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酐ith the sanction of the Royal Society，

By THE
ASTRONOMER
of the
ARMAGH OBSERVATORY， Professor C．Phage：Sheugh

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## SECOND

## armagh catalogue

or
3300 Stars

FOR

## THE EPOCH 1875 ,

deduced from observations made at the

## ARMAGH OBSERVATORY

DURING THE YEARS 1859 TO 1883 ,
under the dhection of the late
T. R. R O BINSON, D.D., F.R.S.,

AND PREPARED FOR PUBLICATION BY HIS SUCCESSOR
J. L. E. DREYER, Рн.D., F.R.A.S

## D UBLIN:

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## I NTRODUCTION.

The Armagh Observatory was founded and endowed in 1791 by Richard Robinson, Lord Rokeby, Archlishop of Armagh, and established under an Act of the Irish Parliament (31st George III. cap. 46). A pamphlet entitled "An Historical Account of the Armagh Observatory," printed in 1883, gives full information of the endowments of the institution, and of the work done to the end of the year 1882 .

At first the Observatory possessed very few instruments, the principal one being an Equatoreal by Troughton. With this the first astronomer, the Rev. J. A. Hamilton, determined the Deelinations of 37 Standard Stars, and the results were incorporated in Mr. Pond's celebrated paper in the Phil. Trans. for 1806. Otherwise, very little work of any value was done until the Rev. John Thomas Romney Robinson was appointed Astronomer in 1823. A few years afterwards the Primate, Lord John George Beresford, at his own expense enlarged the Observatory and provided a Transit Instrument and a Mural Circle, both by Jones, and a 15 -inch Equatoreal Reflector by Thomas Grubb. These instruments were mounted respectively in 1827, 1832 and 1835. From 1828 to 1854 a series of observations was taken with the two former, principally in order to re-determine the positions of Bradley's stars, and the results were given in the work "Places of 5,345 stars observed from 1828 to 1854 at the Armagh Observatory" (Dublin, 1859), commonly known as the Armagh Catalogue.

After the completion of the observations of Bradley's stars, Dr. Robinson formed the plan of re-observing a number of the stars occurring in Baily's Catalogue from Lalande's Histoire Céleste. For this he considered the 3 - - inch object glasses of the Transit Instrument and the Mural Cirele to be too small, while he also recognised the advantage of having buth Right Ascension and Deelination observed simultaneously with one instrument. The observations had been commenced in 1859, but as Lord John George Beresford with his usual liberality provided the necessary means for altering the Mural Circle, the work was stopped at the end of 1860 . The late Mr. Thomas Grubb furnished the instrument with a new teleseope of seven inches
aperture, and with two small collimators. These were put up in 1862, and various minor alterations, which will be described further on, were finished early in 1863. In the meantime, an extensive working list of Lalande stars had been prepared, in which a number of stars were included, of which only one coordinate was given in the Armagh Catalogue. Advantage had also been taken of the enforced leisure to compute the constants for reduction to mean place for a great number of these stars for the year 1870.*

The observations were resumed in April, 1863, but partly because it was soon found necessary to provide a new cell for the object glass, partly owing to the increasing age and failing sight of Dr. Robinson, and the illness of the assistant, Mr. Edmondson (who died in July, 1864), they did not progress very regularly until the Rev. W. H. Rambaut had been appointed Assistant in August, 1864. Since then, they have been regularly continued (except that the anemometer experiments in 1876-80 caused several long interruptions) until the last were made in December, 1883.

Dr. Robinson died on the 28th February, 1882, and a few months afterwards I was appointed his successor and assumed the direction of the Observatory on the I2th June. I was, however, unable to remove to Armagh till the end of August, as repairs had to be made in the dwelling-house. The first object to engage my attention was the mass of unpublished meridian observations accumulated since 1859. Considering that the majority of the stars had in the course of late years been observed in the zones of the Astronomische Gesellschaft, while nearly all of them may be expected to appear in the forthcoming great Catalogue of the Paris Observatory, it seemed very desirable to have the Armagh results published with as little delay as possible. I, therefore, only took a sufficient number of observations to fill a fow gaps here and there, and to make myself familiar with the instrument. A selection from the results obtained in the years 1869-76 had been published by Dr. Robinson in 1879, in the Trans. Royal Dublin Society in the form of a catalogue of one thousand stars for 1870. As only a small number of copies of this publication had been procured for distribution, and there were unpublished observations of many of these thousand stars, it seemed desirable to include them all in the proposed new catalogue, so that this

[^0]and the catalogue of 1859 would contain a complete record of the meridian work done here since 1827. An application was successfully made to the Government Grant Committee of the Royal Society for the means of printing the Second Armagh Catalogue.

In addition to the results obtained since 1859, the present volume contains a few observations made in the years 1855-58, when the large amount of reductions to be made prevented much observing being done. Up to the end of 1860 the observations were made by Mr. Edmondson (R.A.), and Mr. W. H. Rambaut (N.P.D.), in 1863 by Dr. Robinson, from August, 1864, to July, 1868, by the Rev. W. H. Rambaut, and from November, 1868, to the beginning of 1882 by the Rev. Charles Faris. After September, 1882, most of the observations were made by myself. The current reductions were generally made by the respective observers. Great credit is due to Mr. Faris for his perseverance and care in taking the observations during more than thirteen years, and for the energy with which he during this period performed the large amount of reductions incidental to this kind of work. The examination and putting together of the results, the reduction to $1875^{\circ} 0$ and formation of the catalogue, as well as the investigation of Proper Motions and of systematic errors have been done by myself.

Having given this short account of how the present catalogue originated, I proceed to describe in detail the instrument and observations.

## The Instrument and the Method of observing.

The Mural Circle was fully described in Vol. IX. of the Memoirs of the Royal Astronomical Society. Referring for details to this paper and to the Introduction to the Armagh Catalogue, it may be of use to repeat the following particulars here. The circle is 56 inches in diameter and is divided on the inner face to $5^{\prime}$. The divisions are cut in a slip of metal (an alloy of gold and silver). There is a coarse graduation on the edge of the circle for setting. The axis of the circle is 36 inches long and has two pivots, the one next the circle is of 6.5 inches diameter, the other of 2.5 inches diameter, both are three inches long. It rests on Y's with an angle of $60^{\circ}$, attached to a strong cast-iron cradle which can be adjusted in level and azimuth. The axis is hollow and the axis of the telescope passes through it and is secured by a nut. The telescope is clamped to the circle at both ends. Between the circle and the pier a thin disc of copper, of slightly shorter
diameter than the circle, is attached to the axis; it serves for clamping and for revolving the instrument quickly by means of a pinion working in teeth perpendicular to the surface of the disc. The clamps originally furnished by Jones (four in number) act on the edge of the copper disc, they are only used for reflex observations, as a fifth and better one was afterwards provided. This gives fine motion in a somewhat similar manner as is employed in modern transit circles, by the push of a fine screw. The friction wheels are placed between the circle and the copper disc, they are carried by a light framework suspended from a lever on the top of the pier which at the other end carries a heavy counterpoise. The circle can be removed from the pier by taking off the telescope and passing a long iron rod through the hollow axis. This rod is supported on a light but strong carriage of iron which moves on three wheels. About every four or five years the instrument has been taken off the pier and cleaned and oiled. The pivots show evident signs of wear, but I have had no means of testing their figure.

The four original microscopes have been used during the present series of observations, while the use of the additional eight ones has been discontinued.* They are unnsually long (24 inches), and their object-glasses and eye-pieces are separately attached to the pier and only connected by a loose sliding tube. The object of this arrangement, viz, to ensure permanency of the run of the microscope screws, has been fully attained, and the microscopes have been so adjusted as to make it unnecessary to apply any correction for error of run to the mean of the four microscope readings. The setting has always been done on the nearest division line. The spider lines in the microscopes form crosses with an angle of about $40^{\circ}$.

The telescope attached to the circle up to the end of 1860 was of $3^{\frac{3}{4}}$ inches aperture and 63 inches focus. It has since been attached to a portable equatoreal stand. The object-glass is one of those described in Dr. Robinson's paper on the Melbourne telescope (Phil. Trans. I869). The new telescope had to be of nearly the same focal length as the old one (it is only five inches longer), but the object-glass has a clear aperture of seven inches and is of very peculiar construction. It consists of four lenses, a crown and a heavy flint cemented together, and a light flint and a crown lens also cemented. The definition and light are very

[^1]good. Advantage has, however, not been taken of the large aperture to observe very faint stars, as there is no way of illuminating the wires in a dark field. The bright field illumination is produced by means of a small refleetor of 0.4 in . diameter earried by a thin arm attached to the cover of one of the apertures through which the collimators can be pointed to each other. The same gas lamp as formerly is employed and the intensity of the light can be modified by coloured glasses. A diagonal eye-piece is used. There are eleven wires, but only the five central ones have been used, they are about $3^{\circ} \mathrm{O}$ distant inter se. There is one fixed and one movable horizontal wire, but the latter has rarely been used. The setting in polar distance was done immediately after the transits over the five wires had been taken, a correction for curvature being applied whenever necessary. As the new telescope was eighty pounds heavier than the old one, the counterpoise lever was lengthened and an additional weight added, so as to keep the eentre of gravity in the plane of the frietion wheels. Measures were taken to keep the cradle of the axis steady while the circle is turned, and to prevent the clamps from exerting any lateral foree which might disturb the azimuth or inclination of the axis. The instrumental adjustments appear to be very permanent.

When the instrument was first erected it was noticed in the summer of 1863 , that if the objeet end of the telescope was lowered to the Nadir from the south the "index error" obtained was available south of the zenith (polar distances found with it agreeing with other determinations), but if it was lowered from the north the error was as much as $4^{\prime \prime}$ less, but availed north of the zenith. The cause was at once found; in the cold weather the brass cells of the O. G. fitted the lenses tightly, but their expansion in warmer weather gave the lenses play to shift by their own weight. Mr. Grubb remedied this by substituting east-iron cells and supporting the lenses on three equidistant bearings, two fixed at $60^{\circ}$ east and west of the meridian, the third movable, and pressed inwards by a spring, whose tension is a little more than the weight of the glass. These changes at onee reduced the above mentioned difference from $4^{\prime \prime}$ to $0^{\prime \prime} .07$ and no trouble has since been experienced from this cause.

The collimation is found by means of two small collimators of 1.06 in . aperture and 12 in . focal length, mounted about six feet north and south of the centre of the instrument on cast-iron pillars bolted to isolated piers. The telescope is plaeed vertical and two small apertures in the centre of it are uneovered, through which the collimators are pointed to each other. The error of collima-
tion is extremely permanent. The collimators have also been used for determining the horizontal flexure of the telescope; in 1864 itwas found by fifteen angles $=0^{\prime \prime} \cdot \mathrm{I}$. This small value is no doubt due to the shortness and large diameter of the tube as well as to the circumstance that it is clamped at each end to the circle, the framing of which is very strong. No correction for flexure has therefore been applied.

For determining the errors of azimuth and inclination of the axis of the circle, Dr. Robinson adopted a peculiar but simple contrivance. In place of the eye-piece a small draw tube is inserted, containing a double image prism and carrying a small divided circle which reads $90^{\circ}$ when the spider lines appear single. When the telescope is directed to the basin of mercury placed below it, both the centre wire and its reflected image are seen double. The prism is now turned until only three images are seen, when the distance between the direct and reflected image is proportional to cosine of the angle through which the prism has been turned. The inclination has been thus determined on every night of observation and the "index error" or Nadir point of the circle at the same time and in the usual manner. Both were very permanent and never subject to sudden variations. When observations were taken on several nights within a week, the mean of the "index errors" thus found has generally been used in preference to the single results.

The error of azimuth has been measured by means of the same apparatus from a meridian mark, 8,000 feet to the north of the Observatory. This consists of an obelisk of cast-iron, the pyramidal summit of which has inside it an adjustable cast-iron plate, with a small opening in the shape of a rhombus. The azimuth has been measured from this mark before sunset, and the azimuth of the mark was from time to time checked by observations of close circumpolar stars. It would doubtless have been better to have discarded the use of this meridian mark altogether, and to have depended solely on transits of circumpolar stars (as was done from Scptember, 1882), but as the instrument 'appears to have been very steady in azimuth, I do not consider it likely that sensible errors in the results can have been introduced by the use of the meridian mark.

For the registration of the transits Dr. Robinson presented to the Observatory a Chronograph by Knoblich, in all respects similar to the one described in Vol. 49 of the Astron. Nachrichten. The drum is eleven inches long, and four and three quarter inches in diameter, it revolves in two minutes, so that one-eighth of an inch represents a second of time. It is connected by a
contact maker of Krille's form, with a clock by Earnshaw.* It was, however, found that the conical pendulum of its clockwork regulated it very badly, and the chronograph was never used until the end of 1868, when Mr. Howard Grubb had improved it by substituting for the pendulum a governor similar to those he applies to the driving clocks of his equatoreals. The records are made by diamond points on glazed paper, blackened with a kind of Indian ink supplied by Knoblich. The chronograph has been in incessant use since January, 1869, and has always performed well.

The Right Ascensions of the present Catalogue depend on the Standard Stars of the Nautical Almanac, four or five of which were observed on each night. These were not taken in Polar Distance, the Nadir being observed every night. The Latitude adopted is $54^{\circ} 21^{\prime} 12^{\prime \prime} .70$. The division errors of the Circle were taken from a table made from Dr. Robinson's investigation many years ago, as described in Vol. IX. of the Memoirs R.A.S.

The Refraction tables used are those of Dr. Robinson, printed on pp. 834-835 of the Armagh Catalogue, the details of their construction being given in the Transactions of the Royal Irish Academy, Vol. XIX. Within the limit of this Catalogue (Zen. Dist. $83^{\circ}$ ), these refractions may be considered identical with those of the Tabulæ Regiomontanæ. The barometer was the same as formerly used. The Trougliton thermometer was in 1859 replaced by a Kew Standard.

## The Arrangement of the Catalogue.

The places of stars in the present Catalogue have been reduced to the epoch $1875^{\circ}$. Though the mean epoch of observation is probably a couple of years earlier, 1875 seemed the most suitable epoch, as it will be adopted in the Zone Catalogues of the Astronomische Gesellschaft, and has already been used in several other Catalogues. In reducing to 1875 the Proper Motion was never taken into account.

As the magnitudes had rarely been noted by the observers, I have taken them from the Durchmusternng for all stars north of $92^{\circ}$ N.P.D. For southern stars I have generally followed Bessel and Argelander.

The precessions were computed for 1875, with Struve's constant.

[^2]In the column "Authorities," will be found references to nearly all modern star catalogues of importance. Owing to the limited space catalogues earlier than 1825 (Bradley, Piazzi, d'Agelet, Groombridge), have been omitted; also the valuable catalogue by Copeland and Börgen of stars in the zone $90^{\circ}-$ $92^{\circ}$, as all our stars within this zone occur in the Göttingen Catalogue. Of southern Catalogues, only the Cape Catalogues for 1860 and 1880 were searched (that for 1850 was received too late). I trust the references will be found fairly complete, as no pains have been spared to make them so, but it is very probable that some stars may have been overlooked, among sogreat a number.

The following is a list of the abbreviations employed. They are generally the same as Argelander's-
Weisse's first and second Cat., . . W
Argelander, Cat. Aboensis, . . . CA
Struve's Positiones Medie, . . . P.II
Taylor, . . . . . T
Rümker (the Nachtraige without numbers), . $R$
Armagh Cat., . . . Ar
Santini $0^{\circ}$ to $+10^{\circ}$ (Mem. R.A.S., XII.), $\mathrm{Si}_{1}$ without number
Santini $0^{\circ}$ to $-10^{\circ}$, . . . $\mathrm{Si}_{\mathrm{a}}$ without number
Oeltzen's northern and southern Cat., . Oe
Rümker, Nene Folge, . . . $\mathrm{R}_{2}$
Taylor's Subsid. Cat. . . . . $\mathrm{T}_{g}^{2}$ without number
Greenwich, 12 year Cat. . . . 12 yr.
, 6 year Cat. . . . 6 yr.
Radeliffe Catalogue, . . . . RC
Bonner Beobachtungeu, Bd. VI. . . Bu without number
Greenwich, 7 year Cat.
7 yr .

| " New 7 year Cat. | N 7 yr . |
| :---: | :---: |
| Second Radeliffe Cat. | $\mathrm{RC}_{2}$ |
| Santini- $10^{\circ}$ to - $12^{\circ} 30^{\prime}$, | $\mathrm{Si}_{3}$ |
| " $\quad-12^{\circ} 30^{\prime}$ to $-15^{\circ}$, | $\mathrm{Si}_{4}$ |
| , $\quad 0^{\circ} \mathrm{to}-3^{\circ}$, | $\mathrm{Si}_{5}$ |
| Schjellerup, . | Sp |
| Lamont $+3^{\circ}$ to $-3^{\circ}$, | $\mathrm{L}_{1}$ |
| " $\quad+3^{\circ}$ to $+9^{\circ}$, | $\mathrm{L}_{2}$ |
| $" \quad-3^{\circ}$ to $-9^{\circ}$, | $\mathrm{L}_{3}$ |
| $" \quad+9^{\circ}$ to $+{ }^{1} 5^{\circ}$, | $\mathrm{L}_{4}$ |
| $" \quad-9^{\circ}$ to - $15^{\circ}$, . | $\mathrm{L}_{5}$ |
| " n . of +x 5 and s. of $-15^{\circ}$, | $\mathrm{L}_{8}$ without number |
| Yarnall, . . . | Y |
| Cape, 1860, | $\mathrm{St}_{1}$ |
| Greenwich, 9 year Cat., | 9 yr |
| Glasgow Cat. | G1 |
| Stone, 1880, | St |
| Becker, 52 I Bradley'sche Sterne, | P |

The "Notes" at the end of the volume contain references for which there was no room in the body of the Catalogue, remarks
about Proper Motion, \&c. I have added a list of corrigenda in the first Armagh Catalogue, some taken from Dr. Robinson's notes in the Astr. Nachr. Nos. I42I and I514, others found in Bonner Beob. Vol. VII. or casually detected by me during the preparation of this volume.

## The Accuracy of the Results.

The first step towards forming an idea of the accuracy of the observations made with the improved Mural Circle is to compute the probable error of one observation in R.A. and N.P.D. From 400 observations of 80 stars between $30^{\circ}$ and $100^{\circ}$ N.P.D. this was found to be

$$
\pm 0^{8} 081 \text { and } \pm 0^{\prime \prime} \cdot 85
$$

The single errors in $R$. A. were multiplied with $\cos \delta$.
Considering the circumstance, that by far the greater part of the Right Ascensions of the present Catalogue were observed with an instrument, which by its maker was only intencled for observations of Polar Distances, I thought it desirable to make a complete comparison between this Catalogue and some other extensive modern Catalogue of Stars. For this purpose, the valuable Catalogue of 6,4I 5 Stars observed at the Glasgow Observatory seemed peculiarly suitable, not only because it was deduced from observations made nearly at the same time as the Armagh Observations (1860-8I) and depended in R.A. on the same Standard Stars (the Nautical Almanac), but also because it has already been rigorously compared by Professor Auwers with his Fundamental Catalogue (V.J. S. XIX. p. 195). The Glasgow and Arwagh Catalogues have 549 stars in common. After leaving out ten stars which differed too much ( 163 , IIO7, II40, II60, 1210, 1294, 1300, 2186, 2544, 3022, most of which were only observed once here) there remained 519 Right Ascensions and 539 Polar distances. Taking Proper Motion into account wherever it was known, and arranging the differences according to N.P.D. in groups of $10^{\circ}$ north of $75^{\circ}$ and in groups of $5^{\circ}$ south of $75^{\circ}$, the following table of mean difference was formed :-

| GLASGOW --ARMAGH. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| N.P.D. | $\Delta$ a. | Stars. | N.P.D. | $\Delta$ P.D. | Stars. |
| $45^{\circ} \cdot 1$ | +0 ${ }^{8.141}$ | 14 | $44^{\circ} \cdot 9$ |  | 13 |
| $55^{\circ}$ | +0.106 | 7 | $54 \cdot 7$ | -0.32 | 8 |
| $65^{\circ}$ | +0.021 | 20 | 64.9 | +0.41 | 21 |
| 73.6 | +0.021 | 14 | 73.4 | +0.84 | 17 |
| $77^{\circ} 6$ | -0.034 | 121 | $77^{\circ} 6$ | $-0.21$ | 125 |
| 82.2 | -0.002 | 117 | $82 \cdot 2$ | $-0.13$ | 120 |
| $87^{\circ} 4$ | -0.020 | 111 | 87.4 | -0.42 | 115 |
| 92.4 | -0.080 | 104 | $92 \cdot 5$ | $-0.26$ | 107 |
| $97 \cdot 8$ | -0.108 | I I | $98 \cdot{ }^{\text {I }}$ | - 1.69 | 13 |

The stars are not as well distributed in N.P.D. as might have been wished, still the mean differences seem well established, even in the smaller N.P.D. ${ }^{\text {s }}$. There are no stars north of $39^{\circ}$ nor south of $102^{\circ}$. Plotting these mean differences on crossruled paper, and drawing curves through the points, a new table was produced, by means of which the catalogue was reexamined for the detection of periodic errors. Subtracting from each of the original differences the tabular difference for the corresponding N.P.D., I found for the single hours of R.A. :-

| $0^{n .5}$ | +0.013 | IO St. | $-0^{\prime \prime} .06$ | IO St. |
| ---: | ---: | ---: | ---: | :--- |
| 1.7 | +0.011 | 8 | +0.72 | 10 |
| 2.5 | +0.029 | 14 | +0.16 | 14 |
| 3.3 | -0.012 | 11 | +0.15 | 11 |
| 4.6 | +0.009 | 10 | -0.66 | 10 |
| 5.5 | -0.046 | 16 | +0.19 | 19 |
| 6.7 | -0.080 | 15 | -0.01 | 15 |
| 7.5 | -0.135 | 13 | -0.03 | 13 |
| 8.5 | -0.038 | 21 | -0.26 | 21 |
| 9.5 | +0.002 | 16 | -0.55 | 17 |
| 10.5 | +0.020 | 29 | +0.42 | 29 |
| 11.6 | +0.062 | 15 | +0.52 | 16 |
| 12.5 | +0.008 | 24 | +0.01 | 26 |
| 13.4 | -0.017 | 22 | +0.42 | 24 |
| 14.4 | 0.000 | 22 | +0.22 | 23 |
| 15.4 | -0.010 | 32 | +0.09 | 32 |
| 16.5 | -0.010 | 33 | +0.46 | 34 |
| 17.5 | -0.002 | 22 | +0.11 | 24 |
| 18.7 | +0.015 | 20 | +0.19 | 20 |
| 19.3 | -0.024 | 28 | -0.35 | 28 |
| 20.4 | +0.012 | 37 | -0.19 | 38 |
| 21.5 | +0.003 | 35 | -0.30 | 36 |
| 22.5 | +0.066 | 36 | +0.37 | 38 |
| 23.4 | +0.024 | 30 | -0.66 | 31 |

Drawing a curve throngh points representing these values, the following table of $\Delta a_{a}$ and $\Delta \mathrm{PD} a$ was found. Subtracting again these tabular values from the original differences, arranging the results according to N.P.D. and drawing the curves anew, the table of $\Delta a_{P D}$ and $\Delta \mathrm{PD}_{\mathrm{PD}}$ was found.

Glasgow minus Sec. Armagh Cat.

|  | $\Delta a_{\text {PD }}$ | $\Delta \mathrm{PD}_{\mathrm{PD}}$ |
| :---: | :---: | :---: |
| $45^{\circ}$ | $+\mathrm{o}^{8.1 .145}$ | $-0^{\prime \prime} \cdot 13$ |
| 50 | +0.110 | -0.11 |
| 55 | +0.080 | 0.00 |
| 60 | +0.052 | +0.20 |
| 65 | +0.030 | +0.35 |
| 70 | +0.10 | +0.40 |
| 75 | -0.008 | +0.18 |
| 80 | -0.016 | -0.21 |
| 85 | -0.025 | -0.30 |
| 90 | -0.048 | -0.40 |
| 95 | -0.095 | -0.95 |
| 100 | -0.165 | -1.75 |


|  | $\Delta \alpha_{\alpha}$. | $\Delta \mathrm{PD}{ }_{\alpha}$. |  | $\Delta a$, | $\Delta \mathrm{PD}{ }_{\text {a }}$. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $0^{\text {h. }}$ O | +0.023 | +0'025 | $12^{\text {h }}$ 。 | +0.040 | +o''38 |
| 1 | +0.016 | 0+ 35 | 13 | +0.009 | +0.30 |
| 2 | +0.021 | $\bigcirc+38$ | 14 | -0.010 | +0.23 |
| 3 | +0.016 | $0+\cdot 12$ | 15 | -0.012 | +0.22 |
| 4 | -0.010 | -0.12 | 16 | -0.011 | +0.27 |
| 5 | -0.040 | -0.10 | 17 | -0.010 | +0.29 |
| 6 | -0.073 | +0.05 | 18 | -0.008 | +o.17 |
| 7 | -0.105 | $0 \cdot 00$ | 19 | -0.004 | -0.07 |
| 8 | -0.075 | -0.15 | 20 | 0.000 | -0.26 |
| 9 | -0.025 | -0.40 | 21 | +0.008 | -0.22 |
| 10 | +0.013 | -0.15 | 22 | +0.027 | -0.03 |
| 11 | +0.045 | +0.26 | 23 | +o.038 | +0.12 |

The Polar Distances of the two Catalogues are quite independent of each other, in both cases being referred to the Nadir. The Right Ascensions of both Catalogues depend on the Nautical Almanac, but during the period embraced by the Armagh observations, the N. A. system of star places has been twice changed, in 187 I and in 1880 . The Glasgow RAs agree closely with the system used from 1871 to 1879 (seven year Cat.) and are not affected by the change of system in 1880 , while the Armagh RAs, though the majority depend on the system 1871-79, are also much influenced by the systems used before 187 I and from 1880 to 1883 . It was therefore a priori not to be expected that they should show no sensible deviation from the Glasgow RAs, but it is very remarkable that itis chiefly in thehours observed in mid-winter $\left(6^{\mathrm{a}}-8^{\mathrm{h}}\right.$ ) that the differences reach a large quantity. It was found by Dr. Gill, (Mem. R.A.S. XLVI. p. 80) that for observations made with the chronograph the Right Ascensions of faint stars are too great, while for eye and ear observations (as those made in Glasgow were) no such error appears, and it is at least conceivable that in cold weather an observer might take longer time to press the key than he would require in warmer weather. Another possible cause of error is, that the meridian mark, by which the azimuth of the Armagh instrument has been determined, is situated to the north of the Observatory, in the open country, without any dwelling-houses intervening with hot air, while the great number of chimneys to the south-west and partly to the south of the Observatory owing to the prevailing westerly winds must produce something like lateral refraction, which of course must reach a maximum on winter evenings when the chimneys are hardest at work. Possibly the azimuth found by looking northwards was therefore not strictly applicable south of the zenith, and an error might have been introduced in this way.

With regard to the terms of $\Delta a$ depending on N.P.D., their change of sign and rapid increase with the declination seem to
me likely to arise from defects in the pivots or in the collimation which would naturally show themstlves in this way, as the mean N.P.D. of the Standard Stars employed ( $75^{\circ}$ ), falls very near the place where the change of sign occurs. It should be remembered that the collimation can only be determined with the telescope horizontal, and the inclination with the telescope vertical, and if we add to this the non-reversible and one-sided form of the instrument we have ${ }_{\mathrm{p}}^{\mathrm{p}}$ lenty of possible causes by which to explain the errors depending on N.P.D.

Combining the above tables with those deduced by Professor Auwers for the Glasgow Catalogue we get:-

## Reduction of Second Arinagh Catalogue to Auwers' Fundamental System:

|  |  | $\Delta a^{\prime}$ |  | $\Delta \mathrm{PD}_{\mathrm{Pd}}$. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | $45^{\circ}$ | $-\mathrm{O}^{8 .}$ |  | +o'.45 |  |
|  | 50 | - ${ }^{\circ} \mathrm{I}$ |  | +0.28 |  |
|  | 55 | +o.0 |  | +o.09 |  |
|  | 60 | +o.0 |  | +0.08 |  |
|  | 65 | +o. |  | +0.17 |  |
|  | 70 | Fo.0 |  | +0.32 |  |
|  | 75 | +0.0 |  | +0.21 |  |
|  | 80 | - 0 -0 |  | -0.17 |  |
|  | 85 | +0.0 |  | -0.23 |  |
|  | 90 | +o.0 |  | -0.13 |  |
|  | 95 | -0.0 |  | -0.25 |  |
|  | 100 | -0.0 |  | -0.53 |  |
|  | $\Delta \alpha_{\alpha}$ | $\Delta \mathrm{PD}_{\alpha}$ |  | $\Delta \mathrm{ra}$ | $\Delta \mathrm{PD}_{a}$ |
| $0^{\text {h. }} 0$ | +0.040 | +o'.49 | $12^{\text {h. }} 0$ | +0.030 | +o'.01 |
| 1 | +0.03I | +0.58 | 13 | $0 \cdot 000$ | -0.10 |
| 2 | +0.033 | +0.57 | 14 | -0.015 | -0.18 |
| 3 | +0.021 | +0.27 | I5 | -0.012 | -0.18 |
| 4 | -0.013 | -0.04 | 16 | -0.004 | -0.10 |
| 5 | -0.052 | -0.09 | 17 | +0.004 | -0.02 |
| 6 | -0.089 | -0.01 | 18 | +0.010 | -0.03 |
| 7 | -0.121 | -0.13 | 19 | +0.016 | -0.16 |
| 8 | -0.088 | -0.33 | 20 | +0.020 | -0.25 |
| 9 | -0.034 | -0.64 | 2 I | $+0.028$ | -0.12 |
| 10 | +0.004 | $-0.44$ | 22 | +0.046 | +0.14 |
| 1 I | +0.035 | -0.07 | 23 | +0.056 | +0.33 |

The Polar Distances appear on the whole to be much more satisfactory than the Right Ascensions.

With the completion of this Catalogue the meridian observations, which hitherto have formed the principal astronomical work at the Armagh Observatory, have been discontinued, atleast for the present. In response to an application from the Governore to grant some compensation to the Observatory for the variou:
losses it had sustained through recent legislation, Her Majesty's Government two years ago made a grant to the institution of $£_{2,000}$. Part of this sum was expended on an Equatoreal Refractor of ro inches aperture by Mr. Grubb, and so long as only the present antiquated meridian instruments are available, the activity of the Observatory will be directed to work with the new instrument only. The observations on which this publication is founded have been made at a time when every successive step of reform legislation in Ireland has had the effect of diminishing the resources of the Observatory, and whatever be the shortcomings of the work, I trust it will show that the devotion to science which (to use an expression of Dr. Robinson's) has raised the Observatory to "rank among the best national institutions, without costing the nation one penny," has remained unabated notwithstanding the troubles of the times.

