanting.]

8vo.

Thümmig (Ludwig Philipp):

Dissertatio physico-mathematica de propagatione luminis per systema planetarium. [Inaugural Dissertation.]

4to. Halae Magdeburgicæ, 1721

Tiarks (John Lewis):

—: *Report on his Astronomical Observations for ascertaining the most north-western point of the Lake of the Woods.

8vo. [1829]

—: *Report on Captain Foster's chronometrical observations in H.M.S. *Chanticleer*.

8vo.

—: Letter, in explanation of geocentric latitude.

fol.

Tides (the), a theory thereof. (By W. B.)

8vo. 1883

Tiele (Bernhard):

Nova elementa Fidei planetæ, deductæ ex observationibus quinque oppositionum annorum 1855-1861. [Inaugural Dissertation.]

4to. Bonnae, 1861

Tietjen (Friedrich):

De methodis ad orbitas cometarum determinandas adhibitis, Introductio. Dissertatio Inauguralis.

4to. Berolini, 1864

Tiflis, Physikalischs Observatorium:

—: Magnetische Inclinationen in Tiflis, 1870-76, bestimmt von H. Kiefer.

4to. Tiflis, 1877

—: Materialien zu einer Klimatologie des Kaukasus, gesammelt und herausgegeben von A. Moritz.

Tiflis, Physikalisches Observatorium—continued.

- Abtheilung 1. Meteorologische Beobachtungen. Band
 1, 2. 1871-79. 8vo. & 4to. Tiflis, 1877-80
 Abtheilung 3. Klimatologische Skizzen. Band 1.
 8vo. Tiflis, 1871

- : Collection de tables à l'usage des Stations Météorologiques
 du Caucase, par A. Moritz. 8vo. Tiflis, 1868
 — : Magnetische Beobachtungen, 1879-82. Herausgegeben
 von J. Mielberg. 4to. Tiflis, 1880-83
 — : Meteorologische Beobachtungen, 1880-82.
 4to. Tiflis, 1881-83
 — : Inhaltsverzeichniss zum Bibliotheks-Katalog.
 8vo. Tiflis, 1874

Tilloch (Alexander), see Philosophical Magazine.

Tischner (August):

- The Sun changes its position in space, therefore it cannot be
 regarded as being 'in a condition of rest.'
 16mo. Leipzig, 1883

Tisserand (F.), see Paris, Observatoire.

Titis (Placidus de):

- : Tabulæ primi mobilis cum thesibus ad theoricen & canonibus
 ad praxim. 4to. Patavii, 1657
 — : Primum mobile; with theses to the theory and canons for
 practice . . . Translated . . . with notes and an appendix . . . by John Cooper. 8vo. London [1815]

Tizard (T. H.), see London, Meteorological Office.

Tizini (Mohammed), Tabulæ declinationum et rectarum ascensionum, see Ulugh Beigh.

Todd (Charles):

- : Report on the determination of the boundary line of the
 colonies of South Australia and New South Wales.
 fol. Adelaide, 1869
 — : Observatory and Climate of South Australia.
 8vo. Adelaide, 1876
 — : Rainfall in South Australia during the year 1878.
 fol. Adelaide, 1879
 — : *See also* Adelaide Observatory.

Todd (D. P.):

- : A continuation of De Damoiseau's tables of the satellites of
 Jupiter to the year 1900 . . . published for the American
 Ephemeris and Nautical Almanac. 4to. Washington, 1876
 — : *Preliminary account of a speculative and practical search
 for a trans-Neptunian planet. 8vo. New Haven, 1880
 — : *Report on the total solar eclipse of 1878, July 29.
 4to. Washington, 1880
 — : *Observations of the transit of Mercury, 1878, May 5-6,
 including a systematic search for a satellite, and measures
 of the diameter of the planet. 8vo. Salem, 1880
 — : *Solar parallax from the velocity of light.
 8vo. New Haven, 1880
 — : *On a mechanical attachment for equatorial mountings, to
 facilitate sweeping in right ascension. 8vo. Boston, 1880

Todd (Thomas):

Perpetuum kalendarium astronomicum, or a perpetual astronomical kalendar. 4to. Edinburgh, 1738

Todhunter (Isaac):

- : A history of the progress of the calculus of variations during the nineteenth century. 8vo. Cambridge, 1861
- : A history of the mathematical theory of probability from the time of Pascal to that of Laplace. 8vo. Cambridge, 1865
- : A history of the mathematical theories of attraction and the figure of the earth, from the time of Newton to that of Laplace. 2 vols. 8vo. Cambridge, 1873

Tōkiō, Seismological Society of Japan:

Transactions, 1882-83. Vol. 4-6. 8vo. Tōkiō

Tōkiō University:

Memoirs of the Science Department. No. 5. (Appendices) Measurement of the force of gravity at Sapporo (Yesso), (and at Naha and Kagoshima). No. 9. Earthquake measurement, by J. A. Ewing. 4to. Tōkiō, 1882-84

Tornamira (Francisco Vicente de):

Chronographia, y repertorio de los tiempos, a lo moderno, en qual trata varias y diversas cosas: de cosmographia, sphaera, theorica de planetas [&c.]. 4to. Pamplona, 1585

Toronto, Magnetical and Meteorological Observatory:

- : Observations printed under the superintendence of Lieut. Col. Edward Sabine. 1840-48. 3 vols. 4to. London, 1845-57
- : Abstracts of magnetical observations made during the years 1856 to 1862 inclusive, and during parts of the years 1853, 1854, & 1855. 4to. Toronto, 1863
- : Abstracts of meteorological observations made during the years 1854 to 1859 inclusive. 4to. Toronto, 1864
- : Results of meteorological observations made during the years 1860, 1861, & 1862. 4to. Toronto, 1864
- : Abstracts and results of magnetical and meteorological observations from 1841 to 1871 inclusive. 8vo. Toronto, 1875

Toronto, Meteorological Office:

- : Reports on the meteorological, magnetic, and other observatories of the Dominion of Canada. 1874-76. 8vo. Ottawa, 1875-77
- : Report on the Meteorological Service of the Dominion of Canada to which are appended the Reports of the Directors of the Magnetic and other Observatories for 1877-81. 8vo. Ottawa, 1878-83

Torricellian Experiment:

Difficiles nugae, or observations touching the Torricellian experiment, and the weight and spring of air. 8vo. London, 1674

Toulouse, Académie des Sciences, Inscriptions et Belles-Lettres:

- : Histoire et Mémoires . . . depuis son rétablissement en 1807, pour faire suite à l'Histoire et aux Mémoires de l'ancienne Académie, 2^{me} série. 6 vols. 8vo. Toulouse, 1827-43
- : Mémoires. 3^{me} série. 6 vols. 8vo. Toulouse, 1844-50
 - 4^{me} série. 6 vols. 8vo. Toulouse, 1851-56
 - 5^{me} série. 6 vols. 8vo. Toulouse, 1857-62
 - 6^{me} série. 6 vols. 8vo. Toulouse, 1863-68
 - 7^{me} série. 10 vols. 8vo. Toulouse, 1869-78
 - 8^{me} série. Tome 1-5. 8vo. Toulouse, 1879-83
- : Table Alphabétique des matières contenues dans les seize premiers tomes des Mémoires. 8vo. Toulouse, 1854
- : Table Alphabétique des matières . . . 4^{me} et 5^{me} série. 8vo. Toulouse, 1854
- : Table Alphabétique des matières . . . 7^{me} série. 8vo. Toulouse, 1880
- : Annuaire, 1877-83. 12mo. Toulouse

Toulouse, Observatoire:

- : Annales . . . par F. Petit. Tome 1. 4to. Toulouse, 1863
- : Observatoire astronomique, magnétique, et météorologique . . . Travaux exécutés 1873-1878, sous la direction de F. Tisserand . . . publiés par B. Baillaud. Tome 1. Paris, 1880

Tisserand (F.): Orbite du 8^{me} satellite de Saturne; Mouvement des apses des satellites de Saturne; Anneau de Saturne.

Perrotin (J.): Théorie de Vesta: Observations des satellites de Jupiter et de Saturne, Taches de Soleil, Lumière zodiacale, &c.

Toynbee (Henry):

- : *How to handle lunars. 8vo. London
- : A method for rating chronometers by lunars, containing a few practical hints on lunars, on the best means of employing the results, and on the state of the sextant used for measuring the distance. 8vo. London, 1856
- : See also London, Meteorological Office.

Trafford (F. W. C.):

- : Amphiorama, ou la vue du monde. 8vo. Zurich, 1874
- : Ditto. 8vo. Zurich, 1875
- : Ditto. 8vo. Lausanne, 1875
- : Ditto. 8vo. Lausanne, 1877
- : Souvenir de l'amphiorama, ou la vue du monde pendant son passage dans une comète. 8vo. Zurich, 1880

Trail (William):

Account of the life and writings of Robert Simson, M.D., late Professor of Mathematics in the University of Glasgow.
4to. Bath, 1812

Trémaux (P.):

Principe universel du mouvement et des actions de la matière résultant de la découverte de cette loi générale: *la force vive se transmet mieux entre corps semblables qu'entre corps différents.*
8vo. Paris, 1876

Tresca (Henri), see Loewy et Tresca.

Tresenreuter (Christoph Friedrich):

Dissertatio physico-astronomica de inaequali claritate lucis
diurnae in terra et planetis. 4to. Altorfii, 1729

Trettenero (Virgilio), see Santini.

Trevandrum Observatory:

— : An Astronomical Ephemeris for the years 1838–40, adapted
to the meridian of the Observatory at Trevandrum.

8vo. Trevandrum, 1838–39

— : Description of an observatory established at Trevandrum
by the Rajah of Travancore. By John Caldecott.

4to. London, 1839

— : Report on the Observatories of His Highness the Rajah of
Travancore, at Trevandrum, and on the Augustier Peak of
the Western Ghats. By J. A. Broun.

8vo. Trevandrum, 1857

— : Observations of magnetic declination made at Trevandrum
and Augustia Malley in the years 1852 to 1869,
being Trevandrum Magnetic Observations, Vol. 1. Dis-
cussed and edited by J. A. Broun. 4to. London, 1874

Tromholt (Sophus):

*Sur les périodes de l'aurore boréale (d'après des observations
faites à Godthaab en Groenland) [French and Danish].

4to. Copenhague, 1882

Troughton's Reflecting Circle (directions for observing with).
8vo. London, n.d.

Trouvelot (Leopold):

— : *On the veiled Solar Spots. 8vo. Boston, 1876

— : *On some physical observations of the Planet Saturn.
8vo. Boston, 1876

— : *The Moon's Zodiacal Light. Undulations observed in
the tail of Coggia's Comet, 1874. Sudden extinction of the
light of a solar protuberance. On Saturn's rings.
8vo. Boston, 1878

— : *Spectres fugitifs observés près du limbe solaire.
8vo. Paris, 1880

— : *Observations on Jupiter. 8vo. Boston, 1881

Trowbridge (David):

*On the atmospheres of the Sun and planets.
8vo. Philadelphia, 1877

**Truth in Extremis: A plea against the murder of science by
the gold-poison.** By a searcher. 8vo. Oxford, 1876

Tschermak (Gustav):

— : Die mikroskopische Beschaffenheit der Meteoriten, erläutert
durch photographische Abbildungen. fol. Stuttgart, 1883

— : See also Buchner und Tschermak.

Tupman (George Lyon):

— : Observations of shooting stars in the years 1869, 1870,
1871. 8vo. London, 1874

Tupman (George Lyon)—continued.

- : *On the great meteors of 1875 : September 3, September 7,
and September 14. 8vo. London, 1876
— : *The meteors of 1877, Nov. 23. 8vo. London, 1878

Turin, Reale Accademia delle Scienze:

- : Miscellanea philosophico-mathematica Societatis Privatae
Taurinensis. Tomus 1. 4to. Augustæ Taurinorum, 1759
— : Mélanges de philosophie et de mathématique de la Société
Royale de Turin, 1760-73. 4 vols. 4to. Turin.
— : Mémoires de l'Académie Royale des Sciences, 1784-1800.
6 vols. 4to. Turin, 1786-1801
— : Mémoires de l'Académie (Impériale) des Sciences, litté-
rature et beaux-arts de Turin :
Sciences physiques et mathématiques, an X [1802]-1812.
5 vols. 4to. Turin, 1804-13
Littérature et beaux-arts, an X [1802]-1812.
5 vols. 4to. Turin, 1803-13
— : Mémoires de l'Académie Royale des Sciences de Turin,
1813-1814. 4to. Turin, 1816
— : Memorie della R. Accademia delle Scienze di Torino. Tomo
23-40. 4to. Torino, 1818-38
— : Serie seconda. Tomo 1-35. 4to. Torino, 1839-84
— : Atti, 1865-84. Vol. 1-19. 8vo. Torino, 1866-83
— : Notizia Storica dei lavori fatti dalla classe di scienze fisiche
e matematiche negli anni 1864 e 1865, dal A. Sobrero.
8vo. Torino, 1869
— : Annuario . . . per l'anno 1877-78. Anno 1.
8vo. Torino, 1877
— : Atlante di carte celesti, contenenti le 634 stelle principali
visibili alla latitudine boreale di 45° . . . e catalogo delle
. . . stelle per l'anno 1880. obl. fol. n.d.
— : Il primo secolo della R. Accademia delle Scienze di Torino :
notizie storiche e bibliografiche (1783-1883).
4to. Torino, 1883

Turin, R. Osservatorio della R. Università:

- : Observations Astronomiques faites en 1822-25 . . .
précédées d'un mémoire sur les réfractions astronomiques
par J. Plana. 4to. Turin, 1828
— : Bollettino Meteorologico ed Astronomico. Anno 5-17,
1868-82. oblong 4to. Torino

Turner (John):

- Mathematical exercises. No. 1-6.
8vo. London and Wrexham, 1750-52

Turner (Rev. —):

- The Heavens survey'd, and the true System of the Universe
delineated, so as to form a curious Astronomical Instrument:
exhibiting the number, order, periods, aphelions, perihelions,
nodes, &c., of all the Primary Planets by inspection.
fol. London, 1783

Turnor (Edmund):

Collections for the history of the town and Soke of Grantham.
 Containing authentic memoirs of Sir Isaac Newton, now
 first published from the original MSS. in the possession of
 the Earl of Portsmouth. 4to. London, 1806

Tuttell (Thomas):

A mathematical dictionary, &c. (the description of mathematical instruments). 2 parts, 8vo. London, 1701

Twining (Alexander C.):

*Investigations respecting the Phenomena of Meteoric Rings, as affected by the Earth. 8vo. New Haven, 1862

Twysden (John):

— : The use of the general planisphere, called the analemma (the planetary instrument, and the nocturnal). 3 parts in 1 vol. 4to. London, 1685

— : *See also* Foster (Samuel).

Tycho Brahe, *see* Brahe.**Tyndall (John):**

— : *On the physical basis of solar chemistry. 8vo. London [1861]

— : Heat a mode of motion. Fifth edition. 8vo. London, 1875

Uhlemann (Max):

Grundzüge der Astronomie und Astrologie der Alten, besonders der Aegypter. 8vo. Leipzig, 1857

Ule (Otto):

Das Weltall. Beschreibung und Geschichte des Kosmos im Entwicklungskampfe der Natur Zweite Auflage. 3 vols. 8vo. Halle, 1853

Ulloa (Antonio de): Observaciones astronomicas, *see* Juan y Ulloa.

Ulugh Beigh:

— : Epochæ celebriores, astronomicis, historicis, chronologis Chataiorum, Syrogræcorum, Arabum, Persarum, Choras-miorum usitatae; publicavit, recensuit, et commentariis illustravit J. Gravius. 4to. Londini, 1650

— : *See also* Knobel (E. B.).

