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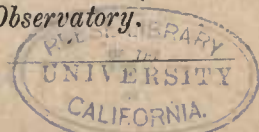
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VOLUME XXVI.
SCIENCE.

X.—A Supplement to Sir John Herschel's "General Catalogue of Nebulae and Clusters of Stars." By J. L. E. DREYER, M.A., F.R.A.S., Astronomer at the Earl of Rosse's Observatory.



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Room 11 - Washington Library (see catalogue)	A new general catalogue of nebulae and clusters of stars, being the catalogue of the late Sir John F.W. Herschel, 1825, revised, corrected, and enlarged, 1888.	101 2 3 1888
Room 11 - Washington Library (see catalogue)	(Monthly Notices of the Royal Astronomical Society, Volume 14, part 1)	101 2 4 1888
Room 11 - Washington Library (see catalogue)	Index catalogue of nebulae found in the years 1885 to 1894, with notes and corrections to the New General Catalogue, 1888.	101 2 5 1894
Room 11 - Washington Library (see catalogue)	(Monthly Notices of the Royal Astronomical Society, Volume 21, pages 184-228)	101 2 6 1894
Room 11 - Washington Library (see catalogue)	Second Index catalogue of nebulae and clusters of stars, containing objects found in the years 1895 to 1904, with corrections to the New General Catalogue, 1888.	101 2 7 1904
Room 11 - Washington Library (see catalogue)	(Monthly Notices of the Royal Astronomical Society, Volume 28, part 5)	101 2 8 1904
Room 11 - Washington Library (see catalogue)	Corrections to the New General Catalogue resulting from the revision of Sir William Herschel's Three Catalogues of Nebulae, 1817.	101 2 9 1904
Room 11 - Washington Library (see catalogue)	(Monthly Notices of the Royal Astronomical Society, Volume 23, pages 21-40)	101 2 10 1904

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X.—*A Supplement to Sir John Herschel's "General Catalogue of Nebulæ and Clusters of Stars."* By J. L. E. DREYER, M. A., F. R. A. S., *Astronomer at the Earl of Rosse's Observatory.*

[Read February 26, 1877.]

INTRODUCTION.

It is now about thirteen years since Sir John Herschel published his "General Catalogue of Nebulæ" in the "Philosophical Transactions of the Royal Society" for 1864. By far the greater part of this work was founded on the observations made by himself and his father, who for so many years were the only investigators in this branch of Astronomy. But even before the publication of this "General Catalogue" the Nebulæ had become objects of more general attention. Formerly it was only the possessors of large reflecting telescopes who thought their optical means sufficient for work on these faint objects, but when D'Arrest had shown how much could be done with a small refractor for the determination of the positions of the brighter Nebulæ several astronomers turned their attention in this direction. We need not here mention all the valuable series of observations which have been given to the public through the exertions of Schönfeld, Schultz, Vogel, G. Rümker, and others; far exceeding them all in importance is the great work of D'Arrest's, "*Siderum nebulosorum observationes Havnienses.*" What makes this work so important is, that it alone of all similar ones, except those of the two Herschels, is founded on zone-observations (sweeps), made with a powerful instrument in order to determine and describe all the Nebulæ which came into the field. The indefatigable observer—whose early death all astronomers lament—succeeded in forming a work, in which he is

not surpassed by anybody as regards the extent and value of his observations, while he often surprises the reader by the sharp and critical acumen with which he analyses and explains the work of his predecessors.

The Copenhagen Observations may be supposed to be in the hands of every observer of Nebulæ, and they are in many ways quite necessary as a supplement to the "General Catalogue." Although the probable errors of D'Arrest's observations are not much smaller than those in Sir John Herschel's positions, still the former are entirely free from the large accidental errors which may not seldom be found in the latter, and at which nobody wonders when he considers the construction of Herschel's instrument. There are therefore many cases in which the "General Catalogue," although giving the result of eminent observers' exertions, put together in a most wonderfully careful manner, is not in accordance with the heavens. And it is not only through D'Arrest's observations that such discrepancies appear: the other works on Nebulæ which have appeared since 1864 have made others visible. Added to this, a considerable number of new Nebulæ have been found since the "General Catalogue" was published; so that this excellent work, both as regards completeness and exactness, appears to want a supplement.

The necessity of arranging such a supplement for my own use soon became obvious to me, when, in 1874, I began to work at the Earl of Rosse's Observatory. Remembering a remark of Sir John Herschel's, that any amount of time spent in preparing extensive working-lists is well spent, I brought together such a list of all the objects, which an examination of all the previous Birr observations had shown in want of being re-observed for one reason or another. This occupation, as well as the reduction of the current observations, necessarily involved a careful study of the work done on the Nebulæ at other observatories—especially by D'Arrest, and Dr. Schultz at Upsala, whose "Micrometrical Observations of 500 Nebulæ" were published about that time. The study of these works, and all similar ones, combined with the personal acquaintance with the objects which my position has facilitated, has, by degrees, made me collect a series of notes and corrections to the "General Catalogue," which I have thought might

also be of use to other astronomers. It was principally the circumstance that several observatories furnished, or about to be furnished, with first-rate instruments, have taken up the study of the Nebulæ, which finally induced me to publish the list of corrections, together with a catalogue of all the Nebulæ (more than 1100) which have been found since Herschel's work appeared. It might, perhaps, seem that the very circumstance I have mentioned as having led me to publish this work now might be used as a proof that it was better to defer publishing it for some time longer, as a good many new Nebulæ are sure to be found ere many years. But in the first place, the list of corrections could not possibly be increased much more, if its publication was deferred; and, secondly, I have lately had proofs enough that a catalogue of new Nebulæ will be useful at the present moment. Among the "new Nebulæ" observed in Marseilles during the last seven or eight years are not a few which were previously discovered by D'Arrest; while a good many of them are found in the list of 600 Nebulæ first seen by Mr. Marth, at Malta, with Mr. Lassell's four-foot reflector ("Memoirs of the Royal Astronomical Society," vol. xxxvi.): and the same has been the case with several of those Nebulæ the positions of which have kindly been furnished to me by different astronomers after my "Request to Astronomers," asking for the communication of new Nebulæ, had appeared in the "Astronomische Nachrichten." To these observers my warmest thanks are due—especially to Messrs. Struve, Winnecke, Tempel, Stephan, and to my friend Dr. Ralph Copeland. Without their valuable co-operation many interesting notes about old Nebulæ, or positions of new ones, would not be found in the following pages.

I must return my special thanks to the Earl of Rosse for permitting me to insert in the Catalogue the new Nebulæ found at Birr Castle since 1861, when the late Earl published an extract of the observations made between 1849 and 1860.* It is to be regretted that the condensed form of this publication has made Herschel often make mistakes in the identification of

* The Nebulæ found after 1860 I have marked "R₂ nova," and in some cases I have added one of the letters B, C, D, which designate the observers, Ball, Copeland, Dreyer. Those found by Lord Rosse are only marked "R₂ nova."

the so-called "novæ," many of which are to be found among Sir William Herschel's Nebulæ, as only Sir John Herschel's Slough-Catalogue was then used as a working-list by the observers at Birr. This has in many cases been noticed by D'Arrest, whose suggestions with regard to these objects I of course was more able to confirm or reject than many others. With respect to all such *R. novæ* in the "General Catalogue," about which nothing is said in the sequel, I may refer the reader to the series of observations from Birr Castle, made since 1860, shortly to be published. From these it will be seen that our attention has been of late especially directed towards finding the exact positions of all such *R. novæ*, for which no exact positions are given in the "General Catalogue."

As a rule, I have not entered such new Nebulæ of D'Arrest's into this Catalogue, which I could see with certainty were identical with *R. novæ*, but have only given their positions among the notes to the "General Catalogue." In all cases, however, where the identity could not be perfectly proved, I have entered the Nebulæ in question, placing a remark about the suspected identity in the last column but one.

The following pages will not require any further explanation. The symbols and abbreviations used are in all cases the well-known Herschelian ones, which I need not explain here. As epoch for all the positions in the list of errors and the Catalogue, I have of course taken 1860.0, the epoch of the "General Catalogue." I have only given the positions in the Catalogue within whole seconds of *R. A.* and fractions of minutes. Herschel has given all the positions to fractions of seconds, although both the seconds and their fractions are not, perhaps, in half a dozen cases reliable. My principal reason for only giving the places approximately (although the reductions had been made sharply) is, that more than half the objects were only determined roughly by their discoverers, so that the Catalogue would have a very heterogeneous look, if D'Arrest's, Stephan's, and Schultz's Nebulæ were given sharply. The time for arranging a Catalogue of exact positions of Nebulæ has not yet come, and will not, until our ideas about the systematical differences between different observers have become clearer. It is also for this reason that I have not mentioned in the list of errors

deviations smaller than 2' between the positions of modern observers and those in the General Catalogue, as only greater differences exceed the degree of accuracy in the older observations sufficiently to give rise to suspicions about motions or changes of the objects.

Every astronomer who may wish for the accurate positions of such Nebulæ which have been micrometrically determined, and the results published, will at once know where to find them, except in the case of the Marseilles Nebulæ, as the positions of these are scattered about in several periodicals. I therefore give here an index of the various lists of new Nebulæ by MM. Stephan and Borelly, with the figures used to designate them in the Catalogue.

Stephan,	I.	Astron. Nachr.,	vol. 76,	No. 1810	} Month. Not. xxxii., p. 23.
„	II.	„ „ „	78,	„ 1867	
„	III.	„ „ „	79,	„ 1876	„ „ „ p. 231.
„	IV.	„ „ „	81,	„ 1939	„ „ xxxiii., p. 433.
„	V.	„ „ „	83,	„ 1972	„ „ xxxiv., p. 75.
„	VI.	„ „ „	83,	„ 1977	
„	VII.	Comptes rendus,	vol. 83,	No. 5 (31 July, 1876).	
„	VIII.	Manuscript Catalogue.*			
Borelly,		Astr. Nachr.,	vol. 79,	No. 1885,	and Month. Not. xxxii., p. 248.

Besides communicating to me his eighth list of Nebulæ, M. Stephan has been kind enough to send me a manuscript list of all his published Nebulæ (though not reduced to a common epoch). The examination of this list has shown that errors arising from misprints in the printed lists cannot exist in my Catalogue. I have made some alterations in M. Stephan's descriptions of the objects, changing "ceF" and "ceS" into "eF," "eS;" also "eF," "eS," into "vF," "vS," as the Nebulæ which have been found in Copenhagen or at Malta, as well as by M. Stephan, were in all cases noted much fainter and smaller by the latter than by the other observers.

* Afterwards printed in the Month. Not., xxxvii., pp. 334-39 (April, 1877).



NOTES AND CORRECTIONS TO THE "GENERAL CATALOGUE OF
NEBULÆ AND CLUSTERS OF STARS."

No.	NOTES AND CORRECTIONS.																												
6	According to the Phil. Trans., 1861, the distance between 5 and 6 is about 14', but it is not said which one is = h. 2. General Catalogue 6 is therefore most probably = Schultz, nova 2.																												
12	Never seen by D'Arrest. h. 4 must be = iv. 15 (H.'s R. A. being wrong).																												
19	R. A. 1 ^m too great (D'Arrest).																												
21	Schultz says: "An eF neb. suspected np between * 30° 20' and a F star n."																												
30	For III. 248, read III. 428.																												
31	D'Arrest has observed one of the R. novæ 4 ^a f, 0°·7 south of h. 15. Using the resulting distance, 67", as scale, I have found the following positions from Fig. 1, Pl. xxv., Phil. Trans., 1861:—																												
	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding-right: 10px;">No. 32,</td> <td style="padding-right: 10px;">0^h 10^m 59^s</td> <td style="padding-right: 10px;">60° 41' 15"</td> <td></td> </tr> <tr> <td style="padding-right: 10px;">31,</td> <td style="padding-right: 10px;">0 11 6</td> <td style="padding-right: 10px;">60 42 9 = h 15</td> <td></td> </tr> <tr> <td style="padding-right: 10px;">33,</td> <td style="padding-right: 10px;">0 11 7</td> <td style="padding-right: 10px;">60 44 5</td> <td></td> </tr> <tr> <td style="padding-right: 10px;">34,</td> <td style="padding-right: 10px;">0 11 10</td> <td style="padding-right: 10px;">60 41 45 bet. 2 F st.</td> <td></td> </tr> <tr> <td style="padding-right: 10px;">35,</td> <td style="padding-right: 10px;">0 11 11</td> <td style="padding-right: 10px;">60 42 40 = D'Arrest nova.</td> <td></td> </tr> <tr> <td style="padding-right: 10px;">36,</td> <td style="padding-right: 10px;">0 11 16</td> <td style="padding-right: 10px;">60 44 5</td> <td></td> </tr> <tr> <td style="padding-right: 10px;">37,</td> <td style="padding-right: 10px;">0 11 42</td> <td style="padding-right: 10px;">60 43 40 E.</td> <td></td> </tr> </table>	No. 32,	0 ^h 10 ^m 59 ^s	60° 41' 15"		31,	0 11 6	60 42 9 = h 15		33,	0 11 7	60 44 5		34,	0 11 10	60 41 45 bet. 2 F st.		35,	0 11 11	60 42 40 = D'Arrest nova.		36,	0 11 16	60 44 5		37,	0 11 42	60 43 40 E.	
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35,	0 11 11	60 42 40 = D'Arrest nova.																											
36,	0 11 16	60 44 5																											
37,	0 11 42	60 43 40 E.																											
	An observation of this group has afterwards shown that these approximate places cannot be more than 15" wrong (Nov. 1876).																												
40-42	I am almost sure D'Arrest and Schultz have seen all the Nebulæ here except Copeland's nova (see Catalogue).																												
59, 60	Precession in R. A. should be + 3 [·] 077.																												
60	D'Arrest's position is 0 ^h 21 ^m 53 ^s ·9, 87° 58' 8", vF, vS, 1E.																												
64	Precession in R. A. should be + 3 [·] 077.																												
69	R. A. 20 ^a too great (Auwers and D'Arrest).																												
72	D'Arrest's N. P. D. is 42° 26', or 10' greater than h.'s (one obs.).																												
78	H.'s place is wrong; Schönfeld has 0 ^h 27 ^m 40 ^s , 99° 10' 12", in perfect accordance with D'Arrest and Secchi (Astron. Nachr., No. 1571).																												
80	R. nova. Does not exist. 82 was undoubtedly observed instead of 79, which latter Nebula is not double. The description in Phil. Trans., 1861, agrees perfectly with the appearance of 82. Schultz's "G. C., 80," has not been seen in Birr before 1874: I have therefore entered it in the Catalogue as a nova.																												
94	= h. 37, is, no doubt, = III. 595. R. A. 16 ^a too small (D'Arrest).																												
97	R. A. is 8 ^a too small (D'Arrest and Schultz).																												
99	= 91.																												
100	h. 41 is = II. 860 (and not = III. 595).																												
101	h. calls it pB, D'Arrest, F, and certainly fainter than 94.																												

No.	NOTES AND CORRECTIONS.
132	= V. 20. According to M. Tempel this Nebula is 30' long.
139	= h. 60. Not found by D'Arrest and me. Is beyond doubt = H. 59, and the second R. nova, therefore, a different object (the other one is most likely = D'Arrest's nova, see Catalogue).
144	= 145.
156 } 157 }	= h. 69, 70. According to D'Arrest, with whose observation a drawing by M. Tempel agrees, the f one is 20" south of the p one. III. 430 (= G. C. 155) was not noticed by h. and D'Arrest; it was seen in its place by Tempel.
161	D'Arrest's R. A. 1 ^m greater (one obs.).
167	Not found by D'Arrest: only once looked for. Seen by Schönfeld (II. Abtheilung), who says that H.'s R. A. is too great (Qy. how much?).
213	The P. D. is 57° (not 59°); it is = 215.
221 } 222 }	II. 219 and II. 220. D'Arrest finds the following positions:—
	$\begin{array}{r} 1^{\text{h}} 2^{\text{m}} 52^{\cdot}7 \qquad 57^{\circ} 36' 28'' \\ 3 \quad 14 \cdot 7 \qquad \qquad 35 \quad 46 \end{array}$
	Schultz makes the first one = nova III., and has II. 219, p. 220 8' in the parallel. I prefer putting his II. 219 down as a nova, as the two Nebulæ observed by D'Arrest are the most conspicuous and the most likely to have been seen by H.
230	For III. 15, read III. 155.
251	Position (from details in Phil. Trans., 1861), 1 ^h 7 ^m 37 ^s , 59° 42' 0".
254	The R. A. of H. is 25' too great (D'Arrest, 2 obs.).
263	= h. 99 = I. 108 (not = III. 250), as already suggested by Marth (A. N., 995 and 1665).
264	= III. 250. The place is 1 ^h 12 ^m 31 ^s ·9, 87° 19' 19" (Schultz and D'Arrest). H. gives but one place for III. 250 and 251. The R. A. and Decl., p. 394 of D'Arrest's work, are both wrong.
269	= III. 251. Position is 1 ^h 12 ^m 52 ^s ·9, 87° 19' 6" (D'Arrest and Schultz).
270	D'Arrest's R. A. is 22' greater.
272	N. P. D. 5' too great (D'Arrest and Schultz).
278 } 288 } 289 }	Schultz's identification of III. 156–158 is unquestionably right, and agrees with H.'s description: "Three forming a rectangular Δ, in the legs eF, vS, at the rectangle vF, pL." h. 102 is <i>not</i> = III. 156, but G. C. 278, with 14' added to its R. A., will be = III. 156. G. C. 288 = III. 157, the place is, according to Schultz, 1 ^h 15 ^m 13 ^s , 57° 17' 57". G. C. 289 = h. 106 = III. 158. G. C. 285–86–87, to be struck out.
313	= 314.
325	Is most probably = 317, the R. A. of H. being 1 ^m too great.
332 } 333 }	Δα, according to Auwers, 15'; D'Arrest and Stephan (VIII.) have 20'. The R. A.'s should be 1 ^h 20 ^m 19 ^s and 1 ^h 20 ^m 40 ^s .
343	Is = 344 = 346. Nobody has seen more than two Nebulæ here (h. 128 and 130).
351	The star following has a P. M. in R. A. of + 0 ^s ·012 a year—Auwers, Astron. Nachr., 1392.
358	No nebulosity seen by Schönfeld.
363	R. A. is 13' too great (D'Arrest and Schönfeld).
364	Repeatedly not found in Birr, and by D'Arrest. Schönfeld (II. Abth.) has observed it twice as vF, eS, = * 13m. The place agrees with that of h. (Qy. could it be a F star?).
371	Not found by D'Arrest. h. has only one observation, marked as doubtful.
394	R. A. 18' too small (Auwers and D'Arrest).
397	R. A. 22' too small (Auwers and D'Arrest).
401	D'Arrest's R. A. is 1 ^h 41 ^m 35 ^s ·5.
403	R. A. 17' too small (D'Arrest and Schultz).

No.	NOTES AND CORRECTIONS.												
421	According to D'Arrest's identification, which I think right, this ought to be = III. 562 (and not 565, which is = h. 159).												
422	D'Arrest makes h. 157 = III. 563. He has here seen the following Nebulæ :—												
	<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding-right: 20px;">h. 157 = III. 563</td> <td style="padding-right: 20px;">1^h 44^m 25^s.2</td> <td style="padding-right: 20px;">54° 31' 26"</td> </tr> <tr> <td style="padding-right: 20px;"> III. 562</td> <td style="padding-right: 20px;"> 25 .8</td> <td style="padding-right: 20px;"> 33 44</td> </tr> <tr> <td style="padding-right: 20px;"> III. 564</td> <td style="padding-right: 20px;"> 29 .2</td> <td style="padding-right: 20px;"> 33 21</td> </tr> <tr> <td style="padding-right: 20px;">h. 159 = III. 565</td> <td style="padding-right: 20px;"> 32 .5</td> <td style="padding-right: 20px;"> 32 24</td> </tr> </table>	h. 157 = III. 563	1 ^h 44 ^m 25 ^s .2	54° 31' 26"	III. 562	25 .8	33 44	III. 564	29 .2	33 21	h. 159 = III. 565	32 .5	32 24
h. 157 = III. 563	1 ^h 44 ^m 25 ^s .2	54° 31' 26"											
III. 562	25 .8	33 44											
III. 564	29 .2	33 21											
h. 159 = III. 565	32 .5	32 24											
	and then three novæ following (see Catalogue).												
423 } 424-5 }	R. novæ, for which no places are given, are most probably = H.'s and D'Arrest's Nebulæ. I have found a neb. nf. 157 (see Catalogue).												
428	55 Andromedæ. Has probably never been nebulous (Schjellerup, Astron. Nachr., 1613).												
442	Probably = ε of Lord Rosse's diagram. II. 221 seems to be = h. 169.												
453	Seen as pB by D'Arrest.												
460	The words in Phil. Trans. 1833, "star 2', 285°," should evidently be, "star 2' 75°," or star f 8', 31" n. D'Arrest has not seen any star p, but one 11.12 m, 9°.0 f, 52" n, which agrees very fairly with my emendation.												
463	In the third column for 112, read r. 112.												
464	= 461.												
472	Both h. and H. are wrong as to the R. A. D'Arrest's R. A. is 14' smaller.												
487	R. A. is 1 ^m too small.												
501	h.'s R. A. (adopted in the G. C.) is 50' too great (C. H., Auwers, D'Arrest).												
518	R. A. 26' too great (H. and D'Arrest).												
539	Not found by D'Arrest. It is only a few vF stars close together.												
557 } 558 } 559 }	Herschel's identification (G. C., p. 17) is slightly wrong, and he puts two Nebulæ = h. 234. Δα (557 - 561) = 17°.4, Δ N. P. D. = 30", while Phil. Trans., 1861, gives βfa 17°.4, 29" n: therefore β = 561, and the Nebula 12' sf = 563. It makes, however, no change in the Catalogue. D'Arrest's identification is certainly wrong.												
581	In the last column but one, for bm read bM.												
593	Not found by D'Arrest on a very clear night.												
594	The * (Schjellerup, red stars, No. 23) follows. Neither D'Arrest nor Schönfeld mentions its red colour, while the latter says that a star 9m 62' f is a little red. Phil. Trans. 1861, has "a ruddy star 10 mag. 16' p." Is this, perhaps, h.'s star?												
612	R. A. is 1 ^m too great.												
614	R. A. is 2 ^h 44 ^m 16 ^s .5. Only a * 9m (and no nebulosity) seen by D'Arrest.												
624	H., h. (in Slough), and D'Arrest agree in calling it pB, only the Cape Observations have F (but not vF).												
629	Its place is 2 ^h 51 ^m 54 ^s , 45° 37' (see Phil. Trans., 1861).												
634	= II. 239. Not found by D'Arrest (only seen by H.).												
639	Not found in Birr, nor in Copenhagen.												
652	D'Arrest's R. A. is 30' greater (one obs.).												
655	R. nova. Most likely = III. 591, as already pointed out by D'Arrest. Strange that 656 was not noticed in Birr (observed by D'Arrest).												
664	= IV. 17. N. P. D. is 7' too great, as also found by D'Arrest.												
667	The only Nebula found by D'Arrest was in 3 ^h 8 ^m 57 ^s .2, 92° 56' 30" (4 obs.), which differs 13' and 11' from H.'s single observation.												
674	= h. 293. It is difficult to see which Nebula of this group is = h. 293. D'Arrest has supposed it to be one in 3 ^h 10 ^m 40 ^s .0, 48° 57' 25", or 4 ^s .5 f 675, and 2' 51" n. Considering the correction of - 2' which is to be applied to the N. P. D.'s of h. 294 and h. 295, this seems right. It is double (see Catalogue).												
684	D'Arrest's R. A. is 12' smaller than G. C.'s (3 obs.).												