J. L. E. DREYER.

[^3]
## THE SECOND <br> ARMAGII CATALOGUE OF STARS, <br> FOR THE EPOCH 1875.

| No. | Lalande. | Mag. | Mean | R.A. 1 | $875 \cdot 0$ | Epoch. | Obs. | Ann. Precess. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 47264 | $7 \times 2$ | $0^{\text {h }}$ | $0^{m}$ | $9^{8 .} 98$ | $75^{\circ} 1$ | 3 | +3.073 |
| 2 | 47280 | $6 \cdot 0$ | - | $\bigcirc$ | 54.93 | $64 \cdot 79$ | 1 | 3.071 |
| 3 | 47287 | $6 \cdot 9$ | 0 | I | $8 \cdot 94$ | 78.03 | 5 | 3.076 |
| 4 | 47289 | $7 \cdot 6$ | - | 1 | $9 \cdot 25$ | 64.75 | I | 3.081 |
| 5 | 47307 | $7 \cdot 7$ | - | I | 24.14 | 74.97 | 1 | $3 \cdot 078$ |
| 6 | 47318 | $6 \cdot 0$ | $\bigcirc$ | 1 | 54.27 | 64.76 | I | 3.070 |
| 7 | 47347 | $7 \cdot 0$ | - | 2 | $33 \cdot 63$ | 73.73 | 2 | $3 \cdot 080$ |
| 8 | $4735^{2}$ | $8 \cdot 0$ | $\bigcirc$ | 2 | 47.94 | $77 \cdot 79$ | I | $3 \cdot 079$ |
| 9 | 47374 | $8 \cdot 0$ | 0 | 3 | 30.98 | 82.88 | 1 | 3.071 |
| ro | 47384 | $7 \cdot 3$ | - | 3 | $3^{8 \cdot 96}$ | 75.92 | 5 | 3.082 |
| I I | 2 | $6 \cdot 7$ | 0 | 3 | 57*10 | 72.56 | 4 | 3.107 |
| 12 | 10 | $7 \cdot 3$ | $\bigcirc$ | 4 | 4.94 | $70 \cdot 87$ | 4 | $3 \cdot 086$ |
| 13 | 19 | $6 \cdot 5$ | $\bigcirc$ | 4 | 18.76 | $79 \cdot 83$ | 3 | $3 \cdot 066$ |
| I 4 | 32 | var. | $\bigcirc$ | 4 | $45 \cdot 65$ | 73.58 | 4 | $3 \cdot 069$ |
| 15 | 55 | 77 | $\bigcirc$ | 5 | 23.55 | $77 \cdot 84$ | 5 | $3 \cdot 088$ |
| 16 | 68 | $7 * 7$ | $\bigcirc$ | 5 | 42.79 | 72.98 | 5 | 3.098 |
| 17 | 73 | $5^{\circ} 0$ | $\bigcirc$ | 5 | 47.55 | 81.30 | 2 | $3 \cdot 061$ |
| 18 | 123 | $6 \cdot 5$ | $\bigcirc$ | 6 | 56.12 | 74.94 | I | $3 \cdot 092$ |
| 19 | 141 | $6 \cdot 5$ | $\bigcirc$ | 7 | $32 \cdot 83$ | $70 \cdot 85$ | 1 | $3 \cdot 100$ |
| 20 | 179 | $7 \cdot 0$ | - | 8 | $26 \cdot 82$ | 81.79 | 1 | $3 \cdot 061$ |
| 21 | 174 | $7 \cdot 6$ | $\bigcirc$ | 8 | 28.99 | $77 \cdot 80$ | 1 | 3'I35 |
| 22 | 193 | $8 \cdot 0$ | $\bigcirc$ | 8 | 52.07 | 71.84 | 4. | 3.099 |
| 23 | 247 | $6 \cdot 0$ | $\bigcirc$ | 9 | 48.00 | $78 \cdot 87$ | 1 | 3.124 |
| 24 | 221 | $7 \cdot 1$ | $\bigcirc$ | 10 | II'78 | $77 \cdot 79$ | 1 | 3*II5 |
| 25 | 220 | $7 \cdot 8$ | $\bigcirc$ | 10 | 12.13 | 71.84 | 5 | $3 \cdot 115$ |
| 26 | 226 | $6 \cdot 5$ | $\bigcirc$ | 10 | 18.63 | $73 \cdot 80$ | 4 | $3 \cdot 141$ |
| 27 | 230 | $6 \cdot 8$ | $\bigcirc$ | 10 | 19.72 | $75 \cdot 34$ | 5 | 3.082 |
| 28 | 234 | $7 \cdot 0$ | $\bigcirc$ | 10 | 21.63 | 64.79 | 5 | 3.049 |
| 29 | 235 | $6 \cdot 5$ | $\bigcirc$ | 10 | 26.33 | $75 \cdot 23$ | 5 | $3 \cdot 098$ |
| 30 | 251 | $7 \cdot 7$ | $\bigcirc$ | II | I•12 | $82 \cdot 79$ | I | $3 \cdot 1 \mathrm{I} 8$ |
| 31 | 259 | $6 \cdot 8$ | $\bigcirc$ | 11 | 23.02 | $70 \cdot 72$ | 5 | $3 \cdot 095$ |
| 32 | 273 | $7{ }^{\circ}$ | $\bigcirc$ | II | $33 \cdot 22$ | $69 \cdot 85$ | 5 | $3 \cdot 138$ |
| 33 | 276 | $7 \cdot 3$ | $\bigcirc$ | II | 54.40 | 65.75 | I | $3 \cdot 069$ |
| 34 | 305 | $7^{\circ}$ | $\bigcirc$ | 12 | $9 \cdot 81$ | $82 \cdot 86$ | I | $3 \cdot 061$ |
| 35 | $3{ }^{13}$ | $7 \cdot 3$ | - | 12 | 52.19 | $70 \cdot 31$ | 4 | $3 \cdot 108$ |
| $3^{6}$ | 317 | $7 \cdot 7$ | $\bigcirc$ | 12 | 54.79 | 71.93 | 2 | 3•099 |
| 37 | 345 | $7{ }^{\circ}$ | $\bigcirc$ | 13 | $44 \cdot 84$ | 71.85 | 4 | $3 \cdot 109$ |
| 38 | 354 | $6 \cdot 4$ | $\bigcirc$ | 13 | $52 \cdot 56$ | $78 \cdot 86$ | 2 | $3 \cdot 119$ |
| 39 | 367 | $6 \cdot 0$ | $\bigcirc$ | 14 | I 3.46 | $76 \cdot 14$ | 6 | $3 \cdot 124$ |
| 40 | 373 | $7 \cdot 5$ | - | 14 | 21.10 | $75 \cdot 13$ | 4 | $3 \cdot 099$ |
| 4 I | 372 | $7^{\circ}$ | $\bigcirc$ | 14 | 21.56 | $78 \cdot 32$ | 2 | $3 \cdot 125$ |
| 42 | 383 | $7 \cdot 1$ | $\bigcirc$ | 14 | $36 \cdot 05$ | 74.50 | 3 | $3.13{ }^{2}$ |
| 43 | 405 | $6 \cdot 5$ | $\bigcirc$ | 15 | $26 \cdot 38$ | 64.79 | 3 | 3.040 |
| 44 | 413 | $6 \cdot 8$ | $\bigcirc$ | 15 | 49.59 | 78.88 | 2 | 3.136 |
| 45 | 419 | 7.5 | $\bigcirc$ |  | $16 \cdot 85$ | $74 \cdot 06$ | 5 | +3.122 |


| No. | Mean N.P.D. $1875 \cdot 0$. | Epoclı. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | $62^{\circ} 8^{\prime} 3 \mathrm{I}^{\prime \prime \prime} \cdot 7$ | 72.01 | 5 | - $20^{\prime \prime} \cdot 05$ | W 1305. |
| 2 | $10853{ }^{1} \mathrm{I}$ | 59.97 | I | 20.05 | Oe 23248. |
| 3 | 59 I 35' 1 | 78.03 | 5 | 20.05 | W 1335. |
| 4 | $\begin{array}{llll}37 & 55 & 25.5\end{array}$ | 59.88 | I | 20.05 |  |
| 5 | $\begin{array}{llll}51 & 58 & 21.6\end{array}$ | 69.87 | 2 | 20.05 | W 135 I . |
| 6 | 993190 | 64.76 | 1 | 20.05 | W $1249, \mathrm{Si}_{2}, 6 \mathrm{yr} 3,7 \mathrm{yr} 2$. |
| 7 | $\begin{array}{lllll}62 & 26 & 53 \cdot 8\end{array}$ | 73.73 | 2 | 20.05 |  |
| 8 | $\begin{array}{llll}65 & 24 & 315\end{array}$ | 72.30 | 2 | 20.05 | W 11, Ar7. |
| 9 | 93 I5 23.9 | 82.88 | I | 20.05 | W $23, \mathrm{Si}_{2}, \mathrm{~N}_{7 \mathrm{yr}}{ }_{5}, \mathrm{~L}_{8} 6$, |
| 10 | $\begin{array}{llll}65 & 29 & 53.5\end{array}$ | $75^{\circ} 00$ | 4 | 20.05 | W 29.1 [Gl 19. |
| 11 | $\begin{array}{llll}33 & 31 & 49 & 5\end{array}$ | 72.56 | 4 | 20.05 | Oe $46, \mathrm{Bn}$. |
| 12 | $\begin{array}{llll}57 & 33 & 53.5\end{array}$ | $70 \cdot 87$ | 4 | 20.05 | W 44. |
| 13 | $10316 \quad 27.5$ | 79.83 | 3 | 20.05 | $\mathrm{W}_{46,} \mathrm{Si}_{4} 4$. |
| 14 | $94 \quad 1009$ | $73 \cdot 62$ | 5 | 20.05 | $\mathrm{T}_{14}, \mathrm{Si}_{2}, \mathrm{~L}_{3} 7$. |
| 15 | $\begin{array}{llll}62 & 16 & 24.6\end{array}$ | $76 \cdot 34$ | 6 | 20.05 |  |
| 16 | 504738.0 | 72.98 | 5 | 20.05 | W 104. |
| 17 | 108 $3^{8}$ I.5 | 81.30 | 2 | 20.05 | Oe 47, Y 54. |
| 18 | $\begin{array}{llll}63 & 42 & 23 \cdot 8\end{array}$ | $70 \cdot 35$ | I | 20.04 |  |
| 19 | $\begin{array}{llll}57 & 29 & 19.2\end{array}$ | 69.30 | 2 | 20.04 | W i8i. |
| 20 | $104 \quad 5216.5$ | 73'78 | 2 | 20.04 | W if7, ${ }_{\text {Bn. }}$ |
| 21 | $\begin{array}{llll}38 & 3 & 20 \cdot 3\end{array}$ | 68.51 | 3 | 20.04 |  |
| 22 | $\begin{array}{llll}62 & 6 & 16 \cdot 2\end{array}$ | $7 \mathrm{~F} \cdot 84$ | 4 | 20.04 |  |
| 23 | $47 \quad 5 \quad 57 \times 6$ | 78.87 | I | 20.04 | W 232, RC 44. |
| 24 |  | 73.90 | 2 | 20.03 | Y. 103. |
| 25 | $\begin{array}{llll}54 & 12 & 19\end{array}$ | 71.84 | 5 | 20.03 | W 245, Y 104. |
| 26 | 41 13 58 <br> 1   | 73.80 | 4 | 20.03 | R 28. |
| 27 | $\begin{array}{llll}80 & 27 & 1.5\end{array}$ | 75.42 | 4 | 20.03 | W 151, Si ${ }_{2}$, Gl 59. |
| 28 | $\begin{array}{llll}110 & 54 & 16.9\end{array}$ | 64.79 | I | 20.03 | Bn. |
| 29 | $\begin{array}{llll}67 & 26 & 17 \cdot 8\end{array}$ | $75 \cdot 23$ | 5 | 20.03 | W $253, \mathrm{~L}_{6}$. |
| 30 | $54 \quad 8 \quad 37 \times$ | 82.79 | I | 20.03 | W 266, Y 113. |
| 31 | $\begin{array}{llll}70 & 28 & 5 \cdot 1\end{array}$ | 72.34 | 4 | $20^{\circ} 03$ | W $277, \mathrm{Re}_{2} 26$. |
| 32 | $44 \quad 28 \quad 46 \cdot 9$ | 67.78 | 3 | 20.03 | Oe 187. [ $\mathrm{L}_{1} 36, \mathrm{Gl} 7^{2 .}$ |
| 33 | $92 \begin{array}{llll}92 & 4^{2} & 36 \cdot 5\end{array}$ | $65^{\prime} 75$ | 1 | 20.03 | W i8i, T $51, \mathrm{Bn}, \mathrm{Si}_{5}$ I6; |
| 34 | $984435 \%$ | 82.86 | I | 20.03 | W $185, \mathrm{Si}_{2}$. |
| 35 | $\begin{array}{llll}64 & 14 & 23.2\end{array}$ | $72 \cdot 18$ | 3 | 20.02 | W 309, T $57, \mathrm{R}_{40}, \mathrm{R}_{2}$ [41. |
| 36 | $7041 \quad 39^{\circ} 2$ | $71 \times 93$ | 2 | $20^{\circ} 02$ | W 311. |
| 37 | 66 I $44^{\circ} \mathrm{O}$ | $72 \cdot 24$ | 5 | 20.02 | W 328. |
| 38 | $59 \quad 45 \quad 30 \% 7$ | 78.86 | 2 | 20.02 | W 331, R $\mathrm{R}_{2} 54$ |
| 39 | 5746 | $74^{\prime} 7^{2}$ | 5 | 20.02 |  |
| 40 | $\begin{array}{llll}72 & 12 & 46.0\end{array}$ | 75* 13 | 4 | $20 \cdot 02$ | W $349, \mathrm{R}_{53}, \mathrm{Bn}$. |
| 41 | $\begin{array}{llll}57 & 42 & 47 *\end{array}$ | $78 \cdot 14$ | 3 | 20\%02 |  |
| 42 | $\begin{array}{llll}54 & 48 & 52.4\end{array}$ | 73.33 | 4 | 2001 | W 357, Y 145. |
| 43 | IIO 4580 | 64.79 | I | $20^{\circ} 1$ | Oe 136 , Bn. |
| 44 | $\begin{array}{llll}55 & 9 & 25.2\end{array}$ | 78.89 | 2 | 20.01 |  |
| 45 | $\begin{array}{lllll}61 & 14 & 20: 3\end{array}$ | 74.06 | 5 | -20.00 | $\mathrm{R}_{\mathrm{z}} 78$. |




| No. | Lalande. | Mag. | Mean R.A. 1875.0. |  |  | Epoch | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9 I | 91 I | $7{ }^{\circ}$ | $0^{\text {h }}$ | $29^{\text {m }}$ | $46^{8 .}$ OI | 80.83 | 2 | $+3^{8 \cdot 024}$ |
| 92 | 930 | 6.5 | $\bigcirc$ | $3{ }^{\circ}$ | 41*45 | $75 \cdot 53$ | 3 | 3.220 |
| 93 | 960 | 6.5 | $\bigcirc$ | 31 | $41 \cdot 64$ | 71.35 | 2 | 3.380 |
| 94 | 983 | $6 \cdot 5$ | 0 | 32 | 20.63 | 73.08 | 5 | $3 \cdot 162$ |
| 95 | IOI 4 | $7 \cdot 7$ | 0 | 33 | $7 \times 12$ | 64.79 | I | $3 \cdot 311$ |
| 96 | IOI9 | $7 \cdot 7$ | 0 | 33 | 20.17 | 73.44 | 3 | 3.277 |
| 97 | 1045 | $7{ }^{\circ}$ | 6 | 33 | $58 \cdot 60$ | 76.01 | 4 | $3 \cdot 235$ |
| 98 | 1080 | $8 \cdot 2$ | $\bigcirc$ | 34 | $46 \cdot 49$ | $76 \cdot 51$ | 3 | $3 \cdot 177$ |
| 99 | I 100 | $7{ }^{\circ}$ | $\bigcirc$ | 35 | $30 \cdot 81$ | $70 \cdot 45$ | 5 | 3.266 |
| 100 | III3 | $7 \cdot 2$ | $\bigcirc$ | 35 | $49 \cdot 87$ | 72.59 | 4 | 3178 |
| IOI | I 125 | $7 \times 3$ | 0 |  | 20.58 | $78 \cdot 14$ | 4 | 3.133 |
| 102 | 1137 | $7{ }^{\circ}$ | $\bigcirc$ | 36 | 32.05 | $70 \cdot 41$ | 4 | 3.032 |
| 103 | 1147 | $7 \cdot 5$ | 0 | 37 | 19*14 | 74.78 | 2 | $3 \cdot 365$ |
| 104 | $\pm 165$ | 8.1 | 0 | 37 | 34.36 | $74 \cdot 16$ | 3 | 3.140 |
| 105 | 1202 | $8 \cdot 5$ | $\bigcirc$ | 38 | $55^{\circ} 60$ | $70 \cdot 61$ | 5 | 3'195 |
| 106 | 1210 | $6 \cdot 5$ | 0 | 39 | 26.16 | 73.12 | 4 | 3.451 |
| 107 | 1236 | $7 \cdot 5$ | 0 | 39 | 55.30 | 73.79 | 3 | 3.308 |
| 108 | 1240 | $5^{\circ} \mathrm{O}$ | $\bigcirc$ | 40 | $0 \cdot 40$ | $78 \cdot 52$ | 5 | $3^{\prime} 133$ |
| 109 | 1250 | $7 \cdot 8$ | $\bigcirc$ | 40 | $30 \cdot 14$ | $75 \cdot 40$ | 6 | 3.259 |
| I 10 | 1244 | $7^{\circ}$ | $\bigcirc$ |  | $39^{\circ} 09$ | 64.88 | 1 | 3.565 |
| 111 | 1272 | 7.5 | 0 | 40 | 59.28 | 73.07 | 4 | 3.151 |
| 112 | 1305 | $5 \cdot 5$ | $\bigcirc$ | 4 I | $49 \cdot 84$ | $70 \cdot 83$ | 3 | 2.972 |
| I 13 | 1308 | 7.5 | $\bigcirc$ | 42 | 10.00 | $76 \cdot 26$ | 3 | 3.152 |
| 114 | 1322 | $6 \cdot 8$ | 0 | $4^{2}$ | $3 \mathrm{I} \cdot 67$ | $64^{-84}$ | I | 3.135 |
| 115 | 1320 | $7 \cdot 5$ | $\bigcirc$ | 42 | $37 \cdot 37$ | 72.11 | 3 | 3.306 |
| II6 | ${ }^{1} 348$ | $7^{\circ}$ | 0 | 43 | 4.08 | 65.83 | I | 2.957 |
| 117 | ${ }^{1} 336$ | 77 | 0 | 43 | 15.66 | $75 \cdot 27$ | 5 | 3.243 |
| 118 | I 361 | $7{ }^{\circ}$ | 0 | 43 | $30 \cdot 86$ | 80.85 | I | 3.068 |
| 119 | 1357 | $7 \cdot 6$ | 0 | 43 | $32 \cdot 80$ | 71.51 | 3 | 3.205 |
| 120 | 1370 | $7 \cdot 4$ | $\bigcirc$ | 43 | 58.30 | 76.07 | 5 | 3*19 |
| 121 | 1395 | $7 \cdot 3$ | O | 44 | $35^{\prime} 72$ | 73.54 | 3 | $3 \cdot 294$ |
| 122 | 1405 | $8 \cdot 0$ | 0 | 44 | $47 \cdot 84$ | 82.85 | 2 | $3 \cdot 046$ |
| 123 | 1406 | $7{ }^{\circ}$ | 0 | 44 | 58.71 | 74.98 | I | 3.177 |
| 124 | 1414 | $7{ }^{\circ}$ | 0 | 45 | 9.58 | $70 \cdot 66$ | 5 | $3 \cdot 243$ |
| 125 | 1438 | 7.5 | $\bigcirc$ | 45 | $49^{\circ} 76$ | 73.91 | 3 | 3.173 |
| 126 | 1443 | $6 \cdot 7$ | $\bigcirc$ | 46 | $0 \cdot 24$ | $75 \cdot 84$ | I | 3.281 |
| 127 | 1451 | $7 \cdot 8$ | $\bigcirc$ | 46 | I8. |  |  | $3 \cdot 349$ |
| 128 | 1462 | $7 \cdot 3$ | $\bigcirc$ | 46 | $39^{\circ} \mathrm{x} 9$ | $70 \cdot 66$ | 4 | $3 \cdot 322$ |
| 129 | 1479 | $7 \cdot 6$ | $\bigcirc$ | 46 | $5{ }^{1} 73$ | $77 \cdot 36$ | 6 | 3.218 |
| 130 | 1494 | $7{ }^{\circ}$ | - | 47 | 18.28 | $77 \cdot 19$ | 3 | 3-199 |
| 131 | 1495 | 7.3 | 0 | 47 | 22.20 | 69.33 | 4 | 3.245 |
| 132 | 1540 | $6 \cdot 8$ | $\bigcirc$ | 48 | 33.37 | $78 \cdot 84$ | I | 3.197 |
| 133 | - 539 | 7.8 | 0 | 48 | 36.41 | $70 \cdot 85$ | 5 | $3 \cdot 234$ |
| 134 | 1544 | $7 \cdot 5$ | - | 48 | $40 \cdot 38$ | 73.39 | 4 | 3.22 I |
| 135 | 1585 | $8 \cdot 3$ | $\bigcirc$ |  | 5570 | 73.48 | 5 | $+3.227$ |


| No. | Mean N.P.D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 91 | $105^{\circ} 39^{\prime} 33^{\prime \prime \prime} \cdot 1$ | 80.83 | 2 | - $19^{\prime \prime} .89$ | Bn . |
| 92 | 50 21 20.8 | 75.53 | 3 | 19.88 | W 761. |
| 93 | 30 51 $4 \mathrm{I}^{\circ} 5$ | $70 \cdot 36$ | 4 | 19.87 |  |
| 94 | 64 21 48 | 73.08 | 5 | 19.86 | W8i2. |
| 95 | $3^{8} \quad 48$ |  |  | 19.84 |  |
| 96 | $43 \quad 25 \quad 5 \mathrm{I} \cdot \mathrm{I}$ | 77.78 | 2 | 19.84 |  |
| 97 | $\begin{array}{llll}50 & 28 & 31.8\end{array}$ | 70.67 | 6 | 19.84 | W 859. |
| 98 | $\begin{array}{lllll}62 & 3^{8} & 37\end{array}$ | 76.51 | 3 | 19.82 | W 878. |
| 99 | $\begin{array}{lllll}46 & 44 & 52\end{array}$ | $70 \cdot 36$ | 4 | 19.82 | W 901. |
| 100 | $63 \quad 2 \begin{array}{lll}65 \cdot\end{array}$ | 72.59 | 4 | 19.81 |  |
| 101 | 74 I 14*1 | 78.14 | 4 | 19.80 | W 931, R 162. |
| 102 | $\begin{array}{llll}100 & 36 & 24.4\end{array}$ | $70 \cdot 41$ | 4 | 19.80 | W I $137, \mathrm{Si}_{2}, \mathrm{Si}_{3} 48$. |
| 103 | $\begin{array}{lllll}36 & 31 & 57 \%\end{array}$ | 74.78 | 2 | 19.79 | RC 193. |
| 104 | $\begin{array}{llll}72 & 45 & 18 \cdot 3\end{array}$ | 74.16 | 3 | 19.79 | W 963. |
| 105 | $\begin{array}{llll}61 & 29 & 38 \cdot 3\end{array}$ | 70.56 | 4 | 19.77 | W 988. |
| 106 | $31 \quad 6 \quad 33.3$ | $73 \cdot 12$ | 4 | 19.76 | $\mathrm{R}_{8} 279$. |
| 107 | $44 \quad 19$ 9.1 | 72.57 | 4 | 19.75 | Oe 728, $\mathrm{R}_{8} 286$. [G1 206. |
| 108 | $\begin{array}{llll}75 & 12 & 24.7\end{array}$ | 78.52 | 5 | 19.75 | T. 222, $\operatorname{Ar} 158, \mathrm{R}_{2} 288$, N 7 yr 87 , |
| 109 | $\begin{array}{llll}51 & 39 & 12.8\end{array}$ | 75.40 | 6 | 19.75 | W 1023, R296. |
| 110 | ${ }^{2} 533346 \cdot 2$ | 59.89 | 1 | 19.74 | Oe 741. |
| 111 | $\begin{array}{llll}71 & 46 & 55\end{array}$ | 73.07 | 4 | 19.74 | W 1034, $\mathrm{R}_{2} 305, \mathrm{Bn}$. |
| 112 | $\begin{array}{llll}112 & 24 & 18.7\end{array}$ | 68.82 | 3 | 19.72 | Oe $425, \mathrm{Y} 400$, St 315. |
| 113 | $\begin{array}{llllllllllll}71 & 59 & 42\end{array}$ | $76 \cdot 26$ | 3 | 19.72 |  |
| 114 | $\begin{array}{lllll}75 & 52 & 24\end{array}$ | $64 \cdot 84$ | I | 19.71 | W 719, $\mathrm{R}_{2} \mathbf{3 2 2}$, Sp 282. |
| 115 | $\begin{array}{llll}46 & 37 & 143\end{array}$ | 68.87 | 4 | 19.71 | R 194. |
| 116 | $\begin{array}{lll}114 & 49 & \text { 1•I }\end{array}$ | 65.83 | 1 | 19.70 | Oe 440, Bn, Y 414, St |
| 117 | $\begin{array}{llll}55 & 42 & 24.9\end{array}$ | 75.27 | 5 | 19.70 | W [322. |
| 118 | 90854 | $79^{\circ} 90$ | 2 | 19.69 | $\mathrm{W} 732, \mathrm{Si}_{5} 62, \mathrm{~L}_{1} \mathrm{I}_{43}$, |
| 119 | $\begin{array}{llll}62 & 18 & 40 \cdot 4\end{array}$ | $70 \cdot 47$ | 5 | 19.69 |  |
| 120 | $\begin{array}{llll}65 & 5 & 46 \cdot 3\end{array}$ | $76 \cdot 7$ | 5 | 19.69 | W ifig. |
| 121 | $49 \cdot 26 \quad 56 \cdot 2$ | 74.06 | 5 | 19.68 | W 1126. |
| 122 | $95 \quad 43 \quad 2 \cdot 2$ | $82 \cdot 85$ | 2 | 19.67 | W 759. |
| 123 | $\begin{array}{llll}68 & 3 & 267\end{array}$ | 71.40 | 2 | 19.67 | $\mathrm{R}_{3} 346$. |
| 124 | $56 \quad 47{ }^{56} 3^{\circ}$ | 70.62 | 4 | 19.67 | W 1137. |
| 125 | $\begin{array}{llll}69 & 16 & 6 \cdot 3\end{array}$ | 73.91 | 3 | 19.65 | W $\mathrm{II} 55^{\text {, }} \mathrm{R}_{2} 356$. |
| 126 | $\begin{array}{llll}52 & 7 & 49.5\end{array}$ | 71.80 | 2 | 19.65 | $\mathrm{R}_{8} 360$, Y 44 I . |
| 127 | $44 \quad 5 \quad 4.5$ | 64.76 | 1 | 19.65 | Bn . |
| 128 | $47 \quad 18 \quad 41 \times 6$ | $70 \cdot 66$ | 4 | 19.64 | R 212. |
| 129 | $\begin{array}{llll}61 & 35 & 56.5\end{array}$ | 77.07 | 5 | 19.64 | W 1178. |
| 130 | $\begin{array}{lllll}65 & \text { II } & 29.8\end{array}$ | $76 \cdot 63$ | 4 | 19.63 | W 1192. |
| 131 | 5747243 | $70^{\circ} 3^{2}$ | 4 | 19.63 |  |
| 132 | 667 13\% | 78.84 | I | 19.60 | W $1218, \mathrm{R}_{8} 397$. |
| 133 | $60 \quad 106$ | $70 \cdot 47$ | 5 | 19.60 | W 122 I . |
| 134 | $\begin{array}{rrr}62 & 7 & 1.6\end{array}$ | 73.39 | 4 | 19.60 | W 1223. |
| 135 | 61585443 | $73 \cdot 48$ | 5 | - 19.58 | W 1256. |


| No. | Lalande. | Mag. | Mean R.A. 1875.0. |  |  | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I36 | 1611 | 79 | $0^{\text {h }}$ |  | $3 \mathrm{I}^{\text {s. }} 16$ | 77.87 | 3 | $+3^{\text {s. }} 216$ |
| 137 | 1625 | $7 \cdot 9$ | $\bigcirc$ | 51 | 3.99 | $7 \mathrm{I} \cdot 84$ | 4 | 3.273 |
| 138 | 1633 | $8 \cdot 3$ | - | 51 | 5.95 | 64.94 | I | $3 \cdot 235$ |
| 139 | 1629 | $6 \cdot 8$ | $\bigcirc$ |  | 13.49 | $77 \cdot 14$ | 4 | 3.310 |
| 140 | 1671 | $6 \cdot 0$ | $\bigcirc$ | 5 I | 20.97 | 79.56 | 3 | 3.141 |
| 141 | 1663 | $6 \cdot 8$ | $\bigcirc$ | 52 | 16.99 | 70.95 | 6 | 3.259 |
| 142 | 1665 | $7 \cdot 2$ | 0 |  | 17.87 | $7 \mathrm{I} \cdot 87$ | 5 | $3 \cdot 226$ |
| 143 | I681 | $7{ }^{\circ}$ | $\bigcirc$ |  | 25.88 | 67.85 | 5 | 3.037 |
| 144 | 1677 | 73 | $\bigcirc$ | 52 | $42 \cdot 73$ | 73.29 | 5 | $3 \cdot 261$ |
| 145 | 1689 | $7^{\circ}$ | - | 53 | 4.75 | 77.52 | 3 | 3.405 |
| 146 | 1701 | $7^{\circ}$ | $\bigcirc$ | 53 | 27.16 | $76 \cdot 92$ | 2 | 3.399 |
| I47 | 1727 | $6 \cdot 2$ | $\bigcirc$ | 54 | 14.58 | $73 \cdot 61$ | 4 | 3.43 I |
| I 48 | I 749 | $6 \cdot 9$ | $\bigcirc$ | 55 | 2.69 | 71.84 | 4 | $3 \cdot 455$ |
| I 49 | 1770 | $8 \cdot 0$ | $\bigcirc$ |  | 1138 | $70 \cdot 85$ | 1 | $3 \cdot 123$ |
| I 50 | 1791 | $6 \cdot 5$ | $\bigcirc$ |  | $48 \cdot 60$ | 77.17 | 3 | 3.236 |
| 151 | 1834 | $7^{*} 2$ | $\bigcirc$ | 57 | 370 | 80.85 | 2 | 3.301 |
| 152 | 1847 | $6 \cdot 5$ | 0 | 57 | 34.68 | 73.55 | 3 | 3.342 |
| 153 | 1854 | $6 \cdot 5$ | $\bigcirc$ | 57 | $37 \cdot 82$ | 70.86 | 5 | $3 \cdot 256$ |
| 154 | 1879 | $7 \cdot 3$ | $\bigcirc$ | 58 | 17.86 | $75 \cdot 64$ | 4 | 3.082 |
| I 55 | 1870 | $7{ }^{\circ}$ | $\bigcirc$ |  | 29.41 | $68 \cdot 89$ | I | $3 \cdot 593$ |
| 156 | I 882 | 7.3 | 0 | 58 | 32.91 | 78.87 | I | 3*192 |
| 157 | 1895 | $7{ }^{\circ}$ | 0 | 58 | 42.95 | 65.83 | I | 2.940 |
| ${ }^{1} 58$ | 1912 | $7 \cdot 5$ | $\bigcirc$ | 59 | 51.80 | 71.80 | 4 | 3.309 |
| I 59 | 1924 | 7.5 | I | 0 | I 2.90 | 74.03 | 6 | $3 \cdot 394$ |
| 160 | I943 | 7.5 | 1 | $\bigcirc$ | $36 \cdot 98$ | 70.86 | 5 | 3.432 |
| 161 I62 | 1965 | 8.0 8.5 | 1 | $\bigcirc$ | 47.90 | 77.56 | 3 | 3.057 |
| 162 | 1977 | $8 \cdot 5$ | I | I | 27.05 | 64.94 |  | $3 \cdot 274$ |
| 163 | 1992 | $7^{\circ}$ | 1 | I | 33.05 | 82.90 | 2 | 3.080 |
| 164 | I997 | $7 \cdot 2$ | 1 | 1 | 56.94 | $75 \cdot 34$ | 4 | $3 \cdot 276$ |
| 165 | 2007 | $7{ }^{\circ}$ | I | 2 | I 7.44 | $75 \cdot 86$ |  | $3 \cdot 307$ |
| 166 | 2047 | $6 \cdot 8$ | 1 | 2 | $54 * 27$ | $78 \cdot 95$ | 2 | 3.227 |
| 167 |  | 7.5 | I | 3 | 7.94 | 64.79 | I | 3.380 |
| 168 | 2087 | $8 \cdot 6$ | I | 4 | $0 \cdot$ |  |  | 3084 |
| 169 | 2096 | 73 | I | 5 | 9.70 | 80.45 | 2 | 3.390 |
| 170 | 2110 | $6 \cdot 6$ | I | 5 | 14.26 | 69.68 | 5 | 3.750 |
| 171 | 2 I 32 | 8.0 | I | 5 | 33.56 | 70.66 | 5 | 3.32 I |
| 172 | 2144 | 73 | I | 5 | 57.71 | 74.03 | 5 | 3.303 |
| 173 | 2 I 57 | 73 | I | 6 | 26.14 | $77 \cdot 66$ | 5 | $3 \cdot 398$ |
| 174 | 2191 | $7 \cdot 5$ | I |  | $26 \cdot 58$ | 76.53 | 3 | $3 \cdot 295$ |
| 175 | 2231 | $6 \cdot 8$ | I | 8 | $45 \cdot 25$ | $70 \cdot 88$ | 2 | 3.214 |
| $\pm 76$ | 2247 | $7^{17}$ | 1 | 9 | 9.27 | 72.82 | 2 | 3.216 |
| 177 | 2244 | $7{ }^{\circ}$ | 1 | 10 | 5*73 | 73.42 | 2 | 3.220 |
| 178 | 2280 | $6 \cdot 8$ | I | 10 | 10.61 | $78 \cdot 85$ | I | $3 \cdot 397$ |
| 179 | 2283 | 6.9 | 1 |  | 23.13 | 75.86 | 4 | 3.526 |
| 180 | 2293 | $6 \cdot 8$ | I | 10 | 27.92 | 7I•08 | 4 | $+3.316$ |