— : Tabulæ long. ac lat. stellarum fixarum, ex observatione Ulugh Beighi, Tamerlanis magni nepotis jam primùm luce ac Latio donavit et commentariis illustravit Thomas Hyde. [Pers. & Lat.] In calce libri accesserunt Mohammedis Tizini tabulæ declinationum et rectarum ascensionum; additur elenches nominum stellarum. [Arabic & Lat.] 2 parts in 1 vol. Oxonii, 1665

United Kingdom, Ordnance Survey:

— : An account of the operations carried on for accomplishing a trigonometrical survey of England and Wales; from the commencement, in the year 1784 (to 1809). By W. Mudge, I. Dalby, and T. Colby.

3 vols. 4to. London, 1799-1811

United Kingdom. Ordnance Survey—continued.

- : Astronomical Observations made with Ramsden's Zenith Sector, together with a catalogue of the stars which have been observed, and the amplitudes of the celestial arcs, deduced from the observations at the different stations. 4to. London, 1842
- : An account of the measurement of the Lough Foyle base in Ireland, with its verification and extension by triangulation; together with the various methods of computation followed on the Ordnance Survey, and the requisite tables. By Capt. W. Yolland. 4to. London, 1847
- : Astronomical observations made with Airy's Zenith Sector from 1842 to 1850, for the determination of the latitudes of various trigonometrical stations. By Capt. W. Yolland. 4to. London, 1852
- : Account of the observations and calculations of the principal triangulation, and of the figure, dimensions, and mean specific gravity of the earth as derived therefrom. Drawn up by Capt. A. R. Clarke under the direction of Lieut. Col. H. James (with vol. of plates). 4to. London, 1858
- : Instructions for taking meteorological observations, with tables for their correction, and notes on meteorological phenomena. By Col. Sir H. James. 8vo. London, 1860
- : Abstracts of the principal lines of spirit levelling in England and Wales. By Col. Sir H. James (with vol. of plates). 4to. London, 1861
- : Abstract of the principal lines of spirit levelling in Scotland. By Col. Sir H. James (with vol. of plates). 4to. London, 1861
- : Comparisons of the Standards of Length of England, France, Belgium, Prussia, Russia, India, Australia, made at the Ordnance Survey Office, Southampton, by Capt. A. R. Clarke, under the direction of Col. Sir Henry James. 4to. London, 1866
- : Extension of the triangulation of the Ordnance Survey into France and Belgium, with the measurement of an arc of parallel in Latitude 52° N., from Valentia in Ireland to Mount Kemmel in Belgium. By Col. Sir H. James. 4to. London, 1863
- : Determination of the positions of Feaghmain and Haverfordwest; longitude stations on the great European arc of parallel, being an appendix to the Account of the principal triangulation of Great Britain and Ireland. By Capt. A. R. Clarke, under the direction of Col. Sir H. James. 4to. London, 1867

United States Almanac, or Complete Ephemeris, 1843, '45.
12mo. Philadelphia.

United States Boundary Commission, see Boss (L.).

United States Coast (and Geodetic) Survey :

- : Report of the Superintendent of the United States Coast Survey, showing the progress of the survey during the years 1853-77. 4to. Washington, 1854-80

United States Coast (and Geodetic) Survey—continued.

— : Report of the Superintendent of the U.S. Coast and Geodetic Survey, showing the progress of the work during the years 1878-82. 4to. Washington, 1881-83

Appendix to vol. for 1860 contains

- Reports of Observations of solar eclipse, July 1860. Alexander & Gilliss.
- " " 1861. Abstracts of observations of eclipse of July 1860.
- " " 1869. Reports of observations of solar eclipse, Aug. 1869.
- " " 1870. " Dec. 1870.
- " " 1871. Reports of observations of solar " eclipse, Dec. 1870, and general index of professional and scientific papers in Reports for 1851-70.
- " " 1873. List of stars for observations of latitude; Errata in Heis's catalogue of stars.
- " " 1875. Report on Transit of Venus Expeditions, 1874.
- " " 1876. Catalogue of stars for observations of latitude.
- " " 1878. Observations of Transit of Mercury, May 1878.
- " " 1881. Ellipticity of the earth from pendulum experiments, &c. C. S. Peirce.
- " " 1882. Total eclipse of Jan. 1880 (Davidson). New reduction of Lacaille's Observations of Fundamental Stars (Powalky).

— : Report on the history and progress of the American Coast Survey up to the year 1858. 8vo.

— : Standard mean Right-Ascensions of circumpolar and tame stars. 4to. Washington, 1862

— : *Methods, discussions and results. Meteorological Researches for the use of the Coast Pilot. (By William Ferrel.) Part 1-3. 4to. Washington, 1877-82

United States Geographical Surveys:

Report upon United States Geographical Surveys west of the one-hundredth meridian, in charge of Lieut. Geo. M. Wheeler. Vol. 2, Astronomy and barometric Hypsometry. 4to. Washington, 1877

United States Geological Survey:

Meteorological observations during the year 1872, in Utah, Idaho, and Montana. 8vo. Washington, 1873

United States Naval Astronomical Expedition:

— : To the Southern hemisphere during the years 1849, 1850, 1851, 1852, Lieut. J. M. Gilliss, Superintendent. Vol. 1-3, 6. 4to. Washington, 1855-56

— : A catalogue of 1963 stars . . together with a catalogue of 290 double stars. The whole from observations made at Santiago, Chili, during the years 1850-1852. 4to. Washington, 1870

Universal System (the), or mechanical cause of all the appearances and movements of the visible heavens . . . with a dissertation on Comets: . . . likewise an attempt to prove what it is that moves the Sun round its axis. 8vo. London, 1779

Upsala Kongl. Universitet:
Årsskrift. 1861-70.

8vo. Upsala.

Upsala, Kongl. Votonskaps-Societet:

— : Nova Acta Regiae Societatis Scientiarum. Series 3, Vol. I-II. 4to. Upsaliæ, 1855-83

— : Nova Acta. Volumen extra ordinem editum. (In memoriam quattuor seculorum ab Universitate Upsaliensi peractorum Regia Societas Scientiarum Upsaliensis.) 4to. Upsaliæ, 1877

— : Årsskrift. Årgången 1, 2. 8vo. Upsala, 1860-61

Upsala, K. Universitäts-Sternwarte:

— : Refractors-Beobachtungen . . . vom Februar 1862 bis Januar 1864. 8vo. Upsala, 1864

— : Observations météorologiques faites . . . pendant les années 1855-62. 4to. Upsal, 1866

— : Observations météorologiques horaires, exécutées par une Société d'Étudiants . . . 1865-68. Dirigées et publiées par R. Rubenson. 4to. Upsal, 1877

— : Bulletin météorologique mensuel, 1869-75. Vol. 1-7. 4to. Upsal, 1871-76

Uranus; oder tägliche, für Jedermann fassliche Uebersicht aller Himmelserscheinungen. Herausg. von P. H. L. von Boguslawski. 1846, '47 : 1849, Part 1. 8vo. Glogau und Breslau, 1845-48

Ure (Andrew):

A slight sketch of, reprinted from 'The Times' and various other Periodicals. 12mo. London, 1875

Ursinus [Ursin] (Georg Frederik Krüger):

— : De Eclipsi Solari die VII Septembbris MDCCXXX apparitura secundum methodum geometriæ analytice tractata dissertation. 4to. Hafniæ, 1820

— : Logarithmi vi Decimalium scilicet numerorum ab 1 ad 100,000 et sinuum et tangentium ad 10'', quibus additi sunt varii logarithmi et numeri saepius in mathesi adhibiti. 8vo. Hafniæ, 1827

Useful Knowledge Society, see Society for the Diffusion of Useful Knowledge.

Utrecht, Observatoire Astronomique Sonnenburg:

— : Recherches astronomiques . . . publiées par M. Hoek. I. De l'influence des mouvements de la terre sur les phénomènes fondamentaux de l'optique . . . II. Perturbations de Proserpine, dépendantes de la première puissance de la masse perturbatrice de Jupiter. Livraison 1, 2. 4to. La Haye, 1861-64

— : Recherches astronomiques, addition à la première livraison : Recherches sur la quantité d'éther contenue dans les liquides, par M. Hoek et A. C. Oudemans. 4to. La Haye, 1864

Uylenbroek (Pieter Johannes):

Oratio de Astronomiae conditione apud Arabes, aliasque medii aevi gentes orientales. 4to. Lugduni Batavorum, 1832

Uzielli (Gustavo):

*G. B. Donati. 8vo.

Valderus (J.) [and others]:

Sphaerae atqve astrorvm cœlestium ratio natura & motus.
 (J. Ziegler, de solidæ sphæræ constructione : Proclus, de sphæra, sive globo cœlesti, scholijs eiusdem Ziegleri explicatus : Hematiculum Berosi : Aratus, de siderum natura & motu : cum commentarijs Theonis Alexandrini : Ptolemaeus & Jordanus, planisphærium. 8vo. [Basileæ, 1536]

Valentiner (Wilhelm):

Determinatio orbitae Cometae v anni MDCCCLXIII. Dissertatio inauguralis. . . . 4to. Berolini, 1869

Vállas (Antal):

Felsöbb Egyenletek egy Ismeretlennel. Part 1.

8vo. Budán, 1842

Valz (Benjamin):

*Recherches sur le mode de formation des queues de comètes. 8vo. Genève, 1831

Vapereau (G.):

Dictionnaire universel des contemporains, contenant toutes les personnes notables de la France et des pays étrangers. 8vo. Paris, 1858

Vecchietti (Hieronymus):

De anno primitivo ab exordio mundi ad annum Julianum accommodato, et de sacrorum temporum ratione libri octo. fol. Augustae Vindelicorum, 1621

Vega (Georg von):

— : Thesaurus logarithmorum completus, ex arithmeticâ, logarithmica, et ex trigonometria artificiali Adriani Vlacci collectus, plurimis erroribus purgatus, in novum ordinem redactus. [Lat. & German.] fol. Lipsiae, 1794

— : Manuale logarithmico-trigonometricum matheseos studiorum commodo in minorum Vlacci, Wolfii, aliarumque hujus generis tabularum logarithmico-trigonometricarum mendis passim quam plurimis scatentium locum substitutum. [Lat. & Ger.] 4to. Lipsiae, 1820

— : Logarithmisch-trigonometrisches Handbuch. Vierzigste Auflage, . . . bearbeitet von Dr. C. Bremiker. 8vo. Berlin, 1856

Venturi (Giambattista):

Experimental enquiries concerning the principle of the lateral communication of motion in fluids. Applied to the explanation of various hydraulic phenomena. Translated [by W. Nicholson]. 8vo. London, 1799

Venus (Transit of), 1874:

Papers relating to the Transit of Venus in 1874, prepared under the direction of the Commission authorised by Congress. 4to. Washington, 1872-76

Venus (Transit of), 1882:

Instructions to observers. [Issued by the British Transit of Venus Committee.] 8vo. London

Vernon (George Venables):

- : *On the irregular oscillations of the barometer at Manchester. 8vo. Manchester, 1861
- : *On the irregular barometric oscillations at Geneva and on the Great St. Bernard, and their relations to the mean temperature and the fall of rain. 8vo. London, 1862
- : *On the number of days on which rain falls annually at London. 8vo. London, 1864
- : *On the direction of the wind at Manchester during the years 1849-61, at 8 A.M. 8vo. London, 1864
- : *On the meteorology of scarlatina. 8vo.
- : See also Heap and Vernon; Ransome and Vernon.

Veteres Mathematici:

Veterum mathematicorum Athenaei, Apollodori, Philonis, Bitonis, Heronis, et aliorum Opera, Graece et Latine pleraque nunc primum edita. fol. Parisii, 1693

Vicaire (E.):

- : *Sur la théorie des taches et sur le noyau obscur du soleil. 4to. Paris, 1873
- : *Sur la constitution du soleil et la théorie des taches. [2 mémoires.] 4to. Paris, 1873
- : *Sur la constitution physique du soleil. Réponse aux critiques de M. Faye. 4to. Paris, 1873
- : *Observations sur la théorie des cyclones solaires. [2 mémoires.] 4to. Paris, 1873
- : *Sur la loi de l'attraction astronomique sur les masses des divers corps du système solaire, et en particulier sur la masse et sur la durée du soleil. 4to. Paris, 1874

Victoria, Royal Society:

- : Transactions of the Philosophical Society of Victoria, 1854-55. Vol. 1. 8vo. Melbourne, 1855
- : Transactions of the Philosophical Institute of Victoria, 1855-60. Vol. 1-4. 8vo. Melbourne, 1857-60
- : Transactions and Proceedings of the Royal Society of Victoria, 1860-82. Vol. 5-19. 8vo. Melbourne, 1860-83

Vidal (Adriano Augusto de Pina):

- : Curso de Meteorologia. 8vo. Lisboa, 1869
- : Tratado elementar de optica. 8vo. Lisboa, 1874

Vienna, Gesellschaft der Freunde der Naturwissenschaften:

- : Berichte über die Mittheilungen . . . gesammelt und herausgegeben von W. Haidinger. Band 1, 2. 8vo. Wien, 1847
- : Naturwissenschaftliche Abhandlungen, . . . herausgegeben von W. Haidinger. Band 1. 4to. Wien, 1847.

Vienna, Kaiserliche Akademie der Wissenschaften:

- : Denkschriften . . . Mathematisch-naturwissenschaftliche Classe. Band 1-4 [and vol. of plates]. fol. Wien, 1850-52
- : Ditto. Band 5-46. 4to. Wien, 1853-83
- Register zu den Bänden 1-25 in Band 26.
" " " 26-40 " 40.

Vienna, Kaiserliche Akademie der Wissenschaften—continued.