No.	NOTES AND CORRECTIONS.																
686-687	According to D'Arrest the p one is 133" north of the f one. $\Delta\alpha = 4'$.																
692	For " * 7 f 7 ^s .5, 211 ^o " read " * 7 p 7 ^s .5." Cape Observations have : position from a * 7 ^m = 31 ^o .0.																
703	N. P. D. is 3' too small.																
748-750	R. A. 8 ^s and 13 ^s too great. (J. Schmidt, Astr. Nachr., 2097).																
756	D'Arrest's position 3 ^h 32 ^m 49 ^s .0, 95 ^o 7' 18", is in perfect accordance with Auwers' place for III. 569.																
758 } 760 }	G. C. and h. are wrong. D'Arrest and H. agree perfectly : <table style="margin-left: 40px; border: none;"> <tr> <td style="padding-right: 20px;">II. 455 = h. 307</td> <td style="padding-right: 20px;">3^h 35^m 0^s.5</td> <td style="padding-right: 20px;">95^o 9' 28"</td> </tr> <tr> <td>II. 456</td> <td>35 19 .0</td> <td>11 10</td> </tr> </table>	II. 455 = h. 307	3 ^h 35 ^m 0 ^s .5	95 ^o 9' 28"	II. 456	35 19 .0	11 10										
II. 455 = h. 307	3 ^h 35 ^m 0 ^s .5	95 ^o 9' 28"															
II. 456	35 19 .0	11 10															
763	Adopting the above place for II. 456, we find the position of 763 to be 3 ^h 36 ^m 19 ^s , 95 ^o 11' (v F, * 10.11 np).																
774	= II. 594. Not found by Schönfeld (II. Abth.). It must be = II. 458 with an error of 1 ^o in N. P. D.																
781	R. A. about 22 ^s too great. H. and Schönfeld (II.) agree.																
826	For globular cluster read O. R. A. 8 ^s too great (Schönfeld, D'Arrest).																
836	= II. 464. Not found in Copenhagen, nor in Birr. 835 is exactly 1 ^o north ; they are probably identical.																
837	For " * 11 sf" read " * 11 sp."																
839	Hind's variable Nebula. No. 1689 of the Astr. Nachr. contains an observation by D'Arrest of an S Nebula with an excentric Nucleus = * 14m, which was first seen by O. Struve early in 1868, 15 ^s p the place of the missing Nebula. At present there is no nebulosity distinctly visible, neither round this faint star, nor near the well known variable star. On this point I am in perfect accordance with Dr. Copeland, observing with the large Dunecht refractor, and M. Tempel, who works with a fine Amici refractor of 11 ⁱ aperture (at Arcetri). In the Pulkova refractor, however, some traces of nebulosity seem still to be visible. M. Otto Struve informs me that he, from time to time, has observed the variable Nebula, but that he avoids reducing and comparing his observations for fear of being preoccupied with respect to this minimum visible. He does not consider the Nova from 1868 a separate Nebula. "What I see is certainly the variable Nebula itself, only in altered brightness and spread over a larger space. Some traces of nebulosity are still to be seen exactly on the spot, where Hind and D'Arrest placed the variable Nebula."																
881	Is = 878. N. P. D. is 93 ^o (not 90 ^o).																
888	II. calls it cr. Not seen so by anybody else.																
890	R. A. is 1 ^m too great (Auwers and D'Arrest).																
908	For II. 547 read II. 457.																
918 } 919 } 920 } 922 }	D'Arrest is quite right in supposing 919 = II. 527 and 920 = 921 = 924. H.'s R. A. of II. 528 is wrong, but the * 9m south makes the identity with h. 334 certain. Adopting D'Arrest's positions for 919 and 920, we have <table style="margin-left: 40px; border: none;"> <tr> <td style="padding-right: 20px;">919,</td> <td style="padding-right: 20px;">4^h 45^m 21^s.0</td> <td style="padding-right: 20px;">93^o 20' 45"</td> <td style="padding-right: 20px;">vF, vS, * 9 3¹/₂'s.</td> </tr> <tr> <td>918,</td> <td>24</td> <td>15 45</td> <td>vF.</td> </tr> <tr> <td>920,</td> <td>32 .2</td> <td>20 40</td> <td>F, pL, R.</td> </tr> <tr> <td>922,</td> <td>38</td> <td>8 40</td> <td>F.</td> </tr> </table>	919,	4 ^h 45 ^m 21 ^s .0	93 ^o 20' 45"	vF, vS, * 9 3 ¹ / ₂ 's.	918,	24	15 45	vF.	920,	32 .2	20 40	F, pL, R.	922,	38	8 40	F.
919,	4 ^h 45 ^m 21 ^s .0	93 ^o 20' 45"	vF, vS, * 9 3 ¹ / ₂ 's.														
918,	24	15 45	vF.														
920,	32 .2	20 40	F, pL, R.														
922,	38	8 40	F.														
944	Observed by D'Arrest, 4 ^h 51 ^m 36 ^s .4, 90 ^o 41' 24", F, S, R, * 12 p 39".																
948	R. A. is 4 ^h 52 ^m 26 ^s .4 (D'Arrest).																
965	D'Arrest has: " * 13 sp in margin," h " * 12 nf," G. C. " * 12 sf." R. A. 17 ^s too great.																
1157	The "Crab Nebula." No published drawing is satisfactory: the one in Phil. Trans. 1844 is not at all like the object. The diagram in Phil. Trans. 1861 gives a very fair general idea of its form, the dark lanes, &c.																

No.	NOTES AND CORRECTIONS.						
1162	The Description should be eF, S, gbM.						
1167	= III. 747. Auwers makes the P. D. 8' 20" less, supposing the determining star to be B. A. C. 1985.						
1202	For N read neb.						
1216	N. P. D. 24° is a misprint for 34°.						
1456	R. nova, γ is = h. 410, as already pointed out by D'Arrest, α is nova (see Catalogue), δ = h. 409, the N. P. D. of β becomes thus 56° 28'·7 (N. P. D. of G. C. 1455 5' too small).						
1460	D'Arrest's N. P. D. is 56° 24' 2" in accordance with the measures in Phil. Trans., 1861.						
1519 } 1520 } 1522 } 1523 }	No visible change has taken place in this system since 1862, when D'Arrest found the position 56°. dist. 29", while H. found 1789 dist. 60" and h. 1827 45°, 45". N. P. D. is 117°, not 157°. N. P. D. is 152°, not 112°.						
1527 } 1528 } 1530 } 1531 }	h. is wrong in supposing that the two diagrams in Phil. Trans., 1861, page 716, partly represent the same Nebulæ; they show two distinct groups of Nebulæ p and f. I am almost quite sure that δ (spp γ) is = h. 446, whose R. A. then must be about 30° too great (h. did not put down the place exactly, and D'Arrest did not find it in h.'s place. I have, accordingly, put ϵ and ζ down as novæ in the Catalogue, and remarked at ϵ : "h. 446 f 17', 71" s."						
1537 } 1558 }	Why are these called bright in the G. C.? Bond calls them "two F Nebulæ;" they are in reality only two vF, vS clusters. D'Arrest makes the R. A. 1 ^m greater, but Schultz agrees with Bond.						
1560	According to D'Arrest the star is sp, not np.						
1592	In the description read h. 471 for h. 871.						
1597	Is close np 1596 (Phil. Trans., 1861).						
1612	For II. 544 read II. 554.						
1616	10 ^s ·5 in the description does not agree with the Catalogue places. $\Delta\alpha$; Obs. Havn., p. 398, is 5 ^s ·7 (a half-second chronometer was used, whence the mistake).						
1618	D'Arrest makes the R. A. 30 ^s ·0 smaller (2 obs.). H. and h. disagree.						
5066	N. P. D. is 69°, not 65° (Bond, list of new Nebulæ).						
1679 } 1682 }	The places of these Nebulæ as given in the G. C. differ a good deal from those in the Cape observations (p. 128). D'Arrest has the positions—						
	<table border="0"> <tr> <td>1679,</td> <td>8^h 32^m 0^s·5</td> <td>16° 31' 29"</td> </tr> <tr> <td>1682,</td> <td>8 33 46·5</td> <td>16 35 23</td> </tr> </table>	1679,	8 ^h 32 ^m 0 ^s ·5	16° 31' 29"	1682,	8 33 46·5	16 35 23
1679,	8 ^h 32 ^m 0 ^s ·5	16° 31' 29"					
1682,	8 33 46·5	16 35 23					
1686	D'Arrest's R. A. is 30 ^s greater.						
1704 } 1707 }	It appears to me most likely, that II. 48 = II. 80 (or at least that the descriptions belong to one Nebula), as it would be strange if H. on two nights should only have seen one of 2 pB Nebula. h. 527, "the faintest object imaginable," is probably the same as D'Arrest's "Opacissimum nebulae indicium, videtur tamen ex aliquot stellulis consistere." Schultz says: "Indubitably seen, probably a globular cluster."						
1722 } 1723 } 1724 }	R. novæ. Two of these are decidedly to be struck out; h. 536, 538, G. C. 1725 and 1727, II. 281 and one nova were seen in Birr. M. Tempel has sent me a sketch of this group with five additional Nebulæ, first seen by him (their approximate places are given in the Catalogue: I have verified two of them). From this sketch I find the place of the R. nova 1722, 8 ^h 49 ^m 10 ^s , 92° 45'.						
1735	= h. 542. I have looked for it in vain, and agree with Auwers in making h. 542 = II. 557.						
1738	= h. 539. D'Arrest's R. A. is 8 ^h 54 ^m 41 ^s ·9 (Descr. and P. D. agree. 3 obs.).						
1757	Discovered by D'Arrest, who, however, could not find it a second time.						
1773	N. P. D. is 70° (h. and D'Arrest), there is no neb. in 71°. R. A. 17 ^s too great.						
1786 } 1787 }	H.'s R. A. is wrong (h. has none), the R. A.'s of the G. C. are 26 ^s and 29 ^s too small according to D'Arrest (Δ N. P. D. = 31").						



No.	NOTES AND CORRECTIONS.						
1797 } 1798 }	<p>ii. 868 and 869. h. and D'Arrest have only seen one Neb. here (ii. 869), Auwers makes the $\Delta\alpha = 30''$, G. C. has only $2''$. Auwers's R. A. for ii. 869 agrees with that of D'Arrest ($9^h 10^m 25^s.5$), G. C. has $44''$ less.</p>						
1809	= 1807 (D'Arrest 63).						
1813	= α in the Phil. Trans., 1861. N. P. D. is quite wrong, the measures ($\alpha\gamma$) give $55^\circ 38' 56''$.						
1828	R. nova close np h. 587. D'Arrest mentions it as f 587 $4''$, a little n.						
1838 } 1839 }	<p>ii. 57 and 58. Have only been seen by H.: searched for in vain by Schultz. They are therefore most likely = 1845 and 1847. H.'s description: two dist. $1'$ np sf, the p pS, the f pL, is in accordance with this.</p>						
1846	Position from the drawing in Phil. Trans., 1861, $9^h 18^m 13^s$, $77^\circ 56'$, eF, vS, R.						
1901	= h. 627. Not seen by D'Arrest, but often observed in Birr.						
1906	= i. 282. Never found by D'Arrest.						
1909	R. A. 1^m too small (H., D'Arrest, G. Rümker).						
1914	= ii. 624. The place is wrong. D'Arrest has $9^h 38^m 56^s.5$, $83^\circ 38' 16''$.						
1928	Procession in R. A. should be $3^s.823$.						
1939	<p>= h. 642 never seen by D'Arrest, nor in Birr (where h. 646, 648, D'Arrest's nova, and a fourth Nebula a little north were seen). h. has only observed it in one sweep (and <i>not</i> 646 and 648 in the same sweep), so I am sure it is = h. 646, the minute of R. A. being wrong.</p>						
1944	<p>G. C. has, * 10 sf 100°, which does not agree with Phil. Trans., 1833 (20° sf). According to D'Arrest the * f $4^s.4$, position 141°.</p>						
1953	<p>To be struck out, as suspected p. 23, G. C. Not seen by anybody after H., is therefore = M. 81.</p>						
1958	For $87^\circ 55'$ read $87^\circ 45'$.						
1969 } 1971 }	The minute of R. A. should be 49 (H. and D'Arrest).						
1972	= ii. 909. Not found by D'Arrest, unless it is a Nebula observed by him in R. A. $9^h 49^m 27^s$ (2 obs.).						
2004	<p>* B. W. ix. 1200 is $2'$ sf, R. A. therefore 54^s too great. The magnitude of this * (orange red, not in Schjellerup's list) is given as $7^m.7$ in the B. D., as $8^m.5$ and $8^m.7$ by Argelander (B. B. vi.), as 8^m by Hind, Chacornac, and Schjellerup, as $9^m.0$ by Bessel and Copeland (Dunsink, March 1876). Is it slightly variable?</p>						
2018	= 2020. The place for h. 3229, "only a very rude approximation" (misprint in the Cape Observations).						
2031 } 2032 }	R. novæ. The places are, according to Phil. Trans., 1861—						
<table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">$10^h 5^m 13^s$</td> <td style="text-align: center;">$50^\circ 28'$</td> <td style="text-align: center;">eF, vS, R.</td> </tr> <tr> <td style="text-align: center;">$10 \ 5 \ 32$</td> <td style="text-align: center;">$50 \ 28$</td> <td style="text-align: center;">vF, vS, E ray.</td> </tr> </table>		$10^h 5^m 13^s$	$50^\circ 28'$	eF, vS, R.	$10 \ 5 \ 32$	$50 \ 28$	vF, vS, E ray.
$10^h 5^m 13^s$	$50^\circ 28'$	eF, vS, R.					
$10 \ 5 \ 32$	$50 \ 28$	vF, vS, E ray.					
2033	D'Arrest's place is $10^h 5^m 23^s.6$, $14^\circ 58' 6''$ (one obs.).						
2049 } 2050 }	<p>Are correctly placed in the G. C. Phil. Trans., 1861, Pl. xxvii., fig. 13, shows them together with h. 688 (<i>not</i> 689).</p>						
2053	<p>= h. 689, Professor Winnecke informs me, that he (early in 1876) had looked in vain for this Nebula as well as for the * 11^m north of it. h. 689 is marked as uncertain in both co-ordinates, and there is therefore not the least doubt that it is = 688 (they were observed in different sweeps). 688 and 689 were never seen in Birr on one night, although Phil. Trans., 1861, erroneously attributes the descriptions to two different objects.</p>						
2057	R. nova. Position is $10^h 10^m 14^s.7$, $67^\circ 27' 42''$ (D'Arrest).						
2062	For iii. 695 read iii. 965.						
2077 } 2078 }	<p>iii. 979-81. H. has seen three Nebulae in a line (what direction?), $1'$ distant from one another. D'Arrest has seen but two; his place for iii. 979 agrees well with that in the G. C.; he has iii. 980 (?) f 21^s, $24''$ south (2 obs. of each).</p>						
2079 }							

No.	NOTES AND CORRECTIONS.
2081	= i. 283. Not found by D'Arrest (see 1906 and 2218). The places of all the objects found on the 2nd April, 1801, are, perhaps, affected with some large error (they are i. 282-84, ii. 903-5, iii. 963-71).
2098	For iii. 883 read ii. 883.
2149	To be struck out. ii. 46 is quite certainly = h. 728 (D'Arrest and h. agree).
2151	Must be identical. See errata in the Cape Observations.
2152	
2170	
2179	Schönfeld and Vogel have observed a Nebula in $10^h 33^m 7^s.4$, $80^\circ 5' 26''$, νF , S, $1E 130^\circ$, mbM, which no doubt is = i. 272, whose position was uncertain. i. 279 = h. 740. H. cB, h. hardly visible. D'Arrest and I have not seen anything at all. Unless H.'s Nebula is a mistake for M 95 (H. - h. = $-54'$), there is here a remarkable case of a variable Nebula.
2196	= h. 751 and 753. Not seen in Birr, Copenhagen, Upsala, and Leipzig (Vogel). The "Triple Nebula" (Phil. Trans., p. 720) is 748.
2198	
2218	= i. 284. Not found by D'Arrest (see 2081).
2226	R. nova. $10^h 43^m 34^s$, $45^\circ 29'$. No description (perhaps an eF *).
2232	= ii. 493. D'Arrest's R. A. is 30° less (2 obs.).
2233	See D'Arrest's discussion of all the observations of this group in the Astr. Nachr., vol. 62, No. 1477. There is not the slightest doubt he is right, and that 2233 and 2239 are to be struck out. His positions for h. 778 = ii. 494 and 779 = i. 118 agree with the positions of G. C. 2235 and 2236. In the Phil. Trans., 1861, p. 720, should, for h. 782, be read ii. 493.
2239	
2234	D'Arrest's place for h. 777 is in perfect accordance with h.'s. He saw but this one Nebula in this neighbourhood (no others seen in Birr).
2239	h. 782 = h. 779 = i. 118.
2282	= iii. 75. Not found by D'Arrest. ii. 100 and iii. 75 were observed by H. in the same sweep, otherwise one might think they were identical (with a mistake of 2^m in the R. A. of the latter, but P. D. is also different).
2302	= ii. 904. Never found by D'Arrest, who has a nova $2^m 23^s$ f.
2310	D'Arrest's N. P. D. agrees with that in the G. C.
2365	To be struck out, = iii. 334.
2368	Answers' N. P. D. is $3'$ greater, which agrees with D'Arrest.
2375	H.'s P. D. is $5'$ too small (D'Arrest).
2377	The Phil. Trans., 1861, give separate observations of h. 857 and 875, but there is not the least doubt that M. 65 and M. 66 several times were mistaken for M. 66 and h. 875.
2388	To be struck out, there are here only two Nebulæ (2381 and 86).
2415	N. P. D. $5'$ too small (D'Arrest).
2428	= ii. 152. According to M. Tempel the N. P. D. is $10'$ too small.
2436	= h. 903. To be struck out: is = h. 902 (only one Nebula seen by H., h., D'Arrest, Vogel, Tempel, and in Birr).
2483	= iii. 773. Is it = ii. 830? D'Arrest found only the latter.
2489	= R. nova. To be struck out, only h. 934 and 936 seen.
2491-2 5069	R. novæ. As one of the three novæ is = 2496, 5069 is to be struck out.
2519	For § 8 nf read sf (Arg. Oeltzen, 12027).
2522	R. novæ. I do not think there were here seen any Nebulæ except H.'s, h.'s, and D'Arrest's. Eight were seen, probably 2521, 2526, 2527, 2528, 2533, and D'Arrest's novæ, or 2535 and 2537. I have placed D'Arrest's Nebulæ in the Catalogue, as there is no certain evidence that they were seen in Birr.
2523	
2524	
2525	
2538	
2545	= h. 971. According to M. Tempel a nebulous double star. = i. 201. Observed by G. Rümker, whose R. A. is $11^h 38^m 41^s.8$ (3 obs.).

No.	NOTES AND CORRECTIONS.																				
2547	= II. 881. Looked for in vain by D'Arrest.																				
2558	= III. 94. R. A. is 30' too great (D'Arrest, 2 obs.).																				
2583	Not found by D'Arrest. It must be = 2579, with an error of 1° in PD.																				
2585 } 2587 }	D'Arrest has only seen one Nebula in 11 ^h 43 ^m 50 ^s .3, 39° 3' 37". II. 825 and III. 716 were not seen by H. in one and the same sweep, <i>might</i> therefore be identical. But M. Tempel has seen both Nebulae.																				
2602	For "* f" read "* p" (Rümker and D'Arrest)																				
2618-19	D'Arrest's R. A. is 20' greater.																				
2620	R. A. in the G. C. is 1 ^m too small (Rümker and D'Arrest).																				
2621	For * 25° read * 65° (3' dist.).																				
2650	Must be = 2649. No other Nebula seen in Copenhagen and in Birr.																				
2668	D'Arrest and Schultz agree with H. in the description. No doubt as to the identity: places agree.																				
2683 } 2684 } 2685 }	This group wants a thorough re-examination. D'Arrest has seen the following Nebulae: h. 1065 (Qy. = III. 394), 1067 (Qy. = 395), 1070 (Qy. = 392), 1071 (Qy. = 391), 1073 (Qy. = 393), 1075 (Qy. = 396), 1079 (Qy. = 382), and 1082 (Qy. = III. 383). For his new Nebulae, see the Catalogue.																				
2705	Is undoubtedly = I. 224 with an error of 3' in the P. D. Only seen once (and I. 224 not at the same time).																				
2729	III. 708. h.'s position is not correct, as the D * shows. D'Arrest's position is 12 ^h 0 ^m 39 ^s .1, 46° 5' 19". This is therefore not the same as the one seen in Birr, 6' ssp 1088 (Phil. Trans., 1861), which is a nova.																				
2748	h. 1104 = IV. 54. H. and D'Arrest agree perfectly. The place in the G. C. to be corrected by - 12' and - 3'.																				
2761	= h. 1114. Seems to be double. D'Arrest says: "quandoquidem videbar mihi videre duas in unum confluentes Nebulas." The disagreement between Schönfeld's measures (II., p. 90) may arise from this cause, as already suggested by the Author.																				
2762	The star is sf, not nf (D'Arrest. 4 obs.).																				
2775	Precession in R. A. should be + 3 ^s .064.																				
2812	Never seen by D'Arrest. h. seems to have suspected the identity with 2829. But he observed both on the 25th April, 1830?																				
2818	= h. 1157. D'Arrest has the R. A. = 12 ^h 8 ^m 38 ^s , same PD. Whose minute is wrong?																				
2821	For IM read bM.																				
2842	R. A. 10' too small (Schönfeld, Schultz).																				
2844 } 5070 } 2852 } 2857 } 2862 } 2865 } 2869 }	The observations on this group by h. have been very fully discussed by Schönfeld and Schultz. As these eminent observers agree perfectly between themselves, and with D'Arrest as to the present state of the group, there is not the slightest doubt, that Schönfeld's ingenious suggestion is right, according to which 48' are to be subtracted from the R. A.'s of h. 1189, 1190, and 1194, and the descriptions of h. 1189 and 1190 are to be exchanged. The following Nebulae form this group:—																				
	<table style="margin-left: 40px;"> <tr> <td>2844 = h. 1178</td> <td>12^h 12^m 14^s</td> <td>83° 50' 8</td> <td rowspan="3">} Seen by h. ("3 more seen"), first determined by Schönfeld and D'Arrest.</td> </tr> <tr> <td>5568</td> <td>12 39</td> <td>56.3</td> </tr> <tr> <td>5070</td> <td>12 41</td> <td>45.5</td> </tr> <tr> <td>2852 = h. 1183 = 89</td> <td>12 48</td> <td>52.8</td> <td rowspan="3">} vF, eS, seen by Schultz on 3 nights.</td> </tr> <tr> <td>2865 = h. 1190</td> <td>13 0</td> <td>52.8</td> </tr> <tr> <td>2857 = h. 1187 = 94</td> <td>13 14</td> <td>50.2</td> </tr> </table>	2844 = h. 1178	12 ^h 12 ^m 14 ^s	83° 50' 8	} Seen by h. ("3 more seen"), first determined by Schönfeld and D'Arrest.	5568	12 39	56.3	5070	12 41	45.5	2852 = h. 1183 = 89	12 48	52.8	} vF, eS, seen by Schultz on 3 nights.	2865 = h. 1190	13 0	52.8	2857 = h. 1187 = 94	13 14	50.2
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	With respect to H.'s Nebulae, II. 568, 569, 570, 571, there can likewise be no doubt that Schönfeld's conjecture is right, that their P. D. is 83° 50' (compare the G. C., p. 28), and that they are identical with the above group. No traces of uebulosity have been seen by anybody in 82° 50'.																				

No.	NOTES AND CORRECTIONS.
	G. C. 2856, 2862, and 2869, are therefore to be struck out, and the rest to be corrected according to the above. The only thing that puzzles me is, that h. 1194 alone of the whole group was also observed in sweep 251, and that the R. A. (but not the descriptions) agree within a fraction of a second? h. must have made the same mistake in 251—probably he used a wrong R. A. for a zero star in both sweeps (117 and 251). There is no reason whatever for supposing any change in this group.
2859	II. 377. Is = 2858 = II. 323 as suggested by Marth.
2863	To be struck out, = III. 300.
2865	= h. 1190 (see above). R. A. should be $12^{\text{h}} 13^{\text{m}} 0^{\text{s}}$. Description νF , νS .
2882	H., F; h., νB ; D'Arrest, νF .
2884	Not found by D'Arrest (Query, did he search "10' ad austrum" instead of 10' nf?). Not seen by Schultz. There is not any "great error in Lord Rosse's account." The Nebula south of the scarlet star (3060) was seen after h. 1196 and 1202 had been observed, probably while the telescope was being moved back to the meridian.
2891 } 2903 } 2893 } 2899 }	R. A. in the G. C. is 30° too small (D'Arrest. 2 obs.).
	h. 1213 and 1215. There is some discordance between Schönfeld, Schultz, and D'Arrest, as to which of these is the faintest. Schönfeld says, h. 1215 is, while Schultz agrees with h. in making 1213 the faintest. D'Arrest says, in a note to h. 1215, that it appears from his observations, that 1215, in 1862, was the faintest. I cannot, however, reconcile this remark to the fact of D'Arrest's only having one observation of h. 1213 (3 of 1215), adding to it: "Duarum precedens ac debilior." It does not seem likely that any change has taken place here.
2909	R. nova about $30' f$ h. 1200. Is most probably = D'Arrest's nova ($12^{\text{h}} 16^{\text{m}} 9^{\text{s}}$, $77^{\circ} 51'$). The descriptions agree.
2914	R. A. is $12^{\text{h}} 17^{\text{m}}$.
2915	R. A. 1^{m} too small.
2922	= III. 97. Not seen either by h., by D'Arrest, or at Birr Castle.
2932 } to } 2940 } 2949 }	R. novæ. "Twelve knots examined." The G. C. contains more than 12 Nebulæ between $12^{\text{h}} 18^{\text{m}} - 21^{\text{m}}$ and $76^{\circ} - 77^{\circ}$, so there does not appear to have been sufficient reason for introducing these nine "novæ."
	= h. 1244. Schönfeld thinks this Nebula = II. 168. This certainly agrees with H.'s words: "The most southern is E."
2955 } 2956 }	II. 167 and 168. One of these is = h. 1244, the place of the other is, according to the <i>Observationes Havnienses</i> : $12^{\text{h}} 18^{\text{m}} 35^{\text{s}}$, $76^{\circ} 25' 7''$ (H.'s place is wrong). The Birr observation agrees with this, so there is no doubt about it. 2956, therefore, to be struck out.
2967	= III. 39. R. A. 20° too great according to D'Arrest.
2969	Seen as pB or pF by D'Arrest (4 obs.).
2972	N. P. D. is $58^{\circ} 0' 19''$ (error of reduction).
2984 } 2988 } 2993 }	R. A. is 12° too small (D'Arrest and Schultz).
2989	= II. 497. N. P. D. $3'$ too small (D'Arrest. 2 obs.).
2992 } 2995 }	R. novæ. Entered to fill the number of "11 knots" observed in Birr. I think, myself, that h. 1203 and D'Arrest's nova nf were seen as well as the other nine mentioned in the G. C., p. 29. As 2955 and 2956 are one Nebula, one "nova" (2992) is to be struck out, while the one f 1275 is right.
2999	For "vb" read " νB ."
3003	As already pointed out by D'Arrest, the remark in the G. C., that II. 56 and II. 90 were seen in one sweep (1st March, 1784) is contradicted by the numbers. According to the <i>Phil. Trans.</i> , the Nebulæ were observed on the 14th and 21st March, 1784.