| No. | Mean N.P.D1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| I 36 | $63^{\circ} 40^{\prime} 39^{\prime \prime} \cdot 7$ | $77 \cdot 87$ | 3 | - 19'*57 |  |
| 137 | $55 \quad 4 \mathrm{I} \quad 22 \cdot \mathrm{I}$ | 71.84 | 4 | 19.56 | [109, Y 488. |
| I38 | $61 \quad 9 \quad 8 \cdot 9$ | 64.95 | I | 19'56 | W $1284, \mathrm{Bn}$. |
| I39 | $\begin{array}{lll}51 & 12 & 0.6\end{array}$ | $76 \cdot 70$ | 5 | 19.56 | W $1285, \mathrm{Y} 494$. |
| 140 | $\begin{array}{lll}76 & 58 & 48 \cdot 8\end{array}$ | 79.56 | 3 | 19.55 | W 873, $\mathrm{R}_{2} 428, \mathrm{Y}_{496}$ |
| 14I | 58 13 12.I | 70.61 | 5 | 19.54 | W 1315. |
| 142 | 63 I 8.6 | $7 \mathrm{I} \cdot 87$ | 5 | 19.54 | W 1316. |
| 143 | $\begin{array}{lll}96 & 33 & 2 \mathrm{I} \cdot 2\end{array}$ | $67 \cdot 85$ | I | 19.53 | W 890, $\mathrm{Si}_{2}, \mathrm{Sp} 340$. |
| 144 | 58 10 53.7 | $78 \cdot 87$ | 3 | 19.53 | W 1326. |
| 145 | 43 2I 2 I'5 | 77.52 | 3 | 19.52 |  |
| 146 | 43 21 150 | $76 \cdot 92$ | 2 | 19'5 1 |  |
| 147 | $417877^{\circ} 2$ | $73 \cdot 61$ | 4 | 19.50 | Oe 988. |
| 148 | $\begin{array}{llll}39 & 3^{8} & \text { I } 7 \cdot 5\end{array}$ | $7 \mathrm{I} \cdot 84$ | 4 | 19.48 |  |
| 149 | 80 | $65 \cdot 20$ | 3 | 19.48 | W 944, Gl 254. |
| 150 | $62 \quad 55 \quad 32 \cdot 3$ | 77.17 | 3 | 19.46 | W i389, Res 477. |
| 151 | 55 12 9.8 | 80.85 | 2 | 19.43 |  |
| 152 | $504046 \cdot 8$ | 73.91 | 4 | 19.43 | W 142.6, R 249, 2 yr 69. |
| 153 | 6 I - 3 I 3 | $70 \cdot 88$ | 4 | 19.42 | R $250, \mathrm{~T}_{2}, \operatorname{Ar} 221, \mathrm{Gl} 260$. |
| I 54 | $88 \quad 2 \mathrm{I} \quad 23.4$ | $75 \cdot 64$ | 4 | 19.40 | W 1002, $\mathrm{N}_{7 \mathrm{yr}} \mathrm{I} 25, \mathrm{Sp} 362, \mathrm{Y}_{553}$ |
| I 55 | $\begin{array}{llll}32 & 54 & 51.4\end{array}$ | $68 \cdot 89$ | I | 19.40 | $\text { Ое } 1073, \mathrm{RC}_{326}$ |
| I 56 | $\begin{array}{lll}71 & 28 & 22.3\end{array}$ | 73.33 | 2 | $19 * 40$ | W 1449. |
| 157 | $\begin{array}{llll}\text { III } & 24 & 12.6\end{array}$ | $65 \cdot 83$ | I | 19.40 | Oe 6 Io. |
| 158 | 55 31 26.2 | 71.80 | 4 | 19.38 | W 1478. |
| I 59 | $47 \quad 8 \quad 42.4$ | 74.02 | 6 | 19.38 | W 1485. |
| 160 | $\begin{array}{llll}43 & 49 & 35 \cdot 6\end{array}$ | $70 \cdot 88$ | 4 | 19.36 | Oeilit. |
| 16 | $\begin{array}{lll}92 & 24 & 6.0\end{array}$ | 77.56 | 3 | 19.35 | W 1057, PM 87, Sis 97. |
| 162 | 60 | 64.94 | I | 19.34 | W I5II. |
| 163 | $883945^{\circ}$ | $82 \cdot 86$ | I | 19.34 | See Notes. |
| 164 | $60 \quad 15 \quad 35.5$ | 75.34 | 4 | 19.33 | W 1527. |
| 165 | $56 \quad 43 \quad 32 \cdot 5$ | $69 \cdot 8 \mathrm{I}$ | 3 | 19.32 | W 153 x . |
| 166 | $\begin{array}{llll}66 & 52 & 22 \cdot 1\end{array}$ | $78 \cdot 95$ | 2 | 19.30 | $\mathrm{L}_{6}$. |
| 167 | 4944 |  |  | 19.30 | W 7. |
| 168 | $88 \quad 6 \quad 42 \cdot 1$ | $67 \cdot 80$ | 2 | 19.28 | W 25. |
| 169 | 4945 10\% | 77.95 | 1 | 19.25 | W 55. |
| 170 | $\begin{array}{lll}28 & 57 & 29.5\end{array}$ | $67 \cdot 22$ | 6 | 19.25 | Oe 12 Iz . |
| 171 | $\begin{array}{lll}56 & 32 & 39.9\end{array}$ | $70 \cdot 63$ | 4 | 19.24 |  |
| 172 | $\begin{array}{llll}58 & 35 & 20 \cdot 4\end{array}$ | 74.03 | 5 | 19.23 | PM 94, Bn, Gl 288. |
| 173 | $493{ }^{\circ} 4^{\circ} 0$ | $75 \cdot 52$ | 6 | 19.22 | W 77. |
| 174 | $\begin{array}{llll}60 & 7 & 12 \cdot 7\end{array}$ | 74.90 | 4 | 19.20 |  |
| 175 | $\begin{array}{llll}70 & 14 & 46.9\end{array}$ | $68 \cdot 84$ | 4 | 19.16 | W 128. |
| 176 | $70 \quad 9 \quad 3{ }^{7} \times 2$ | $72 \cdot 82$ | 2 | 19*I5 | $W \pm 36 .$ |
| 177 | $69 \quad 36822.7$ | 73.42 | 2 | 19.12 | $\text { W } 166, \text { T } 408 .$ |
| 178 | 5 I 10 $48 \cdot 5$ | 72.25 75.86 | 2 | 19'12 | W i62, R, Y 635. |
| $\begin{array}{r}179 \\ \\ \hline 80\end{array}$ | $\begin{array}{llr}41 & 39 & 3 \cdot 2 \\ 58 & 54 & 56 \cdot 1\end{array}$ | 75.86 | 4 | 19.12 -19.15 | PM 102, Oe 1334. |
| 180 | $\begin{array}{llll}58 & 54 & 56 \cdot 1\end{array}$ | 71.09 | 5 | - 19'11 | W I 75. |


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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| I81 | 2331 | 8.0 | $\mathrm{I}^{\text {h }}$ II ${ }^{\text {m }} 3$ | $39^{\prime \prime} \cdot 96$ | 64.93 | 1 | $+3^{8 .} 340$ |
| 182 | 2330 | $6 \cdot 5$ | 1 II | $42 \cdot 19$ | $68 \cdot 85$ | 3 | 3.378 |
| 183 | 2352 | $8{ }^{\circ}$ | 112 | 37.98 | 73.77 | I | 3.455 |
| 184 | 2408 | $7{ }^{\circ}$ | $1{ }^{1} 3$ | $48^{\circ}$ |  |  | 2.993 |
| 185 | 2396 | $7 \cdot 5$ | 13 | 50.71 | $75 \cdot 82$ | 2 | 3.46 I |
| 186 | 2403 | $6 \cdot 5$ | $1{ }^{1} 4$ | 21.89 | 71.37 | 4 | 3.570 |
| 187 | 2423 | 7.0 | 1.14 | 28.14 | 76.10 | 4 | 3.242 |
| 188 | 2443 | $7 \cdot 5$ | 114 | $4^{8}$ |  |  | $2 \cdot 866$ |
| 189 | 2466 | $6 \cdot 7$ | 1.16 | 11.96 | $70 \cdot 85$ | I | $3 \cdot 387$ |
| 190 | 2483 | $7{ }^{\circ}$ | 116 | $17{ }^{\circ}$ |  |  | 3'154 |
| 191 | 2507 | $7 \cdot 8$ | 17 | 32*43 | $73 \cdot 84$ | 1 | 3.539 |
| 192 | 2539 | 7.0 | 17 | $45 * 44$ | 77.87 | 1 | 3.004 |
| 193 | 2530 | $7 \cdot 3$ | I 8 | 14.27 | 69.47 | 3 | 3.543 |
| 194 | 2581 | $6 \cdot$ | 18 | 32.10 | 7 1'90 | 2 | 2.941 |
| 195 | 2591 | $6 \cdot 8$ | I 19 | 23.49 | $78 \cdot 40$ | 2 | 3.150 |
| 196 | 2597 | $6 \cdot 8$ | I 19 | $49 \cdot 46$ | 74.32 | 5 | 3.302 |
| 197 | 2620 | $8 \cdot 3$ | 20 | $30^{\circ} 13$ | $73 \cdot 84$ | 1 | 3.332 |
| 198 | 2654 | $7 \cdot 5$ | 2 I | 19.21 | $75 \cdot 37$ | 2 | $3 \cdot 335$ |
| 199 | 2637 | $6 \cdot 8$ | 121 | 20.67 | $75 \cdot 87$ | 3 | $3 \cdot 647$ |
| 200 | 2675 | 7.0 | I 2 I | $32 \cdot 84$ | 72.06 | I | 2.977 |
| 201 | 2690 | $7^{\circ} 0$ | 122 | 0.49 | 64.95 | I | 2.92 I |
| 202 | 2673 | 7.4 | 22 | 3.14 | $75 \cdot 85$ | I | 3.413 |
| 203 | 2710 | 6.5 | 22 | 51.44 | 74.07 | 4 | $3 \cdot 265$ |
| 204 | 2740 | $7{ }^{\circ}$ | 23 | 31.82 | 73.92 | 3 | 2.955 |
| 205 | 2762 | $6 \cdot 6$ | I 25 | 0.16 | $76 \cdot 27$ | 5 | 3.399 |
| 206 | 2757 | $6 \cdot 5$ | 125 | 19.69 | $7 \mathrm{I} \cdot 85$ | 2 | $3 \cdot 840$ |
| 207 | 2777 | $6 \cdot 5$ | 125 | 38•16 | $78 \cdot 85$ | I | 3.413 |
| 208 | 2789 | $7 \cdot 0$ | I 26 | 14. |  |  | 3.489 |
| 209 | 2814 | $7{ }^{\circ}$ | I 26 | 44.29 | 72.28 | 5 | 3.417 |
| 210 | 2847 | $7 \cdot 2$ | I 27 | 52.30 | 76.27 | 5 | $3 \cdot 390$ |
| 2 II | 2859 | $8 \cdot 0$ | 128 | 0.84 | $78 \cdot 89$ | 4 | 3.250 |
| 2 I 2 | 2867 | $6 \cdot 8$ | 28 | $30 \cdot 41$ | $76 \cdot 28$ | 5 | 3.501 |
| 213 | 2890 | $6 \cdot 5$ | 128 | $43 \cdot 12$ | 73.92 | 3 | 3.402 |
| 214 | 2918 | $8 \cdot 0$ | 129 | 23.59 | $74 \cdot 83$ | 2 | 3.326 |
| 215 | 2950 | $7 \cdot 3$ | 130 | 3 $1 \times 99$ | 72.11 | 4 | $3 \cdot 301$ |
| 216 | 2969 | $8 \cdot 0$ | 131 | 6.24 | $76 \cdot 87$ | 3 | 3.267 |
| 217 | 2999 | $6 \cdot 5$ | 13 I | 23.05 | 82.86 | I | 2.980 |
| 218 | 3002 | $6 \cdot 5$ | I 3 I | $46 \cdot 8 \mathrm{I}$ | 79.30 | 5 | 3.270 |
| 219 | 3014 | $7 \cdot 2$ | I 32 | 14.52 | $77 \cdot 27$ | 5 | 3.340 |
| 220 | 3032 | $8 \cdot 5$ | I 32 | 21'10 | 64.94 | I | 2.917 |
| 221 | 2996 | $7 \times 5$ | 132 | 33.64 | 7190 | 4 | 3.200 |
| 222 | 3062 | $7 \cdot 2$ | 133 | 43.31 | 69:30 | 2 | $3 \cdot 064$ |
| 223 | 3091 | 8.0 | I 34 | 25.77 | $78 \cdot 86$ | 2 | 3.041 |
| 224 | 3073 | 7.5 | I 34 | $34^{\circ} \mathrm{I} 2$ | 73.78 | 1 | 3.572 |
| 225 | 3 II2 | $7{ }^{\circ}$ | 135 | 44.46 | 74.13 | 4 | $+3.727$ |



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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 226 | 3126 | $7 \cdot 8$ | $\mathrm{I}^{\mathrm{h}} 35^{\text {m }}$ | $49^{\text {8. }}$ |  |  | $+3^{6 .} 390$ |
| 227 | 3140 | $7 \cdot 8$ | I 36 | 30.74 | $76 \cdot 85$ | 2 | 3.670 |
| 228 | 3149 | $6 \cdot 5$ | I 36 | 41.89 | $76 \cdot 55$ | 6 | 3.408 |
| 229 | 3165 | 7.2 | I 37 | I $3 \cdot 13$ | $78 \cdot 92$ | I | 3.414 |
| $23^{\circ}$ | 3166 | $6 \cdot 8$ | I 37 | 2I.26 | $75 \cdot 29$ | 4 | 3.477 |
| 231 | 3 I 81 | 7'5 | 137 | $48 \cdot 53$ | 69.88 | 4 | $3 \cdot 364$ |
| 232 | 3205 | $7 \cdot 5$ | 38 | $28 \cdot 28$ | 73.54 | 3 | $3 \cdot 000$ |
| 233 | 3244 | $6 \cdot 5$ | 39 | $42 \cdot 82$ | $76 \cdot 68$ | 5 | 3.009 |
| 234 | 3243 | $7{ }^{\circ} 0$ | 40 | $3 \cdot 64$ | $75 \cdot 85$ | 3 | $3 \cdot 342$ |
| 235 | 3267 | $8{ }^{\circ}$ | 140 | $43: 36$ | 71*63 | 4 | 3.035 |
| 236 | $33^{\circ 1}$ | $6 \cdot 5$ | 41 | 42.91 | 74.87 | 2 | $2 \cdot 845$ |
| 237 | 3310 | $6 \cdot 5$ | 42 | 26.39 | $70 \cdot 66$ | 5 | 3.352 |
| 238 | 3337 | 73 | 43 | 34.72 | 76.05 | 5 | $3 \cdot 485$ |
| 239 | 3379 | $8 \cdot 0$ | 43 | $58 \cdot 98$ | $78 \cdot 85$ | 2 | 2.996 |
| 340 | 3370 | $7^{\circ}$ | 44 | 14.97 | $72 \cdot 25$ | 3 | $3 \cdot 334$ |
| 241 | 3378 | $7 \cdot 5$ | I 44 | 17.30 | $76 \cdot 23$ | 3 | $3 \cdot 285$ |
| 242 | 3373 | $6 \cdot 6$ | 44 | $5^{1}$ |  |  | $3 \cdot 798$ |
| 243 | 3410 | $8 \cdot 0$ | 45 | 9.32 | $67 \cdot 82$ | 2 | 3.022 |
| 244 | 3405 | $7{ }^{\circ}$ | 1 45 | 12. |  |  | 3.330 |
| 245 | 3419 | $7^{\circ}$ | I 45 | $23^{\circ}$ |  |  | 2.994 |
| 246 | 3412 | $7{ }^{\circ} 2$ | 45 | $48 \cdot 5^{8}$ | 7796 | 2 | 3.511 |
| 247 | 3439 | $7^{\circ}$ | 46 | $48 \cdot 24$ | 72.39 | 2 | 3.780 |
| 248 | 3468 | 8•0 | 46 | $45 \cdot 80$ | 73.88 | 4 | 3.052 |
| 249 | 3476 | $6 \cdot 4$ | 47 | 34.78 | 67.84 | 1 | 3.519 |
| $25^{\circ}$ | 3501 | $7 \times 5$ | 48 | 0.51 | $75 \cdot 63$ | 4 | 3.397 |
| 251 | 3518 | $8 \cdot 0$ | I 48 | 43.27 | 77.82 | 1 | $3 \cdot 685$ |
| 252 | 3560 | 73 | 50 | 6.09 | $78 \cdot 12$ | 4 | $3 \cdot 781$ |
| 253 | 3547 | $5 \cdot 5$ | 50 | 25.87 | 70.60 | 3 | 4342 |
| 254 | 3618 | $5 \cdot 0$ | 50 | $48 \cdot 94$ | 78.93 | I | $2 \cdot 807$ |
| 255 | 3596 | 77 | 50 | 53.73 | 71* 6 | 4 | 3.401 |
| 256 | 3621 | 7.0 | 51 | 47.59 | 75.39 | 4 | 3.473 |
| 257 | 3640 | $7 \cdot 7$ | 52 | 3.82 | 77.38 | 4 | $3 \cdot 273$ |
| 258 | 3693 | 7.0 8.6 | 53 | 27.30 | $78 \cdot 90$ | I | $2 \cdot 908$ |
| 259 | 3683 | $8 \cdot 6$ | I 53 | $35^{\circ}$ |  |  | $3 \cdot 204$ |
| 260 | 3689 | 777 | 53 | $43 \% 0$ | $73 \cdot 10$ | 5 | $3 \cdot 184$ |
| 261 | 3682 | $7 {fecff4b74-608c-4b90-8853-e4c1c567a6c6}7 & \(70^{\circ} 50$ | 2 | $5 \cdot 85$ | Oe $5382, \mathrm{Bn}$. |  |  |
| 617 | $\begin{array}{llll}93 & 55 & 41.5\end{array}$ | 83.02 | I | 5.85 |  |  |  |
| 618 | 69 I5 44.3 | 82.05 | 1 | $5 \cdot 80$ | W i170, Re 2488, 75 r Oe 3546, Bn. [362. |  |  |
| 619 | 10634 |  |  | $5 \cdot 74$ | Oe 3546, Bn. [362. W $1192, \mathrm{PM}_{502}, \mathrm{R}_{1346}$ |  |  |
| 620 | $63 \quad 30 \quad 59.9$ | 77:32 | 3 | $5 \% 0$ | $\begin{array}{r} \mathrm{W}_{\mathrm{II} 92,} \mathrm{PM}_{502}, \mathrm{R}_{\mathrm{I} 346}, \\ {\left[\mathrm{R}_{2} 2495 .\right.} \end{array}$ |  |  |
| 621 | 69 21-1 | 68.25 | 6 | $5 \cdot 67$ | W 1208. |  |  |
| 622 | $\begin{array}{llll}92 & 15 & 14.7\end{array}$ | 71.33 | 3 | $5 \cdot 67$ | $\mathrm{W}_{\mathrm{W}} \mathrm{I} 8 \mathrm{r}, \mathrm{Si}_{\mathrm{g}}, \mathrm{Sp} 1608$. |  |  |
| 623 | $\begin{array}{llll}52 & 54 & 46\end{array}$ | 69.08 | 4 | 5.59 | W 1218. |  |  |
| 624 | $\begin{array}{lllll}101 & 7 & 5\end{array}$ | 80.48 | 2 | 5.54 | W $1230, \mathrm{Si}_{2}, \mathrm{Si}_{3} 47 \mathrm{O}$, WI229,Spi620, Glı 122 |  |  |
| 625 | $\begin{array}{lllllllllll}86 & 43 & 27\end{array}$ | 72.04 | 5 | $5 \cdot 51$ | W1229,Spi620, Gli226 |  |  |
| 626 | $\begin{array}{llll}63 & 27 & 20 \cdot 8\end{array}$ | 74.83 | 6 | $5 \times 44$ | W 1270. |  |  |
| 627 | $\begin{array}{llll}25 & 14 & 34.4\end{array}$ | 60.08 | 1 | $5 \cdot 40$ | Oe 5475. |  |  |
| 628 | $\begin{array}{llll}54 & 14 & 16 \%\end{array}$ | 71.62 | 5 | $5 \cdot 39$ | W 1280. |  |  |
| 629 | 101 51 57 | 64.93 | 1 | 5.28 | W 1304, $\mathrm{Si}_{3} 479$. |  |  |
| 630 | $885945 \cdot 8$ | $78 \cdot 10$ | 2 | $-5.28$ | W $1296, \mathrm{Si}_{1}$, Gl 1239. |  |  |


| No. | Lalande. | Mag. | Mean R.A. 1875.0. |  |  | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 631 | 9567 | $7{ }^{\circ}$ | $4^{\text {h }}$ | $59^{\text {m }}$ | $10^{8 .} 14$ | 69.27 | 5 | $+3^{8.601}$ |
| 632 | 9594 | $7 \cdot 9$ | 4 | 59 | 30.60 | 73.03 | 5 | 3.154 |
| 633 | 9598 | $7 \cdot 8$ | 4 | 59 | 54.30 | 75.99 | 1 | 3.436 |
| 634 | 9647 | $3 \cdot 8$ | 5 | $\bigcirc$ |  |  |  | 2.536 |
| 635 | 9659 | $6 \cdot 0$ | 5 | $\bigcirc$ | 50.64 | $79 \cdot 06$ | I | $2 \cdot 767$ |
| 636 | 9630 | $7 \cdot 8$ | 5 | 0 | 55'73 | 73.03 | 4 | 3.435 |
| 637 | 9683 | $7^{\circ}$ | 5 | I | 35.94 | 81.55 | 2 | $2 \cdot 782$ |
| 638 | 9653 | $5 \cdot 5$ | 5 | 1 | 54.20 | $71 \cdot 31$ | 4 | 3.757 |
| 639 | 9699 | $7 \cdot 0$ | 5 | 2 | 23.22 | 74.23 | 5 | $3 \cdot 141$ |
| 640 | 9697 | $7 \cdot 1$ | 5 | 3 | 34.05 | 71.22 | 5 | $4 \cdot 158$ |
| 641 | 9664 | $6 \cdot 5$ | 5 | 4 | 1 1 -98 | $69^{1} 13$ | 1 | $5 \cdot 25$ I |
| 642 | 9764 | $7 \circ$ | 5 | 5 | I.86 | $82 \cdot \mathrm{O}$ | 2 | 3.012 |
| 643 | 9743 | $7{ }^{\circ}$ | 5 | 5 | 22.43 | $76 \cdot 24$ | 5 | 4.047 |
| 644 | 9754 | $7{ }^{\circ}$ | 5 | 5 | $54^{\circ}$ |  |  | $4 \cdot 467$ |
| 645 | 9769 | $7 \cdot 5$ | 5 | 6 | 14.80 | 71.80 | 4 | $3 \cdot 831$ |
| 646 | 9802 | $6 \cdot 8$ | 5 | 7 | 2.10 | 72.50 | 2 | 3'II4 |
| 647 |  | $6 \cdot 0$ | 5 | 9 | $7 \cdot 60$ | 68.00 | I | 3.330 |
| 648 | 9849 | $9^{\circ} \mathrm{O}$ | 5 | 9 | $9 \cdot 94$ | 8101 | I | 2.992 |
| 649 | 9827 | $6 \cdot 5$ | 5 | 9 | 21.30 | 71.2I | 5 | 3.789 |
| 650 | 9854 | $7 \cdot 8$ | 5 | 9 | 53.8 I | 73.96 | I | 3.45 I |
| 651 | 9831 | $7 \cdot 3$ | 5 | 9 | 55.54 | 7132 |  | 4.038 |
| 652 | 9886 | $7{ }^{\circ}$ | 5 | 10 | 19.68 | $78 \cdot 10$ | 2 | 2.808 |
| 653 | 9864 | 7.8 | 5 | 10 | $57 \cdot 25$ | $78 \cdot 25$ | 4 | 3.979 |
| 654 | 9890 | $7 \cdot 5$ | 5 | 11 | $45 \cdot 30$ | $70 \cdot 49$ | 4 | 4.04I |
| 655 | 9973 | $6 \cdot 5$ | 5 | I 3 | I 5.50 | 80.01 | 2 | 3.037 |
| 656 | 9971 | 8.0 | 5 | 13 | 17.77 | 73.70 | 2 | 3•128 |
| 657 | 9955 | 77 | 5 | 13 | $47 \times 79$ | 71.86 | 5 | 4.027 |
| 658 | 10023 | $7{ }^{\circ}$ | 5 | 14 | 18.03 | 6512 | I | 2.947 |
| 659 | 10028 | 7.3 | 5 | 14 | $43 \cdot 88$ | 79.06 | I | 3.16I |
| 660 | 10011 | $6 \cdot 8$ | 5 | 15 | 25.99 | 71.01 | 5 | 4.035 |
| 66 I | 10041 | $6 \cdot 8$ |  | 16 | $20 \cdot 30$ | $70 \cdot 55$ | 4 | 4.028 |
| 662 | 10066 | $8 \cdot 5$ | 5 | 16 | 54.48 | $75 \% 7$ | 4 | 3.933 |
| 663 | 10107 | $7 \cdot 5$ | 5 | 17 | 44.73 | 8I.OI | 1 | 3562 |
| 664 | IOI 45 | $5{ }^{\circ}$ | 5 | 18 | 15. |  |  | 3.112 |
| 665 | 10165 | $8 \cdot 0$ | 5 | I 8 | $45 \cdot 37$ | $65 \cdot 12$ | I | 3.005 |
| 666 | ror79 | $6 \cdot 0$ | 5 | I9 | 52.63 | 64.97 | I | $3 \cdot 496$ |
| 667 | Ior90 | $7{ }^{\circ} 1$ | 5 | I9 | 54.97 | 75.05 | 1 | 3.228 |
| 668 | ror68 | $6 \cdot 7$ | 5 | 20 | 7.98 | 7 I 3 I | 4 | 3.981 |
| 669 | 10210 | $7 \cdot 7$ | 5 | 20 | $52 \cdot 73$ | $76 \cdot 55$ | 4 | 3.622 |
| 670 | 10209 | $6 \cdot 6$ | 5 | 21 | 21.35 | 69.67 | 5 | 4.005 |
| 671 | 10223 | 7.7 | 5 | 21 | $32 \cdot 26$ | 74.53 | 4 | 3.936 |
| 672 | 10308 | $7{ }^{\circ}$ | 5 | 22 | 42.64 | $65 \cdot 12$ | I | 2.993 |
| 673 | 10293 | 7.5 |  | 22 | 46 I2 | 73.51 | 4 | $3 \cdot 451$ |
| 674 | 10271 | 7.8 |  | 22 | $57^{\circ}$ |  |  | 4.055 |
| 675 | 10339 | $7 \cdot 4$ |  | 23 | $43 \cdot 61$ | $75 \cdot 06$ | I | $+3.167$ |


| No. | Mean N.P.D. $1875 \cdot 0$. | Epoch. | Obs. | Ann. Prec. | Anthorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 631 | $67^{\circ} 39^{\prime} 33^{\prime \prime} \cdot 0$ | $70 \cdot 62$ | 7 | $-5^{\prime \prime} \cdot 26$ | W $1325, \mathrm{R}_{2} 2531$. |
| 632 | $86 \quad 23$ 1.0 | $73 \cdot 03$ | 5 | $5 \cdot 23$ | W $\mathrm{I}_{3} 5, \mathrm{Si}_{1}$. |
| 633 | $\begin{array}{llll}74 & 13 & 59.7\end{array}$ | 75.99 | I | $5 \cdot 20$ | $\mathrm{W}_{1350} \mathrm{R}_{13} 85, \mathrm{R}_{2} 2540$. |
| 634 | $\begin{array}{lll}\text { II } & 32 & 26.0\end{array}$ | 68.01 | I | 5.17 | See Notes. |
| 635 | $\begin{array}{llll}103 & 17 & 32.9\end{array}$ | 79.06 | I | 5'12 |  |
| 636 | $\begin{array}{llll}74 & \text { I8 } & 4 \mathrm{~T} 4\end{array}$ | 73'04 | 5 | 5*II | W 1387 , R 1390. |
| 637 | $\begin{array}{llll}102 & 39 & 18.5\end{array}$ | 81.55 | 2 | 5.06 | W $1379, \mathrm{Si}_{3} 486, \mathrm{Y} 2167$. |
| 638 | $\begin{array}{llll}62 & 7 & 48 \cdot 7\end{array}$ | 67.57 | 6 | $5 \cdot 03$ | $\mathrm{W}_{142 \mathrm{I}, \mathrm{PM}_{52 \mathrm{I}}, \mathrm{R}_{2} 2549 .}$ |
| 639 | $86 \quad 56$ | 74.23 | 5 | 4.99 | Sp 1655 |
| 640 | 503190 | $69 \cdot 36$ | 6 | $4 \cdot 89$ | W 5 . |
| 641 | 30.44 | 74.72 | 3 | $4 \cdot 84$ | Oe 5599. |
| 642 | $\begin{array}{llll}92 & 38 & 51 & 3\end{array}$ | $82 \cdot 01$ | 2 | 4.76 | W 57, Si ${ }_{2}$, Gl 1266. |
| 643 | $\begin{array}{llll}53 & 7 & 5 \cdot 6\end{array}$ | $76 \cdot 24$ | 5 | 474 | W 72. |
| 644 | $\begin{array}{llll}42 & 58 & 26 \cdot 4\end{array}$ | 60.06 | 2 | $4 \cdot 69$ | Oe 5637. |
| 645 | $59 \quad 45$ 0.0 | 7 I -80 | 4 | $4 \cdot 66$ | Witi, Y 2 I92. |
| 646 | 88 บо 57'1 | 72.50 | 2 | 4.59 | W [Gl 1283. |
| 647 | $\begin{array}{llll}78 & 48 & 5^{\circ}\end{array}$ | 68:00 | I | $4 \cdot 42$ | Wi66, Tis80, Aris 45, |
| 648 | 93830 | $8 \mathrm{I} \cdot 48$ | 2 | $4{ }^{41}$ | W 175, R 1401. |
| 649 | 615483 | $72 \cdot 07$ | 4 | 4.40 | W 207. |
| 650 | $\begin{array}{llll}73 & 47 & 18 \cdot 6\end{array}$ | 73.96 | I | 4.35 | W 236. |
| 651 | 53 30 22.2 | 71.68 | 5 | 434 |  |
| 652 | IOI 288381 | $69 \cdot 01$ | 2 | 431 | W 208, $\mathrm{Si}_{\mathrm{a}} 503$. |
| 653 | $55 \quad 14417$ | $78 \cdot 25$ | 4 | $4 \cdot 26$ |  |
| 654 | $\begin{array}{llll}53 & 27 & 29\end{array}$ | $70 \cdot 49$ | 4 | 4'19 |  |
| 655 | $\begin{array}{llll}91 & 32 & 38 \cdot 2\end{array}$ | $80^{\circ} \mathrm{OI}$ | 2 | 4.06 | W 26I, $\mathrm{Si}_{2}$. |
| 656 | $873^{6} \quad 5 \mathrm{I} \cdot \mathrm{I}$ | 73.40 | 3 | 4.06 | W 259, T 1917. |
| 657 | $535536 \cdot 1$ | 71.86 | 5 | 4.02 |  |
| 658 | 9529 |  |  | 3.97 | W 296, Si ${ }_{2}$. [1733, Gl I $_{\text {305. }}$ |
| 659 | $86 \quad 6 \quad 55.4$ | 79*06 | 1 | 3.94 | W 303, R2 $2580,12 \mathrm{yr} 444, \mathrm{Sp}$ |
| 660 | $53 \quad 43 \quad 23.5$ | $69 \times 19$ | 6 | $3 \cdot 88$ | W $3^{85}, \mathrm{RI} 422$. |
| 661 | $\begin{array}{lll}53 & 55 & 8 \cdot 0\end{array}$ | 70.55 | 4 | $3 \cdot 80$ | $\text { W } 406$ |
| 662 | 55 т5 39.5 | $72 \cdot 71$ | 6 | 3.75 | PM 563. |
| 663 | 69 31 | $70 \cdot 55$ | 2 | $3 \cdot 68$ | W 462 . |
| 664 | 88 I6 II'I | $68 \cdot 00$ | I | $3 \cdot 63$ | See Notes. |
| 655 | $\begin{array}{llll}92 & 55 & 48 \cdot 9\end{array}$ | $65 \cdot 12$ | I | $3 \cdot 59$ | $\mathrm{W}_{405}, \mathrm{Si}_{2}, \mathrm{Sp} \mathrm{Si}_{767} \mathrm{~F}, \mathrm{Gl}$ |
| 666 | $\begin{array}{llll}72 & 8 & 49 \%\end{array}$ | 64.97 | I | 3.49 | T 1970, Arı188, 7yr 399, N7yr |
| 667 | $83 \quad 14303$ | $75 \cdot 05$ | I | 3.49 | W 431, Gl 1328 . [692, Y 2258. |
| 668 | $\begin{array}{lll}55 & 24 & 37 \cdot 2\end{array}$ | 7 I 31 | 4 | 3.47 | $\text { W } 525$ |
| 669 | 67 21 $49^{\circ} 2$ | $77 \cdot 64$ | 5 | 3.41 | W 558, R $1435, \mathrm{R}_{2} 2610$. |
| 670 | $54 \quad 43$ | 69.67 | 5 | $3 \cdot 37$ |  |
| 671 | $\begin{array}{llll}56 & 45 & 32 \cdot 6\end{array}$ | 73.43 | 5 | $3 \cdot 35$ |  |
| 672 | $93 \quad 24$ |  |  | $3 \cdot 25$ | W 520, $\mathrm{Si}_{8}$. |
| 673 | $\begin{array}{lll}73 & 57 & 3 \cdot 2\end{array}$ | $70 \cdot 82$ | 5 | $3 \cdot 25$ | W 625. |
| 674 | 53 19 11.5 | $60 \cdot 06$ | 2 | 3.22 |  |
| 675 | 85 | 75.06 | I | $-3.16$ | $\mathrm{W}_{543}, \mathrm{Si}_{1}, \mathrm{Gl}$ I 345. |