- : Sitzungsberichte der mathematisch-naturwissenschaftlichen Classe, 1849-60. Band 2-42. 8vo. Wien, 1849-61
- : Abtheilung 2 (Mathematik, Physik, Chemie, Mechanik, Meteorologie, Astronomie), 1861-83. Band 43-86. 8vo. Wien, 1861-83
- : Register zu den ersten 10 Bänden. 8vo. Wien, 1854
- : „ „ zweiten 10 Bänden. 8vo. Wien, 1856
- : „ „ Bänden 21-30. 8vo. Wien, 1859
- : „ „ „ 31-42. 8vo. Wien, 1862
- : „ „ „ 43-50. 8vo. Wien, 1865
- : „ „ „ 51-60. 8vo. Wien, 1870
- : „ „ „ 61-64. 8vo. Wien, 1872
- : Feierliche Sitzung, 1859, '61. 8vo. Wien
- : Almanach, Jahrgang 5, 6, 8, 9. 1855-59. 8vo. Wien
- : Circular, No. 23-50. 8vo. Wien, 1877-83

Vienna, K. K. Central-Anstalt für Meteorologie und Erdmagnetismus:

- : Jahrbücher . . . von Karl Kreil, 1848-56. Band 1-8. 4to. Wien, 1854-61
- : Übersichten der Witterung in Österreich und einigen auswärtigen Stationen im Jahre 1860. 4to. Wien, 1861

Vienna, K. K. Sternwarte:

- : Annalen . . . von J. J. von Littrow (und C. L. von Littrow). Theil 1-20 (in 10 vols.) fol. Wien, 1821-40
- : Ditto. Herausgegeben von C. L. von Littrow. Neue Folge. Band 1-14. 4to. Wien, 1841-51
Vol. 4-12. Storia Celeste del R. Osservatorio di Palermo dal 1792 al 1813.
- : Ditto. Herausgegeben von Carl von Littrow (und E. Weiss). Dritte Folge. Band 1-29. 8vo. Wien, 1851-80
Vol. 1, 2. Argelander's Zonen-Beobachtungen vom + 45° bis + 80° Decl. in mittleren Positionen für 18420, von W. Oeltzen.
- : Meteorologische Beobachtungen . . . von 1775 bis 1855 . . . herausgegeben von Carl von Littrow und Carl Hornstein (und Edmund Weiss). Band 1-5. 8vo. Wien, 1860-66
- : Meteorologische Beobachtungen, 1839-50. 4to. Wien
- : Uebersicht der meteorologischen Beobachtungen von C. Jelinek (und A. Kunes), 1839-50. 4to. Wien
- : Hygrometer-Beobachtungen, 1829-33, 1836-45, . . . reducirt von C. Jelinek. 4to. Wien
- : Hülfs-Tafeln . . . zusammengestellt im Jahre 1837 von C. L. v. Littrow. 8vo. 1837
- : *Resultate der Beobachtungen am Meridian-Kreise, zusammengestellt von E. Weiss. 8vo. Wien, 1871

Vienna, österreichische Kriegsmarine:

- Almanach, 1863-65. Jahrg. 2-4. 8vo. Wien

Vieta (Franciscus):

- : Canon mathematicus sev ad triangula cum appendicibus. fol. Lutetiae, 1579

Viota (Franciscus)—*continued.*

- : *Opera mathematica, in unum Volumen congesta ac recognita, operâ atque studio Francisci à Schooten.*
fol. Lugduni Batavorvm, 1646

Vige[nô]re (Blaise de) :

- Traicté des Comètes, ou estoilles chevelues, apparoissantes extraordinairement au ciel ; avec leurs causes & effets.
8vo. Paris, 1578

Vignoles (Charles) :

- Observations to accompany the map of the shadow-path thrown by the total eclipse of the Sun on the 18th July, 1860, across the north-eastern part of Spain. 8vo. London, 1860

Villarceau (Antoine François Joseph Yvon) :

- : *Procédé pour calculer la masse et les éléments de l'orbite d'une planète perturbatrice inconnue (Extrait). 4to. Paris, 1848
 — : *Mémoires et notes sur les étoiles doubles et la détermination des orbites des planètes. 8vo. Paris, 1850
 — : *Théorie analytique de l'inégalité de lumière des étoiles doubles. (Extrait par l'auteur.) 4to. Paris, 1852
 — : *Troisième mémoire sur les étoiles doubles. (Extrait par l'auteur.) 4to. Paris, 1852
 — : *Théorie analytique du gyroscope de M. L. Foucault. 8vo. Paris, 1855
 — : *Détermination des orbites des planètes et des comètes. 4to. Paris, 1857
 — : *Prochain retour de la comète découverte par M. D'Arrest en 1851. 4to. Paris, 1857
 — : *Exposé du système des observations et de la détermination des éléments de leur réduction. 4to. Paris, 1860
 — : *Éphémérides pour la recherche de la comète périodique de d'Arrest, à son prochain retour en 1863 et 1864. 4to. Paris, 1862
 — : *Recherches sur le mouvement et la compensation des chronomètres. 4to. Paris, 1862
 — : *Étude du mouvement de rotation de la lunette méridienne. 4to. Paris, 1863
 — : *Nouveau théorème sur les attractions locales. 4to. Paris, 1868
 — : *Discussion relative au transfert de l'Observatoire Impérial de Paris. 4to. Paris, 1869
 — : *Nouvelle détermination de la vraie figure de la terre, ou de la surface de niveau, n'exigeant pas l'emploi des nivellements proprement dits. 4to. Paris, 1871
 — : *Théorie du pendule simple, à oscillations coniques, en ayant égard à la rotation de la terre. 4to. Paris, 1879
 — : *Application de la théorie des sinus des ordres supérieurs à l'intégration des équations différentielles linéaires. 4to. Paris, 1880
 — : *Mécanique céleste. Exposé des méthodes de Wronski et composantes des forces perturbatrices suivant les axes mobiles. 4to. Paris, 1881

Villarceau (Antoine François Joseph Yvon)—continued.

- : *Remarques à l'occasion du mémoire de MM. Loewy et Périgaud sur la flexion des lunettes. 4to. Paris, 1881
- : *Théorie de la flexion plane des solides, et conséquences relatives, tant à la construction des lunettes astronomiques, qu'à la réglementation de ces appareils, pour les affranchir des déviations de l'axe optique produites par la flexion. 4to. Paris, 1881
- : *Mécanique céleste. Essai philosophique sur la science de l'ordre (méthode ainsi nommée par son auteur). 4to. Paris, 1882
- : *See also* Paris, Observatoire.

Villehuet (Bourdé de):

- Le Manœuvrier, ou essai sur la théorie et la pratique des mouvements du navire et des évolutions navales.
8vo. Paris, 1769

Villeneuve (J. Perny):

- Commentaire et discussion de l'Astronome J. P. . . V . . . , par un ancien officier de l'État-Major [le C^{te} Kostrowicki]. 4to. Vienne, 1861

Vilna, see Wilna.

Vince (Samuel):

- : A treatise on practical astronomy. 4to. Cambridge, 1790
- : *A new method of investigating the sums of infinite series. 4to. London, 1791
- : The principles of hydrostatics. Vol. 3, Part 2. 8vo. Cambridge, 1796
- : A complete system of astronomy. 3 vols. 4to. Cambridge, 1797–1808
- : The principles of astronomy, designed for the use of students in the University. 8vo. Cambridge, 1799
- : A treatise on plane and spherical trigonometry, with an introduction, explaining the nature and use of logarithms. 8vo. Cambridge, 1800
- : The principles of fluxions, designed for the use of students in the University. Third edition. 8vo. Cambridge, 1805
- : A confutation of Atheism, from the laws and constitution of the heavenly bodies : in four discourses preached before the University of Cambridge. 8vo. Cambridge, 1807
- : The elements of the Conic Sections, adapted to the use of students in Philosophy. Fourth edition. 8vo. Cambridge, 1810
- : A treatise on fluxions. Fifth edition. 8vo. Cambridge, 1818

Vincendon-Dumoulin (A.):

- Hydrographie du voyage au Pôle Sud et dans l'Océanie sur les corvettes *l'Astrolabe* et *la Zélée*, exécuté . . . pendant les années 1837–40, sous le commandement de J. Dumont d'Urville. 8vo. Paris, 1843

Virgin (C. A.):

Voyage autour du monde sur la frégate Suédoise *l'Eugénie*, exécuté pendant les années 1851-53, sous le commandement de C. A. Virgin. Observations scientifiques : 3^{me} partie. Physique. [French and Swedish. Edited by A. J. Ångström.] 4to. Stockholm, 1858-74

Visconti (Ferdinando):

Del sistema metrico della Città di Napoli. 8vo. Napoli, 1838

Vision (the theory of), or visual language, shewing the immediate presence and providence of a Deity, vindicated and explained. 8vo. London, 1733

Viviani (Vincenzo):

— : De Maximis et Minimis, geometrica diuinatio in quintum conicorum Apollonii Pergæi adhuc desideratum . . . liber primus (et secundus). 2 vols. in 1, fol. Florentiae, 1659

— : La Vita, ed alcune lettere familiari di Galileo Galilei. 8vo. Venezia, 1826

Vizagapatam Observatory:

Results of meteorological observations, 1872, '75-77, '79-82.

By A. V. Nursingrow. 8vo. Calcutta, 1873-83

Vlacq (Adrian):

— : Chilades centum Logarithmorum pro numeris ab unitate ad 100,000. fol. [Goudæ, 1628 ?]

— : Arithmetique logarithmetique, ov la constrvction et vsage d'vne table contenant les Logarithmes de tous les Nombres depuis l'Vnité jusques à 100000, et d'vne avtre table en laquelle sont compris les Logarithmes des Sinus, Tangentes & Secantes, de tous les Degrez & Minutes du quart du Cercle, selon le Raid de 10,00000,0000 parties. fol. Goude, 1628

— : Tabvlae sinvvm, tangentivm, et secantivm ; logarithmi sinvvm, tangentivm, et nvmerorvm ab vnitate ad 10,000. Cvm methodo facilima, illarvm ope, resolvendi omnia triangvla rectilinea et sphærica, et plvrimas qvaestiones astronomicas. Editio nova et emendata a Joh. Jacobo Hentschio. 8vo. Francofurti et Lipsiae, 1778

Vogel (Hermann Carl):

— : Beobachtungen von Nebelfleckchen und Sternhaufen am sechsfüssigen Refractor und zwölffüssigen Aequatoreal der Leipziger Sternwarte ausgeführt. 8vo. Leipzig, 1867

— : *Verzeichniss von hundert Nebelfleckchen, abgeleitet aus Beobachtungen an der Leipziger Sternwarte. 4to. Altona, 1867

— : *Bahnbestimmung und Ephemeriden der Planeten Antiope (90) und Aegle (96). 4to. Altona, 1867, 1868

— : *Bahnbestimmung des Cometen V, 1846. 4to. Altona, 1868

— : Beobachtungen von Nebelfleckchen und Sternhaufen deren Declination zwischen 9° 30' und 15° 30' gelegen sind. Inaugural-Dissertation. 8vo. Jena, 1870

— : *Resultate spectralanalytischer Untersuchungen an Gestirnen. 8vo. Leipzig, 1871

Vogel (Hermann Carl)—continued.

- : *Untersuchungen über das Spectrum des Nordlichts.
8vo. Leipzig, 1871
- : *Ueber die Absorption der chemisch wirksamen Strahlen
in der Atmosphäre der Sonne. 8vo. Leipzig, 1872
- : *Über ein Spectroskop zur Beobachtung lichtschwächer
Sterne, und einige damit ausgeführte Beobachtungen.
8vo. Leipzig, 1873
- : Untersuchungen ueber die Spectra der Planeten
Gekrönte Preisschrift. 8vo. Leipzig, 1874
- : *Positionsbestimmungen von Nebelflecken und Sternhaufen
zwischen + 9° 30' und + 15° 30' Declination.
4to. Leipzig, 1876
- : *Untersuchungen über das Spectrum des neuen Sterns im
Schwan. 8vo. Berlin, 1877
- : *Spectralphotometrische Untersuchungen, insbesondere zur
Bestimmung der Absorption der die Sonne umgebenden
Gashülle. 8vo. Berlin, 1877
- : Der Sternhaufen χ Persei beobachtet am 8-zölligen Refractor
der Leipziger Sternwarte in den Jahren 1867 bis 1870.
4to. Leipzig, 1878
- : *Notizen über fernere Beobachtungen des neuen Sterns im
Schwan. 8vo. Berlin, 1878
- : *Über eine einfache Methode zur Bestimmung der Brenn-
punkte und der Abweichungskreise eines Fernrohrobjectivs
für Strahlen verschiedener Brechbarkeit. 8vo. Berlin, 1880
- : *Resultate spectralphotometrischer Untersuchungen.
8vo. Berlin, 1880
- : *Vermischte Mittheilungen, betreffend Spectralapparate.
4to. Berlin, 1881
- : *Ueber eine Methode, die Schwingungszeit eines Pendels
oder irgend eines schwingenden Stabes durch Coïncidenzen
mit einem Pendel oder Stabe von bekannter Schwingungs-
dauer zu ermitteln. 8vo. [München, 1881]
- : *See also* Bothkamp, Sternwarte.

Vogel (Hermann Carl) und Osw. Lohse:

- *Untersuchungen über die Verwendbarkeit der Kollodium-
Photographie zur Beobachtung des bevorstehenden Venus-
Vorüberganges. 8vo. Leipzig, 1873

Vogt (Carl):

- Les prétendus organismes des météorites. 4to. Genève, 1882

Voigt (Johann Heinrich):

- Entwickelung der physischen Beschaffenheit der Kometen und
ihres dadurch begründeten natürlichen Einflusses auf
andere Weltkörper. Bey Gelegenheit des Kometen von
1807. 8vo. Rudolstadt, 1808

Voiron (—):

- Histoire de l'Astronomie, depuis 1781 jusqu'à 1811, pour
servir de suite à l'Histoire de l'Astronomie de Bailly.
4to. Paris, 1810

Volpicelli (Paolo):

*Descrizione della lampada elettro-dinamica del Sig. Duboscq-Soleil.
4to. Roma, 1851

Voltaire (François Marie Arouet de):

Elémens de la philosophie de Neuton mis à la portée de tout le monde.
8vo. Amsterdam, 1738

Vorsselman de Heer (P. O. C.):

- : Specimen inauguraile de fractionibus continuis.
4to. Trajecti ad Rhenum, 1833
- : *Note sur le calcul de l'inclinaison magnétique.
8vo. Genève, 1835

Vulliamy (Benjamin Lewis):

- : Some considerations on the subject of public clocks, particularly church clocks, with hints for their improvement.
4to. London, 1828
- : A supplement to the paper entitled 'some considerations on public clocks' consisting of a correspondence with the committee for building the new church at Bermondsey.
4to. London, 1830
- : *On the construction and regulation of clocks for railway stations.
8vo. London, 1845
- : On the construction and theory of the dead escapement for clocks.
8vo. London, 1846
- : A portion of the papers relating to the great clock for the new Palace at Westminster, with remarks. fol. London, 1848

Wace (Henry):

A simple method of calculating logarithms to any number of figures.
8vo. London, 1873

Wackerbarth (Francis Diedrich):

- : *Om planeten Neptunus.
8vo. Uppsala, 1865
- : *A provisional theory of Leda.
4to. Upsala, 1866
- : Fem-ställiga logarithm-tabeller, innehållande de vanliga logarithmerna från 0 till 11000, de naturliga logarithmerna från 0 till 10000, logarithmerna för die trigonometriska funktionerna, jemte en samling tabeller. Svo. Upsala, 1867

Wagner (A.):

[Notices of Astronomical books, from Astron. Gesellsch. Vierteljahrsschrift.]
8vo. Leipzig, v.d.

Waldo (Leonard):

Report of the Observations of the total Solar Eclipse, July 29, 1878, made at Fort Worth, Texas.
4to. Cambridge [U.S.], 1879

Waldschmidt (Johann Jacob):

Diatriba de atomis, finibus mundi et loco. [Inaugural Dissertation.]
4to. Marburgi, 1687

Walonn (W. H.):

*On Unitation; a novel arithmetical operation.
8vo. London, 1868

Wales (William) :

Astronomical observations made in the voyages which were undertaken by order of His present Majesty for making discoveries in the southern hemisphere by Commodore Byron, Captain Wallis, Captain Carteret, and Captain Cook fol. London, 1788

Walker (Charles V.) :

*Galvanic time-signals. 8vo. London, 1876

Walker (D. F.) :

An epitome of astronomy, with the new-discovered planets, and the late comet, as illustrated by the Eidouranion ; or transparent Orrery. 8vo. Edinburgh, 1824

Walker (George) :

On the doctrine of the sphere, in six books : to which is added an appendix, containing the solution of a problem for ascertaining the latitude and longitude of a place, together with the apparent time. 4to. London, 1777

Walker (Robert) :

Analysis of researches into the origin and progress of historical time. 8vo. London, 1796

Walker (Sears C.) :

- : *Researches relative to the planet Neptune. (Ephemeris for the opposition of 1848.) 4to. Washington [1848]
- : *Ephemeris of the planet Neptune for the years 1851 and 1852. 4to. Washington, 1851

Walkingame (Francis) :

The tutor's assistant, being a compendium of arithmetic and complete question-book. 9th edition. 12mo. London, 1771

Wallace (John) :

- : A new treatise on the use of the globes, and practical astronomy ; or a comprehensive view of the system of the world. 8vo. New York, 1812
- : Logarithmic tables : containing the logarithms of numbers, log. sines, tangents and secants, and natural sines. 8vo. [title wanting]

Wallis (John) :

- : A treatise of algebra, both historical and practical, shewing the original, progress, and advancement thereof With some additional treatises : I. Of the cono-cuneus II. Of angular sections III. Of the angle of contact IV. Of combinations, alterations, and aliquot parts. 3 parts in 1 vol. fol. London, 1685–84
- : Opera mathematica. 3 vols. fol. Oxoniæ, 1699–93

Wallis (John) :

A brief examination of the nebulous hypothesis, with strictures on a work entitled 'Vestiges of the natural history of creation.' 8vo. London, 1845

Walmsley (D. C.):

The theory of the motion of the apsides in general, and of the apsides of the Moon's orbit in particular. [Translated from the French.] 4to. London, 1754

Warburton (Henry):

- : *On the partition of numbers, and on combinations and permutations. 4to. Cambridge, 1849
- : *On self-repeating series. 4to. Cambridge, 1856

Ward (Hon. Mrs.):

Telescope teachings. 8vo. London, 1859

Ward (John):

- : The young Mathematician's guide; being a plain and easy introduction to the mathematicks The seventh edition, to which is . . . added a supplement, containing the history of logarithms. 8vo. London, 1740
- : The Lives of the Professors of Gresham College: to which is prefixed the Life of the Founder, Sir Thomas Gresham. fol. London, 1740
- : Posthumous works Part 1, containing his new method of navigation Part 2, containing the doctrine of the sphere Revised by George Gordon. 8vo. London, 1765
- : Life, *see* Birch (T.).