No.	NOTES AND CORRECTIONS.
3008	i. 23. Schönfeld's position is $12^h 21^m 37^s.5$, $77^\circ 28' 13''$. H.'s P. D. is 4' too great.
3016	= h. 1291. To be struck out; is beyond doubt = h. 1278 = ii. 848. According to D'Arrest the place is perfectly empty.
3017	R. A. 11^s too small; P. D. is $75^\circ 10' 37''$ (Schultz), pL, F.
3022	R. novæ. To be struck out. Nova O. Struve, h. 1293, 1294, 1305, were seen. D'Arrest has another nova here.
3023	
3024	
3025	= ii. 115. R. A. is 14^s too small (Schultz).
3029	= ii. 116. G. C. has: "Not seen by D'Arrest." Observations Havnienses contain two observations. Has likewise been observed by Schönfeld and Schultz. R. A. 14^s too small.
3030	= ii. 114. Seen as a first class Nebula by D'Arrest.
3041	i. 197 and 198. D'Arrest's positions are (in perfect accordance with G. Rümker's)—
3042	
$\begin{array}{cc} 12^h 23^m 42^s.3 & 47^\circ 31' 28'' \\ 23 & 48.6 & 34 & 50 \end{array}$	
3046	= iii. 42. Seen by D'Arrest as pF (brighter than iii. 41).
3050	ii. 118. Not seen by anybody after H.
3051	iii. 69. D'Arrest's position is $12^h 24^m 35^s.5$, $72^\circ 22' 19''$, F, pL, biN, E (2 obs.).
3056	The * 9m is 8^s p (not f), (D'Arrest).
3060	To be struck out, = h. 1299 (3032), the star is B. W. $12^h 378$ (Sch. red star 148).
3071	= h. 1326. Is = ii. 849; but both H. and h. are wrong with respect to the P. D. D'Arrest's position is $12^h 26^m 30^s.9$, $25^\circ 17' 2''$. Phil. Trans., 1833, have: A star 9m near (D'Arrest has * 10 p 10^s), G. C. has erroneously "* 9 inv."
3079	Is probably to be struck out. Not seen as a nebulous star <i>by anybody</i> except h., who seems to have had some doubts on the subject. (See his remarks, Phil. Trans., 1833, pp. 499-500).
3084	R. A. 30^s too small. H. and D'Arrest agree.
3120	Not found by D'Arrest. The only "B * 9m" near the place is B. D. $14^\circ 2523$, 6.5 mag., whose R. A. is exactly 1^m greater than that of G. C. 3120.
3130	For $89^\circ 16' 17''$ read $89^\circ 46' 17''$ (misprint).
3170	= h. 1401. Is = h. 1399.
3172	Before seeing Schultz's remarks on h. 1402, I had suspected that M 60 had been mistaken for 1402 by the Birr observer. It is certainly strange that Schultz could see the duplicity, which was neither visible to h., nor to D'Arrest, nor to Vogel.
3174	ii. 20. Not found by D'Arrest. It is most likely = ii. 148, as already suspected by h. (see his note to 3148).
3176	For h. 1402 read h. 1404.
3185	"2 B stars f." Phil. Trans., 1833, have "6' np of 2 Bst," which should be, "2 Bst 6' np."
3196	ii. 39. Is it = h. 1419, with an error of $10'$ in the P. D.? The descriptions seem to agree, and Schultz says about 1419: "r indubious, even in twilight." Neither Schultz nor D'Arrest mention ii. 39.
3199	= h. 1421. Not found by D'Arrest and Vogel.
3239	R. nova. To be struck out: is evidently = h. 1442.
3245	= h. 1446. Not found by D'Arrest. It is very likely = h. 1440, as the observations were made in different sweeps.
3256	There is only this one Nebula here. D'Arrest calls it once R, another time oval. In 1867 he remarked, that it had appeared far brighter in 1862.
3269	Undoubtedly = ii. 344.
3333	h. 1494 = ii. 386. D'Arrest's position is $12^h 50^m 35^s.8$, $61^\circ 44' 54''$ (6 obs.). Auwers' place is nearer to this than the G. C. is.

No.	NOTES AND CORRECTIONS.
3336	h. 1496. h. thought this = II. 385, but D'Arrest has found them both as different objects. I have entered II. 385 in the Catalogue.
3343	= h. 1500. R. A. uncertain. D'Arrest's is 16° less (3 obs.).
3364	= II. 392. D'Arrest's N. P. D. is 61° 27' 16" (4 obs.).
3374	III. 760 is = II. 190, as already suspected by Marth and Auwers. No Nebula seen by D'Arrest in the spot, where 3374 should be.
3421	= II. 185. Position wrong; it is = 3426 (Markree Catalogue and D'Arrest agree).
3482	For III. 312 read II. 312.
3489	R. nova. Is, no doubt, the same as D'Arrest's nova, 13 ^h 12 ^m 58 ^s ·3, 101° 50' 8", pB, pS, R, bM.
3576	= II. 689. According to M. Tempel, not "pB, pL, R," but vS, 1E.
3588	= h. 1633. Schultz has once looked for it in vain (but under unfavourable circumstances). Not observed by anyone after h.
3597	According to the well-agreeing observations by H., D'Arrest, and Mr. Mitchell in Birr, there are here only 3 Nebulae—
	3595 = h. 1637 = III. 86 3596 = 1638 = III. 85 3602 = 1643 = III. 87
	and h. 1639 is, no doubt, = 1643, with an error of 30" in the R. A. (which h. only determined once; they were observed in different sweeps). 3597 is, therefore, to be struck out. In Phil. Trans., 1861, p. 728, should evidently, for 1638, be read 1637, and for 1639, 1638.
3698	To be struck out; is = 3696.
3703	To be struck out; = 3704.
3714	II. 844 is, no doubt, = 3715 (I. 238), at least it was not seen by D'Arrest.
3722	R. nova. To be struck out, only 3712, 3721, 3725 seen in Birr.
3766	Is quite certainly = 3760.
3778 } 3779 }	Are the same as as 3773 and 3774. D'Arrest found the following positions:—
	13 ^h 58 ^m 44 ^s ·2 35° 0' 27" - 58 57 6 34 57 39,
	which agree pretty well with the drawing from Birr Castle and the places of 3773 and 3774. D'Arrest has also observed a Nebula (F, S, R, * 12·13 p 9' v ls) almost at the place of G. C. 3779, but only one. I prefer, therefore, setting it down as a nova.
3785	R. A. is too great.
3795	P. D. 2½' too small, according to Auwers and D'Arrest. The latter could not see 3793.
3807	To be struck out; is = 3808. Strange, that h., in a case like this (or 3722), has not remarked the carelessness of the observer.
3830	Phil. Trans., 1861, "about 10' sp h. 1770." D'Arrest has observed a Nebula 4' p, 5'·4 north of 1770.
3836	= III. 551. Not seen by h. and D'Arrest. It is very likely = h. 1770 = 3835.
3855	R. nova. D'Arrest's position is 14 ^h 14 ^m 9 ^s ·0, 85° 54' 52" (pF, pL, mE). R. A. in G. C. 1 ^m too great.
3869	N. P. D. should be 74° (not 75°).
3905	Most probably = h. 1816 (3902), which is not mentioned in the Phil. Trans., 1861.
3922	Misprint of 10' in Auwers' work (Vierteljahrsschrift der astron. Gesellschaft, I., p. 183). Lacaille's P. D. is 145° 56' 51" for 1860. Identity therefore certain.
3956	For "* 15 p" read "* 11 p 15."
3976	The star is <i>south</i> of the nebula.
4003	R. nova. Observed by D'Arrest, 14 ^h 46 ^m 42 ^s ·5, 85° 50' 21", pF, pL, R.
4020	2' south of 4019, the place is therefore 14 ^h 52 ^m 31 ^s , 39° 47'·5.

No.	NOTES AND CORRECTIONS.
4022	III. 311. D'Arrest has one observation of a Nebula in $14^h 54^m 28^s.0$, $16^\circ 18' 46''$, forming a triangle with two stars of 11 m. It is no doubt = III. 311.
4043 }	R. novæ. Not seen by D'Arrest and Schultz. Are probably to be struck out. "6 Nebulae found," but 4038, 39, 42, 45, 46, 47, may all have been seen in the large eyepiece with a field of 30' diameter.
4044 }	
4057	II. 684 must be = 4060. H. says: "II. 684, two, the second pB, S, iE, the first is II. 545." D'Arrest has only seen II. 545 and 4060, exactly in the same R. A. H. has here no doubt, as often, only given one place for two Nebulae. 4057, therefore, must be struck out.
4082	II. 758. The place is $15^h 11^m 40^s.4$, $33^\circ 57' 53''$ (D'Arrest, 2 obs.). H.'s positions of this and neighbouring Nebulae are wrong. Auwers, p. 57 (note to II. 757).
4083	M. 5. Discovered by Gottfried Kirch on the 5th May, 1702. The following is an extract from Marie Margarethe Kirch's diary, now in the possession of Lord Lindsay:—"Durch solches Suchen [for the comet then visible] fand mein Mann durch eben diesen 3 Sch. Tub. hoch über μ [Serpentis, mentioned in the foregoing] ein neblicht, aber doch deutliches Sternchen, es hatte viel feine andere Sternchen um sich, doch eins stand sonderlich per Tubum über diesen ungefähr also [then follows a rough sketch of a star and the "nebulous star" below it] . . . May 6. Das neblichte Sternchen haben wir deutlich auf seiner vorigen Stelle gefunden." At 10.30, p. m., on the date mentioned, 5M would be about 8° above μ Serpentis, and the sketch made by M. M. Kirch represents exactly the relative position of 5 M and the * 5 Serpentis, as seen in an inverting telescope (per tubum). Communicated by Dr. R. Copeland.
4084	To be struck out; is = II. 758.
4085	II. 760. See note to 4082. D'Arrest's position is $15^h 13^m 0^s.4$, $34^\circ 4' 9''$.
4086	For $32^\circ 10'$ read $33^\circ 10'$. Not mentioned by R. as a separate Nebula.
4088	To be struck out; is = II. 760.
4092	= h. 1918 (misprint).
4105	D'Arrest's R. A. is 20^s greater (1 obs.).
4110	= II. 654. 1787 F, 1865, "tertiæ classis e pallidissimis" (D'Arrest). Winnecke was, in 1876, able to see and even measure it with a $6\frac{1}{2}$ -inch refractor.
4114	II. 761. See note to 4082. D'Arrest's position is $15^h 30^m 9^s.6$, $32^\circ 57' 48''$.
4115	R. A. should be $15^h 30^m 42^s$.
4117	R. nova. To be struck out; 4114 and 4116 were seen.
4122	Auwers makes the R. A. 8^s less, D'Arrest 17^s less than the G. C.
4124	Position to be corrected, like h. 1934 and II. 766. It should be $15^h 34^m 0^s$, $30^\circ 6' 22''$ (not seen by D'Arrest; only seen once in Birr).
4127	Rosse C. D'Arrest's position is $15^h 35^m 2^s.8$, $30^\circ 9' 2''$.
4128	R. A. is wrong. H. has $15^h 35^m 39^s$, Rümker and D'Arrest $15^h 35^m 49^s.1$.
4130	H.'s R. A. is 32^s less than D'Arrest's. Auwers agrees with the G. C.
4131	= II. 766. R. A. should be $15^h 36^m 48^s.1$ (D'Arrest, see 4082).
4133	= 4131, and not "nova."
4134	For III. 378, read III. 738.
4149	H. calls it vF, R, D'Arrest B, mE, 4'l.
4152	Both H. and h. make $\Delta\alpha + 3^s$ or 4^s ; D'Arrest has $0^s.0$.
4161	= III. 140. Marth has observed a Nebula in $15^h 59^m 5^s$, $69^\circ 4'$ (No. 302). There can be but little doubt it is = III. 140.
4167	Auwers has R. A. $16^h 3^m 54^s$ in good accordance with D'Arrest.
4190	D'Arrest has one observation of III. 740, but in R. A. $16^h 19^m 59^s$ (?).
4227	= h. 1967. R. A. is 44^s too great (Schultz).
4244	= IV. 50. N. P. D. is 5^s too small.
4247	Auwers' N. P. D. is $47^\circ 1' 10''$; G. C. is 1° wrong.
4266	= III. 124. R. A. is 24^s too great (Stephan, Astr. Nachr., No. 1867).

No.	NOTES AND CORRECTIONS.
4268	J. Schmidt says the R. A. is 2 ^m too great (Astr. Nachr., No. 1678), but he is wrong, as H., h., D'Arrest, and Schönfeld agree perfectly.
4362	The description should be Cl, P, stL.
4373	H.'s R. A. is 16 ^s too small.
4383	= II. 902. R. A. is 21 ^s too great (Schultz).
4390	Not omitted in Auwers' work, but to be found on p. 76.
4473	The variability seems most doubtful; it is certainly still a first-class Nebula, or at least among the very brightest of the second class.
4514	For ☉ read ○.
4527	= II. 202. Not noticed by D'Arrest, who has two observations of a S. R. F. Nebula in 19 ^h 49 ^m 19 ^s , 61° 5' 24", which also has been observed by Marth.
4538	No Nebula; a star 12 m. with some eF st around. See also D'Arrest and Schönfeld.
4567	To be re-observed; three observations; the nebulosity only seen once.
4585	= 4586. See G. C., p. 38.
4602	R. Novæ. D'Arrest has seen the first one in 20 ^h 40 ^m 14 ^s , 90° 9' 25". I have measured the two others (f. 4605), but must refer the reader to the coming publication of the Birr Observations.
4603	
4604	
4646	= III. 209. D'Arrest gives the result of three observations— 21 ^h 7 ^m 4 ^s .4, 77° 0' 8".
4649	= h. 2108. Not found by D'Arrest (twice), while 2109 was visible.
4653	R. A. 10 ^s .7 too small (H. and D'Arrest).
4654	R. A. is 2 ^m 0 ^s too great (D'Arrest).
4799	R. nova = h. 2164, and, accordingly, to be struck out.
4803	For 24 ^m 57 ^s read 25 ^m 2 ^s . Not seen a second time; not found by me.
4809	R. A. wrong; should be 22 ^h 29 ^m 13 ^s (H. and D'Arrest).
4816	= C. (Rosse), Schultz: 22 ^h 30 ^m 57 ^s .9, 56° 16' 18".
4817	= E. (Rosse), D'Arrest: 22 ^h 31 ^m 3 ^s .0, 56° 21' 19".
4818	= D. (Rosse), D'Arrest: 22 ^h 31 ^m 20 ^s .6, 56° 18' 39".
4823	= B. (Rosse) = h. 2174 = III. 166.
4827	Is not at all "er."
4835	Do not exist. The words "7 knots found," in the Phil. Trans., 1861, p. 735, refer to the following Nebulae: h. 2183 and 2184. h. has, by a mistake, applied them to h. 2181 (4834). All seven to be struck out.
4841	
4872	R. novæ. Two of the "three Nebulae involved in F nebulosity" were observed by D'Arrest.
4873	h. 2195 and another 3 ^s p, 25" south, vF, vS, vIE.
4881	Is, no doubt, = 4882. See errata in the Cape Observations.
4890	D'Arrest's R. A. is 21 ^s less (3 obs.).
4912	R. novæ. Four Nebulae seen by Schultz and Tempel, viz., h. 2218, 2219, Nova D'Arrest and Nova Schultz about 8 ^s f. 2219, 1' n (looking nearly like 2218). The two last mentioned are most probably the same as those seen in Birr.
4913	
4917	Observed by D'Arrest, vF, vS.
4918	= h. 2221. Not seen by D'Arrest, Vogel, and Schultz. The Birr Observation might, perhaps, have been of one of the other Nebulae in this neighbourhood: a second time it was looked for in vain.
4920	For "bM * 6" read "bM * 16."
4930	III. 186. D'Arrest's position is 23 ^h 11 ^m 10 ^s .9, 95° 10' 44".
4935	= h. 2229. Not seen by D'Arrest, Schultz, and Tempel. Perhaps = D'Arrest's nova, with an error of 15' in the N. P. D.
4941	No Nebula, only a few stars close together. Compare Schönfeld, I., p. 115; Auwers, p. 77. Not in Observaciones Havnienses.

No.	NOTES AND CORRECTIONS.
4942	= 4943.
4953	D'Arrest and Secchi (Astr. Nachr., 1571) have P. D. = $81^{\circ} 5' 53''$.
4967	R. A. is 12° too small (D'Arrest, Schultz, etc.).
4972	h.'s N. P. D. wrong. H. has $58^{\circ} 20'$, in accordance with D'Arrest.
4974	N. P. D. should be $87^{\circ} 14' 24''$.
4980	Observed both by D'Arrest and by me. Place quite correct.
4982	To be struck out; = III. 187, whose R. A. is 9° too small (P. D. $2\frac{1}{2}'$ too great).
4984	Auwers has $23^{\text{h}} 27^{\text{m}} 11^{\text{s}}$; D'Arrest has $23^{\text{h}} 27^{\text{m}} 20^{\text{s}}$, but N. P. D. $4'$ smaller (4 obs.).
5003 }	Are two distinct Nebulæ, observed by D'Arrest and me. Correction to the place of 5004.
5004 }	= $+ 8^{\circ}, + 5'$.
5013	R. A. is 1^{m} too great.
5033	Searched for in vain by D'Arrest. Probably only some F stars.
5036	R. A. is 23° too great. H. and D'Arrest agree.
5047	To be struck out; = 5048.
5066	For 65° (P. D.) read 69° .

REFERENCES TO FIGURES OF NEBULÆ IN VARIOUS WORKS.

The following list comprises all figured Nebulæ which are not included in Sir John Herschel's list (General Catalogue, p. 40). The abbreviations are as follows:—

- Lassell. Mr. Lassell's Paper in vol. xxxvi. of the "Memoirs of the Royal Astronomical Society."
D'A. S. N. D'Arrest's work, "Siderum Nebulosorum Observationes Havnienses."
Secchi. Descrizione del nuovo osservatorio del Collegio Romano. 1856,*
Vogel. Dr. H. C. Vogel: Positionsbestimmungen von Nebelflecken und Sternhaufen zwischen $+ 9^{\circ} 30'$ und $+ 15^{\circ} 30'$ Decl. Leipzig, 1876.
M. N. Monthly Notices of the Royal Astronomical Society.

* Most of these figures are very strange looking, and do not appear to be very like the objects; but as they were made by an astronomer of Father Secchi's standing, I have, of course, included them in the list.

REFERENCES TO PUBLISHED FIGURES OF NEBULÆ.

G. C.	h.	Work cited.	No. of Plate.	No. of Fig.	G. C.	h.	Work cited.	No. of Plate.	No. of Fig.
138	61	Lassell,	I.	1	2890	1211	Lassell,	III.	17
600	262	Lassell,	I.	2	3025	II. 115	Lassell,	IV.	19
604	264	Lassell,	I.	3	3028	1296	Lassell,	IV.	18
826	2618	Lassell,	I.	4	3049	1312	Lassell,	IV.	20
905	332	Vogel,	II.	2			Vogel,	I.	9
1137	355	D'Arrest, S. N.,	—	(p. 37)	3106†	1357	Lassell,	V.	21
1157	357	Secchi,	IV.	8	3132	1376	Lassell,	V.	22
		Lassell,	II.	6	3155	1386	Lassell,	V.	23
1179*	360				3165	1397	Lassell,	V.	24
1202	iv. 33	D'Arrest, S. N.,	—	(p. 80)	3258	1456	Lassell,	V.	25
1225	365	Secchi,	IV.	12	3321	1486	Lassell,	VI.	26
		Lassell,	I.	8	3342	1498	Vogel,	I.	10
1227	v. 28	D'Arrest, S. N.,	—	(p. 80)	3536	iv. 70	D'Arrest, S. N.,	—	(p. 290)
1361	379	Vogel,	II.	15	3572	1622	Lassell,	VI.	27
1425	393	Vogel,	I.	1	3606	3523	Lassell,	VII.	28
1437	399	Secchi,	IV.	6	3614	1649	Lassell,	VII.	29
		D'Arrest, S. N.,	—	(p. 86)	3615	1650	Vogel,	I.	11
1511	3075	Lassell,	II.	9	4087	1917	D'Arrest, S. N.,	—	(p. 319)
1519	444	Lassell,	I.	10	4290	3680	Lassell,	VII.	30
		Secchi,	IV.	15	4343	1989	Lassell,	VII.	31
1532	450	Secchi,	IV.	13					
		Lassell,	I.	11	4355*	{ 1991 } { 3718 }	Lassell,	VIII.	32
		D'Arrest, S. N.,	—	(p. 92)			Mem. R.A.S., xxxii., §	I.	—
		M. N., xxviii.,	—	(p. 155)	4390	2000	Secchi,	IV.	3
1565	{ 464 } { 3093 }	Secchi,	IV.	11	4403*	2008	Lassell,	II.	33
1567	3095	Secchi,	IV.	14	4440	2020	Vogel,	II.	1
1861	604	Lassell,	II.	12	4447	2023	D'Arrest, S. N.,	—	(p. 334)
2017	3228	Secchi,	IV.	16			Holden, Wash. Obs., '74,	VI.	2
2052†	688	Phil. Trans., 1861,	xxvii.	13	4487*	2037	Lassell,	IX.	34
2099	710	D'Arrest, S. N.,	—	(p. 133)	4510	2047	Secchi,	IV.	1
2102	3248	Secchi,	IV.	5	4514	2050	D'Arrest, S. N.,	—	(p. 336)
		Lassell,	III.	14	4532	2060	Secchi,	IV.	7
2197*	3295						Lassell,	IX.	35
2347	840	Vogel,	I.	2			Secchi,	IV.	10
2373	854	Lassell,	III.	15			D'Arrest, S. N.,	—	(p. 338)
		Vogel,	I.	4	4572	2075	Lassell,	IX.	36
2377	{ 857 } { 875 }	Vogel,	I.	5	4628	2098	Lassell,	X.	37
2378	859	Vogel,	I.	3			Secchi,	IV.	2
2786	1132	Vogel,	I.	6	4687	{ 2128 } { 3878 }	Secchi,	IV.	9
2806	1148	Vogel,	I.	7	4886	2202	D'Arrest, S. N.,	—	(p. 360)
2838	1178	Lassell,	IV.	16			Vogel,	I.	12
		Vogel,	I.	8	4892	2205	D'Arrest, S. N.,	—	(p. 362)
2868	1192	D'Arrest, S. N.,	—	(p. 207)	4964	2241	Secchi,	IV.	4
							Lassell,	X.	38

* See notes.

† Not 1911, as in G. C.

‡ Not in Phil. Trans., 1850.

§ By Lassell.

NOTES.

No. 1179 = h. 360. The following monographs have appeared since 1864 :—

Lord Rosse's in the *Phil. Trans.*, 1868.

G. P. Bond's in the *Annals of the Observatory of Harvard College*, v., 1867.

Secchi, *Sulla grande nebulosa di θ Orione*, 1868.

D'Arrest's in his paper, "*Undersøgelser over de nebulose Stjerner.*" 1872.*

No. 2197 = h. 3295 (γ Argûs). See the volumes of the *Monthly Notices, R. A. S.* Plates are found in vols. xxiv., p. 2 (Abbott), xxviii., p. 200 (id.), xxix., p. 82 (Captain Herschel), xxxi., p. 234 (Abbott).

No. 4403 = h. 2008 (Omega Nebula). Two drawings of this Nebula, by Trouvelot and Holden, are found in Professor Holden's interesting Paper on supposed Changes in the Nebula M. 17 (*American Journal of Science and Arts*, vol. xi., May, 1876). Compare *Wash. Obs.*, 1874, Plate vi.

M. Tempel, of the Observatory at Arcetri, near Florence, has made a considerable number of drawings of Nebulæ with the two fine Amici telescopes at his disposal, which it is to be hoped may soon be published. The following Nebulæ have, for the first time, been carefully drawn at Arcetri :—G. C. 132, 155-56-57, 516, 768, 1202, 1227, 1270, 1949, 1950, 2318, 2660, 2801, 2810, 2825, 2839, 3105, 3107, 3108, 3110, 3142, 3160, 3274, 4315, 4795, 4810, 4911-12-13-15, 5053.

Vol. viii. of the *Annals of the Observatory of Harvard College*, which was received at Birr Castle in the summer of 1877, contains lithographs from drawings by Mr. Trouvelot of the following Nebulæ :—G. C. 116 (Pl. 33), 1179 (Pl. 24, Woodbury type), 4230 and 4294 (Pl. 25), 4355 (Pl. 32), 4447 (Pl. 34), 4532 (Pl. 35).

* Two old drawings of the Neb. in Orion (not mentioned by h.) are to be found in Rozier's *Journal de Physique*, vol. 22, 1779 (by Le Fevre de l'Oratoire), and in Schröter's "*Aphroditographische Fragmente*," *Helmstadt*, 1796, Plate ii. Both these drawings are not without value.

GENERAL CATALOGUE OF NEBULÆ.