| No. | Lalande. | Mag. | Mean R.A. 1875.0. |  |  | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 676 | 10324 | $7 \times 0$ | $5^{\text {h }}$ | $24^{\text {m }}$ | $27^{\text {8 }} 34$ | 71.66 | 5 | $+4^{\text {b.0 }} 040$ |
| 677 | 10394 | $7 \times$ | 5 | 25 | 5'14 | 73.96 | 3 | 2.836 |
| 678 | 10400 | 7.5 | 5 | 25 | $22^{\prime} 15$ | $71 \times 59$ | 4 | 2.996 |
| 679 | 10437 | 6.0 | 5 | 26 | 22.12 | $66 \cdot 12$ | I | 3.033 |
| 680 | 10408 | 73 | 5 | 26 | 54.90 | 69.97 | I | 4.099 |
| 68 I | 10456 | $7 \times 4$ | 5 | 27 | 10'75 | 80.53 | 2 | 3.043 |
| 682 | 10496 | 77 | 5 | 28 | $5 \cdot 35$ | 74.08 | 2 | 3.070 |
| 683 | 10492 | 6.5 | 5 | 28 | 19.57 | $70 \cdot 69$ | 5 | 3.371 |
| 684 | ${ }_{10518}$ | 7.5 | 5 | 28 | $35 \cdot 55$ | 8 I ¢ I | 1 | 2.825 |
| 685 | 10489 | $6 \cdot 6$ | 5 | 28 | $45 \cdot 48$ | $71^{\prime 2}$ | 4 | 3.714 |
| 686 | ro540 | 5‘5 | 5 | 29 | 13•19 | 68.00 | I | 2.958 |
| 687 | 10525 | $6 \cdot 7$ | 5 | 29 | 20.71 | $79^{\circ} 06$ | I | 3.743 |
| 688 | 10505 | $7 \cdot$ | 5 |  | 50.72 | 70.82 | 4 | 4.254 |
| 689 | 10548 | $3 \cdot 1$ | 5 |  | 10.56 | $80 \cdot 05$ | 2 | 3.583 |
| 690 |  | $8 \cdot 5$ | 5 | 31 | 3. |  |  | 3.279 |
| 691 | 10607 | $7 \times 0$ | 5 |  | 56.63 | $7{ }^{1} 27$ | 5 | $3 \cdot 600$ |
| 692 | 106I5 | 6.4 | 5 | 32 | 30.6 r | 72.94 | r | 3.879 |
| 693 | 10636 | 7.8 | 5 | 32 | $46 \cdot 24$ | 73.58 | 4 | 3.545 |
| 694 | 10630 | 79 | 5 | 32 | 59.17 | 68.98 | 5 | 3.962 |
| 695 | 10682 | $7 \cdot 8$ | 5 | 33 | 20.71 | 82.05 | I | $3 \cdot 105$ |
| 696 |  | $7 \times$ | 5 | 34 | 21.52 | $7 \mathrm{~F} \times 04$ | 2 | 3.005 |
| 697 | 10709 | $8 \cdot 2$ | 5 | 34 | 26.49 | $71 \times 10$ | 3 | 3.622 |
| 698 | 10703 | $7 \cdot 1$ | 5 | 34 | 44.87 | 72.06 | 2 | 3.943 |
| 699 | 10776 | $7 \cdot 0$ | 5 | 35 | 24.22 | 80.09 | I | 3.003 |
| 700 | 10795 | 57 | 5 | $3^{6}$ | $\bigcirc \cdot 57$ | 68.01 | 1 | $3 \cdot 105$ |
| 701 | 10687 | 73 | 5 | 36 | 1147 | $70 \cdot 65$ | 4 | 5.262 |
| 702 | 10826 | $7{ }^{\circ}$ | 5 | 36 | 49.96 | $65 \cdot 12$ | I | 2.912 |
| 703 | 10722 | 6.5 | 5 | 37 | 19.02 | 69.06 | 1 | 5.656 |
| 704 | 10805 | $6 \cdot 7$ | 5 | 37 | $24^{\circ} \mathrm{O}$ | 73.82 | 4 | 3.880 |
| 705 | 10842 | $7{ }^{\circ}$ | 5 | 37 | 59.44 | 73.25 | 7 | 3.375 |
| 706 | 10881 | $7{ }^{\circ}$ | 5 |  | $29^{\circ} \mathrm{I}$ | $80 \cdot 65$ | 2 | 2.910 |
| 707 | 10769 | $6 \cdot 2$ | 5 | 39 | 28.58 | 69.13 | I | 6.440 |
| 708 | r0895 | 6.2 | 5 | 39 | $34^{\circ}$ |  |  | 3.448 |
| 709 | 10871 | 6.5 | 5 | 39 | 34.78 | 70.84 | 5 | 4.008 |
| 710 | 10918 | $6 \cdot 1$ | 5 | 40 | 8. |  |  | $3 \cdot 497$ |
| 711 | 10908 | $7 \cdot 0$ | 5 |  | $43 \cdot 84$ | 71.68 | 3 | 4*139 |
| 712 | 10969 | $7 \cdot 5$ | 5 | 41 | 1.48 | 79.37 | 3 | 3.364 |
| 713 | 10923 | $7{ }^{\circ}$ | 5 | 41 | 4. |  |  | 4.138 |
| 714 | 10968 | $5 \% 3$ | 5 | 4 I | 20.76 | $70 \cdot 87$ | 5 | 3.680 |
| 75 | 10975 | $7^{\circ}$ | 5 | 4 I | $47 \cdot 28$ | 7「08 | 2 | $3 \cdot 766$ |
| 716 | 11060 | 8. | 5 | 42 | 58.25 | $65^{\circ} 5^{2}$ | 2 | $2 \cdot 731$ |
| 717 | 11021 | 6.5 | 5 | 43 |  |  |  | $3 \cdot 779$ |
| 718 | 11026 | 7.2 | 5 | 43 | 36.70 | $7 \mathrm{~F} \cdot 03$ | 3 | 4.133 |
| 719 | 11086 | 6. | 5 | 43 | $55^{\prime} 7^{2}$ | $77 \cdot 23$ | 6 | 2.727 |
| 720 | 11066 | $6 \cdot 8$ | 5 | 44 | $57 \cdot 62$ | 70.02 | 5 | + 4.088 |


| No. | Mean N.P.D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 676 | $53^{\circ} 46^{\prime} 23^{\prime \prime} \cdot 9$ | 71.66 | 5 | $-3^{\prime \prime} \cdot 10$ |  |
| 677 | 100 10 $3^{\prime 2}$ | 75.95 | 4 | $3 \cdot 05$ | W 596, $\mathrm{Si}_{4}, \mathrm{Si}_{3} 528$, Note. |
| 678 | $\begin{array}{lllll}93 & 18 & 40 \cdot 9\end{array}$ | 71.59 | 4 | $3 \cdot 1$ | W 6oI. |
| 679 | $9 \mathrm{I} 4 \mathrm{4} \quad 2 \cdot 7$ | 66.12 | 1 | 2.93 | W 6i9, $\mathrm{Si}_{3}, \mathrm{~L}_{1} 722$. |
| 680 | $5^{2}$ II $4^{\text {a }}$ I | 65.02 | 2 | 2.88 | W 736. |
| 681 | $9 \mathrm{llll}{ }^{1} 147^{7} 7$ | $80 \cdot 53$ | 2 | 2.86 | $12 \mathrm{yr} 468,7 \mathrm{yr}_{4} \mathrm{I} 2, \mathrm{~L}_{1} 728$. |
| 682 | $90 \quad 5 \quad 56 \cdot 8$ | 74.08 | 2 | $2 \cdot 78$ | W 658, $6 \mathrm{yr}^{3} 393$. |
| 683 | 79 50 $42^{\circ} \mathrm{O}$ | $70 \cdot 69$ | 5 | $2 \cdot 76$ | $\mathrm{R}_{2} 2648$. |
| 684 | $100 \quad 35 \quad 173$ | 81.48 | 2 | $2 \cdot 74$ | W 686, $\mathrm{Si}_{2}, \mathrm{Si}_{3} 536$. |
| 685 | $64 \quad 8 \quad 39^{\circ} \mathrm{F}$ | $71 \cdot 22$ | 4 | $2 \cdot 72$ | W 816. |
| 686 | $\begin{array}{llll}94 & 55 & 19.8\end{array}$ | 68.00 | I | 2.69 | T 2049, ${ }^{\text {Ar }} 124 \mathrm{~L}, \mathrm{Si}_{2}$, St |
| 687 | $\begin{array}{llll}63 & 9 & 23 \cdot 2\end{array}$ | 79.06 | 1 | $2 \cdot 67$ | W 842, Gl 1364. [2480. |
| 688 | $\begin{array}{llll}48 & 14 & 15.1\end{array}$ | 70.82 | 4 | 2.63 |  |
| 689 | $\begin{array}{llll}68 & 56 & 10 \cdot 2\end{array}$ | $76 \cdot 00$ | 3 | 2.61 | $\zeta$ Tauri, see Notes. |
| 690 | $81740 \%$ | 6x 55 | 2 | $2 \cdot 53$ | W 740, Ar 1253. |
| 69 I | 68 I8 $35{ }^{\circ}$ | 7「27 | 5 | 2.45 | W 953. |
| 692 | $\begin{array}{llll}58 & 4^{2} & 47 \%\end{array}$ | $72 \cdot 94$ | I | $2 \cdot 40$ | W 962. |
| 693 | $\begin{array}{llll}70 & 23 & 26.9\end{array}$ | 73.58 | 4 | $2 \cdot 38$ |  |
| 694 | 56 9 $0 \cdot$ <br> 8   | 65.98 | 5 | $2 \cdot 36$ |  |
| 695 | $\begin{array}{llll}88 & 34 & 44.8\end{array}$ | 82.05 | I | $2 \cdot 32$ | W 8ı7, Spı $870, \mathrm{Gly}_{3} 83$. |
| 696 | $\begin{array}{lllll}92 & 53 & 36 \cdot 5\end{array}$ | $75^{\circ} \mathrm{O}$ | 2 | 2.24 | W 844, $\mathrm{Si}_{2}$. |
| 697 | $673053{ }^{\circ} \mathrm{I}$ | $70 \cdot 33$ | 4 | 2.23 | R 1517 , Ar 1268. |
| 698 | $\begin{array}{llllll}56 & 44 & 55^{\prime} \text { I }\end{array}$ | $72 \cdot 06$ | 2 | $2 \cdot 20$ | W io66, PM 62 I . |
| 699 | $\begin{array}{llll}92 & 57 & 45.8\end{array}$ | $80 \cdot 09$ | I | $2 \cdot 15$ | W 88ı. |
| 700 | $\begin{array}{llll}88 & 35 & 154\end{array}$ | 68.01 | I | $2 \cdot 10$ | W892,T 2 I12, $\mathrm{R}, \mathrm{Ar}_{1275}$, <br> $\left[\mathrm{Si}_{1}, \mathrm{Sp}\right.$ I 89 I |
| 701 | $\begin{array}{llll}31 & 16 & 12.8\end{array}$ | 69.01 | 6 | $2 \cdot 08$ | Oe 6i47. |
| 702 | $96 \quad 51$ |  |  | 2.02 | W 921, $\mathrm{Si}_{2}$, Sp 1897. |
| 703 | $\begin{array}{llll}27 & 14 & 3 \mathrm{r} & 8\end{array}$ | 64.57 | 2 | 1.98 | Oe 6165. |
| 704 | $\begin{array}{llll}58 & 43 & 50 \cdot 9\end{array}$ | 73.82 | 4 | $\times .97$ |  |
| 705 | 77 10 I•8 | $73 \cdot 25$ | 7 | $1 \cdot 92$ | W 939, Sp igo5, Glı407. |
| 706 | $96 \quad 55{ }^{6} 3 \times 9$ | $8 \mathrm{x} \cdot 99$ | I | I. 88 | W $964, \mathrm{Si}_{2}$. |
| 707 | 2 llll | $69 \cdot 13$ | I | 1.80 |  |
| 708 | $\begin{array}{lllll}74 & 13 & 43.5\end{array}$ | 66.05 | 3 | 1.79 1.78 | See Notes. |
| 709 | $\begin{array}{llll}54 & 53 & 23.5\end{array}$ | $69^{\circ} \mathrm{O}$ | 6 | $\times 1.78$ | W 1260, Y 2377. |
| 710 | 72 19 10.0 | 67.50 | 2 | 1'74 | $\left\lvert\, \begin{array}{r} \text { Ar } 1290, \mathrm{R}_{2} 2730,6 \mathrm{yr} 412 . \mid \\ {\left[\mathrm{B}_{1} 46 .\right.} \end{array}\right.$ |
| 711 | $\begin{array}{llll}51 & 18 & 217\end{array}$ | 72.58 | 2 | I. 68 | W 1296, Ari294, Y 2385. |
| 712 | $\begin{array}{llll}77 & 37 & 43^{\circ}\end{array}$ | 79.37 | 3 | 1.66 | $\mathrm{R}_{2} 2739, \mathrm{Sp} 1926$. |
| 713 | $\begin{array}{lllll}51 & 20 & 508 \\ 6 & \\ 5 & 28 & 35.5\end{array}$ | 69.87 | 1 | ${ }^{1} 66$ |  |
| $7 \times 4$ | $\begin{array}{llll}65 & 28 & 35.5\end{array}$ | $70 \cdot 87$ | 5 | r. 63 | $\mathrm{R}_{1} 572,12 \mathrm{yr} 493,6 \mathrm{yrr}_{414} 4$, |
| 715 | $\begin{array}{llll}62 & 29 & 26.5\end{array}$ | 71.08 | 2 | I'59 |  |
| $7^{16}$ | 10421 |  |  | I 49 | $\mathrm{L}_{5} 126$. |
| 717 | $\begin{array}{lll}62 & 4 & 197\end{array}$ | 67.50 | 2 | $1 \cdot 48$ | Ar i 309, Gl 1438. |
| 718 | $\begin{array}{llll}51 & 28 & 33 \cdot 2\end{array}$ | 68.41 | 5 | ${ }^{\circ} 43$ | W 1387, PM 646. |
| 719 | 10431815 | $76 \cdot 65$ | 7 | 141 | W IIoo, $\mathrm{Si}_{4} 477$. |
| 720 | $\begin{array}{llll}52 & 4^{1} & 478\end{array}$ | 68.03 | 5 | $-1.31$ |  |




| No. | Lalande. | Mag. | Mean R.A. | 1875.0 | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 766 | I 1867 | $7 \cdot 5$ | $6 \quad 7^{\text {m }}$ | $2^{\text {8. }} 80$ | 66.14 | I | $+2^{8 .} 956$ |
| 767 | 11839 | $6 \cdot 5$ | 67 | 10.45 | 69.70 | 3 | 3.505 |
| 768 | I 1864 | 7.7 | 67 | 34.71 | 69.91 | 5 | 3.42 I |
| 769 | 11875 | $7{ }^{\circ}$ | 68 | 19.55 | $75 \cdot 07$ | 4 | $3 \cdot 848$ |
| 770 | 11901 | $6 \cdot 5$ | 69 | 9.88 | $75 \cdot{ }^{8}$ | 4 | 4.014 |
| 771 | 1 1969 | $7^{\circ}$ | 6 10 | 27.37 | 76.04 | 2 | 3.408 |
| 772 | 12018 | $6 \cdot 5$ | 610 | $38 \cdot 82$ | 74.43 | 3 | $3 \cdot 192$ |
| 773 | 11989 | $6 \cdot 0$ | 610 | $58 \cdot 72$ | $70 \cdot 29$ | 5 | 3.416 |
| 774 | 12007 | $6 \cdot 5$ | 6 II | $45 \cdot 86$ | 68.49 | 5 | 3.490 |
| 775 | 12038 | 6.6 | 6 I2 | 28.23 | $70 \cdot 69$ | 5 | 3.457 |
| 776 |  | $8 \cdot 7$ | $6 \quad 12$ | $46 \cdot 68$ | 82.05 | 1 | 3'193 |
| 777 | 12057 | $5 \cdot 8$ | $6 \quad 12$ | $56 \cdot 53$ | $76 \cdot 28$ | 5 | 3.422 |
| 778 | 12070 | $7{ }^{\circ}$ | $6 \quad 14$ | 3.48 | $70 \cdot 87$ | 4 | $3 \cdot 843$ |
| 779 | 12143 | 7.5 | $6 \quad 14$ | $39^{\circ} 31$ | $70^{\circ} 15$ | I | 2.966 |
| 780 | 12096 | $7{ }^{\circ}$ | $6 \quad 14$ | 49.97 | 68.8I | 4 | 4.027 |
| 781 | 12176 | $6 \cdot 5$ | 615 | $35 \cdot 24$ | 8I.98 | 1 | 2.797 |
| 782 | 12134 | $6 \cdot 8$ | 6 I5 | 57.98 | $69 \cdot 89$ | 5 | 4.091 |
| 783 | 12182 | 7.5 | 6 I 7 | 3.31 | $70^{\circ} 11$ | 5 | 3.916 |
| 784 | 12216 | $6 \cdot 4$ | $6 \quad 17$ | I 2.23 | 76.83 | 4 | 3.282 |
| 785 | 12217 | $7 \cdot 2$ | 6 17 | 4I*45 | 70.69 | 5 | 3.659 |
| 786 | 12246 | $6 \cdot 5$ | $6 \quad 18$ | 20.14 | 72.61 | 2 | 3.424 |
| 787 | 12262 | 7.4 | 6 I8 | $50 \cdot 56$ | 74.12 | 3 | $3 \cdot 527$ |
| 788 | 12296 | 7.4 | 620 | 21.90 | 69.89 | 5 | 4.060 |
| 789 | 12323 | $6 \cdot 8$ | 620 | $30 \cdot 50$ | 69.88 | 5 | 3.572 |
| 790 | 12325 | 8.1 | 620 | $40 \cdot 92$ | 7237 | 4 | 3.589 |
| 791 | 12359 | 7.5 | 620 | 47'14 | 80.56 | 2 | 2.970 |
| $79^{2}$ | 12316 | 6.1 | 620 | 48'12 | $70 \cdot 17$ | 1 | 3.142 |
| 793 | 12366 | $7{ }^{\circ}$ | $6 \quad 22$ | $20 \cdot 5 \mathrm{I}$ | $72 \cdot 13$ | I | 4.183 |
| 794 | 12402 | $7 \cdot 5$ | $6 \quad 22$ | $48 \cdot 84$ | $76 \cdot 10$ | 3 | 3.626 |
| 795 | 12387 | $6 \cdot 5$ | $6 \quad 23$ | I.32 | 69\%7 | 5 | 4.084 |
| 796 | 12437 | $7 \cdot 2$ | $6 \quad 24$ | 17.53 | 72.78 | 3 | $4 \cdot 183$ |
| 797 | 12444 | $6 \cdot 5$ | $6 \quad 24$ | $18 \cdot 37$ | 71*12 | 5 | 4.016 |
| 798 | 12494 | $5 \cdot 5$ | $6 \quad 24$ | 50'13 | $77 \cdot 46$ | 3 | $3 \cdot 346$ |
| 799 |  | $6 \cdot 8$ | $6 \quad 25$ | $21^{\circ}$ |  |  | $5 \cdot 2$ I6 |
| 800 | 12489 | $6 \cdot 5$ | $6 \quad 25$ | $30 \cdot 57$ | 69.90 | 4 | 3.939 |
| 801 | 12475 | $7 \cdot 5$ | $6 \quad 25$ | 39.48 | $72 \cdot 55$ | 4 | 4.318 |
| 802 | 12587 | 5'9 | $6 \quad 27$ | $17^{\circ} \mathrm{I}$ I | 71.75 | 6 | $3 \cdot 046$ |
| 803 | 12596 | $7 \cdot 5$ | $6 \quad 27$ | 35*91 | 75*78 | 3 | $3 \cdot 141$ |
| 804 | 12590 | $7 \cdot 3$ | $6 \quad 27$ | $47 \cdot 96$ | $70 \cdot 51$ | 5 | 3.438 |
| 805 | 12628 | $7 \cdot 5$ | $6 \quad 29$ | $\bigcirc \cdot 05$ | 73.06 | 3 | 3.398 |
| 806 | 12648 | $7{ }^{\circ}$ | 630 | 1.67 | 69.09 | 2 | 3.868 |
| 807 | 12676 | $4 \cdot 8$ | 630 | 23.84 | 67.70 | 2 | 4.291 |
| 808 | 12716 | $6 \cdot 8$ | 631 | 51.56 | $72 \cdot 57$ | 4 | 3.681 |
| 809 | 12801 | $6 \cdot 5$ | $6 \quad 33$ | I.20 | 80.56 | 2 | 2.674 |
| 810 | 12751 | $6 \cdot 5$ | 633 | 13.85 | 69'74 | 5 | +4.035 |


| No. | Mean N.P.D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 766 | $94^{\circ} 58^{\prime}$ |  |  | +0". 62 | W $\mathrm{I}_{5} 8, \mathrm{Si}_{2}$. |
| 767 | $\begin{array}{llll}72 & 3 & 36.5\end{array}$ | $67 \cdot 65$ | 5 | $0 \cdot 63$ | W 148. |
| 768 | $\begin{array}{llll}75 & 22 & 43.5\end{array}$ | 68.27 | 6 | 0.66 | W $163, \mathrm{PM} 702$. |
| 769 | 59 51 33.2 | 75.07 | 4 | 0.73 | PM 703, R 1773. |
| 770 | $\begin{array}{llll}54 & 48 & 42 \%\end{array}$ | 72.81 | 4 | 0.80 | $\begin{array}{r} \mathrm{W} \\ 194, \mathrm{Ar} \mathrm{In}_{15}, \mathrm{~N}_{7 \mathrm{yr}} \\ {\left[803, \mathrm{RO}_{8} 682, \mathrm{Y}_{25} 82 .\right.} \end{array}$ |
| 77 r | $75 \quad 5354{ }^{7} 7$ | $76 \cdot 04$ | 2 | 0.91 |  |
| 772 | 84 51 45* | 74.43 | 3 | 0.93 | See Notes. |
| 773 | $\begin{array}{llll}75 & 34 & 218\end{array}$ | $70 \cdot 29$ | 5 | 0.96 | W $272, \mathrm{R}_{2} 2920, \mathrm{Gl}_{1542}$. |
| 774 | $\begin{array}{llll}72 & 37 & 39\end{array}$ | $66 \cdot 26$ | 6 | 1.03 | W 286. |
| 775 | $\begin{array}{llll}73 & 56 & 15 * 5\end{array}$ | 70.69 | 5 | $1 \bigcirc 09$ |  |
| 776 | $84 \quad 5049.6$ | 82.05 | 1 | 1'12 |  |
| 777 | $75 \begin{array}{llll}75 & 17 & 53.7\end{array}$ | 76.84 | 4 | $1 \cdot 13$ |  |
| 778 | $\begin{array}{llll}59 & 58 & 50 \cdot 5\end{array}$ | 70.87 | 4 | $1 \cdot 23$ | W 340, R 1825,12yr 548. |
| 779 | $\begin{array}{llll}94 & 32 & 27 \cdot 1\end{array}$ | 70.15 | I | $1 \cdot 28$ |  |
| 780 | $\begin{array}{llll}54 & 25 & 18.0\end{array}$ | 67.54 | 4 | $13^{\circ}$ | W 363. |
| 781 | $\begin{array}{lll}101 & 43 & 3\end{array}$ | 81.98 | I | 1.36 | W 427, Si $669, L_{5} 275$. |
| 782 | $\begin{array}{llll}52 & 37 & 179\end{array}$ | 69.89 | 5 | 1.40 | Y 26 Iri. |
| 783 | $\begin{array}{llll}57 & 39 & 50 \cdot 8\end{array}$ | $70 \cdot 11$ | 5 | 1.49 | W 432, R 1843. |
| 784 | 8 81 3093 | $76 \cdot 83$ | 4 | r 50 | $\mathrm{W} 466, \mathrm{Si}_{1}$. |
| 785 | $\begin{array}{llll}66 & 13 & 27.2\end{array}$ | 68.92 | 6 | I 55 | W 453. |
| 786 | $\begin{array}{llll}75 & 12 & 40.4\end{array}$ | $72 \cdot 61$ | 2 | 1.60 | W 492, Gl 1559. |
| 787 | 71 10 8.9 | 74.12 | 3 | r'65 | W 48 g . |
| 788 | $\begin{array}{llll}53 & 26 & 13\end{array}$ | $66 \cdot 73$ | 6 | $1 \cdot 78$ | W 529. |
| 789 | $\begin{array}{lllll}69 & 25 & 51 & 3\end{array}$ | 69.83 | 4 | 1'79 |  |
| 790 | $\begin{array}{llll}68 & 46 & 6 \cdot 5\end{array}$ | $72 \cdot 37$ | 4 | I.81 | $[\mathrm{N} 7 \mathrm{yr} 822,9 \mathrm{yr} 6 \mathrm{r} 9 .$ |
| 791 | $\begin{array}{llll}94 & 23 & 14 \cdot 1\end{array}$ | $75 \cdot 39$ | 3 | 1.82 | ${ }_{3} \mathrm{Sp} 2207$. |
| 792 | 87 I $\quad 9 \times 1$ | 70'17 | 1 | 1.82 |  |
| 793 | $\begin{array}{llll}50 & 9 & 49.8\end{array}$ | $72 \cdot 13$ | r | 1995 | W 586. |
| 794 | $\begin{array}{llll}67 & 22 & 28.2\end{array}$ | $76 \cdot 10$ | 3 | I '99 | W 616, $\mathrm{T}_{2}, \mathrm{R} 1882$. |
| 795 | $\begin{array}{llll}52 & 44 & 20 \% 2\end{array}$ | $68 \cdot 30$ | 5 | 2.01 | W6ir. |
| 796 | $\begin{array}{llll}50 & 7 & 43\end{array}$ | 72.78 | 3 | $2 \cdot 12$ |  |
| 797 | $\begin{array}{llll}54 & 37 & 9.8\end{array}$ | $7 \mathrm{I} \cdot 12$ | 5 | $2 \cdot 12$ | W 654. |
| 798 | $\begin{array}{llll}78 & 22 & 15.9\end{array}$ | 77.46 | 3 | $2 \cdot 17$ | W 705, ${ }^{\text {Sp } 2237, \mathrm{Gl}_{15} 83 .}$ |
| 799 | $\begin{array}{llll}3 \mathrm{~T} & 47 & 32 \cdot 6\end{array}$ | $66 \cdot 56$ | $\stackrel{2}{2}$ | 2.22 |  |
| 800 | $\begin{array}{llll}56 & 53 & 10\end{array}$ | 75.91 | 5 | 2.23 | W696, R $1896,12 \mathrm{yr}_{570} 56$, |
| 801 | $46 \quad 50 \quad 29^{\circ}$ | 69.30 | 6 | 2.24 | W 689. |
| 802 | $\begin{array}{lllll}91 & 7 & 38.9\end{array}$ | 7175 | 6 | $2 \cdot 38$ | W 776, $\mathrm{L}_{1} 998$, Gl 594. |
| 803 | 87 - $35^{\circ}$ | 75.78 | 3 | 2.41 | Sp 2260. |
| 804 |  | 70.88 | 4 | 2.43 |  |
| 805 | $\begin{array}{llll}76 & 12 & 26.7\end{array}$ | 70.63 | 5 | $2 \cdot 53$ | R 1929. |
| 806 | $59 \bigcirc 24.6$ | 66.09 | 3 | 2.62 | [643. |
| 807 | $\begin{array}{llll}47 & 24 & 13.7\end{array}$ | $67 \cdot 10$ | 5 | $2 \cdot 65$ | Ar 1507, RC r $788 \mathrm{r}, 9 \mathrm{yr}$ |
| 808 | $\begin{array}{llll}65 & 17 & 42.9\end{array}$ | 72.57 | 4 | 2.78 | W 909, $\mathrm{R}_{1946, \mathrm{Y}_{2681} \text {. }}$ |
| 809 | $\begin{array}{rrrr}106 & 45 & 55\end{array}$ | $80 \cdot 56$ | 2 | 2.88 | ${ }^{\mathrm{Bn}}$. |
| 8ro | $\begin{array}{llll}53 & 57 & 14.3\end{array}$ | 68.54 | 5 | +2.88 | W 948. |





| No. | Mean N.P.D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 856 | $85^{\circ} 37^{\prime} 38^{\prime \prime} \cdot 9$ | $72 \cdot 12$ | 4 | +5 $5^{\prime \prime} 3^{6}$ | W 1925, $\mathrm{Bn}, \mathrm{Gl} 1772$. |
| 857 | 6832 <br> 10 | $65 \cdot 66$ | 7 | $5 \cdot 42$ | W 1906, Note. |
| 858 | $\begin{array}{lllll}76 & 39 & 16 \cdot 2\end{array}$ | 78.44 | 3 | $5 \cdot 43$ | W 7, Sp 2548. |
| 859 | 42 II 6.4 | 71.28 | 6 | $5 \cdot 52$ |  |
| 860 | $41 \begin{array}{llll} \\ 417 & 39^{\circ}\end{array}$ | $74 * 05$ | 1 | 5*56 | PM 823, Oe 7644. |
| 861 | $\begin{array}{llll}57 & 49 & 39 *\end{array}$ | $71^{\prime \prime 1}$ | 4 | $5 \cdot 61$ | W 72. |
| 862 | 76 I 38.8 | $70 \cdot 74$ | 5 | $5 \cdot 72$ | W 131 , Gl 1797. |
| 863 | $44 \quad 22 \quad 38 \cdot 5$ | 73'11 | 5 | $5 \times 74$ | Oe $7675, \mathrm{RC}$ I908. |
| 864 | 85 12 38.1 | $7 \mathrm{I} \cdot 35$ | 4 | $5 \cdot 82$ |  |
| 865 | $\begin{array}{lllll}93 & 4^{1} & 20 \cdot 7\end{array}$ | 78.05 | 2 | $5 \cdot 86$ | W 204, Si ${ }_{2}$, Gl 1806. |
| 866 | $\begin{array}{llll}67 & 49 & 8.7\end{array}$ | 78.05 | 2 | $5 \cdot 87$ | W 204, $\mathrm{RC}_{2} 777$. |
| 867 | 40 18 $55^{\circ} \mathrm{O}$ | $70 \cdot 70$ | 5 | 5.95 |  |
| 868 | $48 \quad 53494$ | 70\%70 | 5 | 5.98 | W 234, T 2916, 12yr 653, RC |
| 869 | $\begin{array}{llll}58 & 49 & 2 \mathrm{I} & 8\end{array}$ | 77.47 | 3 | $6 \cdot 04$ | Bn. [1922,7yr 558. |
| 870 | $\begin{array}{llll}54 & 37 & 8 \cdot 5\end{array}$ | 69.09 | 4 | 6.09 | W 279. |
| 87 I | $\begin{array}{llll}117 & 39 & 40 \cdot 8\end{array}$ | 68.08 | 2 | $6 \cdot 16$ | $\mathrm{T}_{2951}$ I, $\mathrm{Ar} 1665, \mathrm{Oe} 6528$, |
| 872 | $\begin{array}{lll}70 & 15 & 2.4\end{array}$ | 70.08 | 4 | $6 \cdot 25$ | W 344. [St 3534. |
| 873 | $\begin{array}{llll}106 & 59 & 6 \cdot 1\end{array}$ | $79 \times 16$ | 1 | $6 \cdot 32$ | Bn , see Notes. |
| 874 | $44 \quad 54 \quad 28 \cdot 5$ | 68.29 | 6 | $6 \cdot 52$ | R2201, Bn, Y 2978. |
| 875 | $\begin{array}{llll}115 & 39 & 30 \cdot 3\end{array}$ | 68.08 | 2 | $6 \cdot 52$ |  |
| 876 | $\begin{array}{llll}53 & 26 & 57 \cdot 8\end{array}$ | 70.74 | 5 | $6 \cdot 52$ | R 2204. |
| 877 | $\begin{array}{llll}41 & 12 & 35.7\end{array}$ | $77 \% 47$ | 3 | $6 \cdot 57$ | Oe $7857, \mathrm{Bn}$. |
| 878 | $\begin{array}{lll}68 & 18 & 8.9\end{array}$ | 62.10 | 4 | $6 \cdot 59$ | W 46i,PM 86r, R 2211. |
| 879 | $47 \quad 35 \quad 215$ | $70^{\circ} 43$ | 3 | 6.63 | W 460,R2212.[Ar1679. |
| 880 | $\begin{array}{llll}7 \mathrm{I} & 36 & 28.3\end{array}$ | 73.09 | 2 | 6.75 | W 503 . |
| 88 I | 43 I3 41*2 | $71^{\circ} 3^{\circ}$ | 6 | $6 \cdot 78$ | R 2220 Oe 7904, Bn. |
| 882 | $\begin{array}{llll}62 & 27 & 12.7\end{array}$ | $74 * 9$ | 1 | $6 \cdot 82$ | W 525. |
| 883 | $\begin{array}{llll}79 & 8 & 42 \cdot 5\end{array}$ | $70 \cdot 54$ | 5 | 6.82 | $\mathrm{W}_{55 \mathrm{I}, \mathrm{Y}} 3012, \mathrm{Gl} 1860$. |
| 884 |  | $71 \times 52$ | 5 | $6 \cdot 84$ | R 2226, Oe 792 I . |
| 885 | $\begin{array}{llll}62 & 27 & 18.7\end{array}$ | 79'15 | 2 | $6 \cdot 86$ | W 539. |
| 886 | $39 \quad 45 \quad 57 \%$ | 65.7 | 2 | 6.92 |  |
| 887 | $374441 \cdot 2$ | $67 \cdot 86$ | 4 | $6 \cdot 96$ | Oe 7942. |
| 888 | $\begin{array}{llll}70 & 6 & 43.6\end{array}$ | $73 \cdot 12$ | 4 | $7 \cdot 04$ | W 601. |
| 889 | $\begin{array}{llll}68 & 57 & 33 \cdot 1\end{array}$ | $70 \cdot 75$ | 5 | $7 \times 09$ | W 623. |
| 890 | $69 \quad 55 \quad 297$ | 79:18 | I | $7 \times 11$ | R 2255. |
| 891 | $\begin{array}{llll}75 & 52 & 37\end{array}$ | 72.89 | 4 | ${ }_{7}^{7} 14$ | W 673. |
| 892 | $\begin{array}{lrrr}54 & 8 & 117 \\ 53 & 34 & \end{array}$ | 69.88 | 4 | $7 \cdot 17$ $7 \cdot 18$ | W 643. |
| 893 | $\begin{array}{llll}53 & 34 & 207 \\ 52 & \end{array}$ | 72.87 66.14 | 4 | $7 \cdot 18$ | W 650. |
| 894 | $\begin{array}{llll}52 & 32 & 52\end{array}$ | $66 \cdot 14$ | 2 | 7.27 | W 683. |
| 895 | 108 I5 13 3 | 68.09 | 1 | 7.45 | Oe 6974. |
| 896 | $\begin{array}{llll}46 & 41 & 47 & 6\end{array}$ | 74*10 | 1 | 744 | W $739, \mathrm{RC}_{1985}{ }^{\text {W }}$, Bn . |
| 897 | $\begin{array}{llll}104 & 15 & 194\end{array}$ | 67.08 | 1 | 752 | W $335, \mathrm{Si}_{4} 735, \mathrm{Y} 3074$. |
| 898 | $40 \quad 56 \quad 57^{\circ}$ | 65.56 | 2 | $7 \cdot 56$ | Oe 8070. |
| 899 | 10555219 | 74.60 | 2 | 7.56 +7.62 | Bn. |
| 900 | $5^{\circ} \quad 5040$ \% | 69.85 | 4 | $+7.62$ | W 8i2. |