Ward (Seth), Bishop of Salisbury:

Astronomia geometrica; ubi methodus proponitur qua primiorum planetarum astronomia, sive { elliptica } circularis } possit geometricè absolvī. 3 parts in 1 vol. 8vo. Londini, 1656

Warner (Thomas):

- : How to keep the clock right by observations of the fixed stars with a small fixed telescope. 8vo. London, 1869
- : Ditto. Improved edition. 8vo. London, 1876

Warren (Henry White):

Recreations in astronomy, with directions for practical experiments and telescope work. 12mo. New York, 1880

Wartmann (Louis Frédéric):

- : Cartes Célestes [six maps, showing the apparent paths of the Comets of Halley, Biela, Encke, &c.] 6 sheets [with text 8vo.], Genève, 1828-35
- : Cartes célestes sur un plan nouveau, contenant . . . toutes les étoiles de 1^{re} à 6^{me} grandeur . . . visibles en Europe. 2 sheets [with text 8vo.], Genève, 1835
- : *Notice sur la réapparition de la comète à courte période d'Encke. 8vo. Genève, 1838

Washburn Observatory of the University of Wisconsin:

- : Contributions Number 1. 4to. Madison, 1881
- : Publications Vol. 1. (E. S. Holden, Director.) 8vo. Madison, 1882

Washington, Bureau of Navigation:

Washington, National Institution for the Promotion of
Science:

- : Bulletin of the Proceedings. No. 1-3. 8vo. Washington, 1841-45
— : Constitution and By-Laws. 8vo. Washington, 1840
— : Discourse . . . delivered at the first anniversary, by J. R. Poinsett. 8vo. Washington, 1841

Washington, Philosophical Society:

- Bulletin. Vol. 1-6. 8vo. Washington, 1874-84

Washington, Smithsonian Institution:
Smithsonian Contributions to Knowledge

- : Smithsonian Contributions to knowledge. Vol. 1-23.
— : Annual Report of the Board of Regents, 1849-52, 1854-82.
— : Washington, 4to. 1848-81
— : Washington, 8vo. 1850-84

Washington, Smithsonian Institution—*continued.*

— : Smithsonian Miscellaneous Collections. Vol. 1-27.
8vo. Washington, 1862-83

Washington, United States Hydrographic Office :

- : Practical Papers. No. 5, The determination of secondary meridian by electric telegraph, and the personal equation, by F. M. Green and E. S. Holden. 8vo. Washington, 1876
- : An observing list of stars selected for the determination of time with the portable meridian transit in the Southern hemisphere. 8vo. Washington, 1877
- : Report on the telegraphic determination of differences of longitudes in the West Indies and Central America, by F. M. Green. 4to. Washington, 1877
- : Telegraphic determination of longitudes on the East Coast of South America, embracing the meridians of Lisbon, Madeira [etc.], by F. M. Green, C. H. Davis, and J. A. Norris, in 1878 and 1879. 4to. Washington, 1880
- : Telegraphic determination of longitudes in Japan, China, and the East Indies. By F. M. Green, C. H. Davis, and J. A. Norris, 1881-82. 4to. Washington, 1883

Washington, United States Naval Observatory :

- : Magnetical and Meteorological Observations made at Washington by Lieut. J. M. Gilliss (1838-42).
8vo. Washington, 1845
- : Astronomical Observations made by Lieutenant J. M. Gilliss (1838-1842). 8vo. Washington, 1846
- : Astronomical Observations made during the years 1845, 1847, 1851 & 1852. 4to. Washington, 1846-67
Appendix, 1847. A. Observations on solar spots. Sestini.
B. " on the Mississippi river. R. A. Marr.
C. Tables for reduction of the places of the fixed stars.
- : Astronomical and Meteorological Observations made during the years 1861-79. 4to. Washington, 1862-83

- Appendices, 1862. Longitude of Washington.
- 1863. A. Solar parallax from Observations of Mars, 1862.
B. New elements of Nemausa.
- 1864. Latitude and Longitude of U.S. Naval Observatory. Newcomb.
- 1865. I. Description of the Transit Circle.
II. Investigation of the Distance of the Sun. Newcomb.
- 1866. Discussion of Meteorological Observations, 1842-67.
- 1867. I. Difference of Longitude between Washington and Havana. Harkness.
II. Observations of the Total Eclipse of the Sun, August 7, 1869.
- III. Positions of Fundamental Stars from Washington Observations, 1862-67. Newcomb.
- IV. Catalogue of 151 Stars in Praesepe. Hall.
- 1868. Catalogue of Stars observed by the U.S. Astronomical Expedition to the Southern Hemisphere, 1850-52. Gilliss.
- 1869. I. Reports on Total Solar Eclipse of Dec. 22, 1870.
II. Zones of Stars observed with the Mural Circle, 1846-49.

Washington, United States Naval Observatory (Appendices)—*continued.*

- 1870. I. Difference of Longitude between Washington and St. Louis. Harkness.
- II. Reports on Observations of Eneke's Comet. Hall and Harkness.
- III. Right Ascensions of Equatorial Fundamental Stars. Newcomb.
- IV. Zones of Stars observed with the Meridian Transit Instrument, 1846–49.
- 1871. I. Zones of Stars observed with the Meridian Circle, 1847–49.
- II. Results of Observations made with the Transit Instrument and Mural Circle, 1853–60.
- III. Catalogue of Stars observed during the years 1845–71. Yarnall.
- Ditto, second edition, 1878.
- IV. Memoir of the Founding and Progress of the U.S. Naval Observatory.
- 1872. I. Tables for the Reduction of Transit Observations. Eastman.
- II. Difference of Longitude between Washington and Detroit, Mich.; Carlin, Nevada; and Austin, Nevada. Eastman.
- 1873. The Uranian and Neptunian Systems investigated with the 26-inch Equatorial. Newcomb.
- 1874. I. Instruments and Publications of the U.S. Naval Observatory, 1845–76.
- II. Difference of Longitude between Washington and Ogden, Utah. Eastman.
- 1875. I. Difference of Longitude between the U.S. Naval Observatory and the Sayre Observatory of Lehigh University. Eastman.
- II. Researches on the Motion of the Moon. Part I, Reduction of Observations made before 1750. Newcomb.
- III. Chronometer Rates as affected by Change of Temperature and other Causes. Davis.
- 1876. I. A Subject-Index to the Publications of the U.S. Naval Observatory, 1845–75. Holden.
- II. Reports on Observations of the Transit of Mercury, May 1878.
- III. Reports on the total solar eclipses of July 1878 and Jan. 1880.
- 1877. I. Investigation of the Objective and Micrometer of the 26-inch Equatorial. Holden.
- II. The multiple star Σ 748. Holden.
- III. Solar parallax from Meridian Observations of Mars, 1877. Eastman.
- IV. Longitude of Cincinnati Observatory. Eastman.
- V. Longitude of the Morrison Observatory, Glasgow, Mo. Eastman and Pritchett.
- VI. Observations of Double Stars. Hall.
- 1878. I. Monograph of the Nebula of Orion. Holden.
- II. Longitude of the J. C. Green School of Science, Princeton, N.J. Paul and Young.
- 1879. I. Parallax of α Lyrae and 61 Cygni. Hall.
- II. Determination of the Semidiameter of the Moon. Paul.
- 1880. I. Observations of the Great Comet of 1882. Winlock.

— : Nautical Monographs. No. 1, The winds at sea.

4to. Washington, 1859

Washington, United States Naval Observatory—*continued.*

- : Ephemeris of Stars proper for observation with the planet Mars, near the opposition, 1862. 8vo. Washington, 1862
- : Observations and discussions of the November Meteors of 1867. 8vo. Washington, 1867
- : November Meteors of 1868. [Report by J. R. Eastman.] 8vo. Washington
- : Instructions for observing the Transit of Mercury, 1878, May 5–6. 4to. Washington, 1878
- : Instructions for observing the total Solar Eclipse of July 29, 1878. 4to. Washington, 1878
- : Instructions for observing the transit of Venus, December 6, 1882. 4to. Washington, 1882
- : Report for the year 1877–78. By Admiral Rodgers. 8vo. Washington, 1878
- : Catalogue of the Library. Part 1, Astronomical Bibliography, by Edward S. Holden. 4to. Washington, 1879

Washington, United States Patent Office :

Results of Meteorological observations made under the direction of the United States Patent Office and the Smithsonian Institution, from the year 1854 to 1859 inclusive. Vol. 1, 2, Part 1. 4to. Washington, 1861–64

Washington, War Department :

- : Second, third (and fourth) Reports on Meteorology, by J. P. Espy. fol. and 4to. Washington, 1850–57
- : Meteorological register for the years 1826–30, from observations made by the surgeons of the army, and others to which is appended the meteorological register for the years 1822–25. 8vo. Philadelphia, 1840
- : Meteorological Register for twelve years, from 1831 to 1842 inclusive; compiled from observations made by the officers of the medical department of the army. 8vo. Washington, 1851
- : Army Meteorological Register, for twelve years, from 1843 to 1854 inclusive. 4to. Washington, 1855

Washington, War Department: Signal Office :

- : Daily Bulletin of Weather reports . . . Oct. and Nov. 1872. 4to. Washington, 1873
- : Annual Report of the Chief Signal Officer to the Secretary of War for the year 1880. 8vo. Washington, 1881
- : Professional papers of the Signal Service, No. 2–12. 4to. Washington, 1881–82

Waterhouse (James) :

- : *Photography in connection with the observation of the transit of Venus at Roorkee, December 9th, 1874. 8vo. Calcutta, 1875
- : Report on the operations connected with the observation of the total solar eclipse of April 6, 1875, at Camorta, in the Nicobar Islands. fol. Calcutta, 1875

[Waterhouse (J.)]:

Diagrams of a few double, triple, and multiple stars, as seen upon the meridian with an inverting telescope. 4to. [1844]

Waterhouse (John):

Eight years' meteorology of Halifax, being a record of observations taken at Well Head during the years 1866 to 1873 inclusive. 4to. Halifax, 1874

Waterston (John James):

— : An account of a mathematical theory of Gases. 8vo. [London, 1845]
— : *An account of Observations on Solar radiation. 8vo. London, 1862

Watson (James C.):

Theoretical astronomy relating to the motions of the heavenly bodies revolving around the sun in accordance with the law of universal gravitation. 8vo. Philadelphia, 1868

Watts (Isaac):

The knowledge of the heavens and the earth made easy; or the first principles of astronomy and geography explained by the use of globes and maps. 8th edition. 8vo. London, 1772

Watts (W. Marshall):

Index of Spectra. 8vo. London, 1872

Waud (S. W.):

A Treatise on algebraical geometry. (Library of Useful Knowledge.) 8vo. London, 1835

Webb (Thomas William):

— : Celestial Objects for common telescopes. 8vo. London, 1859
— : Ditto. Second edition. 8vo. London, 1868
— : Ditto. Fourth edition. 8vo. London, 1881

Webster (John):

Elements of natural philosophy with a general view of the solar system. 8vo. London, 1804

Webster (William):

Arithmetick in epitome; or a compendium of all its rules, both vulgar and decimal. 5th edition. 12mo. London, 1735

Webster (William Henry Bayley):

The recurring monthly periods and periodic system of the atmospheric actions, with evidences of the transfer of heat and electricity, and general observations on meteorology. 8vo. London, 185

Weddle (Thomas):

A new, simple, and general method of solving numerical equations of all orders. 4to. Tynemouth, 1842

Weidenbach (— von):

Tafel um den Logarithmen von $\frac{x+1}{x-1}$ zu finden, wenn der Logarithme von x gegeben ist; mit einem Vorworte von Herrn Gauss. 12mo. Copenhagen, 1829

Weidler (Johann Friedrich):

- : Historia Astronomiae ; sive de ortu et progressu astronomiae liber singularis. 4to. Vitembergae, 1741
- : De via curva Mercurii sub Sole in rectam convertenda exemplo transitus Mercurii per Solem d. v Novembris a. MDCCXLIII. illustrata, commentatio. 4to. Vitembergae, 1748
- : Institutiones astronomiae, selectis observationum et calendariorum exemplis illustratae. 4to. Wittenbergae, 1754
- : Bibliographia Astronomica, temporis quo libri vel compositi vel editi sunt ordine servato, ad supplendam et illustrandam astronomiae historiam digesta. Accedunt historiae astronomiae supplementa. 8vo. Wittenbergae, 1755

Weigel (Erhard):

Speculum Uranicum Aquilæ Romanæ Sacrum. Das ist Himmels Spiegel, darinnen ausser denen ordentlichen, auch die ungewöhnlichen Erscheinungen des Himmels mit gebührenden Anführungen abgebildet, vornehmlich aber der im Gestirne des Adlers jüngsthin entstandene Comet : nebenst einer neuen Himmels-Charte. 4to. Jehna, 1661

Weights and Measures (Acts for regulating):

Acts of 5 George IV.(Cap. 74); 4 & 5 William IV. (Cap. 49); and 5 & 6 William IV. (Cap. 63). fol. London

Weigl (J. B.):

Lehrbuch der Arithmetik und Algebra zum öffentlichen Gebrauche und Selbstunterrichte ; mit metrologischen Tafeln. Zweyte Ausgabe. 8vo. Sulzbach, 1823

Weiler (August):

- : *Über das Problem der drei Körper im Allgemeinen und insbesondere in seiner Anwendung auf die Theorie des Mondes. 4to. Leipzig, 1866
- : *Grundzüge einer neuen Störungstheorie und deren Anwendung auf die Theorie des Mondes. 4to. Leipzig, 1872

Weinbach (And.):

Neues Welt-System, dargestellt wie es ist. 8vo. Mainz, 1850

Weinek (L.):

*Die Photographie in der messenden Astronomie, insbesondere bei Venusvorübergängen. 4to. Halle und Dresden, 1879

Weiss (Edmund):

- : *Über die Bahn des Kometen VIII des Jahres 1858. 8vo. Wien, 1858
- : *Die totale Sonnenfinsterniss vom 31. December 1861 in Griechenland. 8vo. Wien, 1862
- : *Über die Bahn von (59) Elpis. 8vo. Wien, 1862
- : Ueber Sternsehnuppen. Ein Vortrag. 8vo. Wien, 1863
- : Planeten- und Cometen-Beobachtungen am Refractor von sechs Zoll Öffnung, von September 1862 bis December 1864. 8vo. Wien
- : Ueber Fixsternsysteme. Ein Vortrag. 8vo. Wien, 1865
- : *Bahnbestimmung von Maja (66). 8vo. Wien, 1865
- : Ueber die Mondoberfläche. Ein Vortrag. 8vo. Wien, 1866