No. of Catalogue.	No. in Marth's Catalogue.	References to other Authorities.	Right Ascension for 1860, Jan. 0.			Annual Precession for 1880.	North Polar Distance for 1860, Jan. 0.		Annual Precession for 1880.	Summary Description.	No. of Observations.
			h	m	s		°	'			
5080	1	.. ..	0	0	6	+ 3·07	82	28	- 20·1	F, vS, R, alm. stell.	2
5081	2	.. ..	0	0	16	3·07	82	23	20·1	eF.	1
5082	..	Struve, 1865, .	0	1	17	3·08	66	59	20·1	vF, N in n end.	1
5083	..	Struve, 1865, .	0	1	27	3·08	67	0	20·1	F, R, * 9·10 sf.	1
5084	3	.. ..	0	1	50	3·08	69	10	20·1	vF, vS, R, bM.	1
5085	..	Schultz,	0	2	11	3·08	63	2·8	20·1	F, vS, iR, mbM, h. 4, p 19 ^s .	2
5086	..	Schultz,	0	2	21	3·09	57	28·2	20·1	F, * 10 att. (Qy. = 6).	1
5087	..	D'Arrest,	0	3	14	3·08	64	56·2	20·1	vF, pL, R, 2 Fst. n.	3
5088	4	.. ..	0	3	38	3·08	68	49	20·1	Neb. st. 13m.	1
5089	5	.. ..	0	3	45	3·07	87	6	20·1	eF, vS, or neb. st.	1
5090	6	.. ..	0	5	33	3·09	68	46	20·1	pF, S, lE, gbM.	1
5091	7	.. ..	0	5	42	3·09	68	41	20·1	F, vS, stell.	1
5092	..	Secchi,	0	7	39	3·06	98	8·8	20·0	vF.	1
5093	..	D'Arrest,	0	10	31	3·09	79	20·0	20·0	pF, S, R, sbM.	2
5094	..	Pechüle,	0	13	17	3·07	89	55·3	20·0	vF, S, R.	1
5095	..	R ₂ nova, C., . . .	0	14	8	3·11	68	14·5	20·0	ecF, cL, R.	1
5096	..	Schultz,	0	14	34	3·11	68	21·2	20·0	eF (Qy. = 40, 41, 42).	1
5097	..	D'Arrest,	0	14	34	3·11	68	22·9	20·0	vF, vS, * 13 sp.	2
5098	..	D'Arrest,	0	14	46	3·11	68	22·1	20·0	vF, vS.	2
5099	..	Struve, 1866, . . .	0	18	40	3·05	99	3	20·0	F, pL, * 7 sf 5'.	1
5100	..	Tempel,	0	19	15	3·07	93	17·3	20·0	vF, S, s bM.	1
5101	..	Secchi,	0	19	59	3·05	98	43·2	20·0	vF.	1
5102	8	.. ..	0	20	0	3·07	89	27	20·0	F, vS.	2
5103	..	D'Arrest,	0	23	21	3·35	27	25·7	19·9	Cl, pL, st 10 . . . * inv.	1
5104	9	.. ..	0	23	47	3·08	85	37	19·9	F, eS, sbM.	1
5105	10	.. ..	0	23	54	3·08	85	39	19·9	eF, S.	1
5106	11	.. ..	0	24	6	3·08	85	35	19·9	vF, vS, iR.	1
5107	..	Schultz,	0	28	48	3·15	66	48·4	19·9	eF, stell., h. 32 sp.	1
5108	12	.. ..	0	29	23	3·08	88	2	19·9	eF.	1
5109	13	.. ..	0	29	35	3·08	88	52	19·9	F, S, R.	1
5110	..	Tempel,	0	32	8	3·04	99	53·3	19·9	F.	1
5111	14	.. ..	0	32	9	3·07	89	53	19·9	eF (h. 41 n).	2
5112	..	Stephan, VIII., . .	0	32	28	3·08	87	14·0	19·8	eF, vS, ibM.	1
5113	..	R ₂ nova, C., . . .	0	32	29	3·08	87	19·7	19·8	F, R.	2
5114	15	.. ..	0	33	8	3·08	88	1	19·8	pF.	2
5115	..	Stephan, VIII., . .	0	33	47	3·08	87	19·7	19·8	eF, S, mbMN.	1
5116	..	Stephan, VIII., . .	0	34	57	3·22	54	26·4	19·8	eF, vS, R, gbM.	1
5117	16	0	36	14	3·08	87	47	19·8	vF, pL.	1
5118	..	D'Arrest,	0	41	8	+ 3·20	63	4·8	- 19·7	eF, pS, lE, probably = 137.	1

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			h	m	s	s	°	'	"		
5119	..	D'Arrest, . . .	0	43	41	+ 3.26	54	55.3	- 19.7	Cl, L, 1C.	1
5120	..	D'Arrest, . . .	0	44	12	3.03	99	21.2	19.7	F, pS, * 11 np.	1
5121	17	.. ..	0	46	27	3.03	99	32	19.6	vF, vS, 1E, alm. stell.	1
5122	18	.. ..	0	47	11	3.03	98	0	19.6	vF, S.	1
5123	..	R ₂ nova, C., . .	0	47	30	3.24	59	13.8	19.6	F, S, R, * 10" n, n. 214 nf.	1
5124	19	.. ..	0	47	56	3.03	98	7	19.6	eF.	1
5125	20	.. ..	0	47	58	3.03	98	6	19.6	pF.	1
5126	..	R ₂ nova, B., . .	0	49	27	3.06	92	32.2	19.6	vF, eS, h. 77 1' np.	1
5127	..	Tempel, . . .	0	49	30	3.02	100	42.5	19.6	pB, pL, * 12, 13 n.	1
5128	..	R ₂ nova, B., . .	0	49	41	3.06	92	31.1	19.6	Stellar.	1
5129	..	Phil. Trans., 1861,	0	50	15	3.24	60	24.3	19.6	vF, eS, stell. h. 79 p.	sev.
5130	21	.. ..	0	50	34	3.04	95	51	19.6	eF, vS.	1
5131	22	.. ..	0	50	41	3.04	95	53	19.6	vF, vS.	1
5132	..	D'Arrest, . . .	0	50	49	3.22	63	53.1	19.6	F, 1E, * 9.10 sf.	2
5133	23	.. ..	0	50	50	3.04	95	54	19.6	F, S, E.	1
5134	24	.. ..	0	50	56	3.04	95	50	19.5	F, E.	1
5135	25	.. ..	0	53	30	3.03	97	37	19.5	vF, S, E.	1
5136	26	.. ..	0	53	46	3.03	97	32	19.5	vF, vS.	1
5137	27	.. ..	0	54	17	3.03	97	38	19.5	vF, vS, gbM.	1
5138	28	.. ..	0	54	31	3.03	97	30	19.5	vF, vS.	1
5139	29	.. ..	0	54	47	3.03	97	34	19.5	vF, vS.	1
5140	30	.. ..	0	54	54	3.03	97	34	19.5	eF.	1
5141	31	.. ..	0	56	1	3.03	97	5	19.4	eF, vS.	1
5142	32	.. ..	0	56	5	3.03	97	44	19.4	vF, S, iR.	1
5143	..	D'Arrest, . . .	0	56	28	3.68	28	42.7	19.4	Cl, vl Ri.	1
5144	33	.. ..	0	57	8	3.07	91	31	19.4	eF, vS.	1
5145	34	.. ..	0	57	31	3.07	91	33	19.4	vF, vS.	1
5146	..	R ₂ nova, D., . .	0	59	0	3.28	58	19.4	19.4	Stell. mbM, r.	1
5147	..	R ₂ nova, D., . .	0	59	14	3.29	58	26.6	19.4	vF, vS.	1
5148	..	R ₂ nova, . . .	0	59	21	3.29	58	24.2	19.4	vF, vS.	2
5149	..	R ₂ nova, . . .	0	59	48	3.29	58	21.6	19.4	vF, h. 86 np.	2
5150	35	.. ..	1	0	49	3.10	86	13	19.3	eF, S, 1E.	1
5151	..	R ₂ nova, B., . .	1	0	52	3.30	57	38.2	19.3	eF, S, R, 215 np.	1
5152	..	R ₂ nova, . . .	1	1	5	3.30	58	6.9	19.3	vF, S, R.	3
5153	..	R ₂ nova, B., . .	1	1	19	3.30	58	0.9	19.3	eF, vS, 217 f.	1
5154	..	R ₂ nova, B., . .	1	1	22	3.30	57	59.1	19.3	eF, stell. 217 f.	1
5155	..	R ₂ nova, . . .	1	1	27	3.30	57	56.5	19.3	eF, vS, R, 217 3' s.	1
5156	..	Schultz, . . .	1	3	6	3.31	57	35.6	19.3	vF, vS, n. 220 f 8°.	1
5157	..	Schultz, . . .	1	3	32	3.31	57	37.9	19.3	vF, S, iR, mbM, n. 220 np.	2
5158	36	.. ..	1	6	48	3.08	88	38	19.2	eF, S, E.	1
5159	37	.. ..	1	7	41	3.08	88	49	19.2	vF, vS.	1
5160	38	.. ..	1	7	48	3.10	86	26	19.2	F, vS, stell.	2
5161	39	.. ..	1	8	45	3.10	85	33	19.1	F, vS, alm. stell.	1
5162	40	.. ..	1	10	55	3.10	86	30	19.1	eF, vS, stell.	1
5163	..	Stephan, III., .	1	11	31	3.19	74	24.6	19.1	eF, vS, R, lbM.	1
5164	41	.. ..	1	12	9	3.18	75	52	19.0	eF, S, R.	1
5165	42	.. ..	1	12	35	3.18	75	56	19.0	Neb. * 12m.	1
5166	43	.. ..	1	12	39	3.18	75	52	19.0	eF, S.	1
5167	44	1	12	54	3.19	74	42	19.0	eF, vS, stell.	1
5168	45	1	13	59	3.10	86	52	19.0	eF, S, R.	1
5169	..	D'Arrest, . . .	1	15	37	+ 3.35	57	24.2	- 18.9	eF, eS.	1

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			h	m	s		°	'			
5170	46	1	15	37	+ 3.14	81	16	- 18.9	vF, vS, stell.	1
5171	..	R ₂ nova, . . .	1	15	47	3.35	57	29.8	18.9	Nebula, h. 108 nf.	1
5172	47	.. ..	1	16	3	3.14	81	18	18.9	vF, S, E.	2
5173	..	Schultz, . . .	1	16	4	3.36	57	14.1	18.9	vF, vS, IE.	2
5174	..	Stephan, VIII., .	1	16	8	3.15	79	26.5	18.9	eF, vS, S* inv. S* att.	1
5175	48	.. ..	1	16	57	3.14	81	25	18.9	F, vS, R.	1
5176	..	D'Arrest, . . .	1	17	41	3.36	57	3.7	18.9	F, pL, R, lbM.	1
5177	..	D'Arrest, . . .	1	18	23	3.06	92	7.8	18.9	vF, vS, 1 st of 3.	2
5178	..	D'Arrest, . . .	1	18	36	3.06	92	6.1	18.9	F, S, R, bM.	3
5179	..	D'Arrest, . . .	1	18	42	3.06	92	1.8	18.9	cF, eS.	1
5180	..	D'Arrest, . . .	1	20	7	3.05	92	41.9	18.8	eF, S, E, * 10 p.	1
5181	49	.. ..	1	21	44	3.16	79	35	18.8	eF, vS, R.	1
5182	..	D'Arrest, . . .	1	22	2	3.36	58	13.5	18.8	vF, pS, * 13, 14 sp.	1
5183	..	Stephan, VIII., .	1	23	10	3.25	67	17.0	18.7	eF, pL, iR.	1
5184	..	D'Arrest, . . .	1	24	4	3.39	57	14.4	18.7	vF, pL, pmE, * 12 p.	1
5185	..	D'Arrest, . . .	1	25	17	3.55	45	47.4	18.6	F, vS, r?	1
5186	..	D'Arrest, . . .	1	25	46	3.36	60	2.1	18.6	Companion to M 33.	1
5187	..	D'Arrest, . . .	1	27	34	4.09	26	10.1	18.6	Cl, S, pRi, st 14 . . .	1
5188	..	D'Arrest, . . .	1	28	7	3.40	56	57.2	18.6	Neb. $\frac{3}{4}$, * 8 np.	1
5189	..	Stephan, III., .	1	28	43	3.53	48	23.6	18.5	eF, vS, R, lbM.	1
5190	50	.. ..	1	29	29	3.12	84	53	18.5	vF, S, gbM.	1
5191	..	Stephan, VIII., .	1	30	15	3.43	55	20.9	18.5	eF, eS, sev. Fst inv.	1
5192	51	.. ..	1	32	51	3.12	84	59	18.4	F, pL, m E.	1
5193	..	D'Arrest, . . .	1	34	39	3.33	64	33.9	18.3	F, vS, R, r?	1
5194	..	D'Arrest, . . .	1	42	35	3.47	55	24.4	18.0	vF, vS, r?	1
5195	..	R ₂ nova, D., . .	1	44	35	3.50	54	28.6	18.0	vF, pS, bet. 2 st, h. 157 sp.	1
5196	..	D'Arrest, . . .	1	44	45	3.50	54	38.2	18.0	vF, pS, 4st sf.	1
5197	..	D'Arrest, . . .	1	45	18	3.50	54	28.1	17.9	F, vS, R.	5
5198	..	D'Arrest, . . .	1	45	41	3.50	54	28.0	17.9	vF, vS.	1
5199	..	R ₂ nova, C, . .	1	48	45	3.46	57	33.0	17.8	eF, R, vS, in a Δ of st.	2
5200	..	Phil. Trans., 1861,	1	49	24	3.47	57	30.1	17.8	{ pB, eS, R, bM, forms D neb. with n. 222.	sev.
5201	..	D'Arrest, . . .	1	49	27	3.51	54	46.1	17.8	pB, pL, R, gmbM.	2
5202	..	D'Arrest, . . .	1	49	34	3.52	54	20.6	17.8	Cl, vS, R.	1
5203	..	R ₂ nova, C., . .	1	49	38	3.47	57	19.9	17.8	eF, R, 456 nf.	2
5204	52	.. ..	1	50	57	3.35	65	47	17.7	vF, vS.	1
5205	..	Stephan, VIII., .	1	52	15	3.45	59	22.1	17.6	eF, vS, R, lbM.	1
5206	..	Stephan, VIII., .	1	53	0	3.46	58	47.8	17.6	eF, S, iR, vF st att.	1
5207	..	D'Arrest, . . .	1	53	19	3.41	61	50.0	17.6	vF, L, E (Qy. D).	1
5208	..	Stephan, VIII., .	1	53	34	3.46	58	51.1	17.6	cF, eS, vF * att.	1
5209	..	D'Arrest, . . .	1	53	47	3.24	75	2.8	17.6	eF, vS.	2
5210	..	D'A., Stephan, III.,	1	54	19	3.47	58	36.4	17.6	vF, S, IE.	2
5211	..	Stephan, III., .	1	55	12	3.47	58	36.0	17.5	eF, vS.	1
5212	..	D'Arrest, . . .	1	56	29	3.42	61	52.2	17.5	eF, eS, R, 2 st 14 p.	2
5213	..	Stephan, III., .	1	57	47	3.21	77	25.2	17.4	vF, vS, R, bM.	1
5214	..	Stephan, VIII., .	1	58	9	3.72	46	5.8	17.4	eF, E 45°, pL, bM.	1
5215	..	Stephan, VI., . .	2	0	5	3.46	61	25.7	17.3	vF, vS, irr.	1
5216	..	D'A., Stephan, VI.,	2	0	31	3.46	61	27.1	17.3	pF, vS, R, * 13 n.	2
5217	53	.. ..	2	1	11	3.14	84	22	17.3	F, S, mE.	1
5218	..	Stephan, VI., .	2	1	18	3.46	59	55.5	17.3	eF, S, R, lbM.	1
5219	..	D'Arrest, . . .	2	1	45	+ 2.97	98	25.8	- 17.3	F, S, * 11s, 1st of 3.	2

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			h	m	s		°	'			
5220	..	D'Arrest, ..	2	2	2	+2.97	98	25.5	-17.2	pF, vS, R, 2nd of 3	2
5221	54	2	2	16	3.14	84	34	17.2	vF, pS.	1
5222	..	D'Arrest, ..	2	2	17	3.54	55	7.6	17.2	F, vS, * 9.10 sp.	1
5223	55	.. ..	2	2	52	3.16	82	49	17.2	eF, vS.	1
5224	..	D'Arrest, ..	2	2	56	3.49	58	34.0	17.2	glob. Cl, F, S, R.	2
5225	56	.. ..	2	2	56	3.14	84	37	17.2	F, S.	1
5226	..	Stephan, VIII., ..	2	3	26	3.74	46	5.6	17.2	eF, vS, R, gbM.	1
5227	..	Stephan, VI., ..	2	6	51	3.48	59	52.6	17.0	* 13 in F neb.	1
5228	..	D'Arrest, ..	2	7	23	3.57	54	44.9	17.0	vF, S, * att. sp.	1
5229	..	Stephan, V., ..	2	8	10	3.45	62	3.1	17.0	eF, eS, iR.	1
5230	..	D'Arrest, ..	2	9	54	3.08	89	24.1	16.9	vF, vS (?? = III. 2).	1
5231	57	.. ..	2	15	30	3.44	64	8	16.6	vF, vS, stell.	1
5232	58	.. ..	2	15	33	3.44	64	5	16.6	eF, vS.	1
5233	59	.. ..	2	17	41	3.45	63	26	16.5	eF, vS, stell.	1
5234	60	.. ..	2	17	43	3.45	63	25	16.5	eF.	1
5235	61	.. ..	2	18	11	3.45	63	26	16.5	eF.	1
5236	..	Tempel, ..	2	18	58	3.06	91	0.7	16.4	vF, pS.	1
5237	62	.. ..	2	19	36	3.46	63	25	16.4	eF, vS, stell.	1
5238	..	R, nova, C, ..	2	19	55	3.35	70	14.8	16.4	eF, S, iR, vg bM, II. 489 sf 1'.	1
5239	..	D'Arrest, ..	2	20	3	3.53	59	19.2	16.4	F, pL, iR.	2
5240	..	Tempel, ..	2	20	26	3.06	90	52.7	16.4	vF, eS, ? O.	1
5241	..	D'Arrest, ..	2	20	43	3.35	70	20.6	16.3	pB, S, R, lbM, * 11 sf.	3
5242	..	D'Arrest, ..	2	21	7	3.54	58	59.0	16.3	F, S, R, bM.	3
5243	..	Stephan, III., ..	2	22	52	3.61	55	52.6	16.2	vF, vS, R, bM.	1
5244	..	D'A., St., III., ..	2	22	56	3.51	61	2.1	16.2	pF, S, R, mbM.	4
5245	..	Stephan, VIII., ..	2	23	54	3.62	55	7.7	16.2	eF, pL, lE, lbM.	1
5246	..	Stephan, III., ..	2	24	29	3.49	62	33.1	16.1	eF, S, gbMN.	1
5247	..	Stephan, III., ..	2	26	0	3.51	61	18.4	16.1	pB, E 75°.	1
5248	..	Tempel, ..	2	26	7	3.37	69	39.7	16.1	vF, vS, 4I st nr.	1
5249	..	Stephan, III., ..	2	26	44	3.55	59	5.8	16.0	eF, vS, R, bM.	1
5250	..	Stephan, III., ..	2	26	44	3.41	67	12.2	16.0	vF, eS, R, bM.	1
5251	63	.. ..	2	29	32	3.09	88	34	15.9	eF, vS.	1
5252	..	Stephan III., ..	2	29	40	3.78	49	4.9	15.9	vF, vS.	1
5253	..	Stephan, III., ..	2	29	47	3.79	48	57.8	15.9	vF, vS.	1
5254	64	.. ..	2	29	50	3.17	83	18	15.9	F, S.	2
5255	65	.. ..	2	29	52	3.17	83	17	15.9	vF.	2
5256	..	Stephan III., ..	2	29	54	3.79	48	56.4	15.9	eF.	1
5257	..	Stephan, III., ..	2	29	58	3.78	49	9.0	15.9	vvF, pS, diff.	1
5258	..	Stephan, III., ..	2	30	19	3.79	48	56.2	15.8	vF, vS.	1
5259	..	Stephan, III., ..	2	30	35	3.79	49	6.9	15.8	vF, vS.	1
5260	66	.. ..	2	30	38	3.10	88	29	15.8	eF, stell.	1
5261	67	.. ..	2	30	41	3.10	88	32	15.8	vF, eS, stell.	1
5262	..	Stephan VIII., ..	2	30	49	2.91	101	38.1	15.8	eF, S, R.	1
5263	..	Stephan, VIII., ..	2	30	52	2.91	101	36.9	15.8	eF, S, R, lbM.	1
5264	68	Tempel, ..	2	31	5	3.10	88	30	15.8	F, S, R, psbM.	2
5265	..	Tempel, ..	2	31	23	3.05	91	53.7	15.8	vF, S.	1
5266	69	.. ..	2	31	30	3.10	88	23	15.8	eF, vS.	1
5267	70	.. ..	2	31	34	3.10	88	24	15.8	eF, S.	1
5268	71	2	31	57	3.16	84	3	15.8	pF, S, R, psbM.	1
5269	72	2	32	0	3.22	79	46	15.8	eF.	1
5270	73	2	32	2	3.22	79	49	15.8	F, S, mE.	1

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			h	m	s		°	' "			
5271	..	Stephan, III., .	2	33	18	+ 3.80	49	6.0	- 15.7	F, S, bM.	1
5272	..	D'A., St. III., .	2	34	3	3.64	55	50.3	15.6	F, S, * 18 inv. n.	2
5273	..	D'Arrest, . . .	2	34	25	3.34	72	23.2	15.6	vF, vS, 1E.	1
5274	..	D'Arrest, . . .	2	39	9	3.12	86	58.7	15.4	F, S, R, lbM, bet. 2 st.	2
5275	..	Stephan, VIII., .	2	40	18	3.16	85	56.9	15.3	eF, pS, R.	1
5276	..	Stephan, VIII., .	2	40	55	3.16	86	0.5	15.3	vF, eS, R, bM, * 13p.	1
5277	..	D'Arrest, . . .	2	41	29	3.06	90	51.7	15.2	vF, vS, r?, * 14s.	1
5278	74	.. ..	2	41	49	3.19	82	29	15.2	F, vS, R.	1
5279	75	.. ..	2	42	0	3.27	77	20	15.2	vF.	1
5280	76	.. ..	2	42	4	3.27	77	21	15.2	F, vS, stell.	1
5281	77	.. ..	2	42	21	3.27	77	22	15.2	F, pS.	1
5282	78	.. ..	2	42	29	3.27	77	17	15.2	vF.	1
5283	79	.. ..	2	42	46	3.27	77	20	15.2	vF.	1
5284	80	.. ..	2	42	56	3.27	77	15	15.1	vF.	1
5285	81	.. ..	2	43	4	3.27	77	25	15.1	Close to aS *.	1
5286	82	.. ..	2	45	12	3.27	77	20	15.0	vF.	1
5287	83	.. ..	2	47	59	3.07	90	6	14.8	vF, S, p of D neb.	1
5288	..	Stephan, VIII., .	2	48	1	3.06	90	45.0	14.8	eF, S, R, p of 2.	1
5289	84	.. ..	2	48	1	3.07	90	6	14.8	pF, S, R, f of D neb.	1
5290	..	Stephan, VIII., .	2	48	5	3.06	90	45.3	14.8	eF, S, R, f of 2.	1
5291	..	D'Arrest, . . .	2	48	9	4.00	44	7.3	14.8	Cl, vS, vF + neb.	1
5292	..	Stephan, VIII., .	2	51	22	2.90	100	57.6	14.6	eF, S, lbM, p of 2.	1
5293	..	Stephan, VIII., .	2	51	28	2.90	100	56.8	14.6	eF, S, lbM, f of 2.	1
5294	85	.. ..	2	52	57	3.26	78	43	14.6	eF, S.	1
5295	86	.. ..	2	53	9	3.26	78	47	14.5	eF.	1
5296	..	R ₂ nova, . . .	2	55	27	3.91	48	12.0	14.4	vF, S, R.	1
5297	..	R ₂ nova, D, . . .	2	56	52	2.86	102	36.0	14.3	eF, eS, * 12 sf, 642 sf 3'.	1
5298	87	.. ..	3	1	12	3.10	88	26	14.1	F, pL, R.	1
5299	..	Stephan, III., .	3	3	31	3.85	51	12.7	13.9	F, vS, R, diff.	1
5300	88	.. ..	3	3	52	3.25	79	44	13.9	eF, vS, R.	1
5301	89	.. ..	3	7	7	3.11	87	51	13.7	F, vS, stell.	1
5302	..	R ₂ nova, . . .	3	10	28	3.94	48	58.0	13.4	vF, vS.	2
5303	..	R ₂ nova, D, . . .	3	10	37	3.94	48	52.5	13.4	vF, vS.	1
5304	..	R ₂ nova, . . .	3	10	38	3.94	48	56.5	13.4	vF, vS.	2
5305	..	R ₂ nova, D, . . .	3	10	41	3.94	48	57.0	13.4	vF, vS, forms D neb. with II. 603, 1'sf.	1
5306	..	R ₂ nova, D, . . .	3	10	47	3.94	49	2.3	13.4	vF, vS.	1
5307	..	R ₂ nova, D, . . .	3	10	51	3.94	48	53.3	13.4	vF, S, * 11m 1'p.	1
5308	..	D'Arrest, . . .	3	11	5	2.94	97	48.6	13.4	pF, S.	1
5309	..	D'Arrest, . . .	3	13	10	3.03	92	37.2	13.3	F, pS, R, * 13 sp.	2
5310	..	D'Arrest, . . .	3	13	51	2.93	97	54.0	13.2	vF, sev. st. inv.	1
5311	..	D'Arrest, . . .	3	14	20	3.02	92	48.3	13.2	pB, pS, R, * 16 att.	2
5312	..	I. Schmidt, . . .	3	17	23	2.29	127	37.1	13.1	F.	1
5313	..	Stephan, VIII., .	3	23	18	2.96	96	1.4	12.6	eF, eS, R, bM, * 13p.	1
5314	..	D'Arrest, . . .	3	26	27	2.99	95	28.6	12.4	pF, S.	2
5315	..	Winnecke, . . .	3	27	36	2.55	116	18.5	12.3	F, 10'L.	1
5316	..	J. Schmidt, . . .	3	28	41	2.29	126	44.6	12.3	F.	1
5317	..	J. Schmidt, . . .	3	30	31	2.31	125	40.5	12.2	F.	1
5318	..	J. Schmidt, . . .	3	31	9	2.30	125	46.0	12.2	F.	1
5319	..	J. Schmidt, . . .	3	31	9	2.30	125	37.8	12.2	F.	1
5320	90	3	31	20	+ 3.37	74	37	- 12.0	Neb. * 13m.	1