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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 901 | 14766 | $7 \cdot 3$ | $7^{\text {h }}$ | $29^{\text {m }}$ | $33^{\text {R.0 }} 06$ | 72•74 | 5 | +4.215 |
| 902 | 14759 | $7 \cdot 2$ | 7 | 29 | $5 \mathrm{I} \cdot 8 \mathrm{I}$ | 70.74 | 5 | $4 \cdot 588$ |
| 903 | 14814 | $8 \cdot 0$ | 7 |  | 54.76 | $77 \cdot 11$ | 5 | 3.454 |
| 904 |  | $6 \cdot 0$ | 7 | 30 | 21.86 | $68 \cdot 07$ | 1 | $2 \cdot 413$ |
| 905 | 14856 | $6 \cdot 5$ | 7 | 30 | $46 \cdot 95$ | $70 \cdot 10$ | 2 | 3.395 |
| 906 | 14893 | $6 \cdot 5$ | 7 | 31 | II•39 | 68.09 | I | $2 \cdot 638$ |
| 907 | I 4899 | $7 \cdot 0$ | 7 | 31 | $46 \cdot 09$ | 73.09 | 2 | $2 \cdot 928$ |
| 908 | 14923 | $7 \cdot 5$ | 7 | 33 | 28.28 | 71•17 | 3 | $2 \cdot 725$ |
| 909 | 14921 | $6 \cdot 0$ | 7 | 33 | 29.46 | 69.49 | 5 | $3 \cdot 602$ |
| 910 | 14928 | 6.5 | 7 | 33 | $45 \cdot 55$ | 73.1 1 | 5 | $3 \cdot 379$ |
| 911 | 14952 | $6 \cdot 5$ | 7 | 33 | $46 \cdot 07$ | 79:16 | 2 | $2 \cdot 707$ |
| 912 | 14934 | $6 \cdot 5$ | 7 | 34 | $37 \cdot 25$ | $72 \cdot 93$ | 5 | $3 \cdot 907$ |
| 913 | I 4974 | $6 \cdot 0$ | 7 | 34 | 40.17 | $7 \mathrm{I} \cdot 11$ | 5 | $2 \cdot 744$ |
| 914 | 14961 | 6.0 6.8 | 7 | 35 | $0 \cdot 40$ | 80.63 | 2 | $3 \cdot 389$ |
| 915 | 14981 | $6 \cdot 8$ | 7 | 35 | $55^{\circ}$ |  |  | 3.583 |
| 916 | 14978 | $8 \cdot 0$ | 7 | 36 | $34 \cdot 61$ | 72.19 | I | 4.223 |
| 917 | 14966 | 7.5 | 7 | $3^{6}$ | $42 \cdot 20$ | $72 \cdot 55$ | 5 | 4.597 |
| 918 |  | 8.5 | 7 | 37 | $20 \cdot 45$ | $79^{\circ} 5$ | 5 | 2.978 |
| 919 | 15060 | $7 \cdot 5$ | 7 | 37 | 25.76 | 74.05 | I | $2 \cdot 978$ |
| 920 |  | 6.5 | 7 | 37 | 38.39 | $66 \cdot 57$ | 1 | 2.477 |
| 921 | 15046 | $5 \cdot 3$ | 7 | 38 | $18 \cdot 38$ | 70.10 | 4 | 4*016 |
| 922 923 | 15070 15092 | 8.0 7.8 | 7 | 38 | 40.10 | $72 \cdot 11$ | 3 | 3.609 |
| 923 | 15092 | $7 \cdot 8$ | 7 | 39 | $38 \cdot 59$ | $70 \cdot 78$ | 6 | $3 \cdot 611$ |
| 924 | 15136 | $6 \cdot 0$ | 7 | 39 | $55 \cdot 36$ | $73 \cdot 62$ | 4 | $2 \cdot 935$ |
| 925 | 15097 | $7 \cdot 3$ | 7 | 40 | 5'12 | $79^{\circ} 90$ | 4. | $3 \cdot 864$ |
| 926 927 | 15147 15173 | 7.5 8.0 | 7 | 40 | $44^{\circ} 77$ | $74 \cdot 86$ | 4 | 3.270 |
| 927 928 | 15173 15184 | 8.0 7.3 | 7 | 41 | 39.87 | $73 \cdot 17$ | 1 | 3.476 |
| 928 | 15184 | $7 \cdot 3$ | 7 | 42 | 12.20 | $70 \cdot 08$ | 4 | $3 \cdot 727$ |
| 929 | 15207 | $7 \cdot 1$ | 7 | 42 | 23.42 | $74 \cdot 60$ | 2 | 3.170 |
| 930 | 15204 | $7^{\circ} 0$ | 7 | 43 | 3.73 | 72.93 | 5 | 3.822 |
| 931 | 15230 | $7{ }^{\circ} \mathrm{O}$ | 7 | 43 | 54.85 | 70.59 | 5 | $3 \cdot 961$ |
| 932 | 15332 | $8 \cdot 0$ | 7 | 45 | 25.72 | 78.88 | 4 | 2.932 |
| 933 | 15342 | $8 \cdot 0$ | 7 | 45 | 52:26 | 73.36 | 4 | 3.015 |
| 934 | I 5349 | 8•0 | 7 | 46 | 9.00 | 70.27 | 6 | 3.149 |
| 935 | I 5335 | $7 \cdot 9$ | 7 | 46 | $42 \cdot 73$ | 72.11 | 5 | 3.907 |
| 936 | ${ }^{1} 5355$ | $7 \cdot 2$ | 7 | 46 | 51.69 | 79*17 | 2 | 3.541 |
| 937 | I 5384 | $7 \cdot 3$ | 7 | 47 | 56.45 | $72 \cdot 88$ | 4 | $3 \cdot 897$ |
| 938 | I 5453 | $7 \cdot 0$ | 7 | 48 | 31.66 | 69:19 | 1 | 2.686 |
| 939 | I 5442 | $7 \cdot 3$ | 7 | 49 | 33.98 | $77 \cdot 90$ | 4 | $3 \cdot 843$ |
| 940 | I 5459 | $7 \cdot 5$ | 7 | 49 | $45^{\circ} \mathrm{O} 2$ | 71•34 | 5 | 3.535 |
| 941 | 15435 | 7.5 | 7 | 49 | 50.55 | 73.50 | 5 | 4*211 |
| 942 943 | 15501 15516 | $7 \cdot 0$ $6 \cdot 8$ | 7 | 51 | 19.06 | 72.09 | 4 | 3.900 |
| 943 | 15516 15578 | $6 \cdot 8$ $8 \cdot 1$ | 7 | 51 | $40 \cdot 35$ | 73.38 | 4 | 3.944 |
| 944 945 | 15578 I 5585 | 8.1 | 7 | 52 | 35.01 | 77.48 | 3 | $3 \cdot 187$ |
| 945 | I 5585 | $7{ }^{\circ}$ | 7 | 53 | 18.29 | $72 \cdot 75$ | 5 | +3.481 |


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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 901 | $47^{\circ} 15^{\prime} 24^{\prime \prime} \cdot 6$ | $72^{\prime \prime} 74$ | 5 | $+7^{\prime \prime} \cdot 64$ | W $813, \mathrm{Bn}$. |  |  |  |
| 902 | $\begin{array}{llll}39 & \text { II } & 24.3\end{array}$ | 68.90 | 4 | $7 \cdot 66$ | Oe 8093. |  |  |  |
| 903 | $72 \begin{array}{lll}79 & 12 \cdot 3\end{array}$ | 77'11 | 5 | 7.67 | W 846. [3088, St 3737. |  |  |  |
| 904 | $\begin{array}{llll}18 & 5 & 38 \%\end{array}$ | 67.07 | 2 | 770 | T3125, Ar $1718,0 \mathrm{O} 708 \mathrm{I}, \mathrm{Y}$ |  |  |  |
| 905 | $\begin{array}{llll}75 & 22 & 47 \%\end{array}$ | $74 \cdot 13$ | I | 774 | W 905, Gl 19 I 8. |  |  |  |
| 906 | $10925 \quad 32.5$ | 68.09 | I | 777 | Oe 7103. |  |  |  |
| 907 | $96 \quad 40 \quad 42 \cdot 1$ | 73.08 | 2 | 782 | W 947, Si ${ }_{2}$. |  |  |  |
| 908 | 1054549.9 | 71.68 | 2 | 7.96 |  |  |  |  |
| 909 | $664 \mathrm{I} 38 \cdot 6$ | $66 \cdot 80$ | 7 | 796 | W 955. |  |  |  |
| 910 | $75 \quad 56$ | $73 \cdot 11$ | 5 | 798 | W 1003, Gl 193 I . |  |  |  |
| 911 | $\begin{array}{lll}106 & 33 & 443\end{array}$ | 79*16 | 2 | $7 \cdot 98$ | Bn. |  |  |  |
| 912 | $55 \quad 42 \quad 33 \cdot$ I | 72.93 | 5 | $8 \cdot 05$ | W 988. |  |  |  |
| 913 | $1045833 \cdot 1$ | 71.59 | 4 | 8.05 | $\mathrm{T}_{2}, \mathrm{Bn}, \mathrm{St} 3783$. |  |  |  |
| 914 | 75 30 $5 \cdot 8$ | $80 \cdot 63$ | 2 | $8 \cdot 08$ | W 1041, Gl 1935. |  |  |  |
| 915 | $\begin{array}{llll}67 & 18 & 30 \cdot 6\end{array}$ | 68.09 | 1 | $8 \cdot 15$ | $\begin{array}{r} \text { W } 1025, \mathrm{~T} 3174, \mathrm{Ar} 1733, \\ {[\text { I } 2 \mathrm{yr} 689, \text { Gl } 1937 .} \end{array}$ |  |  |  |
| 916 | $46 \quad 40 \quad 154$ | 72'19 | I | $8 \cdot 20$ |  |  |  |  |
| 917 | $38 \quad 40$ | 72.55 | 5 | $8 \cdot 2 \mathrm{I}$ | Oe 8222, RC 2022, |  |  |  |
| 918 | $\begin{array}{llll}94 & 23 & 6.6\end{array}$ | 79.15 | I | $8 \cdot 26$ | See Notes. |  |  |  |
| 919 | $\begin{array}{llll}94 & 24 & 45\end{array}$ | $72 \cdot 62$ | 2 | $8 \cdot 27$ |  |  |  |  |
| 920 | II6 $\mathbf{3}$ I9.5 | $66 \cdot 57$ | 2 | $8 \cdot 29$ | T 3194, Ar 1739, Bn, Y 3144, [St 3820, B 210. |  |  |  |
| 921 | $52 \quad 10 \quad 54.4$ | 69.91 | 5 | $8 \cdot 34$ | W 1083. |  |  |  |
| 922 | $66 \quad 9 \quad 30$ | 72.II | 3 | $8 \cdot 37$ | W 1095. |  |  |  |
| 923 | 66 I 54.6 | 71.10 | 5 | $8 \cdot 45$ | W imi6. |  |  |  |
| 924 | $96 \quad 28 \quad 2 \cdot 1$ | $73 \cdot 62$ | 4 | $8 \cdot 47$ | W im $84, \mathrm{Si}_{2}$. |  |  |  |
| 925 | $56 \quad 50 \quad 9.2$ | 79.90 | 4 | $8 \cdot 48$ | W 1122. |  |  |  |
| 926 | 80 $43 \begin{array}{lll}43 & 22.2\end{array}$ | 74.86 | 4 | 8.53 |  |  |  |  |
| 927 | $\begin{array}{llll}71 & 29 & 59.3\end{array}$ | $73 \cdot 17$ | I | $8 \cdot 6$ т | W 1173. |  |  |  |
| 928 | $\begin{array}{llll}61 & 29 & 23 \cdot 6\end{array}$ | $70 \cdot 31$ | 5 | $8 \cdot 65$ | W İ84, $\mathrm{T}_{2}$, $9 \mathrm{yr} 769, \mathrm{Gl} 1967$. |  |  |  |
| 929 | $85 \quad 2 \mathrm{I} \quad 23 \cdot 8$ | 74.60 | 5 | $8 \cdot 66$ | W $124 \mathrm{I}, \mathrm{Si}_{1}, \mathrm{Gl} 1969$. |  |  |  |
| 930 | $\begin{array}{lll}58 & 4 & 18 \cdot 9\end{array}$ | $72 \cdot 93$ | 5 | $8 \cdot 72$ | W 1200. |  |  |  |
| 931 | 53 30 477.8 | $70 \cdot 59$ 78.88 | 6 | $8 \cdot 78$ | W i220, R. |  |  |  |
| 932 | $\begin{array}{llll}96 & 39 & 58 \cdot 1\end{array}$ | $78 \cdot 88$ | 4 | $8 \cdot 90$ | W r326, Sp 2863. |  |  |  |
| 933 | $\begin{array}{lll}92 & 44 & 10 \cdot 2\end{array}$ | 73.36 | 4 | $8 \cdot 94$ | W I 336, $\mathrm{PM} 929, \mathrm{Si}_{2}$, Gl 1987. |  |  |  |
| 934 | 86 I7 7 43.I | 70.27 | 6 | $8 \cdot 96$ | W 1339, Gl 1988. |  |  |  |
| 935 | $55 \quad 3 \quad 2 \cdot 9$ | $72 \cdot 88$ | 4 | $9 \times 00$ | W 1293 . |  |  |  |
| 936 | $\begin{array}{lll}68 & 34 & 18 \cdot 2\end{array}$ | $79^{\circ} \mathrm{I} 7$ | 2 | $9^{\circ} \mathrm{OI}$ | W $1305, \mathrm{Y}_{3217}$ |  |  |  |
| 937 | 55 I8 İ15 | 72.11 | 5 | $9{ }^{\prime} 10$ | W 1329. |  |  |  |
| 938 | 108 - 26.3 | 68.09 | 1 | $9 \times 14$ | Oe 761 t . |  |  |  |
| 939 | 57 ○ 43.1 | 77.90 | 4 | $9 \cdot 23$ | W 1363, R 233 I. |  |  |  |
| 940 | $68 \quad 42 \quad 9 \cdot x$ | 71.34 | 5 | $9 \cdot 24$ | W 137 I . |  |  |  |
| 941 | $\begin{array}{lll}46 & 9 & 48 \cdot 2\end{array}$ | 73.50 | 5 | $9 \cdot 25$ | W $1362, \mathrm{Y}^{2232}$. |  |  |  |
| 942 | $\begin{array}{lll}54 & 59 & 1.4\end{array}$ | 71.47 | 5 | $9 \cdot 36$ | W I403. |  |  |  |
| 943 | $\begin{array}{llll}53 & 34 & 50\end{array}$ | 73.38 | 4 | $9 \cdot 39$ | W I4II, R 2350. |  |  |  |
| 944 | 8424 4I`O & 77.48 & 3 & 9.46 & W 1523, Gl 2014. \\ \hline 945 & \(\begin{array}{llll}70 & 48 & 59\end{array}\) & \(72 \cdot 75\) & 5 & +9.51 & \\ \hline \end{tabular} \begin{tabular}{\|c|c|c|c|c|c|c|c|c|} \hline No. & Lalande. & Mag. & \multicolumn{3}{|l|}{Mean R.A. 1875.0.} & Epoch. & Obs. & Ann. Prec. \\ \hline 946 & I 5595 & \(7 \cdot 0\) & \(7^{\text {b }}\) & & \(30^{8 \cdot} \cdot 93\) & 70.53 & 5 & \(+3.505\) \\ \hline 947 & 15582 & \(6 \cdot 5\) & 7 & 53 & 47.09 & \(76 \cdot 49\) & 4 & 3.918 \\ \hline 948 & 15637 & \(6 \cdot 5\) & 7 & 55 & I2.18 & 79.17 & 1 & 3.975 \\ \hline 949 & I5679 & \(6 \cdot 8\) & 7 & & \(9 \cdot 65\) & 70.31 & 4 & \(3 \cdot 842\) \\ \hline 950 & I 5735 & \(7 \cdot 0\) & 7 & & 3176 & \(74 \cdot 60\) & 2 & 3.477 \\ \hline 951 & ¢ 5746 & 7’5 & 7 & 57 & 57.09 & 70'15 & 4 & 3.688 \\ \hline 952 & I 5766 & \(8 \cdot 0\) & 7 & & 9.88 & 80.17 & 5 & 3.295 \\ \hline 953 & 15783 & \(8 \cdot 2\) & 7 & & \(7 \cdot 67\) & 72.90 & 4 & 3.8I9 \\ \hline 954 & 15853 & \(7 \times 7\) & 8 & 0 & 17.05 & \(75 \cdot 10\) & I & \(3 \cdot 283\) \\ \hline 955 & I5811 & \(7 \cdot 2\) & 8 & \(\bigcirc\) & 17.67 & \(70 \cdot 28\) & 6 & \(3 \cdot 865\) \\ \hline 956 & & \(8 \cdot 1\) & 8 & 0 & 47•12 & \(70^{\circ} 21\) & 2 & \(3 \cdot 633\) \\ \hline 957 & 15872 & \(6 \cdot 8\) & 8 & I & 35.38 & \(78 \cdot 15\) & 5 & 3.809 \\ \hline 958 & 15898 & \(8 \cdot 0\) & 8 & 2 & 9.64 & 71.14 & 3 & \(3 \cdot 632\) \\ \hline 959 & 15967 & \(7 \cdot 6\) & 8 & 2 & 57.08 & 81.66 & 2 & 2.578 \\ \hline 960 & I 5961 & \(7{ }^{\circ}\) & 8 & 3 & I.05 & 73.14 & 5 & \(2 \cdot 849\) \\ \hline 961 & I 5943 & \(6 \cdot 5\) & 8 & 4 & 24.37 & 69.76 & 5 & 4.374 \\ \hline 962 & 16021 & \(6 \cdot 8\) & 8 & 5 & 22.57 & 75:36 & 5 & \(3 \cdot 364\) \\ \hline 963 & 16061 & \(8 \cdot 0\) & 8 & 6 & 14.07 & 77:14 & 2 & \(3 \cdot 178\) \\ \hline 964 & 16053 & \(6 \cdot 5\) & 8 & 6 & 1710 & 71.37 & 5 & \(3 \cdot 568\) \\ \hline 965 & 16017 & \(7 \cdot 7\) & 8 & 6 & \(47 \cdot 24\) & 71•17 & I & 4.567 \\ \hline 966 & 16081 & 7.0 & 8 & 7 & \(9 \cdot 22\) & 82.12 & 1 & \(3 \cdot 510\) \\ \hline 967 & 16100 & 7.2 & 8 & 7 & 24.00 & \(72 \cdot 64\) & 6 & \(3 \cdot 343\) \\ \hline 968 & 16085 & \(6 \cdot 7\) & 8 & 8 & 47.21 & 71.22 & 1 & 4.677 \\ \hline 969 & 16153 & \(8 \cdot 0\) & 8 & 8 & 59\%90 & 74*12 & 2 & \(3 \cdot 136\) \\ \hline 970 & 16ıi6 & \(7 \cdot 3\) & 8 & 9 & 16.83 & 74.58 & 5 & 4`155 |  |  |  |  |  |  |  |
| 971 | 16166 | 7.5 | 8 | 9 | 17.03 | $77^{\circ} \mathrm{I}$ | 2 | 3'135 |
| 972 | 16173 | $7 \cdot 8$ | 8 | 9 | 41.15 | 72.70 | 2 | 3.300 |
| 973 | 16146 | $7 \cdot 3$ | 8 | 9 | $45 \cdot 49$ | 69.73 | 5 | $3 \cdot 859$ |
| 974 | 16184 | 7.4 | 8 | 10 | $45 \cdot 46$ | 72.41 | 3 | 3.823 |
| 975 | 16204 | $7 \cdot 1$ | 8 | II | $34 \cdot 86$ | 70.08 | 3 | $4 \cdot 023$ |
| 976 | 16237 | 7.5 | 8 | II | 42.37 | $76 \cdot 78$ | 3 | 3.585 |
| 977 | 16304 | 5'7 | 8 | 12 | 28-12 | $76 \cdot 58$ | 5 | $2 \cdot 830$ |
| 978 | 16269 | $7 \cdot 3$ | 8 | 12 | 43.88 | $70 \cdot 61$ | 5 | $3 \cdot 891$ |
| 979 | 16301 | $7 \cdot 3$ | 8 | 13 | 39.44 | 71•32 | 4 | $3 \cdot 834$ |
| 980 | 16350 | 7.5 | 8 | 14 | 49.06 | 71.82 | 4 | 3.485 |
| 98 I | 16411 | 7.5 | 8 | 15 | $38 \cdot 44$ | 82.12 | 1 | 2.864 |
| 982 | 16378 | 7.0 | 8 | 16 | $0 \cdot 82$ | $70 \cdot 37$ | 5 | 3.790 |
| 983 | 16439 | $6 \cdot 5$ | 8 | 16 | 14.42 | 75'10 | 5 | 2.730 |
| 984 | 16391 | 7.5 | 8 | 16 | 18.01 | $75 \cdot 35$ | 6 | 3.753 |
| 985 | 16494 | 7.5 | 8 | 18 | 10.95 | 79'18 | 2 | $3 \cdot 058$ |
| 986 | 16489 | $7 \cdot 6$ | 8 | 18 | 13.91 | $69 \cdot 69$ | 5 | $3 \cdot 263$ |
| 987 | 16486 | $7 \cdot 8$ | 8 | 18 | 50.76 | 72.61 | 4 | $3 \cdot 834$ |
| 988 | 16534 | $6 \cdot 5$ | 8 | 19 | $5 \cdot 95$ | 81.15 | 2 | $3 \cdot 120$ |
| 989 | 16522 | $7 \cdot 5$ | 8 | 19 | $48 \cdot 74$ | 71.42 | 4 | $3 \cdot 884$ |
| 990 | 16529 | $6 \cdot 9$ | 8 | 20 | I 93 | $76 \cdot 65$ | 4 | $+3.876$ |


| No. | Mean N.P D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 946 | $69^{\circ} 50^{\prime} 35^{\prime \prime} \cdot 0$ | $70 \cdot 53$ | 5 | +9 $9^{\prime \prime} 53$ | W $1458, \mathrm{~T}_{334 \mathrm{I}} \mathbf{6}$ 6yr 584, |
| 947 | $\begin{array}{llll}54 & 14 & 40.4\end{array}$ | $76 \cdot 49$ | 4 | 9.55 | W 1455. [7Jr 609. |
| 948 | 523112 | 79'19 | I | $9 \cdot 66$ | W 1490. |
| 949 | $\begin{array}{llll}56 & 37 & 13.7\end{array}$ | $70 \cdot 31$ | 4 | 973 | W 1517, R 2378, Bn. |
| 950 | $\begin{array}{llll}70 & 48 & 22.6\end{array}$ | 74.60 | 2 | 9.84 | $\mathrm{T}_{8,} \mathrm{~N}_{7} \mathrm{yr}$ 1002,9yr 788. |
| 951 | $\begin{array}{lll}62 & 7 & \text { I } 4\end{array}$ | $70^{\circ} 47$ | 3 | 9.88 | W $1567, \mathrm{PM} 947, \mathrm{~T}_{\mathbf{2}}$. |
| 952 | $\begin{array}{lll}79 & 8 & 52.4\end{array}$ | 80'17 | 5 | 9.89 | W 1676, Gl 2044. |
| 953 | 57 13 44* | 72.90 | 4 | $9 \cdot 96$ | W 1592. |
| 954 | $\begin{array}{lll}79 & 39 & 44.9\end{array}$ | $75 \cdot 10$ | 1 | 10.05 | Sp 2956. |
| 955 | $\begin{array}{llll}55 & 36 & 24.4\end{array}$ | $70 \cdot 64$ | 4 | 10.05 | W 1624. |
| 956 | $\begin{array}{lll}64 & 5 & 13.4\end{array}$ | 70.21 | 2 | $10 \times 09$ | W 1646, Ar 18 s 3. |
| 957 | $\begin{array}{llll}57 & 24 & 576\end{array}$ | $78 \cdot 15$ | 5 | 10.15 | W $1663, \mathrm{PM}_{956} \mathrm{R}_{2410}$ \% |
| 958 | $\begin{array}{lll}64 & 4 & 37\end{array}$ | $69 \cdot 36$ | 4 | 10.19 | W 1682, R 2417, Ar 1817, $\mathrm{St}_{1}$ |
| 959 | 113151206 | 8I.66 | 2 | 10.25 | Oe 8059, St 4133. [306. |
| 960 | IOO $\quad 58384$ | $73 \cdot 14$ | 5 | 10.26 | $\mathrm{W}_{\text {I }}, \mathrm{Si}_{2}, \mathrm{Si}_{3} 996, \mathrm{Y}_{33}{ }^{\text {I I }}$. |
| 961 | 412049 | 69.43 | 7 | $10 \cdot 36$ | Oe 8697. |
| 962 | $\begin{array}{lll}75 & 37 & 29.9\end{array}$ | $75 \cdot 36$ | 5 | 10.43 | W77, $\mathrm{T}_{3}$, N75r 1019, 9 yr 80 I . |
| 963 | 844153.8 | 77•14 | 2 | 10.50 | W Io5,Sp 2994, Gl 2085. |
| 964 | $\begin{array}{llll}66 & 29 & 16 \cdot 1\end{array}$ | 71.37 | 5 | 10.50 | W 85. |
| 965 | $\begin{array}{llll}37 & 16 & 45.8\end{array}$ | 68-12 | 2 | 10.54 | R 244I, Oe 8746. |
| 966 | $\begin{array}{lll}68 & 54 & 58 \cdot 8\end{array}$ | 82.12 | 1 | 10.56 |  |
| 967 | $\begin{array}{llll}76 & 34 & 29.8\end{array}$ | $72 \cdot 64$ | 6 | 10.58 | W i31, Tg, Sp 3001, Gl |
| 968 | $\begin{array}{lll}35 & 3 & 8 \cdot 6\end{array}$ | 71.2I | 2 | 10.69 | $\mathrm{R}_{2} 450, \mathrm{Oe} 8784$. [2090. |
| 969 | 8647 16.0 | 74-12 | 2 | 10.70 | W I8I, Gl 2095. |
| 970 | $\begin{array}{llll}46 & 12 & 26.4\end{array}$ | 73.44 | 4 | 10.72 | W 145. |
| 971 | $86 \quad 49 \quad 8 \cdot 5$ | 77.2I | 2 | 10.72 | W 187, PM 977. |
| 972 | $\begin{array}{llll}78 & 34 & 24.6\end{array}$ | 72.70 | 2 | 10.75 | W 194, Sp 3014. |
| 973 | $\begin{array}{lll}53 & 53 & 16 \cdot 8\end{array}$ | $69 \cdot 73$ | 5 | 10.76 | W $160, \mathrm{R}_{2458}$. |
| 974 | 56 | $71 \times 09$ | 4 | 10.83 | W igr. |
| 975 | 4943 34*0 | 69.45 | 2 | 10.89 |  |
| 976 | $\begin{array}{lll}65 & 26 & 14.5\end{array}$ | $76 \cdot 78$ | 3 | 10.90 | W 2 I8, Y 3340. |
| 977 | 102123 | $76 \cdot 58$ | 5 | 10.96 | W 294, Bn, $\mathrm{Si}_{3} \mathrm{IO} 23, \mathrm{Y}$ |
| 978 | $\begin{array}{llll}53 & 49 & 45.4\end{array}$ | 69.69 | 6 | 10.97 | W 236. [3344, Note. |
| 979 | 5540 | $70 \cdot 28$ | 5 | II.04 | W 259. |
| 980 | $69 \quad 33^{8} \quad 378$ | 71.85 | 4 | I I'I3 |  |
| 981 | $\begin{array}{lll}100 & 38 & 59.9\end{array}$ | 82.12 | 1 | II'I9 | W 375, $\mathrm{Si}_{\mathrm{i}} 1030$. |
| 982 | $\begin{array}{llll}57 & 18 & 26 \cdot 6\end{array}$ | $70 \cdot 37$ | 5 | II.2I | W 323, R 2491. |
| 983 | 107 II 22.5 | $70 \cdot 63$ | 2 | I I 23 | Oe 8427. |
| 984 | $\begin{array}{lll}58 & 17 & 56 \cdot 3\end{array}$ | $76 \cdot 35$ | 6 | I I.24 | W 335, Bn. [ig10. |
| 985 | $\begin{array}{lll}90 & 44 & 21.8\end{array}$ | $79^{\circ} \mathrm{I} 8$ | 2 | 1 1*37 | W 446, Si ${ }_{1}, \mathrm{Si}_{5}$ 296, $\mathrm{L}_{1}$ |
| 986 | $80 \quad 10 \quad 14.8$ | 69•71 | 5 | 1 1.38 | W 440, Gl 2133. |
| 987 | 55 15 5121 | 72.61 | 4 | 11.42 | W 394. [9yr 8ı8, Gl 2137. |
| 988 | $\begin{array}{llll}87 & 29 & 34.2\end{array}$ | 8I'I 5 | 2 | 11*44 | W $466, \mathrm{Si}_{1}, \mathrm{~L}_{2}$ 1916, Y 3396 , |
| 989 | $\begin{array}{llll}53 & 27 & 56 \cdot 7\end{array}$ | 71.42 | 4 | II*49 | W 42 I . |
| 990 | 53 41 57 ${ }^{\text {² }}$ | $76 \cdot 65$ | 4 | +II.5I | W 424. |