Weiss (Edmund) — *continued*

- : *Berechnung der Sonnenfinsternisse des Jahres 1867. 8vo. Wien, 1866
- : *Bericht über die Beobachtungen während der ringförmigen Sonnenfinsterniss am 6. März 1877 in Dalmatien. 8vo. Wien, 1867
- : *Berechnung der Sonnenfinsternisse in den Jahren 1868 bis 1870. 8vo. Wien, 1867
- : *Beiträge zur Kenntniss der Sternschnuppen. [2 papers.] 8vo. Wien, 1868–70
- : *Bestimmung der Längendifferenz Wien–Wiener Neustadt durch Chronometer-Übertragungen. 8vo. Wien, 1872
- : *Sternschnuppen-Beobachtungen ausgeführt in den Jahren 1867–1874 [2 papers]. 8vo. Wien, 1873–74
- : *Sternschnuppen-Beobachtungen, ausgeführt von August 1874 bis Ende 1877 (und in den Jahren 1840 bis 1845). 8vo. Wien
- : *Beobachtung des Venusdurchgangs vom 8. December 1874 in Jassy, und Bestimmung der geographischen Länge des Beobachtungsortes. 8vo. Wien, 1875
- : *See also* Vienna, K.K. Sternwarte.
- Weiss (Edmund), Th. Oppolzer, und J. Riha :
- Berichte (1–7) der zur Beobachtung der totalen Sonnenfinsterniss des Jahres 1868 nach Aden unternommenen oesterreichischen Expedition. [Mit] Discussion der Beobachtungen von Edmund Weiss. 8vo. Wien, 1868–70

Weiss (Friedrich) :

- Die Gesetze der Satellitenbildung. Einleitung zur Geschichte der Erde. 8vo. Gotha, 1860

Weisse (Christoph) :

- Terræ motum tempore passionis Christi observatum. [Inaugural Dissertation.] 4to. Jenæ, 1683

Weisse (Maximilian) :

- : Coordinatae Mercurii, Veneris, Martis, Jovis, Saturni et Urani. 4to. Cracoviae, 1829
- : Correctiones temporis ex altitudinibus correspondentibus. 4to. Cracoviae, 1829
- : Positiones mediae stellarum fixarum in zonis Regiomontanis a Besselio inter -15° et $+15^\circ$ declinationis observatarum, ad annum 1825 reductae et in catalogum ordinatae. Edit, curavit et praefatus est F. G. W. Struve. 4to. Petropoli, 1846
- : Positiones mediae stellarum fixarum in zonis Regiomontanis a Besselio inter $+15^\circ$ et $+45^\circ$ declinationis observatarum, ad annum 1825 reductae et in catalogum ordinatae. Edit, curavit et praefatus est Otto Struve. 4to. Petropoli, 1863
- : *Vergleichung des catalogus generalis pro 1830 in Struve's Stellarum fixarum . . . positiones mediae . . . mit den beiden Catalogen aus Bessel's Zonen-Beobachtungen. 8vo. Wien, 1858

Weisse (Maximilian)—*continued.*

- : *Variationen der Declination der Magnetnadel beobachtet
in Krakau. 4to. Wien, 1859
- : *See also Cracow, Sternwarte.*

Weisse (Maximilian) und Adalbert Kunes:

- *Stündliche Barometer-Beobachtungen zu Krakau in den
Jahren 1848–56. 4to. Wien, 1858

Weld (Charles Richard):

- A history of the Royal Society, with memoirs of the Presidents, compiled from authentic documents.
2 vols. 8vo. London, 1848

Weller (Adolph P.), *see Schilling und Weller.*

Wells (Edward):

- : The Young Gentleman's course of mathematicks, containing the more useful and easy elements of arithmetick, geometry, trigonometry, mechanicks, opticks, astronomy, chronology, dialling. Vol. 1 & 2. 8vo. London, 1714
- : The Young Gentleman's astronomy, chronology, and dialling, containing such elements of the said arts or sciences, as are most useful and easy to be known. 8vo. London, 1725

W[ells] (J[ohn]):

- Sciographia, or the art of shadowes, Plainly demonstrating, out of the Sphere, how to project great and small circles, upon any Plane whatsoever, with a new Conceit of reflecting the Sunne beames upon a Diall, contrived on a Plane, which the direct beames can never shine upon. Together with the manner of cutting the five Regular Platonicall bodies . . . All performed by the Doctrine of Triangles; and for ease and delight sake by helpe of the late invented and worthily admired Numbers, called by the first Inventor *Logarithmes*. By I. W. Esquire.

8vo. London, 1635

Followed by the table of Briggs's Logarithms (Goudo, 1826).

Wells (William Charles):

- Two essays: one upon single vision with two eyes; the other on dew [&c.] 8vo. London, 1818

Wendelinus (Gottfried):

- Eclipses lunares ab anno MDLXXIII ad MDCXLIII obser-
vatae; quibus tabulae atlantice superstrununtur earumque
idea proponitur. 4to. Antverpiæ, 1644

West (John):

- Elements of mathematics, comprehending geometry, conic sections, mensuration, spherics. 8vo. Edinburgh, 1784

Wetherald (R.):

- Perpetual calculator (the), or time's universal standard.
(Chronology, solar system, pneumatics and hydrostatics.)
8vo. Newcastle upon Tyne, 1760

Wetzel (Eduard) :

Allgemeine Himmelskunde: eine populäre Darstellung dieser Wissenschaft nach den neuesten Forschungen
Zweite Auflage. 8vo. Berlin, 1870

Weyer (G. D. E.) :

- : Über die Differentialformeln für Cometenbahnen von grosser Excentricität mit Berücksichtigung der planetarischen Störungen. 8vo. Berlin, 1852
- : *Ueber die kürzeste Berechnungsart der Monddistanzen im nautischen Gebrauch. 4to. Berlin, 1881
- : *Ueber die Berechnung des wahrscheinlichsten Chronometerganges aus einer Reihe von Standbeobachtungen und über Gewichtsbestimmungen aus Standunterschieden der Chronometer. 4to. Berlin, 1881
- : *Die Wiedererscheinung der Methode und Tafel von Elford als sogenannte 'Neger-Tafel.' 4to. Berlin, 1882
- : *Konstruktion zu einer Küstenaufnahme im Vorbeifahren. nebst Beiträgen zur Geschichte der geometrischen Auflösungen der sogenannten Pothenot'schen Aufgabe. 4to. Berlin, 1882
- : *Bericht über eine neue Schrift von Sir G. B. Airy, die Berechnung der Monddistanzen betreffend. 4to. Berlin, 1882
- : *Die direkten oder strengen Auflösungen für die Bestimmung des Beobachtungsortes aus zwei Höhen der Sonne oder anderer bekannten Gestirne, nebst dem Zeitunterschiede der Beobachtungen. 4to. Berlin, 1883

Weyprecht (Karl) :

An address delivered at Graz, 1875. Fundamental principles of scientific Arctic investigation. 4to.

Weyprecht (Karl) et le Comte Wilczek :

Programme des travaux d'une expédition polaire internationale. 4to.

Wharton (George) :

An astrologicall jvdgement upon his Majesties present march 1645. 4to. Oxford, 1645

Whatton (Arundell Blount) :

Memoir of the life and labors of the Rev. Jeremiah Horrox, curate of Hoole, near Preston; to which is appended a translation of his celebrated discourse upon the Transit of Venus across the Sun. 8vo. London, 1859

Whewell (William) :

- : An elementary treatise on mechanics Vol. I, containing statics and part of dynamics. 8vo. Cambridge, 1819
- : A treatise on dynamics: containing a considerable collection of mechanical problems. 8vo. Cambridge, 1823
- : An introduction to dynamics, containing the laws of motion and the first three sections of the Principia. 8vo. Cambridge, 1832
- : Analytical statics: a supplement to the fourth edition of an elementary treatise on mechanics. 8vo. Cambridge, 1833

Whewell (William)—*continued.*

- : Astronomy and general physics considered with reference to natural theology. [Bridgewater treatises, III.] Second edition. 8vo. London, 1833
- : Ditto. 8th edition. 8vo. London, 1871
- : Die Sternewelt, als Zeugniss für die Herrlichkeit des Schöpfers. Aus dem Englischen . . . von Gustav Plieninger. 8vo. Stuttgart, 1837
- : Newton and Flamsteed. Remarks on an article in number cix. of the 'Quarterly Review.' 8vo. Cambridge, 1836
- [—] : Of the plurality of worlds : an essay. 8vo. London, 1853
- [—] : Of the plurality of worlds : an essay. Also a dialogue on the same subject . . . The fifth edition. 8vo. London, 1859
- : History of the Inductive Sciences from the earliest to the present time . . . The third edition, with additions. 3 vols. 8vo. London, 1857
- : Ditto. Supplementary volume to the second edition . . . containing the new matter of the third edition. 8vo. London, 1857

Whipple (George Mathews) :

- : *On the comparison of the standard Barometers of the Royal Observatory, Greenwich, and the Kew Observatory. 8vo. London, 1878
- : *On the relative duration of sunshine at the Royal Observatory, Greenwich, and at the Kew Observatory, during the year 1877. 8vo. London, 1878
- : *On the relation between the height of the barometer, the duration of sunshine, and the amount of cloud, as observed at the Kew Observatory. 8vo. London, 1879
- : *On the relation existing between the duration of sunshine, the amount of solar radiation, and the temperature indicated by the black-bulb thermometer in vacuo. 8vo. London, 1879
- : *On the rate at which barometric changes traverse the British Isles. 8vo. London, 1880

Whiston (William) :

- : Prælectiones astronomicæ Cantabrigiæ in scholis publicis habitæ . . . quibus accedunt tabulæ plurimæ astronomicæ Flamsteedianæ correctæ, Halleianæ, Cassinianæ, et Streetianæ. 8vo. Cantabrigiæ, 1707
- : Astronomical lectures read in the publick schools at Cambridge ; . . . whereunto is added a collection of astronomical tables ; being those of Mr. Flamsteed, corrected ; Dr. Halley ; Monsieur Cassini ; and Mr. Street. 8vo. London, 1715
- : Ditto. Second edition. 8vo. London, 1728
- : An account of a Surprising Meteor, seen in the Air, March the 6th, 1716 at night . . . The second edition. 8vo. London, 1716

Whiston (William)—continued.

- : The longitude and latitude found by the inclinatory or Dipping Needle, wherein the laws of magnetism are also discovered. To which is prefix'd an historical preface, and to which is subjoin'd Mr. Robert Norman's New Attractive, or account of the first invention of the Dipping Needle. 2 parts, 8vo. London, 1721 (1720)
- : A new theory of the earth, from its original to the consummation of all things; wherein the creation of the world in six days, the universal deluge, and the general conflagration as laid down in the Holy Scriptures are shown to be perfectly agreeable to reason and philosophy third edition. 8vo. London, 1722
- : The calculation of Solar Eclipses without Parallaxes. With a specimen of the same in the total eclipse of the Sun, May 11, 1724. 8vo. London, 1724
- : Astronomical principles of religion, natural and reveal'd Second edition. 8vo. London, 1725
- : The longitude discovered by the eclipses, occultations, and conjunctions of Jupiter's planets; with descriptions of the instruments necessary for this discovery; to which is added an ephemeris for the latter half of the year 1738. 8vo. London, 1738

Whiston (William) and Humphry Ditton:

- A new method for discovering the longitude both at sea and land, humbly proposed to the consideration of the publick. 8vo. London, 1714

White (Daniel Appleton):

- An Eulogy on the life and character of Nathaniel Bowditch. 8vo. Salem, 1838

White (Martin):

- Remarks on the winds, tides, and currents of the ocean, with other phenomena. 8vo. London, 1846

Whitehurst (John):

- An attempt towards obtaining invariable measures of length, capacity, and weight, from the mensuration of time, independent of the mechanical operations requisite to ascertain the centre of oscillation or the true length of pendulums. 4to. London, 1787

(Whitford, J.):

- The pendulum: an epitome of the principles of its calculations for any latitude. 8vo. Stockport, 1872

Whiting (Thomas):

- : Mathematical, geometrical, and philosophical delights, containing essays, problems, solutions, theorems, &c., selected from an extensive correspondence by T . . W . . No. 1-10. 4to. London, 1792-97

- : Scientific Receptacle (the), containing problems, solutions [&c.] . . . selected from an extensive correspondence by T . . W . . Vol. 1. 12mo. London, 1795

- : A comprehensive system of astronomy, both theoretic and practical, with extensive tables of the Sun, Moon, and planets 4to. London, 1828

Whitney (William D.):

*On the lunar zodiac of India, Arabia and China.
8vo. Cambridge (Mass.), 1874

Wichmann (Moritz):

- : De parallaxi stellae Argelandiae (1830 Groombridge). [Inaugural Dissertation.] 4to. Regiomonti Prussorum, 1847
- : *Erster Versuch zur Bestimmung der physischen Libration des Mondes aus Beobachtungen mit dem Heliometer.
4to. Altona, 1847-48

Wiedeburg (Johann Bernhard):

Astronomische Beschreibung und Nachricht von dem Cometen welcher im Monath Mertz dieses jetztauffenden Jahres 1742 erschienen.
4to. Jena, 1742

Wijkander (August):

Beräkning af planeten (117) Lomias Bana. [Inaugural Dissertation.]
4to. Lund, 1872

Wilcocks (Alexander):

*Thoughts on the influence of ether in the solar system, its relations to the zodiacal light, comets, the seasons, and periodical shooting stars.
4to. Philadelphia, 1864

Wildig (G. B.):

A geometrical system of conic sections, for the use of mathematical students at the Royal Liverpool Institution.
8vo. Cambridge, 1822

Wildt (Joh. Christ. Dan.):

Commentatio de rotatione annuli Saturni. [Inaugural Dissertation.]
4to. Hannoverae, 1795

Wilkes (Charles):

Theory of the zodiacal light.
4to. Philadelphia, 1857

Wilkins (John), Bishop of Chester:

- [—] : The discovery of a world in the Moone, or, a discovrse tending to prove, that 'tis probable there may be another habitable World in that Planet.
8vo. London, 1638
- : A discovery of a New World, or a discourse tending to prove, that 'tis Probable there may be another Habitible World in the Moon. With the Discourse concerning the probability of a passage thither. Unto which is added a Discourse Concerning a *New Planet*, tending to prove that 'tis Probable our *Earth* is one of the *Planets*. Tho fourth edition corrected and augmented.
8vo. London, 1684
- : Mathematical magick, or the wonders that may be performed by mechanichal geometry. In two books, concerning mechanical powers [and] motions.
8vo. London, 1680
- : Mathematical and philosophical works; . . . to which is prefixed the author's life, and an account of his works.
2 vols. 8vo. London, 1802

Wilkins (N. G.):

Rules for effecting certain operations in division in a neat and expeditious manner.
8vo. Hanover, 1878

Wilkinson (Thomas T.) :

- : *On bisectant axes, and their relation to the radical axes of two or more given circles. 12mo. London, 1852
- : *Additions to the late Mr. T. S. Davies's notes on geometry and geometers. 8vo. London, 1852
- : *An account of the early mathematical and philosophical writings of the late Dr. Dalton. 8vo. Manchester, 1854
- : *The Lancashire Geometers and their writings. 8vo. Manchester, 1854
- : *De Tactionibus; or some problems on contact, as treated geometrically by Apollonius, Vieta, and Swale. 8vo. Liverpool, 1872

Williams (John) :

Observations of Comets, from B.C. 611 to A.D. 1640, extracted from the Chinese annals. Translated, with introductory remarks, and an appendix, comprising the tables necessary for reducing Chinese time to European reckoning, and a Chinese Celestial Atlas. 4to. London, 1871

Williams (W.) :

The mathematical demonstrations of Euclid rendered clear with no other mathematical instruments than the Chinese Puzzle. 12mo. London, 1817

Williams (W. Mattieu) :

The fuel of the Sun. 8vo. London, 1870

Williamson (Thomas) :

Mathematics simplified and practically illustrated together with a complete essay on the art of surveying lands, &c. 8vo. London, 1808

Willich (Charles M.) :

Popular tables, arranged in a new form, giving information at sight for ascertaining the value of lifehold, leasehold, and church property, renewal fines, &c. . . . Third edition. 8vo. London, 1853

Wilna, Observatoire de l'Académie Impériale des Sciences :

- : Extrait des observations faites pendant les années 1834-35, 1837-38, 1839-40, par (P. de) Slavinsky et — Hlouschnevitch. 4to. Vilna, 1838-42
- : Remarques sur les observations faites à l'Observatoire de Vilna par P. de Slavinski. 4to. Vilna, 1835

Wils (Pieter) :

Wis-konstige Werken, bestaende in eenighe Meet-konstighe ende hemel-klootsche aenteyckeningen elck met hare verklaringhen ende bewijzen. [Edited by G. Kinckhuysen.] 4to. Amsterdam, 1653

Wilson (Henry) :

Trigonometry improv'd, and projection of the Sphere made easy. 12mo. London, 1720

Wilson (H.C.) :

Observations of Comets. See Cincinnati Observatory.