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			h	m	s		°	'	"			
5321	..	J. Schmidt, . . .	3	31	29	+ 2.29	126	28.2	- 12.2	F.	1	
5322	..	J. Schmidt, . . .	3	31	50	2.29	126	12.9	12.1	F.	1	
5323	..	J. Schmidt, . . .	3	32	40	2.29	126	7.9	12.1	F.	1	
5324	..	J. Schmidt, . . .	3	34	0	2.29	125	58.9	12.0	F.	1	
5325	..	D'Arrest, . . .	3	35	46	2.95	96	18.4	11.7	F, vS, * 13p.	1	
5326	..	J. Schmidt, . . .	3	37	0	2.29	125	36.4	11.8	F.	1	
5327	91	.. ..	3	37	23	3.12	87	37	11.6	eF, pL, iR.	2
5328	..	D'Arrest, . . .	3	39	5	2.99	94	34.7	11.5	vF, vS, vIE.	4	
5329	..	D'Arrest, . . .	3	39	10	2.99	94	30.6	11.5	vF, vS, IE.	5	
5330	92	.. ..	3	42	54	3.20	83	28	11.2	vF, S, vIE.	1
5331	93	.. ..	3	46	58	3.27	79	51	11.0	vF, S, R.	1
5332	..	Stephan, VIII., . .	3	53	49	3.55	67	15.8	10.4	eF, vS, iR, mbM.	1	
5333	..	Stephan, VIII., . .	3	57	21	3.61	64	58.6	10.1	vF, vS, R, bM, r.	1	
5334	..	Tempel,	4	5	42	7.47	15	3.2	9.4	pB, L.	1	
5335	94	.. ..	4	9	25	3.66	63	35	9.2	vF, vS, gbM.	1
5336	95	.. ..	4	9	48	3.08	89	32	9.2	vF, S.	1
5337	96	.. ..	4	9	51	3.17	85	34	9.2	vF, S, E.	1
5338	..	Tempel,	4	10	10	20.13	4	3.3	8.8	vF, vS.	1	
5339	..	{ O. Struve, 1868, D'Arrest, . . . }	4	13	33	3.49	70	49.0	8.9	!!! var. S, R, Nn = * 13.	sev.	
5340	..	Stephan, VIII., . .	4	21	25	2.96	95	29.6	8.3	vF, vS, R, r.	1	
5341	..	D'Arrest,	4	23	38	3.23	82	40.0	8.1	F, S, * 12 nf.	1	
5342	97	.. ..	4	23	56	3.08	89	44	8.1	vF.	1
5343	..	D'Arrest,	4	24	46	2.96	95	21.9	8.0	vF, vS (probably = 867).	2	
5344	..	R ₂ nova,	4	25	15	3.08	89	35.5	8.0	pF, eS, * 12m 2'n.	1	
5345	..	D'Arrest,	4	37	10	2.95	95	43.7	7.0	vF, pS, R (h328 np).	1	
5346	..	Stephan, VIII., . .	4	47	19	3.14	86	57.8	6.2	F, S, * 11 inv.	1	
5347	..	G. Rümker,	4	52	53	4.56	40	42.4	5.7	Cl, vS, st. + neb. ?	sev.	
5348	..	R ₂ nova, B. . . .	4	55	2	2.99	93	30.0	5.5	vF, vS, h342 p 3*6.	1	
5349	..	D'Arrest,	4	55	9	3.63	66	24.2	5.5	Cl, P.	1	
5350	..	Stephan, VIII., . .	5	7	30	2.82	100	47.5	4.5	F, S, R, lbM.	1	
5351	98	.. ..	5	14	13	3.22	83	28	3.9	eF, S, R.	1
5352	..	D'Arrest,	5	28	10	2.96	94	49.6	2.7	* 8.9 inv. in neb. (V 30).	2	
5353	..	D'Arrest,	5	28	19	2.96	94	46.4	2.7	B * inv. in neb. (V 30).	1	
5354	..	{ G. P. Bond, Dreyer, . . . }	5	38	11	2.84	100	8.3	1.8	vF, pS, iR, r?, * 9.10, 6'n.	2	
5355	..	D'Arrest,	5	39	10	3.07	90	3.8	1.7	eF, vS, * 9.10 np 4'.	2	
5356	..	Tempel,	5	39	22	3.07	89	57	1.7	F, pL, M 78 n	1	
5357	..	{ Winnecke, . . . Tempel, . . . }	5	56	18	9.58	11	37	0.0	pB, 2'l, IE.	2	
5358	..	Stephan, VIII., . .	5	56	53	2.84	99	43.8	- 0.2	F, * 12 inv.	1	
5359	..	D'Arrest,	6	3	58	2.93	96	11.5	+ 0.4	eF, S, IE, * 11.12 sp.	3	
5360	..	D'Arrest,	6	5	53	3.38	77	9.0	0.6	Cl, lRi.	1	
5361	99	.. ..	6	23	11	3.19	84	54	2.1	S * in nebulosity.	1
5362	..	Borelly,	6	36	0	16.86	5	25.3	3.6	pF, pL, IE.	2	
5363	..	Dunér,	6	37	29	5.45	29	0.3	3.4	F, S, iR r, ?.	5	
5364	..	{ Tempel, Winnecke, . . . }	6	38	31	21.67	4	2	3.9	F, 60", lbM.	2	
5365	..	D'Arrest,	6	38	36	3.95	56	24.5	3.5	Cl, vS, lRi.	1	
5366	..	D'Arrest,	6	39	3	3.95	56	26.8	3.5	vF, vS.	1	
5367	..	D'Arrest,	6	40	2	+ 3.94	56	38.6	+ 3.6	F, r.	1	

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			h	m	s		°	'			
5368	..	D'Arrest, . . .	6	40	20	+ 3.94	56	29.9	+ 3.6	eF, eS, r?	1
5369	..	{ R. nova α = D'Arrest, Winnecke, Borelly, . . . }	6	41	33	3.94	56	30.7	3.7	eF, S, gbM.	sev.
5370	..	Stephan, vi., . . .	6	44	29	21.33	4	3.3	4.5	pB, pL, IE, bM.	2
5371	..	Stephan, vi., . . .	6	48	23	4.39	44	36.5	4.3	eF, vS, vF * inv.	1
5372	..	Tempel, . . .	7::			10.8	9	32	5.2	pB, pL, R, 2st 11 nr.	1
5373	..	Stephan, viii., . . .	7	0	6	4.34	45	19.4	5.3	eF, S, E.	1
5374	100	.. ..	7	0	54	3.56	69	11	5.4	vF, vS.	1
5375	101	.. ..	7	1	1	3.56	69	10	5.4	pF, S, IE, vlbM.	1
5376	..	Stephan, vi., . . .	7	5	24	3.36	77	30.1	5.7	eF, eS, iR.	1
5377	..	R ₂ nova, C, . . .	7	13	53	6.41	20	41.3	6.5	Neb. * or vFvS, III. 748 sf.	1
5378	102	Stephan, vi., . . .	7	14	1	3.59	67	39.4	6.5	vF, pS, R, psbM.	2
5379	103	.. ..	7	16	33	3.63	65	56	6.7	eF, vS, E.	1
5380	..	Phil. Tr., '61 (ζ),	7	17	56	3.92	55	53	6.8	eF, vS.	2
5381	104	.. ..	7	18	10	3.61	66	39	6.8	eF, vS.	1
5382	..	Stephan, vi., . . .	7	18	16	2.86	99	23.2	6.8	eF, vS * inv. * 11s.	1
5383	..	Phil. Tr., '61 (ϵ),	7	18	29	3.92	55	53	6.9	eF, vS, h. 446 f 17", 71" s.	2
5384	..	R ₂ nova, . . .	7	19	29	3.92	55	57.9	6.9	Stellar.	1
5385	..	R ₂ nova, B, . . .	7	19	58	3.92	55	53.2	7.0	vF.	1
5386	..	R ₂ nova, B, . . .	7	20	3	3.92	55	54.0	7.0	eF.	1
5387	105	.. ..	7	23	38	3.69	63	49	7.3	vF, S, iR.	1
5388	..	Stephan, viii., . . .	7	26	0	3.88	56	52.6	7.5	eF, vS, sev. vFst inv.	1
5389	106	.. ..	7	28	5	3.33	78	6	7.6	eF, S.	1
5390	..	Stephan, viii., . . .	7	28	31	3.48	71	48.6	7.6	vF, eS, bM.	1
5391	..	R ₂ nova, C, . . .	7	32	56	4.68	37	18.6	8.0	pF, pS, vmE, * 12 att.	1
5392	..	Stephan, viii., . . .	7	37	26	4.07	50	37.9	8.4	vF, mbM.	1
5393	..	Stephan, viii., . . .	7	37	28	4.07	50	38.9	8.4	vF, mbM, S * att. s.	1
5394	..	Stephan, vi., . . .	7	38	45	3.70	62	43.8	8.5	eF, eS, R, bM, r.	1
5395	..	Stephan, vi., . . .	7	42	35	3.43	73	16.9	8.8	vF, eS, R, bM.	1
5396	..	R ₂ nova, C, . . .	7	43	37	4.84	34	6.2	8.9	F, pL, R, h. 467 sp.	1
5397	..	D'Arrest, . . .	7	46	41	4.87	33	16.5	9.1	F, R, bM.	1
5398	107	.. ..	7	49	17	3.24	82	9	9.3	Neb. * 12 m.	1
5399	108	.. ..	7	49	25	3.64	64	26	9.3	vF, S, psbM.	1
5400	109	.. ..	7	49	49	3.64	64	27	9.3	vF, S, gbM.	1
5401	110	.. ..	7	50	58	3.07	90	15	9.4	F, S, IE.	1
5402	111	.. ..	7	51	23	3.23	82	8	9.4	eF, pS, iR.	1
5403	112	.. ..	7	52	20	3.56	67	14	9.5	eF, S, glbM.	1
5404	113	.. ..	7	52	27	3.19	84	1	9.5	vF, S, R.	1
5405	114	.. ..	7	58	11	3.45	71	54	10.0	vF, vS, E, psbM.	1
5406	..	Stephan, viii., . . .	7	58	48	4.02	50	26.5	10.0	vF, S.	1
5407	115	.. ..	7	59	26	3.24	81	36	10.1	vF, S, mE.	1
5408	..	Stephan, viii., . . .	7	59	44	4.02	50	28.4	10.1	F, S, R, bM.	1
5409	..	Stephan, viii., . . .	8	2	48	3.62	64	23.0	10.3	eF, vS, R.	1
5410	..	Stephan, viii., . . .	8	2	51	3.62	64	24.6	10.3	vF, vS, R.	1
5411	..	Stephan, viii., . . .	8	4	3	3.15	85	57.2	10.4	vF, vS, R, mbM.	1
5412	116	.. ..	8	9	22	3.51	68	38	10.8	vF, S, glbM.	1
5413	117	.. ..	8	10	49	3.51	68	36	10.9	vF, vS.	1
5414	..	Stephan, viii., . . .	8	10	59	3.52	68	6.9	10.9	eF, eS, R, lbM.	1
5415	..	R ₂ nova, C, . . .	8	13	11	3.50	68	38.9	11.0	eeF, L, R, 1650 3' s.	1
5416	..	Stephan, viii., . . .	8	13	20	+ 3.47	70	24.7	+ 11.1	eF, vS, irr. * 13 att.	1

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			h	m	s		°	'			
5417	118	8	14	32	+ 3.61	63	50	+ 11.2	eF, eS, stell.	2
5418	..	D'Arrest, . . .	8	18	16	8.41	11	30.3	11.6	F, S, E, lbM.	2
5419	119	.. ..	8	18	49	3.41	72	10	11.5	eF, vS.	1
5420	120	.. ..	8	18	52	3.61	63	40	11.5	eF.	1
5421	121	.. ..	8	19	37	3.42	72	15	11.6	vF, S, lE.	1
5422	122	.. ..	8	21	49	3.51	68	2	11.7	eF, vS.	1
5423	123	.. ..	8	21	54	3.51	68	2	18.7	F, S.	1
5424	124	.. ..	8	27	9	3.58	64	30	12.1	vF, S, pmE, gbM.	1
5425	..	D'Arrest, . . .	8	27	28	6.64	16	32.2	12.2	eF, pS, R.	1
5426	125	Lassell, . . .	8	29	9	3.60	64	35	12.2	F, S, E.	2
5427	126	.. ..	8	29	18	3.60	64	32	12.2	vF, S, R.	1
5428	127	.. ..	8	29	52	3.58	64	37	12.3	F, S, R.	2
5429	128	.. ..	8	30	6	3.46	69	48	12.3	eF.	1
5430	129	.. ..	8	30	19	3.46	69	48	12.3	eF, vS.	1
5431	130	.. ..	8	33	17	3.45	69	57	12.5	eeF, vS.	1
5432	131	.. ..	9	34	8	3.45	69	59	12.6	eF neb. *.	1
5433	132	.. ..	8	34	42	3.45	69	52	12.6	Neb. *.	1
5434	133	.. ..	8	36	11	3.29	77	45	12.7	eF, S, E.	1
5435	..	Phil. Trans., 1861,	8	46	54	4.33	38	8.5	13.4	F, S, II. 823 n.	10
5436	..	Tempel, . . .	8	48	44	3.03	92	30	13.5	vF, vS.	2
5437	..	Tempel, . . .	8	48	44	3.03	92	34	13.5	vF, vS, 1727 1' s.	1
5438	..	Tempel, . . .	8	48	50	3.02	92	45	13.5	vF, lE, doubtful.	1
5439	..	Tempel, . . .	8	48	58	3.03	92	28	13.6	vF, vS, 4 st 14 f.	2
5440	..	Tempel, . . .	8	49	5	3.03	92	32	13.7	vF, S.	1
5441	134	.. ..	8	49	31	3.39	72	11	13.6	vF, S, R.	1
5442	135	D'Arrest, . . .	8	50	5	3.13	86	32.4	13.6	pB, iR, mbM.	3
5443	..	Borelly, . . .	8	50	9	7.88	11	22.6	13.7	pB, L, E.	1
5444	136	D'Arrest, . . .	8	50	19	3.13	86	22.9	13.6	F, S, R, mbM.	3
5445	137	Tempel, . . .	8	51	30	3.27	78	18	13.7	F, S, R, bM.	2
5446	138	.. ..	8	53	2	3.13	86	16	13.8	F, S, R.	1
5447	139	.. ..	8	53	26	3.27	78	22	13.8	F, pL.	1
5448	140	.. ..	8	54	3	3.27	78	22	13.8	vF, pL, lE.	1
5449	141	.. ..	8	54	3	3.14	85	44	13.9	vF, vS, R.	1
5450	142	.. ..	8	54	26	3.37	72	35	13.9	vF, L, R.	2
5451	143	.. ..	8	54	35	3.22	81	8	13.9	F, vS, R.	2
5452	144	.. ..	8	55	11	3.37	72	33	13.9	eF, vS, R.	2
5453	145	.. ..	8	56	23	3.40	71	11	14.0	vF.	2
5454	146	.. ..	8	56	45	3.40	71	12	14.1	eF, vS, stell.	2
5455	147	.. ..	8	57	23	3.40	71	0	14.1	vF, vS, stell.	1
5456	148	.. ..	8	57	40	3.39	71	11	14.1	eF, eS, stell.	2
5457	149	.. ..	8	57	48	3.39	71	7	14.1	pF, pL, vmE, gbM.	2
5458	150	.. ..	8	59	37	3.40	71	1	14.2	vF, S.	1
5459	151	.. ..	9	2	18	3.20	82	15	14.4	vF, S, lE.	2
5460	152	.. ..	9	3	16	3.20	82	13	14.4	F, S.	2
5461	153	.. ..	9	6	17	3.28	77	17	14.6	vF, vS, mbM.	2
5462	154	.. ..	9	7	5	3.41	69	44	14.7	vF, S, R, lbM.	1
5463	155	.. ..	9	7	8	3.37	71	50	14.7	F, R.	1
5464	..	D'Arrest, . . .	9	8	12	3.37	71	49.2	14.7	eF, vS, sp of 2.	1
5465	156	D'Arrest, . . .	9	8	14	3.37	71	47.0	14.7	eF, vS, nf of 2.	2
5466	..	D'Arrest, . . .	9	8	26	3.37	71	41.6	14.8	eF, sev. st nr.	1
5467	..	R ₂ nova, C, . .	9	8	40	+ 3.90	47	28.0	+ 14.8	F, cL, vmE, II. 708 p.	1

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			h	m	s		°	'			
5468	157	9	8	46	+ 3.41	69	30	+ 14.8	eF, pL.	1
5469	..	R ₂ nova, D, . . .	9	9	1	3.41	69	20.9	14.8	vF, stellar, h. 578 f 10 ^{0.5} .	1
5470	158	.. ..	9	9	46	3.41	69	29	14.8	eF.	1
5471	159	.. ..	9	9	50	3.41	69	29	14.8	F.	1
5472	160	.. ..	9	10	23	3.34	73	13	14.9	pB, vS, R.	2
5473	..	D'Arrest,	9	10	51	3.54	63	8.3	14.9	Cl, S, st F, vC.	1
5474	161	.. ..	9	15	39	3.13	86	15	15.2	vF, S, mbM.	1
5475	162	D'Arrest,	9	16	20	3.11	87	18.8	15.2	pF, S, iR, * 14 f.	2
5476	..	D'Arrest,	9	16	46	3.52	62	37.8	15.2	F, S, E, bM.	2
5477	163	.. ..	9	16	49	3.17	83	28	15.2	vF, pL, lE.	1
5478	..	R ₂ nova,	9	18	5	3.26	77	57.1	15.3	eF, h. 597 sf. 1'.	1
5479	..	R ₂ nova,	9	18	18	3.26	77	59.1	15.3	eF, h. 598 p.	1
5480	164	.. ..	9	18	31	3.11	87	10	15.3	vF, S, vlE.	1
5481	165	.. ..	9	18	33	3.11	87	18	15.3	vF, S, vlE.	1
5482	..	D'Arrest,	9	18	34	2.90	101	2.9	15.3	vF, vS, R, lbM.	3
5483	166	.. ..	9	19	8	3.20	81	26	15.4	F, pL, E.	2
5484	..	D'Arrest,	9	19	37	2.90	100	57.0	15.4	F, S, r?	5
5485	..	D'Arrest,	9	22	14	3.45	65	43.6	15.6	F, vS, R, * 17 att.	1
5486	167	.. ..	9	22	29	3.11	87	12	15.6	eF, S.	2
5487	168	.. ..	9	22	37	3.11	87	20	15.6	vF, vS, lE.	2
5488	..	Schultz,	9	26	18	3.23	79	12	15.8	eF, h. 608 sp.	1
5489	169	.. ..	9	26	29	3.22	79	54	15.8	vF, pL, iR.	1
5490	..	Tempel,	9	27	16	3.23	79	6.3	15.8	1' diam. com.	2
5491	170	.. ..	9	27	21	3.04	91	53	15.8	pF, S, mbM.	2
5492	171	.. ..	9	28	17	3.32	72	35	15.9	vF.	1
5493	..	D'Arrest,	9	29	18	3.44	65	47.1	15.9	F, pL, R, lbM.	4
5494	172	.. ..	9	29	22	3.33	72	23	15.9	vF, S, R, bM.	2
5495	173	.. ..	9	30	10	3.33	72	20	16.0	F, vS, lE.	2
5496	174	.. ..	9	30	13	3.33	72	18	16.0	eF.	1
5497	175	.. ..	9	30	26	3.11	86	38	16.0	vF, iR.	2
5498	176	.. ..	9	30	27	3.11	86	38	16.0	F, S, like a neb *.	2
5499	177	.. ..	9	30	39	3.33	72	19	16.0	eF, vS, lE.	2
5500	178	.. ..	9	30	47	3.33	72	20	16.0	F, S, iR, bM.	2
5501	179	.. ..	9	31	16	3.32	72	20	16.0	vF, S, E.	2
5502	180	.. ..	9	32	9	3.32	72	35	16.1	vF, double?	1
5503	181	.. ..	9	32	29	3.08	89	37	16.1	pF, S, E.	1
5504	182	.. ..	9	33	33	3.15	84	12	16.2	F, vS, vlE, psbM.	1
5505	..	R ₂ nova,	9	41	50	3.58	55	46.9	16.6	pF, pS, R, bM. h. 645 f.	1
5506	183	.. ..	9	42	11	3.10	88	11	16.6	F, vS, alm. stell.	1
5507	..	D'Arrest,	9	42	15	3.25	76	39.4	16.6	vF, S, R.	5
5508	184	.. ..	9	45	12	3.11	87	12	16.7	vF, S, iR.	1
5509	185	.. ..	9	46	7	3.09	88	39	16.8	pB, S, vlE, gbM.	2
5510	186	.. ..	9	47	17	3.29	72	53	16.8	eF.	1
5511	187	.. ..	9	49	22	3.10	87	54	16.9	vF, vS, alm. stell.	1
5512	..	D'A. (Q _y .=II. 909)	9	49	27	5.38	17	12.4	16.9	vF, vS, II. 333 and 334 f.	2
5513	..	R ₂ nova, D, . . .	9	50	33	3.21	78	55	17.0	vF, vS.	1
5514	188	.. ..	9	52	42	3.04	92	13	17.1	eF, S, E.	1
5515	189	.. ..	9	53	4	3.04	92	19	17.1	eF, S, iR.	1
5516	190	9	53	23	3.04	92	18	17.1	vF, vS.	1
5517	191	9	53	41	3.04	92	23	17.1	eF, S.	1
5518	192	9	53	47	+ 3.04	92	18	+ 17.1	eF, vS.	1

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			h	m	s	"	°	'	"		
5519	193	9	54	29	+ 3.04	92	20	+ 17.2	eF.	1
5520	194	9	59	14	3.25	74	58	17.4	vF.	1
5521	..	D'Arrest, Struve,	10	0	17	3.49	57	27.5	17.4	F, S, 1E, N = * 15.	2
5522	..	D'Arrest, .. .	10	3	17	5.44	15	4.5	17.6	vF, S, R, * 13 att. f.	2
5523	..	D'Arrest, .. .	10	9	48	5.32	15	7.1	17.9	F, pL, E, lbM.	4
5524	195	.. ..	10	9	57	3.15	82	15	17.8	pF, vS, gbM, sev. F st nr.	1
5525	..	R ₂ nova, C, ..	10	14	30	4.00	32	16	18.0	eB, vS, sbM, III. 911 5' dist. } (Qy. p. or f).	1
5526	..	Schultz, .. .	10	23	58	3.37	60	48.8	18.4	F, vS, iR, h. 721 nf.	1
5527	196	.. ..	10	32	12	3.12	84	10	18.6	vF, eS, stell.	1
5528	197	.. ..	10	34	30	3.12	84	17	18.7	eF, vS, alm. stell.	1
5529	198	.. ..	10	35	1	3.08	89	38	18.7	eF, stell.	1
5530	199	.. ..	10	35	8	3.08	89	39	18.7	F, S, R.	1
5531	200	.. ..	10	35	15	3.12	84	15	18.7	vF, vS.	1
5532	201	.. ..	10	36	31	3.13	82	30	18.8	eF, vS.	1
5533	202	D'Arrest, .. .	10	36	55	3.19	75	10.9	18.8	F, S, mbM.	3
5534	203	.. ..	10	37	32	3.13	82	41	18.8	vF, S, R.	1
5535	204	D'Arrest, .. .	10	41	34	3.19	75	2.5	18.9	* * in F neb. y.	4
5536	205	.. ..	10	43	2	3.20	73	2	19.0	F, vS.	1
5537	206	.. ..	10	43	18	3.20	73	1	19.0	F, eS, alm. stell. close to S *.	1
5538	207	.. ..	10	43	41	3.14	80	48	19.0	eF, vS, alm. stell.	1
5539	208	Tempel, .. .	10	43	54	3.18	75	20	19.0	F, vS, R, alm. stell. close to a S *.	2
5540	209	.. ..	10	44	10	3.15	79	59	19.0	vF, S, 1E, glbM.	1
5541	210	.. ..	10	45	6	3.16	78	43	19.0	vF, eS, alm. stell.	1
5542	211	.. ..	10	45	6	3.14	80	43	19.0	ceF, vS, alm. stell.	1
5543	212	.. ..	10	45	39	3.15	79	4	19.0	eF, vS, pmE.	1
5544	213	.. ..	10	50	52	3.14	79	55	19.2	eF, vS, alm. stell.	1
5545	214	.. ..	10	50	57	3.14	79	58	19.2	ceF, eS, stell.	1
5546	215	.. ..	10	59	40	3.12	82	5	19.4	eF, vmE, pos. 50° ±.	1
5547	..	Struve, 1869, ..	11	1	8	3.24	62	37	19.4	vF, * 9 np 3'.	1
5548	..	D'Arrest, .. .	11	1	28	4.42	13	40.6	19.4	vF, pL, * 17 nr.	1
5549	..	D'Arrest, .. .	11	3	22	3.25	60	40.5	19.5	pF, S.	2
5550	..	Struve, 1869, ..	11	3	49	3.24	62	16	19.5	pF, pL, * 8m 2' n.	1
5551	..	D'Arrest, .. .	11	4	24	3.30	53	47.6	19.5	F, vS, stell.	1
5552	..	D'Arrest, .. .	11	5	44	3.20	66	35.2	19.5	pB, pL, R, * 11 p.	1
5553	..	Tempel, .. .	11	6	0	3.10	85	35.7	19.5	vF, * 14 f.	1
5554	216	.. ..	11	7	7	3.17	71	58	19.5	eF, S, pmE, pos. 60°.	1
5555	217	Tempel, .. .	11	7	50	3.17	71	58	19.6	F, vS, stell. * n.	2
5556	218	.. ..	11	8	19	3.10	84	8	19.6	vF, pS, alm. stell.	1
5557	219	.. ..	11	8	27	3.17	71	49	19.6	ceF, vS, alm. stell.	1
5558	..	Struve, 1869, ..	11	10	7	3.22	62	36	19.6	pF, S, bM.	1
5559	..	Struve, 1869, ..	11	10	18	3.22	62	37	19.6	pL, dif. * 10.11 nf 2'.	1
5560	220	Tempel, .. .	11	13	56	3.09	86	2	19.7	F, vS, alm. stell. II 33 2' n.	2
5561	221	.. ..	11	14	11	3.09	86	13	19.7	eF, vS.	1
5562	222	.. ..	11	14	21	3.09	86	25	19.7	vF, vS.	1
5563	223	.. ..	11	14	26	3.09	86	20	19.7	eF neb. *.	1
5564	..	R ₂ nova, B, .. .	11	21	23	3.23	53	44.4	19.8	eF, pS, h. 899 4' s.	2
5565	..	R ₂ nova, D, .. .	11	21	33	3.23	53	33.5	19.8	eF, vS.	1
5566	..	R ₂ nova, B, .. .	11	21	48	3.23	53	48.7	19.8	eF, h. 899 p.	1
5567	..	D'Arrest, .. .	11	24	33	3.09	85	44.7	19.8	vF, vS.	1
5568	..	D'Arrest, .. .	11	25	5	+ 3.08	88	24.3	+ 19.8	vF, np of 2.	1