| No. | Lalande. | Mag. | Mean R.A. 1875 ${ }^{\circ}$. |  |  | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1036 |  | $7 \cdot 3$ | $8^{\text {h }}$ |  | $48^{3} \cdot 27$ | 74*5 | 1 | $+3^{8 \cdot 1} 74$ |
| 1037 | 17512 | 7.5 | 8 | 46 | $54 \cdot 18$ | $70 \cdot 39$ | 5 | 3.590 |
| 1038 | 17528 | 7.5 | 8 | 47 | 4.91 | 73.17 | 5 | 3.488 |
| 1039 | 17535 | 77 | 8 | 47 | 34.69 | 76.40 | 5 | 3.784 |
| 1040 | 17572 | $7{ }^{\circ} 9$ | 8 | 47 | $54^{\circ}$ |  |  | 3'175 |
| 1041 | 17604 | $6 \cdot 5$ | 8 |  | 4136 | 80.22 | 1 | 3.018 |
| 1042 | I 7584 | $7{ }^{\circ}$ | 8 |  | 52.29 | 69.95 | 5 | 3.532 |
| 1043 |  | $7 \cdot 2$ | 8 |  | $37^{\circ}$ |  |  | $3 \cdot 711$ |
| 1044 | 17607 | $7 \cdot 2$ | 8 | 49 | 47.00 | 73.19 | 5 | 3.864 |
| 1045 | I 7666 | $6 \cdot 0$ | 8 | 50 | 57.46 | 70.06 | I | 3.243 |
| 1046 | 17729 | 7.5 | 8 | 52 | 36'10 | 74.38 | 5 | 3.235 |
| 1047 | 17719 | $8 \cdot 5$ | 8 | 52 | 48.99 | $70 \cdot 57$ | 3 | 3.703 |
| 1048 | 17766 | $7{ }^{\circ}$ | 8 | 53 | $5 \cdot 47$ | 80.21 |  | 2.802 |
| 1049 | 17750 | $7 \cdot 8$ | 8 | 53 | 53'土 6 | 69.32 | 5 | 3.786 |
| 1050 | 17785 | 6.0 | 8 | 53 | 5732 | 81-20 | I | $2 \cdot 743$ |
| 1051 | 17802 | $6 \cdot 5$ | 8 | 54 | 55:20 | 70.79 | 5 | $3 \cdot 176$ |
| 1052 | 17831 | 7* | 8 | 55 | 16.37 | 71.71 | 4 | 3.005 |
| 1053 | 17809 | $7 \cdot 3$ | 8 | 55 | 33.59 | $79^{\circ} 7$ | 2 | $3 \cdot 642$ |
| 1054 | I 7845 | $6 \cdot 5$ | 8 | 56 | 5'14 | 80.22 | 1 | 3.204 |
| 1055 | I 7853 | 8•1 | 8 | 56 | 34.37 | 71*22 | 4 | ; 3.997 |
| 1056 | 17873 | $6 \cdot 8$ | 8 | 57 | $43 \cdot 65$ | 69.55 | 5 | 3.783 |
| 1057 | 17921 | $7{ }^{\circ}$ | 8 | 57 | 57.59 | 74.95 | 4 | 2.781 |
| 1058 | 17930 | 8.0 | 8 | 58 | $48 \cdot 76$ | 77.72 | 2 | 3.018 |
| 1059 | 17899 | $7 \cdot 2$ | 8 | 58 | 5137 | 70.44 | 4 | 3.835 |
| 1060 | 17946 | $6 \cdot 7$ | 9 | - | 247 | 71-18 | 5 | 3.656 |
| 106I | 18004 | 7.5 | 9 | 1 | 24*15 | $74^{\mathbf{2} 2}$ | 3 | $3 \cdot 280$ |
| 1062 | 18019 | $8 \cdot 5$ | 9 | 1 | 28. |  |  | 2.994 |
| 1063 | 18016 | 79 | 9 | 2 | 22.09 | $70 \cdot 42$ |  | 3.750 |
| 1064 | 18074 | $6 \cdot 5$ | 9 | 2 | 53.56 | 80.41 | 5 | 2.809 |
| 1065 | 18044 | $6 \cdot 5$ | 9 | 3 | 5'15 | 71*56 | 3 | $3 \cdot 643$ |
| 1066 | 18083 | $6 \cdot 0$ | 9 | 3 | 12.02 | 79'I 7 | 2 | 2.876 |
| 1067 | 18079 | $7 \cdot 8$ | 9 | 4 | 8.59 | $68 \cdot 57$ | 5 | 3.748 |
| 1068 | 18110 | $8 \cdot 5$ | 9 | 4 | 14.68 | 72.23 | 2 | 3.024 |
| 1069 | 18120 | $6 \cdot 8$ | 9 | 4 | 44.28 | 7103 | 5 | 3.227 |
| 1070 | 18140 | 6.0 | 9 | 4 | 4746 | 67-16 | I | 2.686 |
| 1071 | 18159 | $8 \cdot 0$ | 9 | 5 | $45 \cdot{ }^{8}$ | $70 \cdot 41$ | 5 | 3.007 |
| 1072 | 18171 | $8 \cdot 0$ | 9 | 6 | I |  |  | $2 \cdot 888$ |
| 1073 | 18162 | $8 \cdot 0$ | 9 | 6 | 10.57 | 71*21 | I | 3.254 |
| 1074 | 18216 | $8 \cdot 3$ | 9 | 7 | 53.48 | 70.39 | 6 | $3 \cdot 266$ |
| 1075 | 18231 | 8.1 | 9 | 8 | 18:24 | $76 \cdot 44$ | 4 | 3.147 |
| 1076 | 18249 | $7 \cdot 5$ | 9 | 8 | $40 \cdot 52$ | $78 \cdot 46$ | 4 | 3'113 |
| 1077 | 18251 | $8 \cdot 5$ | 9 | 8 | 58.81 | $70 \cdot 38$ | 5 | 3.324 |
| 1078 | 18256 | $7 \cdot 4$ | 9 | 9 | 3976 | 73.94 | 4 | 3.683 |
| 1079 | 18317 | $7{ }^{\circ}$ | 9 | 10 | $30 \cdot 53$ | 67.97 | 4 | 2.859 |
| 1080 | 18315 | 7.0 | 9 | 10 | 33.91 | $68 \cdot 18$ | I | $+2.942$ |


| No. | Mean N.P.D. $1875 \cdot 0$. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1036 | $84^{\circ}$ п1 $\mathbf{I}^{\prime} 28^{\prime \prime} \cdot 4$ | 74*5 | 1 | + $13^{\prime \prime} \cdot 28$ | $\mathrm{W}_{1160} \mathrm{Si}_{1}, \mathrm{~T}_{8}, \mathrm{Gl} 2273$. |
| 1037 | $\begin{array}{llll}62 & 36 & 133\end{array}$ | $70 \cdot 39$ | 5 | 13.35 | W 1129. |
| 1038 | $\begin{array}{lllll}67 & 18 & 35.6\end{array}$ | 73* ${ }^{\text {¢ }} 7$ | 5 | 13.36 | W is $37,6 \mathrm{yr} 641$. |
| 1039 | $\begin{array}{llll}54 & 24 & 20.5\end{array}$ | 75.71 | 4 | 13.39 |  |
| 1040 | $84 \quad 3 \quad 45 \cdot 1$ | 75*10 | I | 13.41 | W 12 I 3. |
| 1041 | $\begin{array}{llll}93 & 4 & 57.6\end{array}$ | 80.22 | 1 | 13.46 |  |
| 1042 | $\begin{array}{llll}65 & 4 & 25\end{array}$ | $70 \cdot 17$ | 4 | 13.48 | W 1183. |
| 1043 | $\begin{array}{llll}57 & 4 & 34.4\end{array}$ | 65.68 | 2 | 13.53 | W ir96, Ar 1977 . |
| 1044 | $\begin{array}{lllll}51 & 15 & 33.7\end{array}$ | $73 \cdot 19$ | 5 | 13.54 | W 1199. ${ }^{\text {W }}$ |
| 1045 | $\begin{array}{lllll}80 & 7 & 53.8\end{array}$ | 70.06 | 1 | 13.61 | $\begin{array}{r} \mathrm{W}_{128} 8, \mathrm{Si}_{1}, \mathrm{~T}_{2}, 9 \mathrm{yr}^{876}, \\ \mathrm{G1} 2299 . \end{array}$ |
| 1046 | $\begin{array}{llll}80 & 32 & 2\end{array}$ | 74.38 | 5 | 13.72 | W 1327. |
| 1047 | $\begin{array}{llll}57 & 5 & 45 \%\end{array}$ | $70 \cdot 57$ | 3 | 13.73 | W 1274, Ar 1990. |
| 1048 | $105 \quad 30 \quad 9.3$ | $80 \cdot 21$ | 1 | 13.75 | Oe 9195. |
| 1049 | $\begin{array}{llll}53 & 39 & 5 & 3\end{array}$ | 69.29 | 6 | 13.80 | W 1294. |
| 1050 | $\begin{array}{llll}108 & 43 & 13.8\end{array}$ | 81.20 | I | 13.80 | R 2714 , Bn. |
| 1051 | $\begin{array}{llll}83 & 52 & 13.7\end{array}$ | 70'79 | 5 | 13.86 | See Notes. |
| 1052 | $\begin{array}{llll}93 & 58 & 5\end{array}$ | $7 \mathrm{I}^{\prime} 7 \mathrm{I}$ | 4 | 13.88 | W 1399, $\mathrm{L}_{\mathrm{a}} 492$, Gl 2320. |
| 1053 | $\begin{array}{lllll}59 & 24 & 24.6\end{array}$ | 77.52 | 3 | 13.90 | W I328. |
| 1054 | 8212419 | 77'18 | 2 | 13.94 | W $1414, \mathrm{Si}_{\mathrm{b}}, \mathrm{Gl} 2324$. |
| 1055; | $\begin{array}{llll}46 & 2 & 514\end{array}$ | 7 F '55 | 3 | 13.97 | RC 2263, Bn. Note. |
| 1056 | $5319.24^{\circ}$ | 69.64 | 4 | 14.04 | W 1378. |
| 1057 | 107 - 113 | 77.55 | 3 | 14.05 | Oe 9289. |
| 1058 | $\begin{array}{llll}93 & 17 & 6 \cdot 6\end{array}$ | 77.72 | 2 | 14.11 | W 1475, $\mathrm{Si}_{2}, \mathrm{Gl} 2337$. |
| 1059 |  | $70 \cdot 84$ | 6 | 14.11 | W 1407, $\mathrm{T}_{8}$, RC 2274. |
| 1060 | $\begin{array}{lllll}58 & 17 & 52 \%\end{array}$ | $7 \mathrm{I} \times 18$ | 5 | 14.18 | W 1444. |
| 1061 | $\begin{array}{llll}77 & 324909\end{array}$ | 74.22 | 3 | 14.27 | W 1524, Sp 3356. |
| 1062 | $\begin{array}{llll}94 & 45 & 15 \cdot 8\end{array}$ | 60'16 | 1 | 14.27 | $\mathrm{L}_{3} 514$. |
| 1063 | $\begin{array}{lllll}54 & 4 & 53.2\end{array}$ | $70 \cdot 74$ | 4 | 14.33 | W 1506. |
| 1064 | 10546 16.1 | 80.41 | 5 | 14.36 | Oe $9382, \mathrm{~L}_{6}$. |
| 1065 | $583144 \%$ | $72 \cdot 6$ I | 5 | 14.37 | W 3 . |
| 1066 | IOI 5I 10\% | $79^{\prime} 17$ | 2 | 14.38 | $\mathrm{W}^{28} \mathrm{Si}_{\text {S }} \mathrm{II} 35$. |
| 1067 | 54 ○ 277 | 68.7 I | 7 | 14.44 | W 35. |
| 1068 | $\begin{array}{llll}92 & 55 & 6.7\end{array}$ | 72.23 | 2 | 14.44 | W 50, $\mathrm{Si}_{5} 394$. |
| 1069 | 803049.6 | $71 \times 03$ | 5 | 14.47 |  |
| 1070 | $\begin{array}{ll}12 & 40 \\ 7 \%\end{array}$ | 66.17 | 1 | 14.48 | Oe 9427. |
| 1071 | $\begin{array}{llll}94 & 2 & 40 \cdot 6\end{array}$ | $70 \cdot 89$ | 5 | 14.53 | W $76, L_{6}$. |
| 1072 | $\begin{array}{llll}101 & 19 & 14.8\end{array}$ | 65.2 I | 1 | 14.55 | $\mathrm{W} 83, \mathrm{Si}_{1} \mathrm{I} 139$. |
| 1073 | $\begin{array}{llll}78 & 49 & 75\end{array}$ | $74^{\circ 2 \mathrm{I}}$ | 1 | 14.56 | W 81, Sp 338 r. |
| 1074 | $77 \quad 59$ 14*2 | $70 \cdot 40$ | 5 | 14.66 | W 127 , Sp 3395. |
| 1075 | $85 \quad 16 \quad 19.2$ | 75.22 | 3 | 14.69 | W $\mathrm{I}_{33}$, L2 69. |
| 1076 | $87 \quad 23 \quad 58.9$ | 77.63 | 5 | 14.71 | W $143, \mathrm{Si}_{1}, \mathrm{~L}_{1} 23880, \mathrm{Gl}$ |
| 1077 | $\begin{array}{llll}74 & 28 & 20 \%\end{array}$ | $70 \cdot 38$ | 5 | 14.72 | W I53. [2387. |
| 1078 | $\begin{array}{llll}55 & 58 & 33\end{array}$ | 73.94 | 4 | 14.77 | W 16 s . |
| 1079 | $\begin{array}{llll}103 & 18 & 53.3\end{array}$ | 66.87 | 3 | 14.82 | W 187, $\mathrm{Si}_{4} 934$. |
| 1080 | $\begin{array}{lllll}98 & 13 & 27 \times 1\end{array}$ | 64.68 | 6 | + 14.82 | See Notes. |


| No. | Lalande. | Mag. | Mean R.A. 1 | $1875 \cdot 0$. | Epoch, | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 108I | 18288 | $6 \cdot 7$ | $9^{\mathrm{h}} 10^{\mathrm{m}}$ | $43^{6}$. OI | 71:23 | 5 | $+3^{\text {b }} 723$ |
| 1082 | 18329 | $7{ }^{\circ}$ | 9 Io | 54.4 I | 67.16 | 1 | 2.904 |
| 1083 | 18345 | $7 \cdot 5$ | 9 II | 27.25 | 65.22 | 1 | $2 \cdot 891$ |
| 1084 | 18343 | 8.0 | 9 II | $36 \cdot 85$ | 75•26 | I | 3.027 |
| 1085 | 18362 | $6 \cdot 7$ | 913 | 8.93 | 72:20 | 5 | $3 \cdot 783$ |
| 1086 | I8394 | $7{ }^{\circ}$ | 914 | $6 \cdot 28$ | 70.82 | 5 | $3 \cdot 643$ |
| 1087 | 18412 | $6 \cdot 7$ | $9 \quad 14$ | 21.18 | $78 \cdot 20$ | 5 | 3.324 |
| 1088 | I 8422 | 7.5 | 914 | $46 \cdot 31$ | $70 \cdot 60$ | 5 | $3 \cdot 381$ |
| 1089 | I8477 | $8 \cdot 0$ | 916 | 10.20 | $76 \cdot 20$ | 3 | 2.987 |
| 1090 | I 8452 | $7 \% 7$ | 916 | 10.91 | 70.02 | 5 | $3 \cdot 688$ |
| 1091 | 18488 | $7{ }^{\circ}$ | 916 | $35 \cdot 56$ | 71.20 | 5 | 3•003 |
| 1092 | I8466 | $7{ }^{\circ}$ | 916 | $39^{\circ}$ |  |  | 3'734 |
| 1093 | 18520 | $7 \cdot 0$ | 917 | 43.22 | 80.21 | 3 | 3.369 |
| 1094 | 18510 | $7 \cdot 8$ | 9 17 | 57.46 | 72.19 | 5 | 3.694 |
| 1095 | $1855^{8}$ | $6 \cdot 5$ | 9 I8 | $36 \cdot 70$ | $79^{-20}$ | 2 | 3.015 |
| 1096 | 18553 | $9^{\circ} 2$ | 9 I9 | 29.28 | 71*72 | 2 | $3 \cdot 884$ |
| 1097 | 18567 | $7 \cdot 5$ | 919 | 33.40 | $73 \cdot 19$ | I | 3.379 |
| IO98 | 18599 | $7^{\circ} \circ$ | 920 | II• 16 | 60'16 | I | 2.756 |
| 1099 | 18638 | $7 \cdot 5$ | $9 \quad 22$ | $3^{8}$ |  |  | 3.614 |
| 1100 | 18666 | $7 \cdot 3$ | $9 \quad 24$ | 12. |  |  | $3 \cdot 892$ |
| IIOI | 18691 | $6 \cdot 8$ | $9 \quad 25$ | 2'70 | 79'18 | I | 3.940 |
| 1102 | 18754 | $7 \cdot 0$ | 925 | 32.62 | $66 \cdot 16$ | 1 | 2.924 |
| 1103 | 18760 | $7 \cdot 5$ | 926 | $39^{\circ} \mathrm{I}$ | $69 \cdot 58$ | 6 | $3 \cdot 66 \mathrm{I}$ |
| 1104 | 18775 | $6 \cdot 5$ | 926 | $50 \cdot 80$ | $70 \cdot 84$ | 5 | 3.44I |
| 1105 | 18794 | $7{ }^{\circ}$ | 926 | $53 \cdot 06$ | 80.19 | 2 | 2.956 |
| 1106 | I8810 | $7 \cdot 5$ | $9 \quad 28$ | 10.05 | $72 \cdot 42$ | 5 | 3.655 |
| 1107 | 18832 | 8.0 | $9 \quad 28$ | I 4.55 | $80 \cdot 22$ | I | 3.030 |
| 1108 | 18857 | $7{ }^{\circ}$ | $9 \quad 28$ | 4771 | 80.21 | I | 2.904 |
| I 109 | 18867 | $8 \cdot 0$ | 930 | $2 \cdot 14$ | $70 \cdot 24$ | 4 | 3.571 |
| IIIO | ェ 8887 | $6 \cdot 5$ | 930 | 7.88 | 73.47 | 4 | 3.041 |
| IIII | 18899 | $7 \cdot 5$ | 930 | 26.45 | 8I.22 | 2 | 2.918 |
| III2 | 18924 | $8 \cdot 0$ | 931 | $26 \cdot 96$ | $72 \cdot 73$ | 2 | 3.036 |
| III3 | 18921 | $6 \cdot 8$ | 931 | $29^{\circ} 20$ | 71.42 | 5 | 3.263 |
| III4 | 18959 | $7 \cdot 5$ | $9 \quad 32$ | 39.98 | $74 \cdot 25$ | 5 | 3.025 |
| III 5 | 18984 | $4^{\circ}$ | 933 | 28. |  |  | 3.064 |
| III 6 | 18976 | 7.8 | 933 | $3 \mathrm{I} \cdot 84$ | 7773 | 4 | 3'196 |
| III 7 | 18966 | $7^{\circ}$ | $9 \quad 33$ | $37 \cdot 31$ | 69.93 | 4 | 3.732 |
| III 8 | 18987 | $6 \cdot 2$ | 934 | 11.00 | $70 \cdot 44$ | 5 | 3.568 |
| III9 | 19006 | $8 \cdot 4$ | 934 | $49^{* 61}$ | $72 \cdot 23$ | 3 | 3.516 |
| 1120 | 19048 | $7 \cdot 2$ | $93^{6}$ | 12.75 | $77 \cdot 23$ | 2 | 3.6I5 |
| II2I | 19068 | $7 \times 7$ | 936 | 44*II | 76.02 | 5 | 3.626 |
| II 22 | 19084 | $8 \cdot 0$ | 936 | 52.43 | 69.56 | 6 | 3.226 |
| 1123 | I 9096 | $6 \cdot 5$ | 937 | 32.74 | 69:17 | 5 | 3.347 |
| 1124 | I9117 | $7 \cdot 5$ | 938 | 8.20 | 80.57 | 3 | 3.125 |
| I125 | I9104 | $7 \cdot 3$ | $9 \quad 38$ | 21.60 | 74.03 | 5 | $+3.732$ |


| No. | Mean N.P.D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1081 | $54^{\circ} \quad 66^{\prime} 45^{\prime \prime} \cdot 0$ | 71.23 | 5 | $+14^{\prime \prime} \cdot 83$ | W I82, Y 389 I . |
| 1082 | 100 34 |  |  | 14.84 | $\mathrm{W}_{197}, \mathrm{Si}_{2}, \mathrm{Si}_{3} \mathrm{II} 49$. |
| 1083 | $\begin{array}{llll}\text { IOI } & 26 & 18.5\end{array}$ | 65.22 | 1 | 14.87 | W 21r, T 4073, Ar 2049, N7yr It 2 2, |
| 1084 | $\begin{array}{lllll}92 & 51 & 44 *\end{array}$ | 71.26 | I | 14.88 |  |
| 1085 | $\begin{array}{llll}51 & 17 & 18\end{array}$ | 72.20 | 5 | 14.97 | $W_{233}$, PM Y 1 O4, $\mathrm{R} 2825, \mathrm{RC}$ <br> [23II, Y 3904. |
| 1086 | $\begin{array}{llll}57 & 12 & 19.5\end{array}$ | 70.82 | 5 | 15.03 |  |
| 1087 | $\begin{array}{lll}74 & 6 & 0.6\end{array}$ | $78 \cdot 20$ | 5 | 15.04 | W 262. |
| 1088 | $\begin{array}{llll}70 & 43 & 10\end{array}$ | $70 \cdot 32$ | 6 | 15.07 | W $279, \mathrm{Bn}$. |
| 1089 | 95 31 $46 \cdot 5$ | 81.25 | 2 | 15.14 | Sp 3452, $\mathrm{L}_{\text {s }} 587$. |
| 1090 | $\begin{array}{llllllllllll}54 & 54 & 58\end{array}$ | 69.38 | 6 | 15.14 | Bn. |
| 1091 | $94 \quad 30-24.9$ | 71.20 | 5 | 15.17 |  |
| 1092 | $\begin{array}{llll}52 & 52 & 40 & 5\end{array}$ | 69.68 | 2 | 15.17 |  |
| 1093 | 714516.2 | $80 \cdot 21$ | 3 | 15.23 | W 348, R $2855 \cdot$ |
| 1094 | $\begin{array}{llll}54 & 18 & 42 \cdot 1\end{array}$ | 72'19 | 5 | 15.25 | W 344. |
| 1095 | $\begin{array}{llll}93 & 44 & 43\end{array}$ | 79:20 | 2 | 15.28 |  |
| 1096 | $\begin{array}{lllll}46 & 41 & 41\end{array}$ | 69.39 | 5 | 15.33 | W 382. |
| 1097 | $\begin{array}{llll}70 & 24 & 5.2\end{array}$ | 73'土9 | I | I5.34 | W 390, 9 yr 909. |
| 1098 | 110 13 18.1 | 60'16 | 1 | 15.37 | Oe 9699. |
| 1099 | $\begin{array}{lllll}57 & 24 & 42.4\end{array}$ | $60 \cdot 17$ | I | 15.51 | W 445. |
| 1100 | $\begin{array}{lllll}45 & 42 & 27 \\ \end{array}$ | 60'17 | 2 | 15.60 | W $47 \mathrm{I}, \mathrm{Y} 3967$. |
| 1 101 | $435^{6} \quad 50$ | 74* 15 | 2 | 15.65 | Oe 9990, $\mathrm{RC}_{2357}$ |
| 1102 | 100 ○ $6 \cdot 6$ | $57 \cdot 17$ | I | 15.67 | W $530, \mathrm{Si}_{2} \mathrm{~L}_{5} 538$. |
| 1103 | $\begin{array}{llll}54 & 38 & 8 \cdot \text { I }\end{array}$ | 69.23 | 8 | 15.73 |  |
| 1104 | $65 \quad 59$ 24. ${ }^{5}$ | 70.84 | 5 | 15.74 | W 54 I . |
| 1105 | $\begin{array}{llll}97 & 57 & 114\end{array}$ | 80'19 | 2 | 15:74 | W $569, \mathrm{Si}_{2}, \mathrm{Sp} 3509, \mathrm{~L}_{3}$ |
| 1106 | $\begin{array}{llll}54 & 39 & 443\end{array}$ | $72 \cdot 42$ | 5 | 15.8 r | W 567. |
| 1107 | $\begin{array}{lllll}92 & 56 & 5\end{array}$ | 80.22 | I | 15.82 | See Notes. |
| I 108 | IOI 3488 | 80.21 | I | 15.84 | W 6I9, $\mathrm{Si}_{\mathrm{s}} \mathrm{II} 75, \mathrm{~L}_{5550}$. |
| 1109 | $\begin{array}{llll}58 & 28 & 59\end{array}$ | $70 \cdot 24$ | 5 | 1591 |  |
| IIIO | $9^{2}$ I $13 \quad 901$ | $71 \cdot 22$ | 3 | 15.92 | $\mathrm{L}_{1} 2558$. |
| 11 | $1004^{2} \quad 59^{\prime 1}$ | $8 \mathrm{I} \cdot 22$ | 2 | 15.93 | W 650, $\mathrm{Si}_{2}, \mathrm{~L}_{5} 557$. |
| 1112 | $\begin{array}{lllll}92 & 36 & 36 \cdot 2\end{array}$ | 72.73 | 2 | 15.99 | W 672,Sp 3539,Gl 2497. |
| 1113 | $\begin{array}{llll}76 & 42 & 10.6\end{array}$ | 7142 | 5 | 15.99 | W 670, Sp 3538, Gl 2498. |
| 1114 | $\begin{array}{llll}93 & 27 & 2.3\end{array}$ | 74.25 | 2 | 16.05 | W 699, $\mathrm{Si}_{2}, \mathrm{~L}_{3} 674$. |
| 1115 | $\begin{array}{llll}90 & 34 & 35\end{array}$ | $67 \cdot 18$ | 5 | 16.09 | See Notes. |
| 1116 | $81 \quad 9 \quad 28.0$ | 75.23 | 2 | 16.10 | W $713, \mathrm{Si}_{1}, \mathrm{Gl}_{2512}{ }^{\text {2 }}$ [4032. |
| 1117 | $\begin{array}{lllll}50 & 28 & 44.6\end{array}$ | $67^{\circ} \mathrm{O} 2$ | 7 | $16 \cdot 10$ | W686, PM 1443, RC 2379, Y |
| 1118 | $\begin{array}{llll}58 & 9 & 18.9\end{array}$ | 68.73 | 6 | 16.13 | W 696, T 4266, Ar 2 I 24. |
| 1119 | $60 \quad 44 \quad 22 \cdot 7$ | 72.23 | 3 | 16.17 | W 719. |
| 1120 | $\begin{array}{lll}55 & 20 & 0.4\end{array}$ | 77.23 | 2 | 16.24 | W 751. |
| 1121 | $\begin{array}{llll}54 & 42 & 26.7\end{array}$ | 76.02 | 5 | 16.26 | W 765. |
| 1122 | $\begin{array}{llll}78 & 54 & 21.4\end{array}$ | 69.56 | 6 | 16.27 |  |
| 1123 | $70 \quad 3344 \%$ | 68.83 | 6 | 16.30 | W 780, R 2928. |
| 1124 | $\begin{array}{llll}86 & 4 & 30\end{array}$ | $80 \cdot 57$ | 3 | 16.33 | W 809, $\mathrm{Si}_{1}$, Gl 253 I . |
| 1125 | $\begin{array}{llll}49 & 35 & 20 \%\end{array}$ | 74.03 | 5 | + 16.35 | W 789 , R 293 I . |