- Wilson (James) :**

 - : A complete dictionary of astrology. Svo. London, 1819
 - : A new and complete set of astrological tables. 8vo. London, 1820

Wilson (J. Maurice) :

 - : Elementary geometry. Books 1, 2, 3, containing the subjects of Euclid's first four books; following the syllabus of geometry prepared by the Geometrical Association. 8vo. London, 1873
 - : *See also* Crossley and Gledhill.

Wilson (John) :

 - The lost solar system of the ancients discovered.
2 vols. 8vo. London, 1856

Windsor, New South Wales :

 - Meteorological Observations made at the Private Observatory of John Tebbutt . . . 1863-81. fol. Sydney, 1868-82

Wing (John) :

 - Ephemerides of the cœlestial motions for six years, beginning anno 1702 and ending anno 1707. . . . 4to. London, 1702

Wing (Vincent) :

 - : Harmonicon Cœleste; or the cœlestiall harmony of the visible world, containing an absolute and entire piece of Astronomie. Wherein is succinctly handled the trigonometrical part, generally propounded and particularly applyed in all questions tending to the diurnall motion. Especially respecting, and truly subservient to the main doctrine of the second motions of the luminaries and other planets, together with their affections, as eclipses, &c.
fol. London, 1651
 - : An ephemerides of the cœlestiall motions for VII years, beginning anno 1652, ending anno 1658. 4to. London, 1652
 - : An ephemerides of the celestial motions for XIII years, beginning anno 1659, ending anno 1671. 4to. London, 1656-57
 - : Astronomia Britannica, in qua per novam concinniorempque methodum, hi quinque tractatus traduntur: I. Logistica astronomica . . . II. Trigonometria . . . III. Doctrina sphœrica . . . IV. Theoria planetarum . . . V. Tabulae novæ astronomiae . . . Cui accessit observationum astronomicarum Synopsis Compendiaria.
2 parts in 1 vol. fol. Londini, 1669-68

Wingate (Edmund) :

 - : Λογαριθμοτεχνία, or the construction and use of the logarithmickal tables. Second edition. 12mo. London, 1635
 - : Mr. Wingate's Arithmetick; containing a plain and familiar method for attaining the knowledge and practice of common arithmetick. Revised by J. Kersey. 15th edition, with a new supplement, by G. Shelley.
8vo. London, 1726

Winlock (Joseph) :

 - : Tables of Mercury, for the use of the American Ephemeris and Nautical Almanac. 4to. Washington, 1864
 - : *See also* Washington, U.S. Naval Observatory.

Winnecke (Friedrich Aug. Theodor):

- : De stella η Coronae Borealis duplici. Dissertatio Astronomica Inauguralis. 8vo. Berolini, 1856
- : Über die Sonne. 8vo.
- : *Beobachtungen des Mars um die Zeit der Opposition 1862. 4to. St. Petersburg, 1863
- : *Pulkowaer Beobachtungen des hellen Cometen von 1862, nebst einigen Bemerkungen. 4to. St. Petersburg, 1864
- : *Bestimmung der Parallaxe des zweiten Argelander'schen Sternes aus Messungen am Heliometer der Sternwarte zu Bonn, 1857-58. 4to. Leipzig, 1872
- : Gauss. Ein Umriss seines Lebens und Wirkens. 8vo. Braunschweig, 1877

Winthrop (John) and A. Oliver:

Two lectures on Comets, by Prof. Winthrop; also, an essay on Comets, by A. Oliver, Jun., with sketches of the lives of Prof. Winthrop and Mr. Oliver; likewise a supplement relative to the present Comet of 1811.

12mo. Boston [U.S.], 1811

Wittram (Theodor):

*Allgemeine Jupiterstörungen des Encke'schen Cometen für den Bahnteil zwischen $152^{\circ}21'7''62$ und 170° wahrer Anomalie. 4to. St. Pétersbourg, 1883

Wittstein (Theodor):

Fünfstellige logarithmisch-trigonometrische Tafeln.
8vo. Hannover, 1859

Witty (John):

A treatise of the sphere, shewing how it is deriv'd from that theory which justly asserts the motion of the earth; as also the projections of it, both orthographical and stereographical.
8vo. London, 1714

Woecckel (Lorenz):

Die Sonne und ihre Flecken. (Programm der Studienanstalt in Nürnberg.) 4to. Nürnberg [1845]

Wohlwill (Emil):

Der Inquisitionsprocess des Galileo Galilei. Eine Prüfung seiner rechtlichen Grundlage nach den Acten der Römischen Inquisition. 8vo. Berlin, 1870

Wolf (Christian):

- : Elementa matheseos universæ, Tom. 1, qui commentationem de methodo mathematica, arithmeticam, geometriam, trigonometriam, analysin, staticam et mechanicam [&c.] complectitur. (Tom. 2, opticam, sphærica et trigonometriam sphæricam, astronomiam, geographiam, chronologiam, &c.) 2 vols. 4to. Halæ Magdeburgicæ, 1713-15
- : Ditto. Editio nova. Tom. 1. 4to. Halæ Magdeburgicæ, 1730
- : A treatise of algebra, with the application of it to a variety of problems in arithmetic, to geometry, trigonometry, and conic sections. 8vo. London, 1739

Wolf (C.):

- : *Recherches sur l'équation personnelle dans les observations de passages. 4to. Paris, 1865

Wolf (C.)—continued.

- : *Description du groupe des Pléiades et mesures micrométriques des positions relatives des principales étoiles qui le composent. 4to. Paris, 1877
- : *Recherches historiques sur les étalons de poids et mesures et les appareils qui ont servi à les construire. 4to. Paris, 1882

Wolf (Rudolf):

- : *Neue Untersuchungen über die Periode der Sonnenflecken und ihre Bedeutung. 8vo. Bern, 1852
- : *Johann Baptist Cysat von Luzern. Ein Beitrag zur Geschichte der Mathematik und Physik in der Schweiz. 8vo. Bern, 1853
- : *Mittheilungen über Sternschnuppen und Feuerkugeln. 8vo. Zürich, 1856
- : Ueber Cometen und Cometen-Aberglauben. Ein populärer Vortrag. 8vo. Zürich, 1857
- : Biographien zur Kulturgeschichte der Schweiz. 4 vols. 8vo. Zürich, 1858–62
- : Taschenbuch für Mathematik, Physik, Geodäsie und Astronomie. Dritte . . . Auflage. 8vo. Bern, 1860
- : Ditto. Vierte Auflage. 8vo. Zürich, 1869
- : Ditto. Fünfte Auflage. 8vo. Zürich, 1877
- : Die Sonne und ihre Flecken. Ein Vortrag. 8vo. Zürich, 1861
- : *Mittheilungen über die Sonnenflecken. 1–18. 8vo. Zürich, 1856–65
- : *Astronomische Mittheilungen. 21–59. Band 1–4. 8vo. Zürich, 1866–83
- : Wilhelm Herschel. Ein Vortrag. 8vo. Zürich, 1867
- : *Matériaux divers pour l'histoire des mathématiques. 4to. Rome, 1869
- : Handbuch der Mathematik, Geodäsie, und Astronomie. 2 vols. 8vo. Zürich, 1869–72
- : Johannes Kepler und Jost Bürgi : Vortrag. 8vo. Zürich, 1872
- : Geschichte der Astronomie. 8vo. München, 1877
- : Geschichte der Vermessungen in der Schweiz, als historische Einleitung zu den Arbeiten der schweiz-geodätischen Commission. 4to. Zürich, 1879
- : *Quelques résultats déduits de la statistique solaire. 4to. Roma, 1881
- : Déterminations de longitude, *see* Plantamour et Wolf.

Wolfers (Jacob Philipp):

- : Tabulae reductionum observationum astronomicarum annis 1860 usque ad 1880 respondentes: . . . Additae sunt tabulae Regiomontanae annis 1850 usque ad 1860 respondentes ab Ill. Zech continuatae. 8vo. Berolini, 1858
- : *Die totale Sonnen-Finsterniss am 18. Juli 1860. 4to. Altona, 1858
- : *Neue Berichtigung der Elemente der Metis. 4to. Altona, 1859

Wolff (Julius Theodor) :

Photometrische Beobachtungen an Fixsternen.

4to. Leipzig, 1877

Wollaston (Francis) :

— : A specimen of a general Astronomical Catalogue, arranged in zones of north polar distance, and adapted to Jan. 1, 1790 : containing a comparative view of the mean positions of stars, nebulae, and clusters of stars together with a proposal for setting on foot some regular method of observing the heavens. fol. London, 1789

— : Directions for making an universal meridian dial, capable of being set to any latitude, which shall give the mean solar time of noon, by inspection, without any calculation whatsoever. 4to. London, 1793

— : Fasciculus Astronomicus, containing observations of the Northern circumpolar region ; together with some account of the instrument with which they were made, and a new set of Tables by which they were reduced to the mean position for the beginning of January 1800.

4to. London, 1800

— : A portraiture of the Heavens, as they appear to the naked eye : constructed for the use of students in Astronomy. fol. London, 1811

Wolynski (Arturo) :

— : Fac-simile della prefazione di Niccolo Copernico [with fac-similes of letters, MSS., &c., of or relating to Copernicus]. fol.

— : Nuovi documenti inediti del processo di Galileo Galilei. 8vo. Firenze, 1878

Wonders (the) of the Heavens displayed, in twenty lectures; by the author of the Hundred Wonders of the World.

8vo. London, 1821

Wood (James) :

— : The principles of mathematics and natural philosophy. Vol. I, The elements of algebra. 8vo. Cambridge, 1795

— : The elements of optics, designed for the use of students in the University. 8vo. Cambridge, 1799

— : The principles of mechanics; designed for the use of students in the University The second edition. 8vo. Cambridge, 1799

— : The elements of algebra, designed for the use of students in the University. . . . Third edition. 8vo. Cambridge 1821

Woodhouse (Robert) :

— : The principles of analytical calculation. 4to. Cambridge, 1803

— : A treatise on plane and spherical trigonometry. 8vo. London, 1809

— : A treatise on isoperimetrical problems, and the calculus of variations. 8vo. Cambridge, 1810

— : An elementary treatise on astronomy. 2 vols. 8vo. Cambridge, 1812-18

Woodley (William) :

The system of the universe, with diagrams, showing the daily motion of the Sun, Moon, &c., round the earth . . . together with a prospectus for simplifying the method of finding the longitude at sea. 8vo London, 1831

Woolhouse (W. S. B.) :

- : Tables of continental linear and square measures. 12mo. London, 1836
- : The elements of the differential calculus. 12mo. London, 1852
- : Measures, weights and moneys of all nations, and an analysis of the Christian, Hebrew, and Mahometan calendars. Sixth edition. 12mo. London, 1881
- : *On the adjustment of mortality tables; a sequel to former papers on the same subject. 8vo. London
- : *See also* Gregory and Woolhouse.

Woollgar (J. W.) :

- : Descriptive list of ancient and modern celestial maps. 8vo.
- : Table for graduating by a dividing engine on a circular logarithmic scale of 1600 divisions. 8vo.
- [—] : *A new perpetual calendar. 8vo. London, 1827

Worms (Henry de) :

The earth and its mechanism; being an account of the various proofs of the rotation of the earth.
8vo. London, 1862

Worsdale (John) :

Genethliacal astrology, comprehending an enquiry into, and defence of the celestial science . . . Second edition.
8vo. Newark, 1798

Worster (Benjamin) :

A compendious and methodical account of the principles of natural philosophy. Second edition. 8vo. London, 1730

Wrey (H. B.) :

A few pages on the Great Pyramid of Ghizeh, viewed in our times as a monument of prophetic, historic, and scientific knowledge, supernaturally communicated to man four thousand years since.
8vo. Barnstaple, 1877

Wright (Arthur W.) :

- : *On the polarization of the ZodiacaL Light.
8vo. New Haven, 1874
- : *Examination of gases from Meteorites. [4 papers.]
8vo. New Haven, 1875-76
- : *On a new process for the electrical deposition of metals, and for constructing metal-covered glass specula.
8vo. New Haven, 1877
- : *Report on the polarization of the corona during the total solar eclipse of July 29, 1878.
4to. Washington, 1880

Wright (Edward) :

— : Certaine errors in Nauigation detected and corrected with many additions that were not in the former edition. (The diuision of the whole art of nauigation ; an addition touching the variation of the compasse.)

3 parts in 1 vol. 4to. London, 1610

— : The Sea-man's tutor, or the marriner's art made easie. In two parts ; the first teaching the principles of the Sphear the second the practical part of navigation.

4to. London, 1659

Wright (G.) :

— : The description and use of a new universal dial, or portable equatorial instrument. 8vo. London, 1781

— : The description and use of a new constructed Octant, Sextant and Quintant. 8vo. London, 1782

Wright (J. M. F.) :

— : Solutions of the Cambridge problems, 1800 to 1820.

2 vols. 8vo. Cambridge, 1825

— : The private tutor, and Cambridge mathematical repository ; comprising illustrations and examples in every branch of the mathematics. Vol. 1. 8vo. Cambridge, 1830

— : A commentary on Newton's Principia, with a supplementary volume. Designed for the use of students at the Universities. 2 vols. 8vo. London and Glasgow, 1833

[—] : Heads of a recent discussion between a learned Doctor in Divinity and the author of 'Commentaries on the Principia of Sir Isaac Newton.' 8vo. London, 1847

Wright (Thomas) :

— : The use of the globes ; or the general doctrine of the sphere to which is added, a synopsis of the doctrine of eclipses. 8vo. London, 1740

— : An original theory or new hypothesis of the Universe, founded upon the laws of nature, and solving by mathematical principles the general phenomena of the visible creation, and particularly the via lactea. 4to. London, 1750

Wright (Thomas) :

Popular treatises on Science, written during the Middle Ages, in Anglo-Saxon, Anglo-Norman, and English. Edited from the original manuscripts (for the Historical Society of Science). 8vo. London, 1841

Wronski (Hoëné) :

Address to the British Board of Longitude, upon the actual state of the mathematics, their reform, and upon the new celestial mechanics, giving the definitive solution of the problem of longitude. Translated by W. Gardiner. 8vo. London, 1820

Wrottesley (Lord) :

— : *On the results of periodical observations of the positions and distances of nineteen of the stars in Sir John Herschel's lists of stars, favourably situated for the investigation of parallax. 4to. London, 1851

Wrottesley (Lord)—continued.