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			h	m	s		°	'			
5569	..	D'Arrest, . . .	11	25	14	+ 3.08	88	25.3	+ 19.8	vF, sf of 2.	1
5570	..	Struve, 1869, . . .	11	28	8	3.16	64	7	19.9	vF, bet. 2 st 12m.	1
5571	..	D'Arrest, . . .	11	29	15	3.32	34	24.3	19.9	S, iR, * 11 nr.	2
5572	..	D'Arrest, . . .	11	32	19	3.13	68	46.1	19.9	vF, vS, R, * 15 p.	1
5573	..	D'Arrest, . . .	11	33	40	3.25	39	20.3	19.9	pB, S, R' glbM.	2
5574	..	D'Arrest, . . .	11	34	31	3.13	69	7.2	19.9	F, S, bM.	2
5575	..	D'Arrest, . . .	11	34	52	3.10	78	50.5	19.9	eF, vS, h. 950 2' s.	1
5576	..	D'Arrest, . . .	11	36	41	3.12	69	9.2	20.0	F, S, IE (Qy. = 2522).	2
5577	..	D'Arrest, . . .	11	36	45	3.12	69	11.5	20.0	vF, pS, IE (Qy. = 2523).	2
5578	..	Borelly, . . .	11	37	13	3.11	72	39.5	20.0	S, R, bM.	1
5579	..	D'Arrest, . . .	11	37	23	3.16	55	53.:	20.0	eF, vS, PD doubtful.	1
5580	..	D'Arrest, . . .	11	37	23	3.16	55	52.:	20.0	{ North of the last one, others } near.	1
5581	224	..	11	37	53	3.09	80	46	20.0	vF, 2' l, mE 70°, glbM.	1
5582	..	D'Arrest, . . .	11	38	35	3.12	69	27.3	20.0	vF, pS, IE, III. 387 sf.	2
5583	..	D'Arrest, . . .	11	39	49	3.11	69	23.4	20.0	F.	1
5584	..	Struve, 1869, . . .	11	42	43	3.11	67	53	20.0	S, R, mbM, * 10.11 n 50''.	1
5585	..	D'Arrest, . . .	11	43	28	3.11	69	12.1	20.0	F, S, R.	1
5586	..	D'Arrest, . . .	11	44	17	3.12	61	4.9	20.0	pF, pS.	1
5587	..	D'Arrest, . . .	11	44	28	3.11	68	13.3	20.0	Cl, S, st F, vC.	2
5588	..	Borelly, . . .	11	44	49	3.10	72	24.3	20.0	pF, IE.	1
5589	..	Borelly, . . .	11	44	58	3.10	72	21.8	20.0	eF, R.	1
5590	..	D'Arrest, . . .	11	45	43	3.10	68	44.4	20.0	pF, pS, E, * 8 p 24'.	2
5591	..	R ₂ nova, . . .	11	46	22	3.16	41	19.4	20.0	eF, r. 202 2½' s.	1
5592	..	D'Arrest, . . .	11	47	59	3.11	57	1.5	20.0	F, pL, IE, bM, * 12 p.	1
5593	..	R ₂ nova, . . .	11	48	38	3.18	28	42.0	20.0	vF, vS, III. 840 f 17'.	1
5594	..	D'Arrest, . . .	11	50	18	3.11	56	52.4	20.0	F, S, IE, 1st of 3.	3
5595	..	D'Arrest, . . .	11	50	25	3.11	56	56.1	20.0	pB, vS, 2nd of 3.	4
5596	..	D'Arrest, . . .	11	50	32	3.11	56	55.0	20.0	F, pL, iR, bM, 3rd of 3.	4
5597	..	Struve, 1869, . . .	11	50	55	3.09	64	6	20.0	pF, vS, mbM, * 7 sp 2'.	1
5598	225	..	11	51	17	3.08	79	12	20.0	vF, S, IE.	1
5599	226	..	11	52	50	3.08	81	2	20.0	vF, vS, IE, stell. N.	1
5600	..	D'Arrest, . . .	11	53	19	3.09	57	16.5	20.1	eF, vS, * 17 vnr south.	1
5601	227	..	11	55	10	3.08	69	5	20.1	vF, vS.	1
5602	..	D'Arrest, . . .	11	55	34	3.07	87	29.2	20.1	F, pS, Δ 2 F st (Qy. = h. 1057).	1
5603	228	D'Arrest, . . .	11	56	1	3.08	69	30.0	20.1	F, vS, vIE, alm. stell.	4
5604	229	..	11	56	36	3.08	68	57	20.1	eF, vS.	1
5605	230	..	11	56	48	3.08	68	55	20.1	eF.	1
5606	..	R ₂ nova, C, . . .	11	57	6	3.08	69	1.5	20.1	eF, h. 1067 np.	1
5607	231	D'Arrest, . . .	11	57	37	3.07	78	37.0	20.1	F, vS, R, glbM.	3
5608	232	..	11	57	59	3.07	78	34	20.1	vF, vS, IE, lbM.	1
5609	233	..	11	58	1	3.07	78	37	20.1	eF, vS.	1
5610	..	D'Arrest, . . .	11	58	6	3.07	67	0.2	20.1	F, S.	2
5611	..	D'Arrest, . . .	11	58	22	3.07	68	59.5	20.1	F, pS, R.	1
5612	..	D'Arrest, . . .	11	58	27	3.07	68	40.1	20.1	vF, S, R, p of 2.	3
5613	..	D'Arrest, . . .	11	58	29	3.07	68	56.0	21.1	vF, vS, * 15 f 1'.	1
5614	..	D'Arrest, . . .	11	58	31	3.07	68	40.3	20.1	vF, S, R, f of 2.	4
5615	..	D'Arrest, . . .	11	58	40	3.07	68	44.7	20.1	F, pS, R, * 11 np.	4
5616	..	D'Arrest, . . .	11	58	43	3.07	68	42.1	20.1	eF, vS.	3
5617	..	D'Arrest, . . .	11	59	35	3.07	78	37.4	20.1	O, pB, S, E, * 10.11 sf.	1
5618	..	Phil. Trans., 1861,	11	59	49	+ 3.06	46	14.5	+ 20.1	vF, r. 195 6' nmf.	sev.



DREYER—On Nebulae and Clusters of Stars.

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			h	m	s		o	'			
5619	..	R, nova, . . .	12	0	41	+ 3.06	46	7	+ 20.1	vF, vS, III. 108 np.	1
5620	..	D'Arrest, . . .	12	0	56	3.05	24	6.4	20.1	F, vS, IE, r?	3
5621	..	D'Arrest, . . .	12	1	45	3.07	93	14.6	20.1	pE, lbM.	1
5622	..	D'Arrest, . . .	12	2	24	3.07	87	25.5	20.1	F, S, diffic. p of D neb.	1
5623	..	D'Arrest, . . .	12	2	29	3.07	87	25.9	20.1	F, S, diffic. f of D neb.	1
5624	..	D'Arrest, . . .	12	3	1	3.06	53	20.9	20.1	F, S, * 12 sf.	2
5625	..	D'Arrest, . . .	12	4	59	3.06	75	59.2	20.0	eF, * 10 np, h. 1119 f.	1
5626	..	D'Arrest, . . .	12	5	16.:	3.05	60	2.:	20.0	eF } very near h. 1120, 21,	1
5627	..	D'Arrest, . . .	12	5	16.:	3.05	60	2.:	20.0	eF } 22, 24.	1
5628	..	D'Arrest, . . .	12	8	18	3.06	79	38.1	20.0	pF, pS, IE, * 14 np.	3
5629	234	..	12	10	50	3.06	83	38	20.0	F.	1
5630	235	..	12	11	19	3.06	83	39	20.0	F, E.	1
5631	236	..	12	12	34	3.06	83	40	20.0	pF.	1
5632	..	{ Schönfeld, . . } { D'Arrest, . . }	12	12	39	3.06	83	56.5	20.0	pF, S, 2nd of 6 neb.	sev.
5633	237	..	12	13	16	3.06	83	37	20.0	pF.	1
5634	238	..	12	13	40	3.06	83	36	20.0	pF.	1
5635	..	D'Arrest, . . .	12	14	10	3.02	61	3.4	20.0	vF, S.	1
5636	..	D'Arrest, . . .	12	14	54	3.05	76	26.4	20.0	F, pL, R, h. 1203 sp.	3
5637	..	D'Arrest, . . .	12	15	48	3.05	78	40.5	20.0	F, vS, sp of 2.	4
5638	..	D'Arrest, . . .	12	15	58	3.05	78	36.3	20.0	vF, vS, iR, nf of 2.	4
5639	..	D'Arrest, . . .	12	16	9	3.05	77	51.5	20.0	vF, L, mE (probably = 2909).	3
5640	..	D'Arrest, . . .	12	16	25	3.02	60	0.1	20.0	vF, IE, com.	1
5641	..	D'Arrest, . . .	12	16	54	3.05	77	1.1	20.0	F, pL, iR, bM.	5
5642	..	D'Arrest, . . .	12	16	55	3.05	78	0.6	20.0	pF, S, IE, lbM.	3
5643	..	D'Arrest, . . .	12	17	32	3.05	77	2.7	20.0	vF, S, R.	2
5644	..	Schönfeld, . . .	12	18	21	3.04	72	45.3	20.0	eS, stellar or neb. * 11.12.	sev.
5645	239	..	12	18	32	3.07	88	40	20.0	vF, vS, alm. stell.	1
5646	..	D'Arrest, . . .	12	18	59	3.05	78	32.4	20.0	F, pS, III. 39 p. 14', 14' s.	1
5647	..	D'Arrest, . . .	12	19	16	3.01	61	21.6	20.0	F, S, r.	1
5648	..	D'Arrest, . . .	12	20	3	3.05	79	48.4	20.0	F, pL, iR, bM.	4
5649	..	D'Arrest, . . .	12	20	10	3.01	61	29.6	20.0	Cl, F, S.	1
5650	240	..	12	20	24	3.06	83	0	20.0	2 st in eF neb y.	1
5651	..	D'Arrest, . . .	12	21	10	3.05	79	47.6	20.0	vF, pL, mE.	2
5652	..	D'Arrest, . . .	12	21	32	3.05	79	57.8	20.0	pB, pS, R, bM, * 13 s.	4
5653	..	D'Arrest, . . .	12	22	23	3.05	81	31.9	20.0	vF, pS, iR.	2
5654	..	Struve, D'Arrest,	12	22	24	3.05	81	13.6	20.0	vF, vS, IE.	5
5655	..	J. Schmidt, . . .	12	22	34	3.05	81	19.4	20.0	vF, vS (Qy. not found by D'A.)	1
5656	..	D'Arrest, . . .	12	23	24	2.77	25	11.5	19.9	pF, vS, R, * 13 att.	2
5657	..	D'Arrest, . . .	12	23	36	3.05	81	12.6	19.9	pB, pS, R, bM.	2
5658	241	..	12	23	57	3.07	88	37	19.9	vF, vS, iR.	1
5659	..	D'Arrest, . . .	12	25	26	2.75	24	59.8	19.9	Cl, vS, st F, mC.	1
5660	..	D'Arrest, . . .	12	25	46	2.71	22	53.5	19.9	F, R (Qy. vS Cl).	1
5661	..	D'Arrest, . . .	12	26	35	3.03	74	3.8	19.9	Cl + neb. close to a *.	2
5662	242	..	12	27	31	3.06	85	55	19.9	eF, vS, nearly R.	1
5663	..	D'Arrest, . . .	12	29	17	2.98	62	17.2	19.9	F, vS, R, mbM.	2
5664	..	D'Arrest, . . .	12	31	19	2.97	60	17.4	19.9	vF, eS.	1
5665	..	D'Arrest, . . .	12	34	34	2.97	63	9.1	19.8	vF, S, IE, 1st of 3.	1
5666	..	D'Arrest, . . .	12	34	38	2.97	63	11.4	19.8	F, S, R, * 12 np, 2nd of 3.	2
5667	..	D'Arrest, . . .	12	34	44	2.97	63	9.8	19.8	F, pL, E, 3rd of 3.	2
5668	..	D'Arrest, . . .	12	38	23	+ 2.74	34	21.9	+ 19.8	F, E (Qy. r).	1

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			h	m	s		°	'			
5669	..	D'Arrest, . . .	12	42	3	+ 2.94	62	0.7	+ 19.7	Cl, F, S, vmC.	1
5670	..	D'Arrest, . . .	12	43	8	2.94	61	25.0	19.7	F, S, R.	2
5671	..	D'Arrest, . . .	12	43	29	2.94	61	55.3	19.7	vF, vS (Qy. r).	1
5672	..	D'Arrest, . . .	12	43	38	2.94	61	48.1	19.7	eF, eS.	2
5673	..	D'Arrest, . . .	12	44	38	2.93	61	48.6	19.7	eF, * 6 n.	2
5674	..	Winnecke, . . .	12	46	0	3.12	99	43	19.6	pB, R.	1
5675	..	D'Arrest, . . .	12	47	22	2.93	62	10.5	19.6	vF, vS, II. 345 f.	1
5676	..	D'Arrest, . . .	12	47	23	2.92	61	56.2	19.6	vF, S.	1
5677	243	.. ..	12	47	40	3.03	81	11	19.6	eF, vS, IE, vlbM.	1
5678	244	.. ..	12	48	1	3.03	81	11	19.6	eF, eS, alm. stell., closefh.1474.	1
5679	..	D'Arrest, . . .	12	48	7	2.92	61	54.4	19.6	F, S, R, lbM.	1
5680	245	.. ..	12	48	31	3.03	81	0	19.6	eF, eS, R, lbM.	1
5681	..	D'Arrest, . . .	12	48	40	2.91	61	43.2	19.6	F, pS, R, bM.	3
5682	..	D'Arrest, . . .	12	49	42	2.92	62	16.6	19.6	vF, vS, II. 346 np.	2
5683	..	D'Arrest, . . .	12	49	53	2.91	61	13.3	19.6	F, S, R.	1
5684	..	W. H., II. 385, .	12	50	45	2.91	61	38.6	19.5	vF, vS (D'Arrest).	5
5685	..	D'Arrest, . . .	12	50	46	2.91	61	44.2	19.5	vF, vS, h. 1494 sp.	1
5686	..	D'Arrest, . . .	12	51	17	2.91	61	0.0	19.5	pF, S, IE.	3
5687	..	D'Arrest, . . .	12	51	28	2.92	62	56.1	19.5	pB, R, bM.	1
5688	..	D'Arrest, . . .	12	51	29	2.91	61	16.3	19.5	F, S, R.	1
5689	..	D'Arrest, . . .	12	51	33	2.91	61	5.3	19.5	F, vS, r.	1
5690	..	D'Arrest, . . .	12	51	55	2.91	61	34.0	19.5	vF, pL, com.	1
5691	..	D'Arrest, . . .	12	52	14	2.90	61	7.2	19.5	F, vS, p of D neb.	2
5692	..	D'Arrest, . . .	12	52	15	2.91	62	25.7	19.5	F, vS, R.	1
5693	..	D'Arrest, . . .	12	52	17	2.80	61	6.8	19.5	pF, S, R, f of D neb.	1
5694	..	D'Arrest, . . .	12	52	29	2.90	61	9.5	19.5	vF, vS, * 7.8 f 13°.	1
5695	..	D'Arrest, . . .	12	52	53	2.90	61	17.1	19.5	F, h. 1501 and 1502 nr.	1
5696	..	D'Arrest, . . .	12	53	11	2.90	60	59.9	19.5	F, S, IE, * 9 sp.	3
5697	..	D'Arrest, . . .	12	53	12	2.90	61	16.0	19.5	vF, S, others near.	1
5698	..	D'Arrest, . . .	12	53	15	2.90	61	16.3	19.5	Multiple neb.	1
5699	..	D'Arrest, . . .	12	53	18	2.90	61	15.9	19.5	F, S, R, II. 391 f 4°.	2
5700	..	D'Arrest, . . .	12	53	29	2.83	52	3.5	19.5	vF, * 20 sp, * 17 nf.	1
5701	..	D'Arrest, . . .	12	53	30	2.90	61	2.5	19.5	vF, S, R.	3
5702	..	D'Arrest, . . .	12	53	53	2.90	61	19.5	19.5	vF, vS, * 15 p.	2
5703	..	D'Arrest, . . .	12	54	2	2.90	61	5.3	19.5	eF, vS, * 13 att.	1
5704	..	D'Arrest, . . .	12	54	5	2.90	61	13.1	19.5	vF, vS.	1
5705	..	R ₂ nova, . . .	12	54	10	2.82	51	54	19.5	} 3 neb. (incl. II. 645) in a line n and s, a fourth one f.	1
5706	..	R ₂ nova, . . .	12	54	10	2.82	51	54	19.5		1
5707	..	R ₂ nova, . . .	12	54	13	2.82	51	54	19.5		1
5708	..	D'Arrest, . . .	12	54	35	2.90	61	26.0	19.5	vF, vS.	2
5709	..	D'Arrest, . . .	12	54	42	2.89	59	56.0	19.5	pB, S, R, lbM, * 11.12 f.	3
5710	..	D'Arrest, . . .	12	55	7	2.90	61	37.3	19.5	pB, S, R, glbM.	4
5711	..	D'Arrest, . . .	12	55	59	2.89	61	12.3	19.4	F, S, * 16 close p.	1
5712	..	D'Arrest, . . .	12	56	17	2.89	61	13.3	19.4	F, S.	2
5713	..	D'Arrest, . . .	12	56	28	2.89	61	12.9	19.4	F, S, IE.	1
5714	..	D'Arrest, . . .	12	57	2	2.89	61	9.7	19.4	vF, vS.	1
5715	..	D'Arrest, . . .	12	57	37	2.88	60	12.9	19.4	eF, S.	1
5716	..	D'Arrest, . . .	12	59	3	2.89	61	45.8	19.4	F, S, R, N = * 16.	1
5717	..	D'Arrest, . . .	13	0	7	2.87	60	42.4	19.4	F, vS, IE, * nr.	1
5718	..	D'Arrest, . . .	13	2	4	3.10	94	31.4	19.3	vF, vS.	2
5719	246	13	2	5	+ 3.05	86	55	+ 19.3	vF, vS.	1

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			h	m	s		°	'			
5720	247	13	2	24	+ 3.06	88	23	+ 19.3	pB, S, R, bM.	1
5721	..	D'Arrest, . . .	13	4	8	2.79	52	36.4	19.3	vF, pL, E, * 13 att. n.	1
5722	248	.. ..	13	5	0	3.05	86	4	19.2	vF, vS.	1
5723	..	D'Arrest, . . .	13	7	55	2.83	58	23.1	19.2	F, S, R.	3
5724	249	.. ..	13	8	32	3.05	86	24	19.1	F, vS, stell.	1
5725	250	.. ..	13	9	57	3.01	81	25	19.1	eF, S, lE.	1
5726	..	D'Arrest, . . .	13	10	13	3.02	83	12.9	19.1	F, S, lE.	3
5727	251	.. ..	13	11	7	3.14	99	30	19.1	vF, vS.	1
5728	252	.. ..	13	11	7	3.14	99	24	19.1	vF, vS.	1
5729	253	.. ..	13	11	36	3.01	81	19	19.1	eF, eS, stell.	1
5730	..	D'Arrest, . . .	13	11	50	3.16	101	48.1	19.1	F, S, * 14 nf.	1
5731	254	.. ..	13	12	6	3.01	81	25	19.0	vF, eS, stell.	1
5732	..	D'Arrest, . . .	13	12	31	2.84	60	45.4	19.0	pF, S, iR, * 7.8 np.	4
5733	..	D'Arrest, . . .	13	13	10	2.89	66	16.1	19.0	pB, pL, iR, * 17 s.	2
5734	255	.. ..	13	13	59	3.00	80	17	19.0	vF, vS, lbM.	1
5735	256	.. ..	13	14	12	3.06	88	56	19.0	F, S, lE.	1
5736	..	D'Arrest, . . .	13	17	26	2.81	58	16.8	18.9	F, pS, lE, N = * 15.	1
5737	..	D'Arrest, . . .	13	17	36	2.96	75	9.8	18.9	vF (Qy. r).	1
5738	257	.. ..	13	19	30	3.05	86	58	18.8	eF, S.	1
5739	258	.. ..	13	21	9	3.04	86	18	18.8	eF, S, lE.	1
5740	259	.. ..	13	23	56	3.08	91	1	18.7	vF.	1
5741	260	.. ..	13	24	5	3.08	90	54	18.7	vF.	1
5742	261	.. ..	13	24	9	3.08	90	59	18.7	vF.	1
5743	262	.. ..	13	24	45	3.08	90	59	18.7	vF.	1
5744	263	.. ..	13	26	35	3.03	85	10	18.6	vF, S, lE.	1
5745	264	.. ..	13	28	42	3.04	86	18	18.5	F, S, bM.	1
5746	265	.. ..	13	28	49	3.14	97	46	18.5	F, vS.	1
5747	266	.. ..	13	30	22	3.03	85	26	18.5	vF, vS.	1
5748	267	.. ..	13	30	26	3.03	85	11	18.5	vF, vS.	1
5749	..	D'Arrest, . . .	13	33	0	2.75	58	18.1	18.4	vF, S, iR.	2
5750	..	D'Arrest, . . .	13	37	9	1.68	21	37.3	18.3	F, S, stell.	1
5751	268	.. ..	13	48	34	3.01	84	18	17.8	vF, vS, lE.	1
5752	269	.. ..	13	50	5	3.01	84	3	17.7	vF, vS, stell.	1
5753	270	.. ..	13	51	18	3.00	82	49	17.7	F, vS, stell.	1
5754	271	.. ..	13	51	24	3.00	83	15	17.7	vF ray, 2' l.	1
5755	272	.. ..	13	57	18	3.18	99	2	17.4	vF, vS, iR.	2
5756	..	D'Arrest, . . .	13	58	0	2.90	74	56.8	17.4	pF, S.	2
5757	..	D'Arrest, . . .	13	59	34	2.12	34	56.1	17.4	F, S, R, * 12.13 p.	5
5758	..	D'Arrest, . . .	14	6	45	2.97	81	40.7	17.0	F, pS, R, lbM, * 16 nf.	2
5759	..	D'Arrest, . . .	14	7	25	2.97	81	49.3	17.0	vF, pL, * 10 p.	1
5760	273	.. ..	14	10	38	2.96	81	9	16.8	eF, S, iR.	1
5761	274	.. ..	14	10	40	2.97	82	18	16.8	eeF, S, lE.	1
5762	275	.. ..	14	10	41	2.97	81	53	16.8	eF, S, E.	1
5763	..	D'Arrest, . . .	14	11	9	2.97	81	41.1	16.8	eF, vS (must be = 3830).	1
5764	276	.. ..	14	11	53	2.99	83	55	16.8	3 st in neb y.	1
5765	277	.. ..	14	12	12	2.97	82	19	16.8	vF, S.	1
5766	278	.. ..	14	12	19	2.97	82	19	16.8	eF, S.	1
5767	279	.. ..	14	13	16	2.97	82	17	16.7	eF, S, lE.	1
5768	280	.. ..	14	13	46	2.97	82	27	16.7	vF, S, lE.	1
5769	281	14	14	0	2.98	83	8	16.7	F, vS or neb. *.	1
5770	..	R ₂ nova, B, . .	14	17	8	2.42	49	3	+ 16.5	vF, bet. III., 733 and 734.	1