| No. | Mean N P.D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1126 | I I $7^{\circ} \mathrm{II} \mathrm{I}^{\prime} 55^{\prime \prime} \cdot 5$ | $67 \cdot 16$ | 3 | $+16^{\prime \prime} \cdot 3^{6}$ | T4301, $\mathrm{Ar}_{213} \mathbf{3}^{8,0 \mathrm{O}} 10070$, |
| I127 | $7044 \begin{array}{ll}70\end{array}$ | $68 \cdot 70$ | 2 | 16.37 | W800,R 2935 . [St 526 I . |
| I 128 | $\begin{array}{llll}12 & 54 & 36 \%\end{array}$ | 66'17 | I | 16.39 | Oe $10084, \mathrm{Bn}$. |
| 1129 | 8242574 | $75 \cdot 24$ | 3 | 16.41 | CA 205, $\operatorname{Ar} \mathbf{2 1 4 0}$, $\mathrm{T}_{2}, \mathrm{Bn}, \mathrm{N} 7 \mathrm{yr}$ |
| $113^{\circ}$ | $6546 \quad 3 \mathrm{I} \cdot 2$ | $68 \cdot 56$ | 6 | 16.44 | W $827 . \quad\left[1198, \mathrm{Y}^{4059 .}\right.$ |
| II3 ${ }^{1}$ | $80 \quad 51 \quad 8.4$ | $80 \cdot 70$ | 2 | 16.46 | Sp 3596. |
| II 32 | $\begin{array}{lll}79 & 2 & 154\end{array}$ | 68.95 | 4 | 16.48 | W 871, Gl 2543. |
| I 133 | 100 $9 \quad 59.2$ | $70 \cdot 70$ | 2 | 16.48 | W 88ı, $\mathrm{Si}_{2}, \mathrm{~L}_{0} 587$. |
| I 134 | 7 I | 72.73 | 4 | 16.54 | W 867, Y 409 I . |
| 1 135 | $53 \quad 3 \begin{array}{lll} & 3 & 39^{2}\end{array}$ | 71'73 | 4 | 16.57 | W 879. |
| I 136 | 98 I5 5170 | 80.74 | 2 | 16.58 | $\mathrm{Si}_{2}, \mathrm{Sp} 36 \mathrm{I} 2, \mathrm{~L}_{3} 730$. |
| I 137 | $\begin{array}{lll}58 & \text { I } & 30 \cdot 6\end{array}$ | 70.91 | 3 | 16.60 | W 892. |
| 1138 | $\begin{array}{llll}49 & 48 & 37 & 9\end{array}$ | $66 \cdot 70$ | 2 | 16.63 | Ar $2153, \mathrm{RC}_{2403}$ |
| I 139 | $\begin{array}{llll}57 & 58 & 47\end{array}$ | 74.26 | I | 16.64 | W 907. |
| 1140 | 5 I | 72.97 | 4 | : 6.67 | W 916, T 4342, Ar 2157, RC [2405, Y 4 IIO, Gl 2560. |
| II4I | 1051747.6 | 81.22 | 2 | 16.68 | $\mathrm{Bn}, \mathrm{Si}_{4} 999, \mathrm{~L}_{6}$. |
| 1142 | 89 20 18.3 | $76 \cdot 72$ | 4 | 16.71 | $\text { W } 970, \mathrm{Si}_{1}, \mathrm{~L}_{1} 2695, \mathrm{Gl} 2568 .$ |
| 1143 | $\begin{array}{lll}54 & 25 & 43 \cdot 7\end{array}$ | $68 \cdot 48$ | 4 | 16.73 | W 948, $\mathrm{T}_{2}$, Gl 2569. W 980, Y 4125. |
| I I 44 | $\begin{array}{lll}74 & 40 & 30 \cdot 4 \\ 83 & 27 & 5.0\end{array}$ | $68 \cdot 63$ 73.55 | 5 | 16.77 16.78 | W 980, Y 4125. <br> W 996, $\mathrm{Si}_{1}, \mathrm{~T}_{2}, \mathrm{Gl}_{2} 573$. |
| I 145 | 83   <br> 8 27  | 73.55 | 3 | $16 \cdot 78$ | W 996, $\mathrm{Si}_{1}, \mathrm{~T}_{2}$, Gl 2573 . |
| 1146 | $\begin{array}{rrr}64 & 46 & 7.8\end{array}$ | 71.73 | 3 | 16.82 | W 991. <br> W $1025, \mathrm{Si}_{9} \mathrm{I} 207$. |
| 1 I 47 | $\begin{array}{llr}102 & 21 & 15.2\end{array}$ | $75 \cdot 72$ 68.18 | 4 | 16.84 <br> 6.86 | W $1025, \mathrm{Si}_{9} \mathrm{I} 207$. <br> Bn. <br> [GI 2584 . |
| I 148 | $\begin{array}{rrr}108 & 25 & 7.0\end{array}$ | $68 \cdot 18$ | 1 | 16.86 16.88 | Bn. [Gl 2584. <br> W $1037 \mathrm{Si}_{3} \mathrm{Sp}_{365 \mathrm{I}} \mathrm{I}$ |
| II 49 | $\begin{array}{rrr}94 & 23 & 4.0 \\ 85 & 9 & 50.6\end{array}$ | $68 \cdot 21$ 77.75 | 2 | ı 6.88 | W $1037, \mathrm{Si}_{2}, \mathrm{Sp} 365 \mathrm{I}, \mathrm{L}_{6}$, W $1057, \mathrm{Si}_{1}, \mathrm{Bn}, \mathrm{Gl}_{2589}$. |
| II 50 | $85 \quad 9 \quad 50 \cdot 6$ | $77 \cdot 75$ | 2 | 16.93 | W $1057, \mathrm{Si}_{1}, \mathrm{Bn}$, Gl 2589. |
| II5 1 | $86 \quad 4 \quad 2 \times 7$ | 72.25 | 3 | 16.95 | $W \text { ro62, } L_{2} \text { I34. }$ |
| 1152 | $725649^{\circ}$ | 66.89 | 7 | 16.95 | W 1055, R 3015. |
| I 55 | $\begin{array}{llll}78 & 56 & 48 \cdot 2 \\ 68 & \end{array}$ | 78.44 | 5 | 17.01 | W iog6. |
| I 154 | $\begin{array}{lrr}68 & 4 & 58 \cdot 6\end{array}$ | 69.05 | 6 | 17.03 | W 1095. <br> W inog, L 275 I . |
| I 155 | $\begin{array}{llll}92 & 25 & 30 \cdot 2\end{array}$ | 81.20 | 2 | 17.04 | W inog, $L_{1} 2751$. |
| II5 6 | $\begin{array}{lll}105 & 24 & 53\end{array}$ | 60'16 | 1 | 17.06 | Oe $10266, \mathrm{~L}_{6} .[\mathrm{Y} 4 \mathrm{I} 69$. |
| I 157 | $\begin{array}{lll}57 & 52 & 0.5\end{array}$ | $67 \cdot 18$ | 8 | $17{ }^{\circ} 14$ | W 1135, Ar $2184, \mathrm{~T}_{2}$, |
| II 58 | $\begin{array}{lll}90 & 25 & 3.4\end{array}$ | 74.25 | 2 | I7 15 | $\mathrm{W}_{\mathrm{II}} 60, \mathrm{~L}_{1} 2767, \mathrm{Gl}_{2} 603$. |
| I 159 | 106 4354.6 | $68 \cdot 20$ | 1 | 17.17 | Oe 10293. |
| 1160 | 95 ○ 59.5 | 81.04 | 5 | 17.22 | W II99, L ${ }_{3} 79 \mathrm{I}, \mathrm{Gl} 2608$. |
| 116I | $56 \quad 45 \quad 0 \cdot 3$ | 73.49 | 4 | 17.22 | $W_{1181}, \mathrm{~T}_{8}, \mathrm{Y}_{4 \mathrm{I} 78}$ |
| 1162 | $\begin{array}{lrr}37 & 1 & 27.0 \\ 70 & 26 & 35.8\end{array}$ | 68.21 | 6 | 17.23 | RC 2435. <br> W itgi. |
| 1163 | $\begin{array}{llll}70 & 26 & 35 \cdot 8\end{array}$ | $70 \cdot 57$ | 6 | 17.23 | W II9I. |
| I 164 | $54.42 \quad 14.2$ | $68 \cdot 76$ | 2 | 17.29 |  |
| 1165 | $84 \quad 23$ 3I'I | 80.24 | 2 | 17.29 | W I232, $\left.\mathrm{T}_{2}, \mathrm{G}\right] 26 \mathrm{I} 6$. |
| 1 166 | $\begin{array}{lll}54 & 23 & 23 \cdot 6\end{array}$ | 67.80 | 5 | 17.30 | W $1210, \mathrm{~T}_{8,} \mathrm{Y}_{4195}$ |
| 1167 | 675267  <br> 8  | $74 \cdot 26$ | I | 17.34 | $\text { W } 123^{8}$ |
| 1 168 | $98 \quad 56$ | $68 \cdot 21$ | I | 17.34 | W $1252, \mathrm{Sp} 3705, \mathrm{~L}_{3} 804$. |
| 1169 | 110 | 75.41 | 4 | 17.38 | Oe 10357. |
| 1170 | $\begin{array}{llll}74 & 13 & 48 \cdot 4\end{array}$ | $7 \mathrm{I} \cdot 64$ | 5 | $+17.41$ | W 1284. |


| No. | Lalande. | Mag. | Mean R.A. 1875.0. |  |  | Epoch. | Obs. | Ann. Prec. |
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| 1171 | 19743 | 7.5 | $10^{\text {h }}$ | $\mathrm{I}^{\text {m }}$ | $7^{8.53}$ | $70 \cdot 63$ | 5 | $+3^{4.090}$ |
| II 72 | $\times 9750$ | $6 \cdot 5$ | 10 | 1 | 9.68 | $77 \cdot 89$ | 3 | $2 \cdot 875$ |
| 1173 | 19782 | $7 \cdot 7$ | 10 | 2 | 57.21 | 71.43 | 5 | $3 \cdot 106$ |
| II74 | 19810 | $6 \cdot 5$ |  | 3 | $48 \cdot 83$ | 81.26 | 1 | $2 \cdot 940$ |
| I 175 | 19814 | 6.0 |  | 4 | $0 \cdot 35$ | 78.24 | 4 | 2.932 |
| 1176 | 19808 | $6 \cdot 5$ | 10 | 4 | 13.09 | 70.23 | 5 | $3 \cdot 324$ |
| 1177 | 19823 | $7 \cdot 8$ | 10 | 4 | $40 \cdot 25$ | 71.93 | 3 | 3.051 |
| 1178 | 19828 | 6.5 | 10 | 4 | 42.92 | 67.24 | I | 2.984 |
| 1179 | 19835 | $7 \cdot 0$ | 10 | 4 | $49^{\cdot 83}$ | 81.24 | I | $2 \cdot 898$ |
| 1180 | 19833 | 77 | 10 | 5 | 939 | 70.83 | 5 | 3.315 |
| 1 181 | 19837 | $7^{\circ}$ | 10 | 5 | $36 \cdot 29$ | 73.92 | 3 | 3.425 |
| 1182 | 19870 | $8 \cdot 3$ | 10 | 6 | 34*19 | $83 \cdot 26$ | 1 | $3 \cdot 114$ |
| 1183 | 19865 | $6 \cdot 5$ | 10 | 6 | $45 \cdot 73$ | 72.23 | 4 | 3.406 |
| I 184 | 19877 | $8 \cdot 0$ | 10 | 6 | $52 \cdot 86$ | 8I.24 |  | $3 \cdot 182$ |
| 1185 | 1 9886 | 7.5 | 10 | 7 | 53.45 | $70 \cdot 24$ | 5 | 3.647 |
| 1186 | 19909 | $8 \cdot 5$ | 10 | 8 | 20.70 | 72.22 | I | $3 \cdot 181$ |
| I 187 | 19914 | 7.9 | 10 | 8 | 29'76 | $75 \cdot 24$ | 4 | $3 \cdot 208$ |
| I188 | 19911 | $6 \cdot 8$ | 10 | 8 | 51.72 | 69.22 | 5 | 3.522 |
| 1189 | 19936 | 6.0 | ro | 9 | 4.47 | 72.36 | 2 | 2.949 |
| I190 |  | $7^{\circ}$ | 10 | 9 | 59.48 | 77.92 | 3 | 2.956 |
| 119] | 19967 | $7{ }^{\prime} 0$ | 10 | 10 | I3.91 | $8 \mathrm{I} \cdot 24$ | I | 2.901 |
| I192 | 19960 | $8 \cdot 0$ | 10 | 10 | $25^{\circ} \mathrm{O}$ | 76.25 | 5 | 3.098 |
| I 193 | 19964 | $6 \cdot 5$ | 10 | I I | I 5.54 | 69.40 | 5 | 3.736 |
| I 194 | 19991 | 6.0 | 10 | II | 24.96 | 68•19 | 2 | 2.992 |
| I 195 | 20002 | $7 \cdot 2$ | 10 | 12 | $9 \cdot 80$ | $75 \cdot 21$ | I | $3 \cdot 273$ |
| x196 | 19985 | 7.0 | 10 | 12 | 10.81 | 69.98 | 4 | 3.919 |
| 1197 | 20015 | $8 \cdot 1$ | 10 | 12 | $46 \cdot 14$ | 74.28 | I | 3•17 |
| 1198 | 20045 | $8 \cdot 0$ |  | 13 | 18. |  |  | $3 \cdot 024$ |
| 1199 | 20059 | $7{ }^{\circ}$ | 10 | 13 | $47^{\circ}$ |  |  | 2.984 |
| 1200 | 20052 | $7 \cdot 8$ | 10 | 14 | $7 \cdot 89$ | $7 \mathrm{I} \cdot 26$ | I | 3.476 |
| 1201 | 20076 | $7{ }^{\circ}$ | 10 | 14 | 26.95 | 74.50 | 8 | $3^{\circ} 023$ |
| 1202 | 20086 | $7{ }^{\circ}$ | 10 | 14 | 49.6I | $79 \cdot 26$ | I | 3.022 |
| 1203 | 20101 | 6.0 | 10 | 15 | 54.05 | 68.18 | 1 | 3.476 |
| 1204 | 20105 | $7{ }^{\circ}$ | 10 | 15 | 54.86 | $70 \cdot 70$ | 4 | 3.431 |
| 1205 | 20129 | $7{ }^{\circ}$ | 10 | 16 | 3.44 | 8I'24 | 3 | 2.939 |
| 1206 | 20112 | 77 | 10 | 16 | 10'14 | $74 \cdot 88$ | 5 | $3 \cdot 282$ |
| 1207 | 20135 | $7{ }^{\circ}$ | 10 | 16 | 51.28 | $70 \cdot 75$ | 4 | $3 \cdot 358$ |
| 1208 | 20170 | $6 \cdot 7$ | 10 | 17 | $45 \cdot 45$ | 80.25 | 2 | $3 \cdot 102$ |
| 1209 | 20169 | $6 \cdot 8$ | 10 | 18 | 15.19 | 71*48 | 5 | $3 \cdot 502$ |
| 1210 | 20191 | 6.0 | 10 | 18 | 39.50 | 77.95 | 3 | $3 \cdot 167$ |
| 1211 | 20202 | 7.2 | 10 | 19 | 18.97 | 74.54 | 4 | 3.341 |
| 1212 | 20247 | $9{ }^{\circ}$ | 10 | 19 | $55^{\circ}$ |  |  | 3.039 |
| 1213 | 20230 | 77 | ro | 20 | 0.35 | 69'74 | 4 | $3 \cdot 343$ |
| 1214 | 20233 | $7 \cdot 5$ | ro | 20 | 19.08 | 73:20 | 2 | 3.577 |
| 1215 | 20296 | $6 \cdot 8$ |  |  | $58 \cdot 38$ | 71•09 | 6 | $+3.396$ |


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| 1171 | $88^{\circ} 28^{\prime} 19^{\prime \prime} \cdot 7$ | 70.06 | 6 | + $177^{\prime \prime} 41$ | W $1289, \mathrm{Si}_{1}, \mathrm{~L}_{1} 2809$. |
| 1172 | 1063151.6 | 75.89 | 4 | 17.42 | Oe 10377. |
| 1173 | $87 \quad 1004$ | $72 \cdot 05$ | 5 | 17.50 | W 6, $\mathrm{L}_{2} \mathrm{I} 54, \mathrm{Gl} 2633$. |
| 1174 | $\begin{array}{llll}\text { тот } & 28 & 53.6\end{array}$ | $70^{\prime} 7 \mathrm{I}$ | 2 | 17.53 |  |
| 1175 | $\begin{array}{llllllllllll}102 & \text { II } & 57\end{array}$ | 78.24 | 4 | 17.54 | $\mathrm{W}_{29}, \mathrm{~T}_{2,} \mathrm{~L}_{5} 654, \mathrm{St}_{5507}$. |
| 1176 | $684 \mathrm{I} \quad 5 \cdot \mathrm{I}$ | 67.35 | 7 | 17.55 | [284r. |
| 1177 | 9 I | 71.93 | 3 | 17.57 | W $44, \mathrm{Bn}, \mathrm{Sp} 3729, \mathrm{~L}_{1}$ |
| 1178 | $\begin{array}{llll}97 & 48 & 8 \cdot 8\end{array}$ | 63.82 | 3 | 17.57 | W 47, T $4523, \mathrm{Ar} 221 \mathrm{I}, \mathrm{N} 7 \mathrm{yr}$ |
| 1179 | $10554 \mathrm{~T} \circ$ | $8 \mathrm{I} \cdot 24$ | I | 17.57 | $\mathrm{W}_{50, \mathrm{Si}_{4} \mathrm{I} 1030\left[1235, \mathrm{~L}_{6} \mathrm{St} 55 \mathrm{I} 6\right.}$ |
| 1180 | $\begin{array}{llll}69 & 15 & 567\end{array}$ | $70 \cdot 83$ | 5 | 17.59 | W 68. |
| 1181 | $\begin{array}{lrr}61 & 8 & 29.5\end{array}$ | 73.03 | 5 | 17.61 | W 77. |
| 1182 | 86 | 83.26 | 1 | 17.65 | $\mathrm{L}_{8} \mathrm{I} 64$. |
| 1183 | $\begin{array}{llll}62 & 14 & 46 \cdot 7\end{array}$ | $7{ }^{\circ} 9 \mathrm{9}$ | 3 | 17.66 |  |
| 1184 | 80 II $45^{\prime} 7$ | $8 \mathrm{I} \cdot 24$ | 1 | 17.66 | W 81, Si ${ }_{1}$, Gl 2645. |
| 1185 | $\begin{array}{llll}47 & 30 & 178\end{array}$ | $70 \cdot 50$ | 4 | 1770 | W 132. |
| 1186 | 80 10 2.7 | 72'22 | I | 17.72 | W II2, Gl 2655. |
| 1187 | $\begin{array}{llll}77 & 42 & 22.9\end{array}$ | 75.05 | 5 | 17.73 | W $116, \mathrm{R}_{3106, \mathrm{Y}} 4265$, |
| 1188 | $\begin{array}{lllllllllllllll}54 & 12 & 53\end{array}$ | $69 \cdot 18$ | 5 | 1774 | Wris. [Gl 2656. |
| 1189 | IOI 10 10  <br> 10    | 66.22 | 2 | 17.75 |  |
| 1190 | 100 $34 \quad 54.9$ | $75^{\circ} 24$ | 4 | 1779 | $\mathrm{Si}_{8}, \mathrm{~L}_{6} 67 \mathrm{I}$. |
| 1191 | 1053112.5 | 81.24 | I | 17.80 | $\mathrm{Bn}, \mathrm{L}_{6}$. |
| 1192 | $873450 \cdot 1$ | 76.25 | 5 | 17.81 | $\mathrm{W}_{147}, \mathrm{Si}_{1}, \mathrm{~L}_{1} 2886, \mathrm{Gl}$ |
| 1193 |  | 66.87 | 6 | 17.84 | Oero7i6, Bn. [2666. |
| 1194 | $\begin{array}{llllll}97 & 26 & 419\end{array}$ | 68.19 | 2 | 17.85 | See Notes. |
| 1195 | $\begin{array}{lll}7 \mathrm{I} & 40 & 8.4\end{array}$ | $75 \cdot 29$ | 1 | 1787 | W 219. |
| 1196 | $\begin{array}{llll}35 & 35 & 48 \cdot 8\end{array}$ | 68.55 | 3 | 17.88 |  |
| 1197 | 80 | 74.28 | 1 | 17.90 | W 189. |
| 1198 |  | 68.2 I | 3 | 17.92 | W 207, $\operatorname{Ar} 2244, \mathrm{~L}_{6}$. |
| 1199 | $\begin{array}{lllll}98 & 25 & 47 \%\end{array}$ | $67 \cdot 20$ | 1 | 17.94 | $\mathrm{W}_{212}, \mathrm{Si}_{2}, \mathrm{Sp} 3785, \mathrm{~L}_{3}$ |
| 1200 | $55 \quad 53 \quad 58 \cdot 6$ | 70.19 | 1 | 17.95 | W $254 . \quad$ [859. |
| 1201 | $94 \quad 45153$ | 71*28 | 4 | 17.96 |  |
| 1202 |  | $70 \cdot 28$ | 2 | 17.98 | $\mathrm{W}^{\mathbf{W} 229, \mathrm{Siq}, \mathrm{Bn}, \mathrm{La}} 8866, \mathrm{Y} 4307 . \mathrm{Gl}$ |
| 1203 | $\begin{array}{llll}55 & 28 & 17 \%\end{array}$ | 68.18 | $\stackrel{2}{2}$ | 18.02 | Ar 225 I , N7yri258. 27687. |
| 1204 | $\begin{array}{llll}58 & 31 & 56 \cdot 1\end{array}$ | 71.03 | 5 | 18.02 | W 290, Y 4313. |
| 1205 | $10246 \quad 48 \%$ | 8I.24 | 3 | 18.03 | W $25 \mathrm{I}, \mathrm{Si}_{3} \mathrm{I} 255, \mathrm{~L}_{5} 700$. |
| 1206 | $\begin{array}{llll}70 & 14 & 21.1\end{array}$ | 74.88 | 5 | 18.03 | W 295, R 3171. |
| 1207 | $\begin{array}{lllll}63 & 47 & 53.6\end{array}$ | 70.87 | 3 | 18.06 | W 312. |
| 1208 | 87 ○ $0 \cdot 1$ | $80 \cdot 25$ | 2 | 18.09 | $\mathrm{I}_{8} 21 \mathrm{I}$. |
| 1209 | $53943{ }^{\circ}$ | $7 \mathrm{~F} \cdot 08$ | 6 | $18 \cdot 11$ | Y 4327. |
| 1210 | $8034 \quad 50.2$ | 77.95 | 3 | 18.12 | See Notes. |
| 1211 | $\begin{array}{lll}64 & 39 & \mathrm{I}\end{array}$ | 74.54 | 4 | 18.15 | W 353, R 3186. |
| 1212 | $\begin{array}{llll}93 & 25 & \text { I } 8\end{array}$ | $66 \cdot 50$ | 3 | 18.17 | W 324, Ar 2263. |
| 1213 | 64 24 58 <br> 8   | ${ }^{67} 73$ | 6 | 18.18 | W 367 . |
| 1214 | $\begin{array}{llll}48 & 7 & 43\end{array}$ | 73.20 | 2 | 18.19 |  |
| 1215 | 59 38 1 | 70.57 | 6 | + 18.25 | W 409, T 4679 Ar 2273. |



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| 1216 | $72^{\circ}$ 1 $3^{\prime} 46^{\prime \prime} \cdot 2$ | 80.91 | 3 | $+18^{\prime \prime} \cdot 25$ | $\mathrm{W}_{4} \mathrm{I} 2, \mathrm{Y} 4355$. |
| 1217 | $\begin{array}{llll}76 & 4 & 25.9\end{array}$ | $77 \cdot 8$ | 5 | 18.25 | W 364, Gl 2728. |
| 1218 | $59 \quad 40 \quad 47 \cdot 5$ | 68.18 | 2 | 18.26 | W 421, Ar 2275. |
| 1219 | $43 \quad 30 \quad 30^{\circ} 0$ | 73.59 | 3 | 18.26 | Oe 10879. |
| 1220 | $\begin{array}{llll}60 & 46 & 48 \cdot 6\end{array}$ | 75.03 | 4 | 18.28 | W 437. |
| 1221 | $82 \quad 18 \quad 40$ | 71*50 | 4 | 18.32 |  |
| 1222 | $\begin{array}{llll}65 & 16 & 33.4\end{array}$ | 75.30 | I | 18.35 | W $472, \mathrm{R} 32 \mathrm{I}$. |
| 1223 | $64 \quad 54 \quad 58 \cdot 1$ | 73.05 | 5 | 18.37 | W 484. |
| 1224 | 50889.5 | 77.24 | 5 | 18.39 | W 49 I . $\quad[\mathrm{Gl} 2748$. |
| 1225 | $\begin{array}{llll}94 & 42 & 49\end{array}$ | 68.2 I | I | 18.42 | $\mathrm{W}_{447}, \mathrm{Si}_{3}, \mathrm{Sp} 3863, \mathrm{~L}_{6}$, |
| 1226 | 66 - 2I•2 | 69.06 | 4 | 18.42 | $\mathrm{W}_{514}, \mathrm{PM}_{1217} \mathrm{R}_{3239}$. |
| 1227 | $43 \quad 42 \begin{array}{ll}1 \times 9\end{array}$ | 67.96 | 7 | 18.46 | R 3244, Oe 10955, RC |
| 1228 | 99 I5 $16 \cdot 1$ | 70.82 | 3 | 18.46 | $\mathrm{Bn}, \mathrm{L}_{6} 743, \mathrm{Y}_{440 \mathrm{I}}$ [2518. |
| 1229 | ${ }_{93}^{93} 114 \quad 56.3$ | 70.55 | 5 | 18.48 | $\mathrm{W}^{486, \mathrm{Sig}_{\mathrm{a}}} \mathrm{Sp} 387 \mathrm{I}, \mathrm{Las} 919, \mathrm{Gl}$. |
| 1230 | $87 \quad 9 \quad 2.8$ | 74.78 | 6 | 18.48 | $\mathrm{W}_{489}, \mathrm{Si}_{1}, \mathrm{Gl}_{2} 756 .[2755$. |
| 1231 | $\begin{array}{llll}94 & 43 & 0.6\end{array}$ | 72.26 | 2 | 18.50 | $\mathrm{L}_{3} 923$. |
| 1232 | $\begin{array}{llll}99 & 56 & 8.7\end{array}$ | $7 \mathrm{I} \cdot 64$ | 5 | 18.53 |  |
| 1233 | 98 II $27 \cdot 1$ | 75.77 | 4 | 18.56 | W 532, $\mathrm{Si}_{2}, \mathrm{~L}_{3} 93 \mathrm{I} .15825$. |
| 1234 | $\begin{array}{ll}116 & 45 \\ 54 \%\end{array}$ | 66.74 | 4 | 18.57 |  |
| 1235 | $10244 \quad 76$ | 72.46 | 5 | 18.57 | W 544, $\mathrm{T}_{2}, \mathrm{Si}_{3} \mathrm{I} 284, \mathrm{~L}_{5} 759$, [Y4430, St 5827. |
| 1236 | $83 \quad 2614.3$ | $75^{\prime 2}$ 29 | 4 | 18.59 | $\mathrm{W}_{552}$, Si $\mathrm{Si}_{1}$ Gl 2765. |
| 1237 | $\begin{array}{llll}51 & 26 & 19.7\end{array}$ | 79.57 | 2 | 18.59 | See Notes. |
| 1238 | 1022039.5 | $70 \cdot 65$ | 5 | 18.64 | W 579, $\mathrm{Si}_{3} 1287$. |
| 1239 | $\begin{array}{lllll}47 & 49 & 19.6\end{array}$ | 71.50 | 4 | 18.64 | W 652, RC 2538. |
| 1240 | $\begin{array}{llll}98 & 23 & 36.2\end{array}$ | 68.28 | 3 | 18.66 | W $587, L_{a} 946$. |
| 1241 | $\begin{array}{lll}6847 & 42\end{array}$ | 71.05 | 6 | 18.68 | W 679. |
| 1242 | 80877 | 75.30 | 3 | 18.68 | $\mathrm{W}_{595} \mathrm{~L}_{4} 356, \mathrm{Gl}_{2773}$. |
| 1243 | $\begin{array}{llll}78 & 36 & 30\end{array}$ | 73.67 | 5 | 18.69 | W 604, $\mathrm{R} 329 \mathrm{I}, \mathrm{T}_{2,} 7 \mathrm{yr} 83 \mathrm{I}$, |
| 1244 | $71 \begin{array}{llll}71 & 7 & 35\end{array}$ | 39.07 | 5 | 18.71 | W 704. [Sp 3909, Gl 2776 |
| 1245 | IO3 19 14.I | $60 \cdot 18$ | I | 18.73 | W 634, $\mathrm{Si}_{4} 1058, \mathrm{~L}_{6} 783$. |
| 1246 | $\begin{array}{llll}46 & 52 & 6.2\end{array}$ | 69.95 | 3 | 18.75 | W 726, Bu. |
| 1247 | $47 \quad 37494$ | 71.25 | 4 | 18.77 |  |
| 1248 | $\begin{array}{llll}69 & 35 & 8.2 \\ 78 & 58 & 0.5\end{array}$ | 75.75 | 4 | 18.77 |  |
| 1249 | $\begin{array}{llll}78 & 58 & 9 & 5\end{array}$ | 75.30 | 3 | 18.78 | W 656, R $3312, \mathrm{Sp} 3923$, |
| 1250 | $\begin{array}{llll}63 & 43 & 44 *\end{array}$ | 68.24 | 2 | 18.83 | [ 4476 , Gl 2788. |
| 1251 | $\begin{array}{llll}76 & 35 & 39\end{array}$ | 73.06 | 5 | 18.84 | 7 yr 837. |
| 1252 | $\begin{array}{llll}56 & 57 & 59\end{array}$ | 74.30 | 2 | 18.84 | R 3323. |
| 1253 | $66 \quad 46 \quad 1 \times 3$ | 77.50 | 4 | 18.86 | W 800, R 3328. |
| 1254 | $\begin{array}{llll}48 & 13 & 52.2\end{array}$ | 68.76 | 6 | 18.87 | W 807, RC 2558. |
| 1255 | $86 \quad 49 \quad 29.9$ | 69.51 | 4 | 18.88 | $\begin{array}{r} \text { W 708, } \operatorname{Ar} 2342, L_{2} 359 \\ {[\text { Gl } 2799 .} \end{array}$ |
| 1256 | 48 Iо $56 \cdot 2$ | 64.70 | 2 | 18.88 | W 8ı5. [ $\mathrm{L}_{1} 3089, \mathrm{Gl} 2802$. |
| 1257 | $91 \begin{array}{lll}17 & 58.0\end{array}$ | $68 \cdot 25$ | 1 | 18.92 | W 733, R 3345, $\mathrm{Si}_{1}$, |
| 1258 | $\begin{array}{llll}99 & \text { II } & 28.7 \\ 69 & 55 & 59.8\end{array}$ | 7 7 .49 | 3 | 18.95 | W 760, $\mathrm{L}_{5} 824$. |
| 1259 | $\begin{array}{llll}65 & 55 & 59.8\end{array}$ | 75.28 | I | 18.96 | W 865. W [P 3955, $\mathrm{L}_{3} 976$. |
| 1260 | 98 I9 45*2 | 68.20 | 3 | +18.96 | W 768, T4889, Ar 2352, |


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| 1261 | 20876 | $6 \cdot 8$ | $10^{\text {b }}$ | $44^{\text {m }} 3$ | $34^{19} 17$ | 72'75 | 6 | $+3^{\text {B }}$ - 66 |
| 1262 | 20882 | $8 \cdot 2$ | 10 | 44 | 41.25 | 75.30 | 1 | 3.147 |
| 1263 | 20885 | $8 \cdot 2$ | 10 | 44 | $46 \cdot 13$ | 79.93 | 3 | 3.147 |
| 1264 | 20896 | $7 \times 1$ | 10 | 45 | 30.31 | $69^{11}$ | 6 | 3.419 |
| 1265 | 20919 | $6 \cdot 9$ | 10 | 45 | $48 \cdot 45$ | 72.59 | 3 | 3.085 |
| 1266 | 20961 | $5 \% 7$ | 10 | 47 | 21.80 | $75 \cdot 26$ | 4 | 3.065 |
| 1267 | 20958 | $7 \cdot 0$ | 10 | 47 | 3I:06 | 74.95 | 3 | 3.324 |
| 1268 | 20937 | $7{ }^{\circ}$ | 10 | 47 | $43 \cdot 50$ | 72.87 | 5 | 3.314 |
| 1269 | 20988 | 8*0 | 10 | 48 | 28.70 | 71.49 | 4 | 3.016 |
| 1270 | 21006 | $6 \cdot 2$ | 10 | 49 | 16.40 | 68.21 | 1 | $3 \cdot 082$ |
| 1271 | 21014 | $7 \cdot 3$ | 10 | 49 | $3^{6.06}$ | 69.10 | 6 | 3.25I |
| 1272 | 21020 | $7{ }^{\circ}$ | 10 | 49 | $47^{\circ}$ |  |  | 3.271 |
| 1273 | 21030 | $7 \cdot 8$ | 10 | 50 | 2.35 | $73 \cdot 79$ | 4 | 3'114 |
| 1274 | 21040 | $7 \cdot 8$ | 10 | 50 | $35 \cdot 50$ | 74.79 | 2 | 3.232 |
| 1275 | 21063 | 77 | 10 | 51 | 39.93 | $72 \cdot 60$ | 6 | $3 \cdot 165$ |
| 1276 | 21066 | 7.5 | 10 | 51 | 54.4 I | 72.28 | I | 3.23 I |
| 1277 | 21084 | $7 \cdot 0$ | 10 | 52 | 28.81 | 80.26 | I | $3 \cdot 202$ |
| 1278 | 21092 | 77 | 10 | 52 | 43.93 | 70.57 | 3 | $3 \cdot 184$ |
| 1279 | 21126 | $9^{\circ}$ | 10 | 53 | 58.80 | 81.76 | 2 | 3.981 |
| 1280 | 21115 | $6 \cdot 7$ | 10 | 54 | $8 \cdot 68$ | 72.61 | 3 | 3.485 |
| 128 I | 2 II44 | $7{ }^{\circ}$ | 10 | 54 | $35^{\circ} 92$ | 71.23 | 1 | 2.996 |
| 1282 | 21164 | $5{ }^{\prime 2}$ | 10 | 55 | 27.20 | 68.00 | I | 3'060 |
| 1283 | 21179 | $7^{\circ}$ | 10 | 56 | 22.57 | $65 \cdot 26$ | I | 3.280 |
| 1284 | 21224 | $7 \cdot 5$ | 10 | 57 | 59.82 | 65.28 | 1 | $3 \cdot 363$ |
| 1285 | 21238 | 8.0 | 10 | 58 | 21.79 | $76 \cdot 22$ | 2 | 3.050 |
| 1286 | 21277 | $7{ }^{\circ}$ | 11 | $\bigcirc$ | 16.01 | $75 \cdot 29$ | 3 | 3.205 |
| 1287 | 21294 | 6.0 | II | $\bigcirc$ | 26.55 | $79^{\prime 2} 8$ | , | 2.997 |
| I 288 | 21266 | $7 \cdot 8$ | I I | $\bigcirc$ | 41'72 | 74.00 | 4 | $3 \cdot 337$ |
| $\underline{1289}$ | 21300 | 73 | II | $\bigcirc$ | 50.51 | 72.65 | 5 | 3.209 |
| 1290 | 2 I $33{ }^{\text {I }}$ | $7 \cdot 2$ | I I | 2 | 15.36 | 74.27 | 5 | 3.271 |
| 1291 |  | $6 \cdot 0$ | II | 2 | 41* |  |  | 2.901 |
| 1292 | 21354 | $7^{\circ}$ | II | 3 | 3'1 1 | 71900 | 3 | $3 \cdot 007$ |
| 1293 | 21345 | 7.5 | 11 | 3 | $7 \cdot 13$ | 73.08 | 5 | 3.287 |
| 1294 | 21358 | $8 \cdot 0$ | II | 3 | 16.53 | 83.26 | 1 | 3.090 |
| 1295 | 21371 | $7{ }^{\circ}$ | II | 4 | 4.71 | 80.24 | 2 | 3'141 |
| 1296 | 21411 | $7 \cdot 2$ | II | 5 | 33.53 | 74'52 | 4 | 3.296 |
| 1297 | 21418 | $6 \cdot 8$ | II | 5 | 43.77 | $72 \cdot 46$ | 8 | 3.304 |
| 1298 | 2142 I | 77 | II | 5 | $53 \cdot 86$ | 71.06 | 5 | $3 \cdot 303$ |
| 1299 | 21445 | $6 \cdot 0$ | II | 6 | 18.48 | $75 \cdot 28$ | 3 | 2.971 |
| 1300 | 21487 | $8 \cdot 0$ | II | 8 | $4 \cdot 54$ | $80 \cdot 26$ | I | 3'107 |
| 1301 | 2 I 49 I | $8 \cdot 5$ | I I | 8 | 13.71 | 74.51 | 4 | 3.216 |
| 1302 | 25519 | $6 \cdot 5$ | II | 9 | 23.07 | $71 \cdot 69$ | 5 | 3.010 |
| 1303 | 21525 | $8{ }^{\circ}$ | I I | 9 | 49'19 | $78 \cdot 62$ | 3 | 3.058 |
| 1304 | 21546 | $7 \cdot 5$ | II | II | 5.75 | $72 \cdot 26$ | 5 | 3.209 |
| 1305 | 2 I 553 | $6 \cdot 9$ | I I | I I | 23.90 | $75 \cdot 28$ | 2 | +3.191 |