— : Speech . . . on Lieut. Maury's plan for improving navigation; with some remarks upon the advantages arising from the pursuit of abstract science. Second edition.
8vo. London, 1853

Wüllerstorff-Urbair (Bernhard, Freiherr von) :
Reise der österreichischen Fregatte *Novara* um die Erde in den Jahren 1857-59. Nautisch-physicalischer Theil.
4to. Wien, 1862-65

Würkert (Ludwig) :
Populäre Astronomie. Vollständiges Lehrbuch für Schule und Haus.
8vo. Leipzig, 1838

Wurm (Johann Friedrich) :
Geschichte des neuen Planeten Uranus, samt Tafeln für dessen heliocentrischen und geocentrischen Ort.
8vo. Gotha, 1791

Wurzelbaur (Johann Philipp à) :
Uranies Noricæ basis astronomica, sive rationes motus annui ex observationibus in solem hoc nostro et seculo abhinc tertio Norinbergæ sub eodem meridiano habitis deductæ.
fol. Norinbergæ, 1719

Wyld (Samuel) :
The practical surveyor, or the art of land-measuring made easy. Fifth edition.
8vo. London, 1764

Wylie (A.) :
— : *The Mongol astronomical instruments in Peking. 8vo.
— : See also Herschel (J. F. W.), Outlines of Astronomy.

Ximenes (Leonardo) :
Del vecchio e nuovo Gnomone Fiorentino e delle osservazioni astronomiche, fisiche ed architettoniche fatte nel verificarno la costruzione libri IV.; a' quali premettesi una introduzione istorica sopra la coltura dell' Astronomia in Toscana.
4to. Firenze, 1757

Yale College Observatory :
Reports, 1880-83. 8vo. New Haven, 1881-83

Yarnall (M.) :
— : Catalogue of stars observed at the United States Naval Observatory during 1845 to 1871. 4to. Washington, 1873
— : Ditto. Second edition. 4to. Washington, 1878

Yates (James) :
*On the excess of water in the region of the Earth about New Zealand; its causes and its effects. 8vo. Edinburgh, 1862

Yolland (William) : see United Kingdom, Ordnance Survey.

Young (Alexander) :
A Discourse on the life and character of the Hon. Nathaniel Bowditch.
8vo. Boston, 1838

Young (Charles A.) :
— : *Spectroscopic Notes. 8vo. Philadelphia, 1869
— : *On a new method of determining the level-error of the axis of a meridian instrument. 8vo. New Haven, 1870

Young (Charles A.)—continued.

- : *On the solar corona. 8vo. New Haven, 1871
- : *Observations of the solar eclipse, 1870, at Jerez. 8vo. Philadelphia, 1871
- : *Preliminary catalogue of the bright lines in the spectrum of the chromosphere. 8vo. New Haven, 1871
- : *Letter to the superintendent of the U.S. Coast Survey, containing a catalogue of bright lines in the spectrum of the solar atmosphere, observed at Sherman, Wyoming 8vo. New Haven, 1872
- : The Sun and the phenomena of its Atmosphere [a lecture delivered at New Haven]. 8vo. New Haven, 1872
- : *Observations on Encke's Comet at the Dartmouth College Observatory. 8vo. New Haven, 1872
- : *Observations on the displacement of lines in the solar spectrum caused by the Sun's rotation. 8vo. New Haven, 1876
- : *American Astronomy: its history, present state, needs and prospects. An address . . . before the American Association for the Advancement of Science . . . 1876. 8vo. Salem, 1877
- : *Observations upon the solar eclipse of July 29, 1878, by the Princeton eclipse expedition. 8vo. New Haven, 1878
- : Solar eclipse, 1878 [2 papers]. 8vo. 1878
- : *Note on the spectrum of Brorsen's Comet. 8vo. New Haven, 1879
- : *Spectroscopic notes, 1879-80. 8vo. New Haven, 1880
- : *Measures of the polar and equatorial diameters of Mars, made at Princeton, New Jersey, U.S. 8vo. New Haven, 1880
- : The Sun. 8vo. New York, 1881
- : *Observations of the transit of Venus, Dec. 6, 1882, at Princeton, N.J., and South Hadley, Mass. 8vo. New Haven, 1883
- : *Astronomical Collisions. 8vo. New York, 1883

Young (Edward L.):

A new theory of gravitation, and other subjects.

8vo. Norfolk, Va., 1874

Young (J. R.):

- : An elementary treatise on algebra, theoretical and practical. 8vo. London, 1823
- : The elements of mechanics, comprehending statics and dynamics, with a copious collection of mechanical problems. 12mo. London, 1832

Young (J. R.), H. Breem, — Scoffern, and E. J. Lowe:

Nautical Astronomy Practical Astronomy, and Meteorology. [Orr's circle of the sciences, Vol. 5.] 8vo. London, n.d.

Young (James) and George Forbes:

*Experimental determination of the velocity of white and of coloured light. 4to. London, 1882

Young (Robert) :

An essay on the powers and mechanism of nature; intended . . . to extend, improve, and more firmly establish the grand superstructure of the Newtonian System.

8vo. London, 1788

Young (Thomas) :

- : A course of lectures on natural philosophy and the mechanical arts. 2 vols. 4to. London, 1807
- [—] : Elementary illustrations of the celestial mechanics of Laplace. Part the first, comprehending the first book. 8vo. London, 1821
- : Miscellaneous works . . . Edited by G. Peacock (and J. Leitch). 3 vols. 8vo. London, 1855
- Vol. 1, 2. Scientific memoirs, &c.
 3. Hieroglyphical essays and correspondence.

- : Life, by George Peacock. 8vo. London, 1855
- : Life, *see also* Arago (D. F. J.)

Zach (Franz Xaver von) :

- : Tabulae motuum Solis novae et correctae ex theoria gravitatis et observationibus recentissimis erutae, quibus accedit fixarum praecipuarum catalogus novus ex observationibus astronomicis annis 1787, 1788, 1789, 1790, in specula astronomica Gothana habitis. 4to. Gothae, 1792
- : Tabulae speciales aberrationis et nutationis in ascensionem rectam et in declinationem ad supputandas stellarum fixarum positions sive apparentes, sive veras: una cum insigniorum cccxciv stellarum zodiacalium catalogo novo. 2 vols. 4to. Gothae, 1806
- : Monatliche Correspondenz zur Beförderung der Erd- und Himmels-Kunde. 28 vols. Gotha, 1800-13
- : Ditto. Register . . . Angefertigt von J. G. Galle. 8vo. Gotha, 1850
- : Correspondance Astronomique, Géographique, Hydrographique et Statistique. Vol. 1-14. 8vo. Gênes, 1818-26
- : L'attraction des montagnes et ses effets sur les fils à plomb ou sur les niveaux des instrumens d'astronomie, constatés et déterminés par des observations astronomiques et géodésiques faites en 1810 . . . près de Marseille. 2 vols. 8vo. Avignon, 1814
- : *See also* Allgemeine geographische Ephemeriden.

Zach (Stefan) :

Der Parallelismus zwischen Sonnenflecken, Erdmagnetismus und Nordlichtern als feste Grundlage für einen Erklärungsversuch des Polarlichtes. [Programm des Gymnasiums in Budweis.] 8vo. Budweis, 1876

Zadkiel :

The grammar of Astrology . . . third edition. 8vo. London, 1849

Zahn (Joannes) :

- : Oculus artificialis teledioptricus. [Part III.] Pro practice construendo et elaborando oculo artificiali teledioptrico.
fol. Heripoli, 1686
- : Oculus artificialis teledioptricus, sive telescopium, ex abditis rerum naturalium & artificialium principiis protractum novâ methodo, eâque solidâ explicatum ac comprimis è tripli fundamento; physico seu naturali, mathematico dioptrico, et mechanico, seu practico stabilitum editio secunda. fol. Norimbergæ, 1702

Zantedeschi (Francesco) :

- : *Nouveau spectromètre. Des irradiations chimiques au point de vue de la photographie. Nouvelle analyse de la lumière du spectre solaire. De la vision stéréoscopique.
4to. Paris, 1856-57
- : *De mutationibus quae contingunt in spectro solari fixo.
4to. München, 1857
- : *Sull' esistenza delle linee longitudinali dello spectro solare.
8vo. Venezia, 1869

Zech (Julius) :

- : Astronomische Untersuchungen über die Mondfinsternisse des Almagest. Preisschrift. 8vo. Leipzig, 1851
- : Astronomische Untersuchungen über die wichtigeren Finsternisse welche von den Schriftstellern des classischen Alterthums erwähnt werden. Preisschrift.
8vo. Leipzig, 1853
- : Tafeln der Additions- und Subtractions-Logarithmen für sieben Stellen. Zweite Auflage. 8vo. Berlin, 1863

Zeitschrift für Astronomie und verwandte Wissenschaften herausgegeben von B. von Lindenau und J. G. F. Bohnenberger. Band 1-6. 8vo. Tübingen, 1816-18

Zeitschrift für Instrumentenkunde: Organ für Mittheilungen aus dem gesammten Gebiete der Wissenschaftlichen Technik. Jahrang 1-4. 4to. Berlin, 1881-84

Zeitschrift für populäre Mittheilungen aus dem Gebiete der Astronomie und verwandter Wissenschaften. Herausg. von C. A. F. Peters. Band 1, 2. 8vo. Altona, 1860-63

Zenger (Carl Venceslas) :

- : *Ueber ein neues Universalmikroskop, und ueber ein neues photographisches Verfahren zur korrekten und beliebigen Vergrösserung photographischer Aufnahmen.
8vo. Prag, 1874
- : *Über katadioptrische Fernröhre und Aplanaten.
8vo. Prag, 1875
- : *Über dialytische Refractoren. 8vo. Prag, 1876
- : *Über die Grundursachen der Sonnenfleckenperiode.
8vo. Prag, 1876
- : *Über Heliophotographie und einen heliographischen Apparat.
8vo. Prag, 1876

Zonger (Carl Venceslas)—continued.

- : *Über Berechnung aplanatischer katadioptrischer Objective. 8vo. Prag, 1877
- : *Ein neues Positions-micrometer. 8vo. Prag, 1877
- : *Ein neues Sonnenocular. 8vo. Prag, 1877
- : *Über eine neue spektrometrische Methode. 8vo. Prag, 1877
- : *Die Grundursache der Planetaren-Bewegungen im Sonnensystem. 8vo. Prag, 1880
- : *Über den Zusammenhang der Erdstürme mit den Planetaren-Verhältnissen des Sonnensystems. 8vo. Prag, 1880
- : *Das Stereomikrometer. fol. Prag

Ziegler (Jacob):

De solidæ sphæræ constructione, *see* Valderus and others.

Zodiac:

- : Qu'est-ce que le zodiaque ? En a-t-il jamais existé un vraiment astronomique ? 8vo. Paris
- : Encore quelques argumens contre le zodiaque. 8vo. Paris

Zöllner (Johann Carl Friedrich):

- : Grundzüge einer allgemeinen Photometrie des Himmels. 4to. Berlin, 1861
- : Photometrische Untersuchungen mit besonderer Rücksicht auf die physische Beschaffenheit der Himmelskörper. 8vo. Leipzig, 1865
- : Theorie der relativen Lichtstärke der Mondphasen. [Inaugural-Dissertation.] 8vo. Leipzig, 1865
- : *Beobachtungen von Protuberanzen der Sonne. 8vo. Leipzig, 1869
- : *Astrophysik. [Notices of various spectroscopic works.] 8vo. Leipzig, 1869
- : *Ueber ein neues Spectroskop; nebst Beiträgen zur Spectralanalyse der Gestirne. 8vo. Leipzig, 1869
- : *On the Temperature and Physical Constitution of the Sun. [Translated from the German.] 8vo. Philadelphia, 1870
- : *Ueber die electrische und magnetische Fernwirkung der Sonne. 8vo. Leipzig, 1872
- : Über die Natur der Cometen. Beiträge zur Geschichte und Theorie der Erkenntniss. 8vo. Leipzig, 1872
- : *Ueber das spectroskopische Reversionsfernrohr. 8vo. Leipzig, 1872
- : *Zur Geschichte des Horizontalpendels. 8vo. Leipzig, 1872
- : *Ueber den Zusammenhang von Sternschnuppen und Cometen. 8vo. Leipzig, 1872
- : *Ueber die Temperatur und physische Beschaffenheit der Sonno. (Zweite Abhandlung.) 8vo. Leipzig, 1873
- : *Photometrische Untersuchungen über die physische Beschaffenheit des Planeten Merkur. 8vo. Leipzig [1874]
- : Wissenschaftliche Abhandlungen. Band 1. 8vo. Leipzig, 1878

Zürich, Naturforschende Gesellschaft :

- : Meteorologische Beobachtungen, 1837-46. 4to. Zürich
 — : Mittheilungen. Band 1-4. 8vo. Zürich, 1849-56
 — : Vierteljahrsschrift . . . redigirt von Rudolf Wolf. Jahrgang 1-25. 8vo. Zürich, 1856-80
 — : Die wichtigsten Momente aus der Geschichte der Naturforschenden Gesellschaft in Zürich. 4to. Zürich, 1846
 — : Bibliographische Notizen über die zürcherischen Naturforscher, Geographen, Aerzte und Mathematiker. 4to. Zürich, 1846

Zürich, Schweizerische Meteorologische Central-Anstalt :

- : Schweizerische meteorologische Beobachtungen, herausgegeben . . . unter Direktion von Rudolf Wolf, 1864-80. Jahrgang 1-17. 4to. Zürich
 — : Annalen, 1880-82. Jahrgang 18-19. 4to. Zürich
-

MANUSCRIPTS.**Adams (Charles B.) :**

Spots on the Sun, observed 1819-23. fol. [drawings only]

Astrological MS. : anonymous.

Aspects of the planets. 8vo.

Astronomical Society :

Catalogue of Stars : MS. copy. fol., and original computations, 8 vols. 4to.

Baily (Francis) :

- : The Cavendish experiments for determining the mean density of the earth. [Results printed in R.A.S. *Memoirs*, vol. 14.] 6 vols. 4to.
 — : Computations for his edition of Flamsteed's British Catalogue of Stars. 7 vols. 8vo.

Bernaerts (Gustave Louis) :

- : Observations du Soleil, 1870-79. 7 vols. 4to. and 6 vol. fol.
 — : Observations de Mars, 1875-77. Portfolio of drawings

- : Observations de Jupiter, 1875-78. 2 portfolios of drawings

Birt (William Radcliff) :

- : Observations on the physical aspects of the lunar crater Plato, 1860-61. 4to,
 — : Observations for the British Association lunar map and catalogue (unfinished). 12 vols. fol.

Burrow (Reuben) :

MS. diary, 1775-87. 3 vols. small 8vo.

Calcutta, Surveyor General's Office :

Meridional transits of the Moon's following limb and certain stars, between Nov. 13, 1826, and Jan. 13, 1828, by Major J. A. Hodgson and assistants. 2 vols. fol.

Campanella's Astrological Predictions, in four books.

8vo. 1716 (?)

Cape of Good Hope, Royal Observatory:

Transit and Circle Observations made in the years 1834-35,
under the superintendence of Thomas Maclear, and reduction
of circle observations, 1834 (copies). 5 parts, fol.

Carrington (Richard Christopher):

Sun spots observed at Redhill, 1853-61.

10 vols. 4to. of observations and reductions; 4 vols. fol. of
drawings.

Chevallier (Temple):

Drawings of Sun-spots, 1847-49. 2 vols. obl. fol.

Cordova, Observaciones meteorológicas, 1813-14. 4to.**Eclipse (total solar) of 1868, August 18:**

Original MSS. of Observations. [Results printed in R.A.S.
Memoirs, vol. 41.] fol.