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			h	m	s		°	'			
5771	282	14	28	34	+ 3.06	89	23	+ 15.9	vF, vS.	1
5772	..	D'Arrest, . . .	14	28	47	2.95	81	5.0	15.9	F, S.	1
5773	283	.. ..	14	35	35	3.07	89	45	15.6	vF, S, mE.	1
5774	284	.. ..	14	36	49	3.04	87	48	15.5	F, S, bM.	1
5775	..	D'Arrest, . . .	14	53	0	1.05	25	31.8	14.6	vF, vS (Qy. r).	1
5776	285	.. ..	14	53	22	3.04	87	48	14.5	vF, S, iR.	1
5777	286	.. ..	14	58	31	3.03	87	28	14.2	F, S, E.	1
5778	287	.. ..	14	59	28	2.96	83	5	14.2	eF, S, iR.	1
5779	..	J. Schmidt, . . .	15	5	31	3.15	94	23.7	13.8	vF, S, * 12 att. n.	1
5780	288	.. ..	15	27	59	2.97	84	33	12.3	eF, vS, alm. stell.	1
5781	289	.. ..	15	28	15	2.97	84	27	12.3	eF, vS, stell.	1
5782	..	D'Arrest, . . .	15	28	23	2.84	77	47.0	12.3	F, S, R, * 16 close f.	2
5783	..	D'Arrest, . . .	15	28	46	2.84	77	29.2	12.2	pB, pL, com. lbM.	3
5784	290	.. ..	15	29	23	2.96	83	52	12.2	vF, S, neb. *.	1
5785	291	.. ..	15	32	44	3.23	98	9	11.9	F, S, iR.	2
5786	292	.. ..	15	35	59	2.91	81	18	11.7	eF, eS, R, vlbM.	1
5787	293	.. ..	15	40	41	2.90	81	15	11.4	eF, ceS, stell.	1
5788	..	R ₂ nova, . . .	15	42	4	2.46	60	56.5	11.3	Neb. 100" s of III. 371.	1
5789	294	.. ..	15	46	27	2.83	77	35	11.0	vF, S.	1
5790	295	.. ..	15	46	46	2.83	77	38	11.0	F, pL.	1
5791	296	.. ..	15	46	48	2.83	77	31	11.0	F, vS, stell.	1
5792	..	Stephan, VII., . .	15	47	59	2.10	48	56.3	10.9	eF, vS, iR, lbM.	1
5793	297	.. ..	15	50	4	2.49	62	38	10.7	vF, S, E.	1
5794	..	Stephan, VII., . .	15	51	5	2.60	67	11.2	10.6	eF, eS, iR, lbM.	1
5795	298	.. ..	15	55	24	2.81	77	1	10.2	vF, vS.	1
5796	299	.. ..	15	57	9	3.11	91	44	10.2	vF neb. *.	1
5797	300	.. ..	15	57	31	2.	85	45	10.2	vF, vS, R, stell.	1
5798	301	.. ..	15	57	32	2.9	85	49	10.2	vF, S.	1
5799	..	Stephan, I., . . .	15	58	9	2.9	71	51.9	10.1	vF, eS, F * close.	1
5800	..	Stephan, I., . . .	15	58	18	2.69	71	53.6	10.1	F, S.	1
5801	..	Stephan, I., . . .	15	58	22	2.69	71	54.8	10.1	vF, vS.	1
5802	302	.. ..	15	59	5	2.62	69	4	10.0	F, pL, iR (Qy. = III. 140).	1
5803	..	Stephan, VII., . .	15	59	46	2.61	68	8.0	10.0	eF, E, sbM.	1
5804	..	Stephan, VII., . .	16	4	50	2.77	75	22.5	9.6	eF, vS, R, bM.	1
5805	303	.. ..	16	5	28	2.47	62	45	9.5	vF, S, E.	1
5806	304	.. ..	16	5	29	2.47	62	42	9.5	F, sbM.	1
5807	..	Stephan, VII., . .	16	5	38	2.77	75	25.7	9.5	eF, vS, R, bM.	1
5808	..	Stephan, II., . . .	16	6	16	2.86	79	46.3	9.5	vF, S, R, bM.	1
5809	..	Stephan, VII., . .	16	6	45	2.77	75	27.3	9.4	eF, vS, diffic.	1
5810	305	.. ..	16	6	58	2.40	60	15	9.4	F, S.	1
5811	306	.. ..	16	7	0	2.40	60	10	9.4	F, vS, stell. N.	2
5812	307	.. ..	16	9	1	2.47	63	6	9.3	vF, vS, R, bM.	2
5813	308	.. ..	16	9	57	2.43	61	29	9.2	vF, S, R.	1
5814	309	.. ..	16	14	15	2.16	52	35	8.9	vF, S, R.	2
5815	..	Stephan, VII., . .	16	17	6	2.81	77	53.1	8.6	eF, vS, vlbM.	1
5816	..	Stephan, II., . . .	16	18	9	2.01	48	44.3	8.6	vF, vS, R, bM.	1
5817	310	.. ..	16	20	38	2.52	65	31	8.4	vF, S, with st.	1
5818	..	Stephan, I., . . .	16	23	2	2.28	56	52.7	8.2	vF, S, lbM.	1
5819	..	Stephan, I., . . .	16	23	3	2.28	56	50.3	8.2	F, S, lbM.	1
5820	..	Stephan, I., . . .	16	23	10	2.28	56	50.5	8.2	vF, S, lbM.	1
5821	..	Stephan, VII., . .	16	25	52	+ 2.01	49	9.4	+ 8.0	eF, vS, R, mbM.	1

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5822	..	Stephan, VII.,	16	26	53	+ 2.01	49	8.0	+ 7.9	cF, vS, R, vlbM.	1
5823	311	16	32	13	2.16	53	37	7.4	vF, vS, stell.	1
5824	312	.. ..	16	32	18	2.16	53	42	7.4	cF, E, stell.	1
5825	313	.. ..	16	33	50	2.16	53	38	7.3	eF.	1
5826	314	.. ..	16	34	22	2.52	65	58	7.2	eF, vS.	2
5827	315	.. ..	16	34	34	2.52	65	57	7.2	eF, vS.	2
5828	..	Stephan, II.,	16	38	41	2.02	49	55.8	6.9	eF.	1
5829	316	.. ..	16	40	8	2.89	80	41	6.8	F, S.	2
5830	317	.. ..	16	42	18	2.44	63	33	6.6	vF, S.	1
5831	318	.. ..	16	45	1	2.97	85	24	6.4	F, S, R.	2
5832	..	Stephan, VII.,	16	45	39	1.89	47	0.8	6.3	vF, E, bi N np sf.	1
5833	..	Stephan, II.,	16	46	12	3.01	87	26.8	6.3	vF, pL, E.	1
5834	319	Stephan, II.,	16	51	11	2.07	61	57.0	5.9	vF, vS, R.	2
5835	320	Stephan, II.,	16	51	44	2.07	61	55.4	5.8	eF, vS.	2
5836	321	Stephan, II.,	16	51	57	2.07	61	55.9	5.8	eF, vS.	2
5837	322	Stephan, II.,	16	52	26	2.07	61	55.3	5.8	F, S, R.	2
5838	323	Stephan, II.,	16	53	12	2.07	61	55.2	5.7	eF, S, R.	2
5839	324	.. ..	16	53	18	2.07	61	49	5.7	vF, R.	1
5840	325	.. ..	16	53	26	2.07	61	52	5.7	vF.	1
5841	326	.. ..	16	54	8	2.33	60	2	5.6	eF, vS.	1
5842	327	Stephan, II.,	16	54	52	2.52	66	44.9	5.6	eF.	2
5843	328	Stephan, II.,	16	54	56	2.52	66	45.2	5.6	eF.	3
5844	329	.. ..	16	55	10	2.92	83	7	5.5	pB, S, 1E.	1
5845	330	.. ..	16	55	21	2.33	59	58	5.5	vF, S, R.	1
5846	331	.. ..	17	1	46	2.98	85	53	5.0	pB.	2
5847	332	.. ..	17	6	8	2.51	66	27	4.6	vF, S, R, sbM.	2
5848	..	Stephan, VII.,	17	6	16	1.91	48	10.5	4.6	pB, vS, R.	1
5849	333	.. ..	17	6	48	2.51	66	33	4.5	F, vS, R, bM.	2
5850	334	.. ..	17	6	53	2.51	66	36	4.5	cF, S.	2
5851	..	Tempel, ..	17	8	16.:	3.36	102	40	4.3	B, S, bct. 2 st v nr.	1
5852	..	Stephan, IV.,	17	8	20	1.96	49	34.3	4.4	eF, * 13 p 0.5.	1
5853	..	Stephan, II.,	17	8	23	2.58	69	31.3	4.4	eF, iR, pS, vlbM.	1
5854	..	Stephan, VII.,	17	9	4	1.82	46	3.4	4.4	eF, vS, diffic.	1
5855	..	Stephan, VII.,	17	9	49	1.82	46	11.3	4.3	eF, vS, diffic.	1
5856	..	Stephan, VII.,	17	10	0	1.82	46	9.4	4.3	vF, vS, R, bM.	1
5857	..	Stephan, VII.,	17	10	48	1.82	46	11.8	4.2	vF, oval, ibM.	1
5858	..	Stephan, VII.,	17	12	3	1.81	46	1.7	4.1	vF, vS, R, bM.	1
5859	..	Schultz, ..	17	13	23	1.84	46	42.1	4.0	* 9m (Qy. neb. or eSCL).	1
5860	335	.. ..	17	20	39	2.80	78	20	3.4	F, S, E.	1
5861	336	.. ..	17	21	43	2.41	63	22	3.3	vF, S, R.	2
5862	337	.. ..	17	23	6	2.69	73	40	3.1	F, vS, R.	1
5863	..	Stephan, VII.,	17	23	53	2.93	83	36.4	3.1	v difficult.	1
5864	338	.. ..	17	24	20	2.69	73	35	3.0	vF, pL.	1
5865	339	D'A., Stephan, II.,	17	25	38	2.90	82	50.0	2.9	pB, S, vLE.	4
5866	340	Stephan, II.,	17	32	41	2.62	71	2.4	2.3	F, S, iR, gbM.	2
5867	..	Stephan, II.,	17	34	13	2.77	77	18.0	2.2	vF, vS, smbM.	1
5868	341	.. ..	17	36	0	2.45	66	15	2.0	pF, S, vlbM.	1
5869	342	.. ..	17	37	57	2.44	64	25	1.8	vF, vS, stell.	1
5870	..	Stephan, VII.,	17	37	55	3.00	86	46.0	1.8	eF, E, vlbM.	1
5871	343	17	38	22	2.44	64	34	1.8	F, S, stell.	1
5872	344	17	38	27	+ 2.63	71	47	+ 1.8	vF, S, mE.	1

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5873	..	Stephan, I., ..	17	38	35	+2.43	64	25.5	+1.8	vF, vS, R.	1
5874	345	17	39	8	2.07	53	9	1.7	vF, S, pmE, bM.	2
5875	346	.. ..	17	40	50	2.57	69	10	1.6	pF, S, iR, gbM.	2
5876	347	.. ..	17	41	10	2.12	54	22	1.6	eF, vS, iR.	2
5877	348	.. ..	17	41	20	2.12	54	22	1.6	vF, S, R.	2
5878	349	.. ..	17	41	57	2.56	69	5	1.5	eeF, S.	1
5879	350	.. ..	17	43	10	2.56	69	8	1.4	eF, vS, stell.	1
5880	351	.. ..	17	43	30	2.57	69	11	1.4	vF, vS, stell.	2
5881	352	.. ..	17	44	27	2.65	72	25	1.3	vF, vS, IE.	1
5882	353	.. ..	17	44	28	2.65	72	25	1.3	vF, S, R.	1
5883	..	Stephan, VII., ..	17	46	3	2.46	65	28.7	1.2	eF, vS, R, mbM.	1
5884	354	Stephan, II., ..	17	46	38	2.25	58	30.1	1.1	vF, vS, R.	2
5885	355	Stephan, II., ..	17	48	22	2.63	71	35.8	1.0	vF, vS, stell.	3
5886	356	Stephan, II., ..	17	48	42	2.63	71	38.7	0.9	F, S, R.	3
5887	357	.. ..	17	49	14	2.63	71	36	0.9	S D * in neb.	2
5888	358	.. ..	17	50	55	2.20	56	46	0.7	F, vm E, sbM.	1
5889	359	Stephan, I., ..	17	53	51	2.45	65	6.1	0.5	vF, vS, stell.	2
5890	..	J. Schmidt, ..	17	54	23	3.84	119	48.1	+0.4	vF, I 49 sf.	1
5891	360	.. ..	17	59	26	2.44	64	46	0.0	F, vS, E, mbM.	1
5892	361	.. ..	17	59	40	+2.62	71	28	0.0	{vF, pL, iR, forms D neb.} with III. 555.}	2
5893	..	D'Arrest, ..	18	0	14	-0.02	23	23.7	0.0	F, pS, iR.	1
5894	362	.. ..	18	2	52	+2.66	72	37	-0.3	eF, vS.	1
5895	363	D'Arrest, ..	18	4	46	2.74	75	56.4	0.5	pF, pL, R.	4
5896	364	.. ..	18	4	51	2.55	68	48	0.5	eF, vS, stell.	1
5897	365	.. ..	18	5	30	2.72	75	3	0.6	pB, S, R.	2
5898	366	.. ..	18	5	51	2.55	68	35	0.6	eF, vS.	1
5899	367	.. ..	18	6	4	2.55	68	34	0.6	vF, S.	1
5900	368	.. ..	18	6	35	2.55	68	36	0.6	F, p of D neb.	1
5901	369	.. ..	18	6	37	2.55	68	36	0.6	F, f of D neb.	1
5902	..	Stephan, I., ..	18	6	51	2.43	64	22.8	0.7	eF, dif. bet. 2 F st.	1
5903	370	.. ..	18	7	38	2.56	68	57	0.7	eF, S, R.	1
5904	371	.. ..	18	7	43	2.62	71	13	0.7	F, vS, R, stell.	1
5905	372	.. ..	18	8	2	2.56	68	59	0.8	eeF, vS, stell.	1
5906	373	Stephan VII., ..	18	8	10	2.53	67	45.2	0.8	vF, vS, R, lbM.	3
5907	374	.. ..	18	9	59	2.45	65	1	0.9	F, vS, stell.	2
5908	..	Stephan, VII., ..	18	10	56	2.71	75	2.9	1.0	F, S, E, mbM, r.	1
5909	375	.. ..	18	12	7	2.76	76	49	1.1	vF, vS.	2
5910	376	.. ..	18	13	7	2.49	66	25	1.2	F, S, E.	2
5911	377	.. ..	18	14	1	2.49	66	22	1.3	pF, S, R, bM.	2
5912	378	.. ..	18	16	22	2.70	74	23	1.5	vF, pL.	2
5913	379	.. ..	18	16	34	2.49	66	35	1.5	vF, S, IE, bM.	2
5914	380	.. ..	18	19	31	2.38	62	32	1.8	F, S, R, gbM.	2
5915	381	.. ..	18	21	15	2.72	75	18	1.9	vF, S, R.	2
5916	..	Stephan, V., ..	18	23	6	2.51	67	10.8	2.1	vF, vS, R, bM.	1
5917	..	Stephan, VII., ..	18	27	56	2.18	56	2.5	2.4	vF, vS, sbM.	1
5918	382	.. ..	18	28	5	2.52	67	14	2.4	F, vS, IE.	2
5919	383	Stephan, II., ..	18	28	45	2.52	67	11.8	2.6	F, vS, R, gbM.	3
5920	..	Stephan, II., ..	18	29	10	2.29	59	23.2	2.6	vF, vS.	1
5921	384	18	31	19	2.53	67	56	2.7	eF, pL.	1
5922	385	Stephan, II., ..	18	31	48	+2.42	63	42.0	-2.9	vF, vS R, mbM.	3

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5923	386	Stephan, II., . . .	18	32	51	+ 2.45	64	44.7	- 2.9	F, pS, iR, bM.	3
5924	..	Stephan, VII., . . .	18	32	52	1.96	50	3.6	2.9	vF, E, 45".	1
5925	387	.. .. .	18	33	50	2.53	67	48	2.7	eF, S, close to a S *.	1
5926	388	Stephan, II., . . .	18	35	45	+ 2.10	53	45.7	3.2	F, pS, R, bM.	2
5927	..	D'Arrest,	18	36	19	- 0.64	19	35.6	3.2	vF, pS, * 8 f, 7' dist.	2
5928	389	.. .. .	18	36	40	+ 2.08	53	13	3.3	vF.	1
5929	390	.. .. .	18	39	33	2.45	64	38	3.5	F, vS, stell.	1
5930	..	Stephan, v.,	18	40	50	2.24	57	52.0	3.6	eF, IE, dif. iR.	1
5931	..	D'Arrest,	18	42	54	1.73	44	26.9	3.8	pF, S, IE.	2
5932	..	D'Arrest,	18	43	16	1.74	44	36.1	3.8	B, S, R, mbM.	3
5933	391	Stephan, I.,	18	44	56	2.42	63	19.5	4.0	vF, S, R, bM.	3
5934	392	.. .. .	18	45	39	2.19	56	12	4.0	vF, S, R, bM.	1
5935	393	J. Schmidt, 1861,	18	52	13	4.05	127	4.6	4.6	* 6.7 in F, pL, neb.	sev.
5936	394	J. Schmidt, 1861,	18	52	15	4.05	127	3.8	4.6	* 8 in F, pL neb.	sev.
5937	395	J. Schmidt, 1861,	18	52	28	4.05	127	8.5	4.6	Var. * (11. . .) with var. neb.!!	sev.
5938	396	.. .. .	18	55	20	2.37	61	25	4.9	eeF, S.	1
5939	..	Stephan, II.,	18	57	51	2.56	68	35.8	5.1	pB, vS, bM.	1
5940	397	.. .. .	18	58	27	3.21	96	14	5.1	pB, S.	2
5941	398	St. (II. and M. S.),	19	5	42	2.32	59	40.9	5.7	pF, S, mE or R (var. ??)	3
5942	399	.. .. .	19	11	4	3.11	91	52	6.2	S, E, ill defined disc.	1
5943	..	Stephan, IV.,	19	12	40	1.77	44	14.8	6.3	eF, diffie.	1
5944	400	.. .. .	19	34	41	2.45	63	1	8.1	* in vF, S neb.	1
5945	401	.. .. .	19	36	32	2.51	67	15	8.3	F, S, R, bM.	1
5946	402	.. .. .	19	36	54	3.23	97	9	8.3	F, pL, R.	2
5947	403	D'Arrest,	19	49	19	2.42	61	5.4	9.3	F, pL, vIE.	4
5948	..	Stephan, v.,	19	51	2	2.33	58	1.0	9.4	eF, vS, 3 st inv.	1
5949	404	.. .. .	19	53	28	3.04	88	39	9.6	F neb. am. st.	1
5950	405	.. .. .	19	58	20	3.27	99	26	10.0	F, S, E.	1
5951	..	D'Arrest,	20	10	33	2.71	72	23.9	11.9	eF neb. * (Qy. eScl).	1
5952	406	.. .. .	20	13	18	3.33	102	42	11.1	vF, S.	2
5953	407	.. .. .	20	13	24	3.33	102	48	11.1	F, S, iR.	2
5954	408	.. .. .	20	14	18	3.13	92	59	11.2	vF, S, R.	2
5955	409	.. .. .	20	14	22	2.95	83	59	11.2	eF.	2
5956	410	.. .. .	20	16	39	2.95	83	59	11.3	pF, pL, R.	2
5957	411	.. .. .	20	16	46	3.59	115	15	11.4	eF, vS, IE, h. 2076 p.	1
5958	412	.. .. .	20	20	27	3.14	93	30	11.6	pB, S, R.	2
5959	413	.. .. .	20	20	38	2.92	82	22	11.6	vF, S, att. to a S *.	1
5960	414	.. .. .	20	22	36	2.56	64	45	11.8	F, S, E.	1
5961	415	.. .. .	20	22	36	3.12	92	39	11.8	vF, pL, R.	2
5962	416	.. .. .	20	25	52	2.89	80	35	12.0	eF, IE.	2
5963	417	.. .. .	20	26	4	2.89	80	34	12.0	pB, pL, mE.	2
5964	418	.. .. .	20	26	13	2.89	80	37	12.0	F, mE.	2
5965	..	Schultz,	20	26	47	2.94	83	5.3	12.1	pB, vS, h. 2081 f.	2
5966	..	Stephan, IV.,	20	29	1	3.17	95	6.2	12.2	eF, IE, lbM.	1
5967	419	.. .. .	20	31	30	2.95	83	30	12.4	pF, S, R.	1
5968	420	Stephan, I.,	20	31	37	3.17	95	27.6	12.4	pF, vS, R, mbM.	3
5969	421	.. .. .	20	37	1	3.02	87	18	12.8	F, S, vIE.	2
5970	422	.. .. .	20	37	12	3.03	87	55	12.8	eF, pL, R.	2
5971	423	20	37	41	3.03	87	55	12.8	vF, S, R.	2
5972	424	20	41	36	2.94	82	47	13.1	F, pL, E.	2
5973	425	20	42	28	+ 2.97	84	32	- 13.1	vF, S, R.	2

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			h	m	s		°	'			
5974	426	20	43	14	+ 2.90	80	36	- 13.2	F, S, R.	2
5975	..	R ₂ nova, . . .	20	44	54	2.49	59	53.:	13.2	Neb. *, neby eE pf.	1
5976	427	.. ..	20	45	1	3.18	96	17	13.2	eF, iR.	2
5977	428	.. ..	20	45	5	3.18	96	16	13.2	vF, S, iR.	2
5978	429	.. ..	20	45	11	3.18	96	14	13.2	vF, S.	2
5979	430	.. ..	20	49	7	2.90	80	3	13.5	eF, pL, R.	2
5980	431	.. ..	20	53	16	3.60	118	34	13.8	eeF, vS.	1
5981	432	.. ..	20	53	38	3.60	118	36	13.8	eeF, vS.	1
5982	..	D'Arrest, . . .	20	54	9	2.77	72	44.5	13.9	vF, vS, iE, * 15 close f.	2
5983	..	D'Arrest, . . .	20	54	16	3.30	103	25.8	13.9	Cl, S, P (Qy. neb.).	1
5984	433	.. ..	21	1	14	2.80	74	13	14.3	vF, vS, R, stell.	2
5985	434	.. ..	21	1	48	2.77	72	5	14.3	vF, S, vIE.	2
5986	435	.. ..	21	3	2	2.83	75	27	14.4	vF, S, R.	2
5987	436	.. ..	21	3	4	2.83	75	25	14.4	vF, vS, R.	2
5988	437	.. ..	21	7	23	2.86	76	57	14.7	vF, S, R.	2
5989	..	Stephan, v., . .	21	9	14	3.09	91	24.4	14.8	eF, vS, biN pf.	1
5990	438	D'Arrest, . . .	21	14	48	2.71	67	30.5	15.1	pB, S, vIE.	4
5991	..	Stephan, iv., .	21	15	11	2.37	51	25.2	15.1	vF, vS, R, F * inv.	1
5992	439	.. ..	21	15	37	2.78	71	56	15.2	pF, S, R.	2
5993	440	D'Arrest, . . .	21	19	20	3.18	97	36.3	15.4	vF, sbM (M has 19 ^m 33 ^s).	3
5994	441	.. ..	21	19	47	2.89	78	26	15.4	vF, close to a S *.	2
5995	442	.. ..	21	20	52	3.10	92	15	15.5	vF, S, R, stell.	2
5996	443	.. ..	21	21	52	3.25	102	6	15.5	vF, vS, iR.	1
5997	444	.. ..	21	22	41	2.98	83	49	15.6	vF, S, E.	2
5998	445	.. ..	21	22	55	3.05	88	12	15.6	F.	2
5999	446	.. ..	21	23	48	2.66	63	54	15.6	vF, S, vIE.	2
6000	..	G. P. Bond, . .	21	25	2	3.07	89	53.0	15.7	O (Qy. D'A. only a * 9).	sev.
6001	447	.. ..	21	25	28	2.98	84	2	15.7	eF, S, E.	1
6002	448	.. ..	21	32	41	2.95	81	39	16.1	F, vS, R, stell.	1
6003	449	.. ..	21	32	43	2.99	84	20	16.1	F, pL, R.	1
6004	450	.. ..	21	33	31	3.17	97	24	16.1	vF, S, R, stell.	1
6005	..	Stephan, iv., .	21	34	30	3.17	97	20.7	16.2	eF, eS, R, bM.	1
6006	451	.. ..	21	35	40	2.90	78	1	16.3	vF, S, stell.	1
6007	452	.. ..	21	36	29	2.65	61	41	16.3	vF, pL, mE.	2
6008	453	.. ..	21	37	12	3.17	97	10	16.3	vF, S, vIE.	2
6009	..	Stephan, iv., .	21	37	36	3.13	94	14.7	16.4	vF, vS, R, vlbM.	1
6010	454	.. ..	21	40	1	3.26	103	53	16.5	vF, S, vIE, vgbM.	1
6011	455	.. ..	21	42	14	2.91	78	9	16.6	vF, vS, stell.	1
6012	456	.. ..	21	44	42	3.04	87	37	16.7	F, R.	2
6013	457	D'Arrest, . . .	21	44	52	3.04	87	34.9	16.7	F, S, iE.	5
6014	..	D'Arrest, . . .	21	45	2	3.04	87	18.9	16.7	vF, vS, R.	3
6015	..	D'Arrest, . . .	21	45	7	3.04	87	21.4	16.7	vF, vS, R.	3
6016	458	.. ..	21	54	32	3.10	92	38	17.2	eF, vS, stell.	1
6017	459	.. ..	21	54	37	3.11	92	52	17.2	eF, vS, stell.	1
6018	460	.. ..	21	56	7	3.07	90	6	17.2	F, S, iE.	2
6019	..	Stephan, ii., . .	21	56	15	2.94	79	28.6	17.2	eF, vS, iR, lbM } are these	1
6020	..	Stephan, iv., .	21	56	16	2.94	79	28.0	17.3	vF, vS, R, gbM } identical?	1
6021	461	.. ..	21	58	3	3.09	91	20	17.3	eF, vS, stell.	1
6022	462	21	58	56	2.88	73	54	17.4	F, S, iE, bM.	1
6023	463	21	59	0	2.88	73	55	17.4	vF, S.	1
6024	464	21	59	58	+ 3.17	98	47	- 17.4	eF, S, stell.	1