Eclipse (total solar) of 1870, December 22:

Original MSS. of Observations. [Results printed in R.A.S.
Memoirs, vol. 41.] fol.

Eclipse (total solar) of 1871, December 11:

Original MSS. of Observations. [Results printed in R.A.S.
Memoirs, vol. 41.] fol.

Florence, Accademia del Cimento:

Historical notices relative to the Academy del Cimento, trans-
lated from the 3rd. edition of the 'Saggi di naturali espe-
rienze,' by S. M. Drach. 4to. 1856

Franks (William Sadler):

Catalogue of the colours and magnitudes of 3890 stars, be-
tween the North Pole and 25° S. Declination. 4to. 1878

Galloway (Thomas):

Unpublished Memoir on recent progress of astronomy. 4to.

Gill (David):

A determination of the solar parallax from observations of
Mars, made at the Island of Ascension in 1877. [Original
MS. of paper partly printed in R.A.S. *Memoirs*, vol. 46.]
2 vols. fol.

Gorton (Sandford):

A series of drawings of the planet Jupiter, 1859-61. 4to.

Groombridge (Stephon):

Original observations for catalogue of Circumpolar stars.

Halley (Edmund):

Astronomical observations made at the Royal Observatory,
Greenwich, from April 11, 1719, to Dec. 31, 1739. Copied
from the four volumes of manuscripts now in the Library
of the Royal Observatory, 1832. fol.

Herschel (John Frederick William):

A general history of double stars (unfinished), with an index-
catalogue reduced to 1830°. [The catalogue printed in
R.A.S. *Memoirs*, vol. 40.] Separate sheets.

Herschel (William):

- : Observations of double stars, 1779 to 1804. 4 vols. fol.
 — : Sweeps with the 20-foot reflector, Dec. 1783 to Sept. 1802,
 transcribed by Carolina Herschel. 8 parts, fol.

Hill (Thomas Wright):

- Computations for a table of logarithms to 22 places, and other
 mathematical MSS. 2 vols. 4to. and fol.

Howlett (Frederick):

- Drawings of solar spots from 1859 to 1874. 5 vols. obl. fol.

Hussey (Thomas John):

- : Calculations for the reduction of those stars of Lalande's
 'Histoire Céleste' and Bessel's 'Zones,' which come within
 the portion (Hour XIV.) contributed by the author to
 the series of Berlin Star Charts. 2 vols. 4to.
 — : Observations of Sun-spots made at Chislehurst, 1826-37.
 4to.
 — : Meteorological observations, made at Chislehurst, 1827-38.
 4to.

Jacob (William Stephen):

- Original MS. of observations of double stars made at Poona,
 1845-48. [Results printed in R.A.S. *Memoirs*, vols. 16,
 17.] Separate sheets.

Johnson (Samuel J.):

- Projections of Eclipses of the Sun and Moon, from A.D. 1880
 to 2000. Obl. fol.

Jupiter:

- Two portfolios of drawings by various observers, 1856-82.
 4to.

Lawson (Henry):

- Register of the appearances on the Sun, 1831-32. 2 vols. 8vo.

Madras Observatory:

- : Meteorological Journal for the years 1801, 1803-12,
 1821-23, 1826. fol.
 — : Astronomical observations made in the years 1793-1818,
 1821-23, 1826, and miscellaneous MSS. fol.

Mars:

- Portfolio of drawings by various observers, 1862-79. 4to.

**Mathematical solutions by members of the Mathematical
 Society.**

2 vols. fol. cir. 1828

Mayer (Christian):

- Complete defence of new observations of fixed-star satellites
 which have been discovered at the Electoral Observatory
 at Mannheim [Mannheim, 1778]. Translated by S. M.
 Drach. 4to.

Newman (W. L.):

- Tables for the numerical solution of Herschel's equations for
 the radii of an aplanatic object glass. 2 vols. 4to. [1845]

Paramatta Observatory:

- : Transit and Circle observations (copies), 1822-23. 3 vols. obl. fol.
 — : Transit observations, 1823-25. 2 vols. obl. fol.
 — : Circle observations, 1823-26. 7 vols. obl. fol.
 — : Miscellaneous papers relating to the Paramatta Catalogue. Unbound

Pastoroff (Wilhelm):

- Beobachtungen der Sonnenflecken . . . zu Buchholz bei Drossen, 1819-33 [drawings only]. 3 vols. sm. 4to.

Persian MS.:

- Treatises on elementary geometry, astronomy and geography. Sm. 8vo. 1846

Robinson (Thomas Romney):

- Table II of Dr. Robinson's paper on lunar nutation. [R.A.S. *Memoirs*, vol. 11.] fol.

Saturn:

- Drawings by various observers, 1852-84 [separate drawings in portfolio]. 4to.

Schwabe (Heinrich):

- Astronomische Beobachtungen, 1825-67. [Chiefly Sun-spots, but also containing observations and drawings of the Moon, planets, comets, &c.] 38 vols. 4to. & fol.

Sharp (Abraham):

- Letters from John Flamsteed and Joseph Crosthwait, addressed to Abraham Sharp, during the years 1702-1730. Copied from the original MSS. by Francis Baily, 1834.

Shea (Charles):

- Observations of spots on the Sun, 1847-66. 5 vols. 8vo.

Sheepshanks Correspondence:

- Letters from J. C. Adams, G. B. Airy, J. Challis, W. R. Dawes, J. Hartnup, J. R. Hind, M. J. Johnson, W. Lassell, J. Lee, H. C. Schumacher, T. Sheepshanks, W. H. Smyth, C. P. Smyth, &c., 1836-59. Unbound

Smyth (William Henry):

- Observations of double and multiple stars, &c. [Original MS. of the 'Bedford Catalogue'.] Separate sheets

Solar Tables, to convert apparent into mean time, for 1810.

2 sheets

South (James):

- Original MSS. of observations of double stars, 1821-25. [Printed in *Phil. Trans.*, 1825-26.] 12 vols. sm. 4to.

Standard Scales:

- : Original entries of the Comparisons of various standard scales made by a Committee of the Royal Astronomical Society in the years 1834-36, with a complete index by F. Baily. 4to.
 — : Correspondence and various MSS. relating to ditto. Unbound

Tabulæ mediorum motuum omnium planetarum; mediorum conjunctionum Solis et Lunæ, &c.; cum canonibus, super meridiem Oxoniorum ordinatae. Tabulæ continent verum locum Saturni, Jovis, Martis, Veneris et Mercurii in longitudine et latitudine, pro quodlibet tempore atque situ, in Oxoniâ constitutæ. Tabula longitudinis et latitudinis civitatum diversarum. Tabulæ magistri Johannis de Linerii de quinque planetis retrogradis, et aliæ variæ tabulæ astronomicæ, ad meridianum civitatis Toleti, cum canonibus. 2 vols. fol. on vellum, cir. 1349

Tennant (James Francis):

Report on the determination of the latitude at Karachi
in March and April, 1855. fol.

Ulugh Beigh:

- : Astronomical tables and catalogue of stars. [Persian MS.] 4to. 1839
—: Preface to the catalogue and knowledge of the stars. [Persian MS.] 4to. 1839

Utting (J.):

Tables of circumferences, areas, &c., of circles; of squares, cubes, reciprocals and roots; of vibrations, &c., of pendulums; of chords, angles, and circular arcs; Sun's meridian altitude at Greenwich, according to Sun's longitude, Sun's R.A. and longitude, &c. fol.

Venus:

Drawings by various observers, 1857 to 1873. [Separate drawings in portfolio.] 4to.

Wille (John):

Index to the Catalogue of the Astronomical Society, showing the order and magnitude of each star in its respective constellation. 4to.

Williams (John):

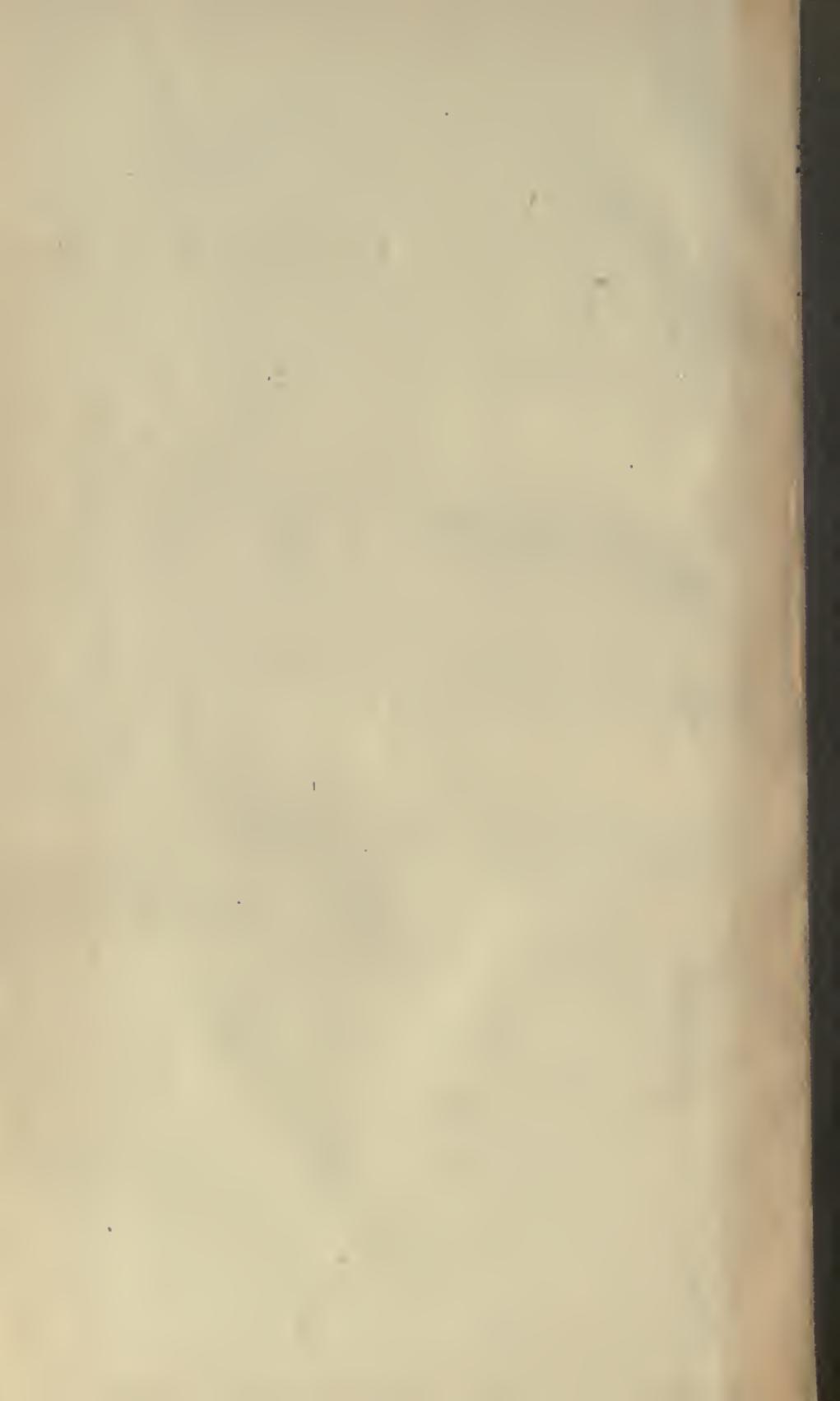
Comets observed in China from B.C. 613 to A.D. 1640.
[Original MS. of printed work.] 4to. 1869

Wilna, Observatoire:

Observations astronomiques faites en 1832-34. Par P. Sloevinski. 4to.

Wrottesley (Lord):

Original observations of Lord Wrottesley's Catalogue of 1009 stars. [R.A.S. *Memoirs*, vol. 23.]

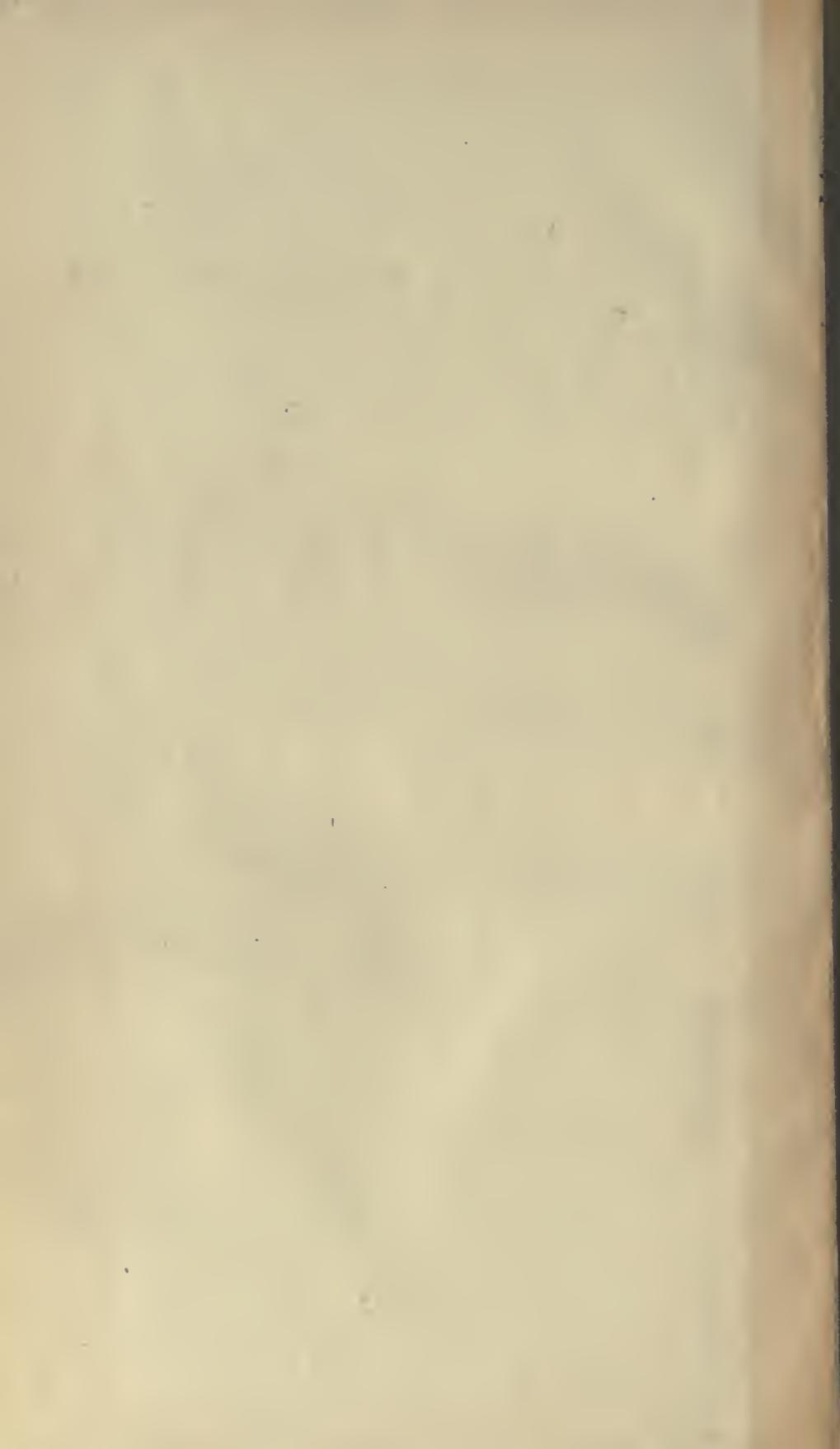


Z
5156
R88

Royal Astronomical Society

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY



BINDING LIST MAY 15 1945

Z
5156
R88

Royal Astronomical Society

PLEASE DO NOT REMOVE
CARDS OR SLIPS FROM THIS POCKET

UNIVERSITY OF TORONTO LIBRARY