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			h	m	s		°	'			
6025	465	22	1	23	+ 3.07	90	11	- 17.5	vF, S, E.	1
6026	466	22	3	45	3.09	88	35	17.6	vF, S.	1
6027	467	Stephan, II., .	22	5	7	2.77	64	49.5	17.6	F, S, R.	3
6028	..	Stephan, IV., .	22	5	31	2.57	51	58.1	17.6	vF, vS, R, lbM, np of 2.	1
6029	..	Stephan, IV., .	22	5	48	2.57	51	59.5	17.7	F, vS, R, lbM, sf of 2.	1
6030	468	.. ..	22	7	56	2.92	76	52	17.7	vF, S, stell.	1
6031	469	.. ..	22	7	58	2.92	76	52	17.7	vF, S, stell.	1
6032	470	.. ..	22	8	46	3.13	95	44	17.8	eF, vS.	1
6033	..	Stephan, V., .	22	9	16	2.62	53	25.1	17.8	eF, cS, st att. n, p of 2.	1
6034	..	Stephan, IV., .	22	9	24	2.86	71	27.9	17.8	pF, lE, * 10 att. s.	1
6035	..	Stephan, V., .	22	9	33	2.62	53	24.1	17.8	vF, S, lbM, f of 2.	1
6036	..	Stephan, IV., .	22	9	41	2.90	74	13.5	17.8	eF, cS, R, bM.	1
6037	471	.. ..	22	13	1	2.75	61	19	17.9	vF, pE.	2
6038	472	.. ..	22	14	55	3.31	112	36	18.0	3 st in F neb. y.	2
6039	473	.. ..	22	14	56	3.12	94	44	18.0	F, vS, lE.	1
6040	..	Stephan, VIII., .	22	15	21	3.12	94	49.5	18.0	eF, pS, iR.	1
6041	474	.. ..	22	15	33	2.65	54	21	18.0	F, S, R.	2
6042	475	.. ..	22	16	2	2.65	54	19	18.1	vF, pS, mE.	2
6043	..	Stephan, VIII., .	22	16	15	2.66	54	29.5	18.1	F, vS, R, mbM.	1
6044	476	.. ..	22	16	18	3.12	94	41	18.1	F, vS, R, alm. stell.	1
6045	477	.. ..	22	17	28	2.72	58	16	18.1	vF, S, E.	2
6046	478	.. ..	22	17	38	2.72	58	19	18.1	vF, S, vIE.	2
6047	479	.. ..	22	17	43	2.91	74	7	18.1	vF, S, iR.	1
6048	..	Stephan, VIII., .	22	17	56	2.66	54	30.4	18.1	F, vS, R, mbM.	1
6049	..	Stephan, VIII., .	22	17	57	2.66	54	34.9	18.1	pF, vS, mbM.	1
6050	480	.. ..	22	17	58	2.72	58	14	18.1	eF, S, mE.	2
6051	..	Stephan, VIII., .	22	18	1	2.66	54	37.2	18.1	vF, vS, mbM.	1
6052	481	.. ..	22	20	51	2.90	73	17	18.2	vF, vS, R.	2
6053	482	.. ..	22	21	0	3.11	93	36	18.3	vF, cS, stell.	1
6054	483	.. ..	22	21	40	2.91	73	34	18.3	pB, S, pmE.	2
6055	..	Stephan, VIII., .	22	21	42	2.91	73	55.9	18.3	eF, eS, R, sbmM.	1
6056	..	Stephan, IV., .	22	21	59	2.76	60	25.4	18.3	eF, S, oval, F * inv.	1
6057	484	.. ..	22	23	18	3.22	104	54	18.3	vF, pL, iR.	1
6058	485	.. ..	22	27	32	3.02	84	54	18.5	F, S.	2
6059	486	.. ..	22	27	46	3.33	116	50	18.5	eF, E.	1
6060	..	Stephan, IV., .	22	29	8	2.73	55	55.0	18.5	vF, cS, R, bM.	1
6061	..	Stephan, VIII., .	22	29	30	2.74	56	46.7	18.5	vF, vS.	1
6062	..	Stephan, VIII., .	22	29	35	2.74	56	45.5	18.5	eF, cS.	1
6063	..	Stephan, VIII., .	22	29	40	2.74	56	44.8	18.5	eF, eS.	1
6064	..	Stephan, VIII., .	22	29	41	2.74	56	46.5	18.5	F, vS.	1
6065	487	.. ..	22	30	6	2.90	71	35	18.6	pF, pL, iR.	2
6066	488	.. ..	22	30	14	2.90	71	34	18.6	vF, vS, neb. *.	2
6067	..	Schultz, . . .	22	30	24	2.74	56	23.0	18.6	F, vS, h. 2172 f.	2
6068	..	R, nova, . . .	22	30	27	2.74	56	19.7	18.6	eF, eS, h. 2172 f.	2
6069	..	Stephan, II., .	22	30	41	2.68	52	10.6	18.6	pB, S, lE, bM.	1
6070	..	Schultz, . . .	22	30	47	2.74	56	18.9	18.6	vF, vS, h. 2174 f.	1
6071	..	Stephan, IV., .	22	31	51	2.74	55	13.7	18.6	eF, vS.	1
6072	..	Stephan, VIII., .	22	32	13	2.75	56	39.4	18.6	eF, vS, R, lbM, S * inv.	1
6073	489	.. ..	22	32	21	3.11	94	53	18.6	pF, vS, R.	2
6074	..	Stephan, IV., .	22	32	22	2.74	55	11.2	18.6	eF, vS.	1
6075	490	22	32	39	+ 2.98	79	39	- 18.6	eF, vS, stell.	1

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			h	m	s		°	'			
6076	491	22	33	39	+2.97	78	50	-18.7	vF, pL, iR.	1
6077	492	22	34	7	2.97	78	46	18.7	vF.	1
6078	493	22	34	27	2.97	78	48	18.7	eF.	1
6079	494	.. ..	22	36	26	3.04	86	34	18.8	eF, vS.	1
6080	..	D'Arrest, ..	22	36	50	2.76	56	43.7	18.8	pF, pL, E, $\frac{2}{3}$ f.	2
6081	495	.. ..	22	37	26	2.98	79	56	18.8	eF, S, stell.	1
6082	496	D'Arrest, ..	22	37	29	3.05	87	4.7	18.8	vF, pS, 1E.	2
6083	..	D'Arrest, ..	22	37	43	2.77	56	23.2	18.8	pF, bet. 2 F st.	2
6084	497	.. ..	22	38	36	2.99	79	41	18.8	eF, vS.	1
6085	498	.. ..	22	38	46	2.99	79	37	18.8	F, S, iR.	1
6086	499	.. ..	22	39	0	3.05	87	31	18.8	F, vS, bM, stell.	1
6087	500	.. ..	22	39	2	2.99	79	52	18.8	vF, pL, R.	2
6088	501	.. ..	22	40	11	3.05	87	7	18.9	eF, vS, R.	1
6089	..	Stephan, VIII.,	22	41	13	2.70	50	30.0	18.9	eF, S, R, lbM.	1
6090	..	R ₂ nova, ..	22	43	22	2.99	79	1.4	19.0	Neb., * 11 f.	1
6091	..	Stephan, v., ..	22	44	36	2.76	53	39.3	19.0	eF, vS, R, bM.	1
6092	..	S. Coolidge, ..	22	46	3.:	3.07	89	16	19.0	Neb. * (Harvard Coll., 1859).	1
6093	502	.. ..	22	46	38	2.98	78	16	19.1	eF, S, R.	1
6094	503	.. ..	22	46	40	3.12	97	18	19.1	F, S, 1E.	1
6095	..	Stephan, v., ..	22	46	46	2.82	58	36.8	19.1	eF, vS.	1
6096	504	.. ..	22	46	58	2.93	70	32	19.1	eF.	1
6097	505	.. ..	22	47	42	2.93	70	30	19.1	vF, vS.	2
6098	506	.. ..	22	47	59	2.93	70	28	19.1	eF.	2
6099	507	.. ..	22	48	27	3.12	96	15	19.1	F, pL, pmE, vgbM.	2
6100	508	.. ..	22	48	54	2.85	60	56	19.1	vF, S.	2
6101	509	Struve, D'Arrest,	22	49	4	3.05	86	49.2	19.1	vF, pS, v1E.	4
6102	..	Struve, 1865, ..	22	50	5	3.02	82	17	19.2	F, S, * 9 sf 4'.	1
6103	510	.. ..	22	50	7	3.08	91	47	19.2	F, vS, R, bM.	2
6104	..	D'Arrest, ..	22	50	26	3.02	81	57.2	19.2	eF, vS.	2
6105	511	.. ..	22	51	10	3.09	91	55	19.2	vF, vS, R, stell.	2
6106	512	.. ..	22	51	58	2.86	61	30	19.2	Long patch of F neb. y.	2
6107	..	Stephan, VIII.,	22	52	0	2.80	54	56.8	19.2	eF, S, iR.	1
6108	..	Tempel, ..	22	53	33	3.16	103	40.3	19.2	vF, S.	1
6109	..	Struve, 1865, ..	22	53	33	3.02	82	20	19.2	pF, pL, * 10.11 sp 2'.	1
6110	..	Stephan, VIII.,	22	54	35	3.06	88	29.4	19.3	eF, pL, R.	1
6111	513	.. ..	22	54	52	2.97	75	11	19.3	vF, vS, alm. stell.	2
6112	514	D'Arrest, ..	22	54	58	2.97	74	46.3	19.3	vF, vS, E, h. 2202 p.	4
6113	..	Stephan, v., ..	22	55	18	2.89	63	42.1	19.3	eF, eS, bM.	1
6114	515	.. ..	22	55	30	2.97	75	12	19.3	eF, vS.	1
6115	..	Struve, 1865, ..	22	56	34	3.06	87	42	19.3	F neb *.	1
6116	516	.. ..	22	57	8	2.87	60	36	19.3	vF, S, R.	1
6117	517	.. ..	22	57	11	2.95	70	41	19.3	eF, vS.	1
6118	518	.. ..	22	57	17	2.95	70	40	19.3	vF, S.	1
6119	..	D'Arrest, ..	22	57	34	3.06	87	38.1	19.3	{ F, S, N, = * 15 (Qy. = Struve's) neb. * 6115). }	1
6120	519	.. ..	22	57	44	3.06	88	10	19.3	eF, E.	1
6121	520	.. ..	22	58	2	3.06	88	12	19.4	vF, vS, v1E, vgbM.	2
6122	521	.. ..	22	58	33	3.06	87	41	19.4	F, vS, stell.	1
6123	522	.. ..	23	0	38	3.07	89	49	19.4	vF, vS, stell.	1
6124	523	Lassell, ..	23	0	40	2.93	67	47	19.4	F, S, R.	2
6125	524	23	1	27	+3.23	115	7	-19.4	eF, vS, stell.	1

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			h	m	s		°	'			
6126	525	23	2	25	+ 3.22	115	10	- 19.4	vF, S, iR.	1
6127	526	23	3	17	3.03	83	10	19.5	vF, vS, stell.	1
6128	527	.. ..	23	3	25	3.03	83	9	19.5	eF.	1
6129	528	.. ..	23	3	36	3.03	83	11	19.5	vF, S, stell.	1
6130	529	.. ..	23	3	37	2.99	76	21	19.5	vF, S, stellar.	1
6131	530	.. ..	23	5	39	3.24	119	7	19.5	vF, pL, E, gbM.	1
6132	..	Stephan, VIII., ..	23	5	47	2.86	55	52.3	19.5	eF, pL, iR.	1
6133	531	.. ..	23	5	53	2.96	70	30	19.5	F, vS, stell.	1
6134	532	.. ..	23	6	2	3.09	92	51	19.5	vF, vS, stell.	2
6135	533	.. ..	23	6	5	3.04	84	26	19.5	vF, S, R.	2
6136	534	.. ..	23	6	9	3.02	79	59	19.5	vF, pL.	1
6137	..	Tempel,	23	6	16	3.21	114	33.3	19.5	F, pS, bet. 2 st.	1
6138	535	.. ..	23	6	23	3.09	92	30	19.5	vF, pS, psbM.	1
6139	536	.. ..	23	6	30	3.00	76	47	19.5	eeF, E.	1
6140	537	.. ..	23	6	35	3.09	92	30	19.5	eF, vS.	1
6141	538	.. ..	23	6	36	3.00	76	45	19.5	eF, vS, vIE, gbM.	1
6142	539	.. ..	23	6	49	2.94	65	51	19.5	vF, vS, stell.	1
6143	540	.. ..	23	7	0	3.09	93	32	19.5	eF, vS, alm. stell.	2
6144	541	.. ..	23	7	10	3.09	93	29	19.5	vF, vS, IE.	2
6145	542	.. ..	23	7	10	3.09	92	48	19.5	F, S, R.	2
6146	543	.. ..	23	7	14	3.09	93	27	19.5	eF, vS, IE.	2
6147	544	.. ..	23	7	36	2.99	74	49	19.6	F, vS, stell.	1
6148	545	.. ..	23	7	39	3.02	80	7	19.6	eF, eS, stell.	1
6149	546	.. ..	23	7	46	3.09	92	57	19.6	eF, vS.	1
6150	547	.. ..	23	7	54	3.09	93	6	19.6	eF, S, IE.	1
6151	..	D'Arrest,	23	8	18	2.98	71	43.2	19.6	pF, pS, R, * 10.11 p.	5
6152	548	.. ..	23	8	22	2.99	74	50	19.6	Neb. * 13m.	1
6153	..	Schultz, Tempel, ..	23	8	26	2.98	71	46.8	19.6	vF, vS, R (probably = 4913).	2
6154	549	.. ..	23	8	29	3.09	93	9	19.6	eF, eS, alm. stell., h. 2220 f.	2
6155	550	.. ..	23	8	41	2.98	71	51	19.6	eeF, neb. * 13m.	1
6156	..	Schultz,	23	8	47	3.05	86	16.0	19.6	F, vS, iR, sp of 2.	3
6157	..	Schultz,	23	8	51	3.05	86	14.5	19.6	F, vS, iR, nf of 2.	2
6158	..	Secchi,	23	9	9	3.08	90	49.2	19.6	vF.	1
6159	551	.. ..	23	9	10	2.99	74	56	19.6	eeF, vS, E.	1
6160	..	Stephan, VIII., ..	23	9	32	2.95	66	16.0	19.6	eF, pL, iR, sev. st inv.	1
6161	..	Schultz,	23	9	50	2.98	71	47	19.6	{ vF, gr of neb. or eE neb. } with sev. knots.	2
6162	552	.. ..	23	9	52	2.98	72	18	19.6	eeF, alm. stell.	1
6163	..	D'Arrest,	23	9	59	2.95	66	46.2	19.6	pF, S, E, rr.	1
6164	553	.. ..	23	10	10	3.04	84	7	19.6	F, S, vIE.	1
6165	554	.. ..	23	10	34	3.03	81	20	19.6	eF, vS, stell.	1
6166	..	Holden,	23	10	38	3.05	86	5.8	19.6	vF, mE, * 12.13 close f.	1
6167	555	.. ..	23	10	46	3.04	83	21	19.6	vF, vS.	1
6168	556	.. ..	23	10	48	3.03	81	20	19.6	eF, vS, stell.	1
6169	557	.. ..	23	10	49	3.03	82	10	19.6	eF, vS, alm. stell.	2
6170	558	.. ..	23	10	53	3.03	81	5	19.6	vF, vS, IE, gbM.	1
6171	559	.. ..	23	10	59	2.98	72	1	19.6	eF, eS.	1
6172	560	.. ..	23	11	4	3.07	90	30	19.6	eF, vS.	1
6173	561	23	11	10	3.04	84	11	19.6	pF, S, R, vgbM.	2
6174	562	23	11	17	3.02	79	25	19.6	F, S, R.	1
6175	563	23	11	33	+ 2.98	72	6	- 19.6	eF, vS, gbM.	2

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			h	m	s		°	'			
6176	564	23	11	35	+ 2.98	72	1	- 19.6	eF, eS, stell.	1
6177	565	23	11	47	2.98	72	4	19.6	eF, eS, stell.	1
6178	566	.. ..	23	11	47	3.07	90	31	19.6	F, vS, stell.	1
6179	567	.. ..	23	11	47	3.04	83	19	19.6	eF, vS, bM.	1
6180	568	.. ..	23	11	48	3.04	83	21	19.6	vF, S, R, glbM.	1
6181	569	D'Arrest, . . .	23	12	8	3.03	82	24.8	19.6	vF, pS, lE, lbM.	2
6182	570	.. ..	23	12	25	3.03	81	16	19.6	vF, vS, gbM.	1
6183	571	D'Arrest, . . .	23	12	38	3.03	82	11.1	19.6	pB, vS, R, bM.	5
6184	..	Secchi, . . .	23	12	42	3.07	90	34.0	19.6	vF.	1
6185	..	Secchi, . . .	23	13::		3.07	90	33::	19.6	vF, nf of 2.	1
6186	572	.. ..	23	13	3	3.04	82	36	19.7	eF, vS.	1
6187	573	Tempel, . . .	23	13	11	2.96	66	32	19.7	F, S, v lE.	2
6188	574	.. ..	23	13	18	3.04	82	24	19.7	eF, vS, stell.	1
6189	575	.. ..	23	14	9	3.07	89	22	19.7	vF, vS, stell.	1
6190	..	Stephan, v., . .	23	15	27	3.02	78	52.4	19.7	vF, S, iR, dif. lbM.	1
6191	576	.. ..	23	15	43	3.07	89	20	19.7	vF, vS, bM.	1
6192	..	Stephan, v., . .	23	15	47	3.02	78	47.0	19.7	F, pS, iR, dif. lbM.	1
6193	..	Secchi, . . .	23	19	27	3.09	95	31.3	19.8	vF.	1
6194	..	(Stephan, VIII., Tempel, . . .)	23	19	43	2.97	65	41.3	19.8	vF, * s, 2 st 11.12 p.	2
6195	..	Schultz, . . .	23	19	55	2.86	48	12.7	19.8	* 8m, neb. ?	1
6196	..	Secchi, . . .	23	20	12	3.09	94	57.3	19.8	vF.	1
6197	..	Secchi, . . .	23	20	12	3.07	90	57.3	19.8	vF.	1
6198	..	.. ..	..	..	..	..	..	..	..	..	..
6199	..	Secchi, . . .	23	20	::	3.07	90	57	19.8	Surround 6197.	1
6200	..	.. ..	..	..	..	..	..	..	..	..	..
6201	577	D'Arrest, . . .	23	20	43	2.98	67	10.9	19.8	F, S, R.	2
6202	578	.. ..	23	21	9	2.98	67	14	19.8	eF, vS, stell.	1
6203	579	D'Arrest, . . .	23	21	38	3.06	87	15.4	19.8	pB, S, R, mbMN, stell.	3
6204	..	Secchi, Tempel,	23	22	0	3.03	79	19.5	19.8	F, * 13n.	2
6205	580	.. ..	23	23	20	3.07	90	41	19.8	F, vS, stell.	2
6206	..	Struve, 1865, . .	23	24	2	3.00	69	24	19.8	F, dif. * 11 201°, 80".	1
6207	581	.. ..	23	26	7	3.09	93	29	19.8	eF, stell (nr III. 187).	1
6208	582	.. ..	23	26	41	3.06	85	55	19.9	F, S, lE.	2
6209	583	.. ..	23	27	14	3.09	93	41	19.9	eF, vS.	1
6210	584	.. ..	23	27	18	3.09	93	44	19.9	vF, eS, stell.	1
6211	585	.. ..	23	27	54	3.06	85	58	19.9	eF.	1
6212	586	D'Arrest, . . .	23	28	32	3.09	93	39.0	19.9	pF, vS, stell.	4
6213	..	Tempel, . . .	23	28	45	3.00	67	8.3	19.8	vF.	1
6214	..	Tempel, . . .	23	30	35	3.12	105	53.3	19.9	vF, S.	1
6215	587	.. ..	23	31	4	3.00	65	5	19.9	vF, S, R.	2
6216	..	D'Arrest, . . .	23	31	39	3.03	74	48.9	19.9	pB, pL, R, mbM.	2
6217	..	Stephan, v., . .	23	31	52	3.11	102	59.9	19.9	eF, pL, iR.	1
6218	..	D'Arrest, . . .	23	33	0	2.97	63	39.2	19.9	vF, vS, lE, * 10 sp.	3
6219	..	Tempel, . . .	23	34	5	3.13	111	0.3	19.9	pB, pL, E.	1
6220	588	.. ..	23	34	17	3.06	87	3	19.9	F, S.	1
6221	589	.. ..	23	34	22	3.06	87	3	19.9	vF, pL.	1
6222	..	Secchi, . . .	23	36	22	3.07	90	17.3	20.0	vF.	1
6223	..	Secchi, . . .	23	36	22	3.07	90	18	20.0	s of the last one, v nr.	1
6224	590	23	37	41	3.01	64	52	20.0	eF.	1
6225	..	Stephan, v., . .	23	38	20	+ 2.99	63	27.5	- 20.0	vF, vS, iR.	1

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			h	m	s		°	'			
6226	..	P. T., 1861, D'A.,	23	39	59	+ 3·01	61	16·5	- 20·0	F, S, 1E, h. 2268 f.	sev
6227	..	R ₂ nova, C, . . .	23	43	50	3·03	63	39·3	20·0	} South of h. 2273 and 2273 a.	1
6228	..	R ₂ nova, C, . . .	23	43	52	3·03	63	41·7	20·0		
6229	..	Stephan, VIII., . .	23	46	7	3·03	62	29·7	20·0	vF, vS, R, bM.	1
6230	591	.. ..	23	46	59	3·07	90	24	20·0	F, S, 1E.	2
6231	592	.. ..	23	48	41	3·07	90	13	20·0	vF, S, R.	1
6232	..	Stephan, v., . . .	23	50	55	3·06	74	17·0	20·0	eF, eS, bM.	1
6233	..	G. P. Bond, . . .	23	51	17	3·10	123	20·7	20·0	Like a comet (1850).	1
6234	..	D'Arrest, . . .	23	52	21	3·05	59	29·1	20·0	vF, vS, * 16 close p.	1
6235	..	.. ..	23	54	1	3·07	83	2·3	20·1	Neb. (Obs. de Moscou II.)	1
6236	593	.. ..	23	54	56	3·07	87	51	20·1	eF, vS.	1
6237	594	.. ..	23	55	15	3·07	87	26	20·1	vF, S, R, stell.	2
6238	..	Schultz, . . .	23	56	15	3·07	70	4·5	20·1	F, S, 1E, h. 2300 nf.	2
6239	..	R ₂ nova, C, . . .	23	57	11	3·07	59	18·3	20·1	eF, L.	2
6240	595	.. ..	23	59	1	3·07	82	24	20·1	eF, neb. * 13m.	2
6241	596	.. ..	23	59	26	3·07	82	24	20·1	eeF, vS.	2
6242	597	.. ..	23	59	35	3·07	82	21	20·1	eF, S, R.	2
6243	598	.. ..	23	59	41	3·07	82	25	20·1	eF, p of D neb.	2
6244	599	.. ..	23	59	43	3·07	82	25	20·1	eF, f of D neb.	2
6245	600	.. ..	23	59	56	3·07	82	21	20·1	eF, S.	1

ADDENDA.

6246	...	R ₂ nova,	0	0	6	+ 3·07	63	6·0	- 20·1	} vF, S, G. C. 1 2'n (verified, 1877).	2
6247	..	R ₂ nova, C, . . .	2	34	58	3·60	58	8·1	- 15·6			ceF, 9^{s} f, 15''s of 597.
6248	..	R nova,	6	54	57	4·66	39	1	+ 4·8	vF, h. 424 12's.	1
6249	..	R ₂ nova, D, . . .	13	28	13	2·94	75	22·5	+ 18·6	} eF, pS, h. 1637 sp (found, 1877).	1
6250	..	Coggia,	20	35	53	0·74	24	3·1	- 12·6			pB, oval, dif. * 15 close f.
6251	..	R ₂ nova, C, . . .	22	59	31	2·85	56	39·3	+ 19·4	} vF, vS, h. 2207 p (verified, 1877).	2

ADDITIONAL NOTES AND CORRECTIONS TO THE GENERAL CATALOGUE.

278 } 283 } 284 } 288 } 289 }	The places of 283 and 284 (R. novæ) are—
	283, 1 ^h 15 ^m 16 ^s ± 57° 15' ± ccF, h. 106 sf.
	284, 1 15 43 57 17·2 vF, S.
	Nothing has ever been seen in Birr in the place given by Schultz for III. 157, sp h. 106 (see above, page 387), while two nebulae were seen np h. 106, viz. 283, and what must be III. 157 = 288, 1 ^h 15 ^m 13 ^s ± 57° 13' ±. This latter nebula forms a nearly rectangular triangle with 278 = III. 156 and h. 106 = III. 158. G. C. 285-86-87 are to be struck out, as already remarked on p. 387.
312	R. nova, 1 ^h 17 ^m 55 ^s 56° 4'·3
318	„ 1 18 38 55 59·4
456	„ 1 49 41 57 18·7
517	„ 2 10 18 76 7·6
551	= h. 229 = II. 278. In the Month. Not. XXXVIII., p. 104, Winnecke draws attention to the remarkable circumstance, that this nebula was invisible to Schönfeld in Dec. 1861, and to Vogel in Nov. 1865, while it was easily seen by D'Arrest, Schönfeld, and Winnecke in 1856, 1863, 1864, 1868, and 1877. This certainly looks as if the nebula was variable.
595-96	R. nova, 2 ^h 34 ^m 36 ^s 58° 6'·4. D. neb.
597	„ 2 34 49 58 7'·9. ccF neb. (6247) sf.
618	„ 2 45 38 49 1 ±.
867	„ = 5343 (4 ^h 24 ^m 46 ^s 95° 21'·9).
868	„ 4 ^h 24 ^m 55 ^s 95° 24'·0.
869	„ 4 25 5 ±. 95 21·0 (cF).
1193	ε Orionis is not nebulous. H. was doubtful about it. Compare Phil. Trans., 1833, p. 499-500, and D'Arrest's "Resultate," p. 316.
1481	= III. 874 is according to H. 26 ^s f, 4 ^s of II. 861, its place is therefore 6 ^h 55 ^m 23 ^s , 39° 17'·2.
1548	The * 7·8 mag. is spp and not in Pos. 19°.
1603	R. nova, 7 ^h 50 ^m 42 ^s , 62° 35'·8, vF, S, R, * 13m 1' f.
	The places of these R. novæ have been taken by the kind permission of Lord Rosse from the MS. of the Observations of Nebulae, Part I. (0 ^h to 8 ^h , R. A.), which were prepared for publication, and sent to the Royal Dublin Society after this paper had been laid before the Academy, and while it was in the press (February, 1878).

ERRATA.

On page 386, in the note to 31, for 0°·7, read 0'·7.

On page 393, among the notes to 2844, &c., the second nebula should have the number 5632, instead of 5568.



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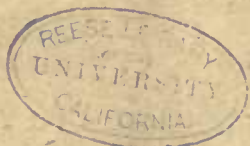
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