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| 1261 | $77^{\circ} 45^{\prime} 30^{\prime \prime} \cdot 1$ | 72'75 | 6 | + 18 " 98 | W $78 \mathrm{I}, \mathrm{Bn}, 7 \mathrm{yr} 84 \mathrm{I}, \mathrm{Y}_{4526, \mathrm{GI}}$ |
| 1262 | 80622.6 | 75.30 | 1 | 18.98 | W 782, L4 377, Gl $2809 .[2808$. |
| 1263 | 80 II I5.1 | 79'93 | 3 | 18.98 | W $785, \mathrm{~L}_{4} 378$, Gl 281 I . |
| 1264 | $51 \quad 0 \quad 2.3$ | $67 \cdot 11$ | 7 | 19.00 | W 894. |
| 1265 | 88 I8 433 | 72.59 | 3 | 19.02 | $\begin{array}{r} W 8 \mathrm{r} 7, \mathrm{~T}_{2}, \mathrm{~L}_{1} 3 \mathrm{II5}, \mathrm{Y} \\ {[4533, \mathrm{Gl} 28 \mathrm{I} 5 .} \end{array}$ |
| 1266 | $\begin{array}{llll}91 & 27 & 55^{\prime} 7\end{array}$ | 75'26 | 4 | 19.06 | See Notes. |
| 1267 | $\begin{array}{llll}58 & 48 & 12.2\end{array}$ | 74.95 | 3 | 19.06 | W 943. |
| 1268 | $59 \quad 42 \quad 12.9$ | 72.87 | 5 | 19.07 | W 945 |
| 1269 | 9742486 | 71.49 | 4 | I9.08 | W 867, $\mathrm{Si}_{2}, \mathrm{~L}_{3} 997$. |
| 1270 | 8835490 | $68 \cdot 20$ | 2 | 19'II | See Notes. |
| 1271 | $\begin{array}{lrr}66 & 4 & 54.4\end{array}$ | 66.42 | 5 | 19'12 | $\mathrm{R}_{3403}, \mathrm{Y}_{457^{2}} \quad[\mathrm{r} 33 \mathrm{r} .$ |
| 1272 | $\begin{array}{llll}63 & 50 & 0.5\end{array}$ | 68.21 | 2 | 19.12 | W 985, T 4942, Ar 2378 , N7 7 yr |
| 1273 | $84332 \cdot 6$ | $73 \cdot 79$ | 4 | 19•13 | W $888, \mathrm{R} 3408, \mathrm{Sp} 3989$, L2 42I, |
| 1274 | 68 I I 2977 | 74.79 | 2 | 19•14 | W 995. [Gl 2838 , |
| 1275 | $\begin{array}{lll}79 & 37 & 507\end{array}$ | $72 \cdot 60$ | 6 | 19'17 | $\begin{array}{r} \mathrm{W} 914, \underset{\left[4584, \mathrm{Gl}_{28}\right.}{\mathrm{R} 3420, \mathrm{~L}_{8}, \mathrm{Y}} . \end{array}$ |
| 1276 | $\begin{array}{llll}68 & 5 & 40 \%\end{array}$ | 72.28 | 1 | 19.18 | W iorg. |
| 1277 | $71 \begin{array}{lll}70 & 14.6\end{array}$ | 80.26 | 1 | 19'19 |  |
| 1278 | $\begin{array}{llll}73 & 47 & 26 \cdot 1\end{array}$ | 68.22 | 4 | 19.20 | W 1037. |
| 1279 | 10324 48.1 | 81.76 | 2 | 19.23 | W $95 \mathrm{I}, \mathrm{Si}_{4} \mathrm{I} 083, \mathrm{~L}_{5} 884$. |
| 1280 | $\begin{array}{llll}42 & 45 & 57\end{array}$ | $68 \cdot 25$ | 4 | 19.23 |  |
| 1281 | $\begin{array}{llll}\text { IOI } & 24 & 374\end{array}$ | 71.23 | I | 19.24 | $\mathrm{L}_{5} 887$. |
| 1282 | $\begin{array}{llll}91 & 48 & 42.4\end{array}$ | $68 \cdot 20$ | 3 | 19.26 | See Notes. |
| 1283 | $\begin{array}{llll}60 & 23 & 50 \%\end{array}$ | 60.33 | 1 | 19.29 | W irog. |
| 1284 | $\begin{array}{llll}50 & 54 & 52 \cdot 6\end{array}$ | $60 \cdot 19$ | I | 19.32 |  |
| 1285 | $93 \quad 3 \begin{array}{lll} & 3 & 40\end{array}$ | 73.23 | 3 | 19.33 | $\mathrm{W}_{1033}, \mathrm{PM}_{127} 6, \mathrm{Si}_{2}$ $\left[\begin{array}{ll} L_{\mathrm{a}}^{0} & 1024 . \end{array}\right.$ |
| 1286 | $68 \quad 50 \quad 29^{\circ} 4$ | $75 \cdot 29$ | 4 | $19 \cdot 38$ | W 1190. |
| I 287 | $\begin{array}{ll}102 & 19 \\ 314\end{array}$ | $79^{\circ} 28$ | 1 | 19.38 | $\mathrm{L}_{5} 917$. |
| 1288 | 52382389 | 74.00 | 4 | 19.39 |  |
| 1289 | 68 10 25.2 | 72.02 | 6 | 19.39 | W 1203 . |
| 1290 | $\begin{array}{llll}59 & 16 & 572\end{array}$ | 72.10 | 6 | 19.42 | W 123 I . |
| 1291 | $\begin{array}{lll}1 I 7 & 24 & \text { II'7 }\end{array}$ | 68.22 | 2 | 19.43 | T 5068, Ar 2420, Oe |
| 1292 | 101036 | 71.57 | 3 | 19.44 | L6929. [III75, 7 yr 867. |
| 1293 | 5647303 | 73.00 | 5 | 19.44 | W 6, Y $4660 . \quad[\mathrm{Gl} 2882$. |
| 1294 | $86 \quad 52 \quad 10 \cdot 8$ | 83.26 | 1 | 19.44 | W11, Ar 2422, Sp 4052, $\mathrm{L}_{2} 500$, |
| 1295 | $78 \quad 1 \quad 14.6$ | $78 \cdot 60$ | 3 | 19.46 | $\mathrm{W}_{25}, 7 \mathrm{yr} 870, \mathrm{Sp}_{4060}$, [Gl 2885. |
| 1296 | $\begin{array}{llll}54 & 32 & 48\end{array}$ | 74.52 | 4 | 19.49 | W 62, |
| 1297 | $53 \quad 30 \quad 59$ | 73'16 | 7 | 19.49 | W $73, \mathrm{Y} 4675$. |
| 1298 | $\begin{array}{llll}53 & 29 & 26 \cdot 8\end{array}$ | 70.02 | 4 | 19.50 | W $78, \mathrm{Y}_{4676 .}$ |
| 1299 | 10749 12.3 | 75.28 | 3 | 19.51 | Bn. ${ }^{\text {W }}$ |
| 1300 | $83 \quad 19$ 38.5 | $80 \cdot 26$ | 1 | 19.54 | W 98, L_ 530, Gl 2902. |
| 1301 | $\begin{array}{rrr}64 & 20 & 0.3\end{array}$ | 74.51 | 4 | 19.55 | Bn. |
| 1302 | IOI 54 40.5 | 70.69 | 6 | 19.57 | Gl 2907. |
| 1303 | $\begin{array}{lll}92 & 47 & 30 \cdot 1 \\ 64 & 15 & 57 \cdot 7\end{array}$ | $76 \cdot 79$ | 5 | 19.57 | W r 33, Sp 4092, Y 4709 , |
| 1304 | $\begin{array}{rrr}64 & 15 & 57 \% \\ 67 & 8 & 1\end{array}$ | 73.01 75.28 | 4 | 1960 +19.60 | $\text { W I } 80 .$ <br> W 86 |
| 1305 | $67 \quad 8 \quad 14^{\circ}$ | $75 \cdot 28$ | 2 | +19.60 | W 186. |


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| I 306 | 2 I 56 | $7{ }^{\circ}$ | $1 \mathrm{I}^{\mathrm{h}} \quad 12 \mathrm{~m}$ | $0^{8.47}$ | 71.24 | 3 | + $3^{4.275}$ |
| 1307 | 21578 | $7 \cdot 8$ | II 12 | 48.14 | 71*00 | 4 | 3.253 |
| 1308 | 21579 | 7.5 | II 12 | $53^{\circ}$ |  |  | 3.291 |
| 1309 | 21582 | $6 \cdot 8$ | II 12 | $58 \cdot 69$ | 79.30 | 2 | 3'179 |
| 1310 | 21618 | $7 \cdot 0$ | II 14 | I 3.48 | 74.28 | 5 | 3.028 |
| 1311 | 21626 | $8 \cdot 0$ | II 14 | 30'92 | 73.27 | 3 | 3.086 |
| 1312 | 21660 | $6 \cdot 7$ | II 15 | $56 \cdot 31$ | $78 \cdot 04$ | 4 | $3 \cdot 156$ |
| 1313 | 21662 | $7 \cdot 7$ | 1 I 16 | $8 \cdot 8 \mathrm{I}$ | 72.05 | 6 | 3.234 |
| I3I4 | 21665 | $7{ }^{\circ}$ | II 16 | 9.21 | 70.95 | 3 | 3.036 |
| I3I5 | 21669 | 8* | II 16 | $21^{\text {. }}$ |  |  | 3.146 |
| 1316 | 21688 | $7^{72}$ | $\begin{array}{ll}\text { I } & 17\end{array}$ | 5.08 | 75.50 | 2 | $3 \cdot 158$ |
| 1317 | 21707 | 8'0 | 1117 | 54.11 | 79.53 | 4 | $3 \cdot 167$ |
| I318 | 21727 | $7 \cdot 2$ | II 18 | $35 \cdot 43$ | 69.67 | 5 | 3.066 |
| I3I9 | 2 I 734 | $6 \cdot 5$ | II 18 | $58 \cdot 31$ | $76 \cdot 89$ | 5 | 3.213 |
| 1320 | 21753 | $7{ }^{\circ}$ | II 19 | $33 \cdot 83$ | $80 \cdot 26$ | I | 3'174 |
| I321 | 21757 | $6 \cdot 8$ | II 19 | $43 \cdot 64$ | $72 \cdot 89$ | 5 | 3.23I |
| 1322 | 21777 | 77 | II 20 | 30.20 | $72 \cdot 96$ | 3 | 3.225 |
| 1323 | 21822 | $7 \cdot 5$ | II 21 | $38 \cdot 53$ | $75 \cdot 30$ | I | 3'157 |
| 1324 | 21828 | $7 \cdot 7$ | II 2 I | $39^{\circ}$ |  | 2 | 3.071 |
| 1325 | 21824 | 8•1 | II 2 I | $50 \cdot 83$ | 73.28 | 4 | 3.258 |
| I 326 | 21846 | $7{ }^{\circ}$ | II 22 | 39.44 | 69.68 | 5 | 3.203 |
| 1327 | 21858 | 7.5 | $\begin{array}{ll}\text { I I } & 23\end{array}$ | 17.13 | 79.87 | 5 | 3.175 |
| 1328 | 21863 | $6 \cdot 8$ | II 23 | 26.77 | 71*43 | 7 | 3.198 |
| r329 | 21877 | $8 \cdot 5$ | II 23 | 57'10 | 75.30 | 3 | $3 \cdot 108$ |
| 1330 | 21896 | $7{ }^{\prime}$ | II 25 | 17.30 | 7178 | 4 | $3 \cdot 166$ |
| 1331 | 21902 | 6.5 | 1 I 25 | 31'55 | $76 \cdot 53$ | 4 | 3.223 |
| 1332 | 2 I922 | 77 | 1126 | 22.84 | $76 \cdot 96$ | 3 | $3 \cdot 208$ |
| I333 | 21927 | $7 \cdot 2$ | II 26 | 56.79 | $70 \cdot 30$ | 2 | 3.506 |
| I 334 | 21946 | $8 \cdot 3$ | II 27 | $4 \cdot 88$ | $74 \cdot 69$ | 4 | $3 \cdot 101$ |
| 1335 | 21960 | $6 \cdot 5$ | II 27 | $45 \cdot 53$ | 80.26 | I | 3.020 |
| 1 336 | 21977 | $6 \cdot 5$ | II 28 | 32:33 | 71.28 | 5 | 3'143 |
| I 337 | 21987 | 7.5 | II 29 | 10.32 | $78 \cdot 65$ | 5 | 3.132 |
| 1338 | 22003 | $6 \cdot 8$ | $\begin{array}{ll}\text { II } & 29 \\ \text { II }\end{array}$ | 54.95 | 74.31 |  | $3 \cdot 156$ |
| 1339 | 22026 | $6 \cdot 5$ | II 30 | 54.13 | 69:28 | 2 | $3 \cdot 244$ |
| 1340 | 22034 | $7{ }^{\circ}$ | 1130 | 59.20 | $65 \cdot 26$ | 1 | 3.037 |
| 1341 | 22059 | 6.3 | II 31 | 55:98 | $76 \cdot 63$ | 3 | $3 \cdot 185$ |
| 1342 | 22067 | $7{ }^{\circ}$ | $\begin{array}{ll}\text { II } & 32\end{array}$ | 10.91 | 69.47 | 5 | $3 \cdot 208$ |
| 1343 | 22098 | $7{ }^{\circ}$ | $\begin{array}{ll}\text { I I } & 33\end{array}$ | 18.30 | $73 \cdot 80$ | 4 | $3 \cdot 048$ |
| 1344 | 22100 | 6.9 8.8 | II 33 | $38 \cdot 30$ | $72 \cdot 31$ | 5 | $3 \cdot 151$ |
| 1345 | 22112 | $8 \cdot 8$ | II 34 | 15.21 | 79.48 | 5 | 3.097 |
| 1346 | 22144 | $6 \cdot 5$ | $\begin{array}{ll}\text { I } 1 & 35\end{array}$ | 35.6r | 69.08 | 5 | 3'132 |
| 1347 | 22148 | 7.7 | $\begin{array}{ll}\text { I I } & 35\end{array}$ | 43.76 | 78.63 | 3 | 3.085 |
| I 348 | 22151 | 7.5 | $\begin{array}{ll}\text { I I } & 35 \\ \text { II }\end{array}$ | 43.99 | 65.29 | 1 | $3.03{ }^{\circ}$ |
| I 349 | 22155 | 7.5 | $\begin{array}{ll}\text { I } 136 \\ \text { I } & \end{array}$ | I.08 | $75 \cdot 56$ | 4 | 3.080 |
| r $35^{\circ}$ | 22168 | $7 \cdot 3$ | $\begin{array}{ll}11 & 36\end{array}$ | 50.74 | 73.29 | 2 | +3.146 |


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| 1306 | $53^{\circ} 49^{\prime} 33^{8 .} 7$ | $7 \mathrm{I}^{\prime} 24$ | 3 | +19"'62 | W $199, \mathrm{Bn}, \mathrm{Y}_{4720}{ }^{\text {d }}$ |
| 1307 | $\begin{array}{llll}56 & 29 & 32\end{array}$ | 7100 | 4 | 19.63 | W 214. |
| 1308 | $51 \begin{array}{llll}51 & 12 & 4^{\circ} \mathrm{O}\end{array}$ | 66.30 | 5 | 19.63 | W 215, Ar 2455. |
| 1309 | $68 \quad 35$ 31•6 | 75.60 | 3 | 19.63 | W 220. |
| 13 ro | $\begin{array}{lllll}99 & 36 & 39\end{array}$ | $74 \cdot 48$ | 5 | 19.66 | W $215, \mathrm{Si}_{2,} \mathrm{~L}_{5} 980$. |
| 1311 | 8653 3r'7 | 73.27 | 3 | 19.66 | $\mathrm{L}_{\mathrm{a}} 568$. |
| 1312 | 751538389 | 78.04 | 4 | 19.68 |  |
| 1313 | $\begin{array}{llll}57 & 29 & 9\end{array}$ | 73.79 | 4 | 19.69 | W 273. [ro59, ${ }^{\text {a }}$ 2935. |
| 1314 | $\begin{array}{llll}98 & 9 & 28 \cdot 2\end{array}$ | 69.53 | 4 | 19.69 | W 250, $\mathrm{Si}_{2}, \mathrm{~L}_{3} \mathrm{rog}$. |
| 1315 | $\begin{array}{llllll}73 & 46 & 52\end{array}$ | 68.22 | 2 | 19.69 | R 3546. |
| 1316 | 72 ro 16.2 | $74 \cdot 26$ | 1 | 19.71 |  |
| 1317 | $6841034{ }^{1} 2$ | $76 \cdot 50$ | 4 | 19.72 | W 308, R 3557. [2940. |
| ${ }^{1} 318$ | $91 \quad 3128.2$ | 69.78 | 4 | 19.73 | W $290, \mathrm{Si}_{2}, \mathrm{~L}_{1} 33 \mathrm{I} 9, \mathrm{Gl}$ |
| I319 | $\begin{array}{llll}59 & 19 & 36 \cdot 3\end{array}$ | 74.15 | 6 | 19.73 | W 330, R 3567, Bn. |
| 1320 | $\begin{array}{llll}66 & 36 & 19 \times 1\end{array}$ | 74.25 | 2 | 19.74 | W 338. |
| 1321 | 55 5I 47* | 72.89 | 5 | 19.74 | W 34 r . |
| 1322 | 56 II 10.4 | $7 \times 78$ | 4 | 19.76 | W 355 - |
| 1323 | 69 14 4930 | 75.30 | I | 19.77 | W 382, R 3590. |
| ${ }^{1} 324$ | 901232.4 | 66.27 | 5 | 19.77 | See Notes. |
| 1325 | 50 - 16.3 | 72'15 | 5 | 19.78 | W 386, RC 2688. |
| 1326 | $\begin{array}{llll}58 & 52 & 55 * 9\end{array}$ | 66.88 | 5 | 19.79 | W 397, Bn. |
| 1327 | $\begin{array}{llll}64 & 21 & 52.4\end{array}$ | 79.87 | 5 | 19.80 | W 412. |
| 1328 | $\begin{array}{llll}59 & 20 & 22.9\end{array}$ | 72.08 | 5 | 19.80 | W 4I3, Bn. |
| 1329 | 80 | 75.30 | 3 | 19.81 | W 393, R 3608, L 453. |
| 1330 | $64 \quad 59 \quad 56 \cdot 5$ | $7{ }^{1} 005$ | 5 | 19.82 | $W_{450}$ PMI321, R ${ }_{3} 620$, <br> [Bn. |
| ${ }^{1331}$ | $\begin{array}{llll}53 & 3 & 44 \times 4\end{array}$ | 76.53 | 4 | 19.83 | W 457, R $3623, \mathrm{Bn}, \mathrm{Y}$ |
| ${ }_{1} 332$ | $\begin{array}{llll}55 & 15 & 29.3\end{array}$ | $76 \cdot 96$ | 3 | 19.84 | W 473, R 3628. [4806. |
| 1333 | $\begin{array}{llll}24 & 3 & 30^{\circ} 2 \\ 81 & \end{array}$ | 68.50 | , | 19.85 | W [Y $482 \mathrm{I}, \mathrm{Gl} 2980$. |
| 1334 | $\begin{array}{rrrr}81 & 19 & 1^{\circ} 0 \\ 805 & \end{array}$ | 74.45 | 3 2 | 19.85 9.86 | W $446, \mathrm{Si}_{1}, \mathrm{Bn}, \mathrm{L}_{2} 635$, $\mathrm{W} 456, \mathrm{Bn}, \mathrm{Si}_{4} \mathrm{II} 2, \mathrm{~L}_{6}$ |
| 1335 | 1052120.9 | 7575 | 2 | 19.86 | W $456, \mathrm{Bn}, \mathrm{Si}_{4} \mathrm{III2}, \mathrm{~L}_{6}$. |
| 1336 | $68 \quad 5245$ | 70.80 | 6 | 19.87 | $\mathrm{W}^{\mathrm{W}} 509, \mathrm{Bn}, \mathrm{Y}_{4} 834$. |
| ${ }^{1} 337$ | $\begin{array}{llll}71 & 26 & 6 \cdot 0\end{array}$ | 75.45 | 5 | 19.88 | W 523. |
| 1338 | $\begin{array}{llll}64 & 16 & 44.5\end{array}$ | 72.29 | 3 | 19.88 | W 539, Y 4845. |
| 1339 | $\begin{array}{llll}44 & 35 & 35.4\end{array}$ | 69.32 | 1 | 19.90 | $12 \mathrm{yr} 965,6$ yr 759. |
| 1340 | $\begin{array}{llll}\text { ror } & 39 & 10.8\end{array}$ | 63.70 | 2 | 19.90 | $\mathrm{W}_{52 \mathrm{r}} \mathrm{r}, \mathrm{Si}_{3} \mathrm{r} 379, \mathrm{~L}_{8} 1025$. |
| 1341 | $\begin{array}{llll}55 & 40 & 547\end{array}$ | 76.63 | 3 | 19.90 | Y 4860. |
| I 342 | 5087 | 68.00 | 4 | 19.90 | W 598. |
| 1343 | $\begin{array}{llll}98 & 46 & 25^{\circ}\end{array}$ | $73 \cdot 81$ | 4 | 19.92 | W 561, $\mathrm{Si}_{\mathrm{s}}, \mathrm{L}_{\mathrm{s}} \mathrm{II} 79$. |
| 1344 | $\begin{array}{llll}65 & 35 & 58 \cdot 7\end{array}$ | $7{ }^{\circ} \mathrm{O}$ | 6 | 19.92 | W 632, R 3684. |
| 1345 | $\begin{array}{llll}80 & 38 & 57\end{array}$ | 79.48 | 5 | 19.93 | $\mathrm{W}_{577}, \mathrm{Sp}_{42 \mathrm{I} 5}, \mathrm{~L}_{6}, \mathrm{Gl}$ $[3007 .$ |
| 1346 | $\begin{array}{llll}67 & 5 & 38.9\end{array}$ | 69.08 | 5 | 19.94 | W677, $\mathrm{R}_{3697} \mathrm{Y}_{4896 .}$ |
| 1347 | $\begin{array}{rrrr}84 & 33 & 38.8 \\ 806 & 18\end{array}$ | $78 \cdot 63$ | 3 | 19.94 | See Notes. [G1 3014 |
| 1348 1349 1 | $\begin{array}{rrr}106 & 19 & 28.8 \\ 86 & 56 & 38.4\end{array}$ | $60 \cdot 17$ $75 \cdot 56$ | 4 | 19.94 19.95 | $\begin{aligned} & \text { Oe } 1588.5 . \quad[\mathrm{Gl} 3014 \\ & \mathrm{W} 609, \mathrm{R}_{3705}, \mathrm{Si}_{1}, \mathrm{~L}_{4} 673 \end{aligned}$ |
| 1349 1350 | $\begin{array}{rrrr}86 & 56 & 38 \cdot 4 \\ 61 & 15 & 9 \cdot 3\end{array}$ | 75.56 73.29 | 4 | 19.95 +19.95 | W609, $\mathrm{R}_{37} 05, \mathrm{Si}_{1}, \mathrm{~L}, 673$ <br> W 698. |


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| 1351 | 22175 | $7 \cdot 2$ | $\mathrm{II}^{\text {h }}$ | $36^{\mathrm{m}}$ | 589.04 | 68.29 | 3 | $+3^{19} 157$ |
| 1352 | 22184 | $7 \cdot 0$ | II |  | 16.73 | $7 \mathrm{7} \cdot 32$ | 5 | 3'133 |
| 1353 | 22201 | $7{ }^{\circ}$ | 11 | 38 | 12.35 | $76 \cdot 49$ | 5 | 3'143 |
| 1354 | 22220 | $7 \cdot 4$ | II |  | $44^{\circ}$ |  |  | $3 \cdot 105$ |
| 1355 | 22231 | $7 \% 9$ | 11 |  | 58.65 | 77.71 | 5 | 3.089 |
| ${ }^{1} 356$ | 22229 | $7 \cdot 0$ | II |  | 1.69 | 69.08 | 5 | $3 \cdot 165$ |
| 1357 | 22237 | $8 \cdot 5$ | 11 |  | 19.05 | $8 \mathrm{I} \cdot 78$ | 2 | 3.080 |
| ${ }^{1} 358$ | 22273 | 7.5 | 11 |  | $49 \cdot 77$ | 72.30 | 5 | $3 \cdot 128$ |
| I 359 | 22279 | 7.8 | 11 |  | 0.03 | 6931 | 1 | 3.114 |
| 1360 | 22285 | 78 | 11 |  | 23.50 | $7{ }^{1 \times 30}$ | 3 | 3.140 |
| 1361 | 22289 | 7.5 | II | 41 | 26.63 | 75'93 | 3 | 3'129 |
| 1362 | 22324 | 75 | 11 | 43 | $5 \cdot 22$ | 69.30 | 2 | 3•130 |
| 1363 | 22350 | 77 | II |  | 15.28 | 75.21 | 5 | $3 \cdot 122$ |
| 1364 | 22354 | 7 7 | 11 |  | 27.87 | 73.54 | 4 | 3•134 |
| 1365 | 22359 | 6.2 | 11 | 44 | 39.42 | $70^{\circ} 64$ | 6 | 3.132 |
| 1366 | 22363 | 7.5 | 11 | 44 | $40^{\circ}$ |  |  | 3.052 |
| 1367 | 22366 | $7 \cdot 2$ | 11 | 45 | 0.61 | $78 \cdot 49$ | 5 | $3 \cdot 092$ |
| 1368 | 22409 | $7 \cdot 5$ | 11 | 47 | $7 \cdot 11$ | $74^{\circ} 0$ | 5 | 3.144 |
| 1369 | 22436 | $8 \cdot 3$ | 11 | 48 | $8 \cdot 35$ | $73 \cdot 78$ | 4 | $3 \cdot 090$ |
| 1370 | 22450 | $6 \cdot 5$ | 11 | 48 | $45 \% 1$ | 72.80 | 4 | $3 \cdot 123$ |
| 1371 | 22453 | 6.5 | 11 | 48 | 53.04 | 79.56 | 4 | 3.126 |
| 1372 | 22455 | $7{ }^{\circ}$ | 11 | 48 | 58.08 | 68.08 | 5 | 3.113 |
| 1373 | 22484 | $7{ }^{\circ}$ | II |  | $48 \cdot 47$ | $70 \cdot 25$ | 6 | 3'106 |
| 1374 | 22489 | 6.8 | 11 |  | 54.96 | $77 \times 51$ | 5 | $3 \cdot 103$ |
| 1375 | 22499 | 7.5 | 11 | 50 | 21.69 | $8 \mathrm{I} \cdot 29$ | I | 3.062 |
| 1376 | 22512 | 7.5 | 11 | 50 | 59.36 | 7775 | 2 | 3'099 |
| 1377 | 22532 | 7.8 | 11 | 51 | $37 \cdot 66$ | 72.50 | 5 | 3.095 |
| 1373 | 22536 | 7.5 | 1 I | 51 | 44.03 | $80 \cdot 30$ | 3 | 3.069 |
| 1379 | 22541 | $8 \cdot 1$ | 11 | 52 | $1 \cdot 36$ | 71.08 | 5 | 3.102 |
| 1380 | 22562 | 77 | 11 | 53 | 10.27 | $75 \circ 07$ | 4 | 3.071 |
| 1381 | 22567 | $6 \cdot 6$ | 11 |  | $3 \mathrm{I} \cdot 89$ | 69.52 | 5 | 3'098 |
| 1382 | 22575 | $8 \cdot 2$ | II | 53 | $45 \cdot 20$ | 69.80 | 2 | 3.096 |
| 1383 | 22585 | $6 \cdot 5$ | 11 | 54 | 19.63 | $80 \cdot 30$ | 3 | 3.078 |
| 1384 | 22601 | $7 \cdot 2$ | 11 | 54 | $49 \cdot 66$ | 7109 | 5 | $3 \times 079$ |
| 1385 | 22612 | $5 \cdot 5$ | 11 | 55 | 15.27 | $70 \cdot 69$ | 5 | 3.093 |
| 1386 | 22628 | 8.0 | II | 56 | $2 \cdot 68$ | $82 \cdot 26$ | 2 | 3.063 |
| 1387 | 22632 | $6 \cdot 7$ | 1 I | 56 | 8.43 | $69 \cdot 76$ | 2 | 3.095 |
| 1388 | 22634 | $8 \cdot 2$ | II | 56 | 10.91 | 74.57 | 4 | 3.076 |
| 1389 | 22678 | 77 | II | 57 | 54.75 | 80.06 | 4 | 3.073 |
| 1390 | 22663 | $8 \cdot 3$ | 1 I | 58 | 12.55 | 74.08 | 5 | 3.073 |
| 1391 | 22683 | 73 | 11 | 58 | 17.10 | 69.50 | 5 | 3.079 |
| 1392 | 22697 | 73 | 11 | 58 | $44 \cdot 75$ | 73.07 | 4 | 3.077 |
| 1393 | 22708 | 7.5 | 11 | 59 | II'I5 | 80.05 | 4 | 3.071 |
| 1394 |  | 6.0 | 11 |  | $19^{\circ}$ |  |  | 3.080 |
| 1395 | 22727 | $8 \cdot 0$ | 12 |  | \% $7 \times 16$ | 73*3 | 1 | $+3.071$ |


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| 1351 | $57^{\circ} 32^{\prime} 35^{\prime \prime} 7$ | 67.00 | 4 | +19"•95 | W 703, Ar 2528. |
| 1352 | 65 17 46.6 | $7 \mathrm{r} \cdot 82$ | 4 | 1996 | $\mathrm{W}_{7} 08, \mathrm{~T}_{5378} \mathrm{R}_{3714}{ }^{\text {a }}$ A |
| I 353 | $\begin{array}{llll}60 & 38 & 12.2\end{array}$ | 7649 | 5 | 19.96 | W 729. [2530, $\mathrm{Y}_{4} 4905$ |
| 1354 | $\begin{array}{llll}75 & 2 & 37.2\end{array}$ | 68.23 | 2 | 19.97 | W $740, \mathrm{R}_{3727}$, Y 4917. |
| ${ }^{1} 355$ | 82 I6 $3^{2}$ \% | 7771 | 5 | 19.97 | W 662, $\mathrm{L}_{2} 686, \mathrm{Gl} 3025$. |
| 1356 | $\begin{array}{llll}53 & 24 & 45 \%\end{array}$ | 67.88 | 5 | 19.97 | W 749, $\mathrm{Y}_{4920 .}$ |
| 1357 | $86 \quad 28 \quad 51.9$ | $81 \cdot 78$ | 2 | 19.97 | W 665, $\mathrm{L}_{1} 69 \mathrm{r}$. |
| 1358 | $64 \quad 52 \quad 51 \cdot 6$ | 73.06 | 4 | 19.98 | W 779. |
| 1359 | 69 16 $233^{\circ} \mathrm{O}$ | 69.31 | 1 | 19.99 | W $785, \mathrm{Y} 4935$. |
| 1360 | $\begin{array}{llll}56 & 48 & 52\end{array}$ | 71.30 | 3 | 19.99 | W 790. |
| 1361 | $\begin{array}{llll}61 & 57 & 54.8\end{array}$ | 73.28 | 4 | 19.99 | W 79J, R 3741. |
| 1362 | $59 \quad 48 \quad 23.2$ | 68.94 | 3 | 20.00 | W 825. |
| 1363 | $\begin{array}{lllll}61 & 12 & 30 \cdot 6\end{array}$ | 73.00 | 6 | 20.01 | W 849. |
| 1364 | $55 \quad 42 \quad 3.2$ | 73.54 | 4 | 20.01 |  |
| 1365 | $\begin{array}{lllll}55 & 55 & 50 \cdot 6\end{array}$ | 70.05 | 7 | 20.01 | W 854, Bn. |
| ${ }^{1} 366$ | $1023744^{1}$ | $66 \cdot 78$ | 2 | 20.01 | W $755, \mathrm{Si}_{\mathrm{g}} \mathrm{I} 398$. |
| 1367 | $77 \quad 2959.6$ | 78.49 | 5 | 20.01 | W $762, \mathrm{R} 3750, \mathrm{Gl} 3045$. |
| 1368 | $\begin{array}{llll}46 & 23 & 18.3\end{array}$ | 73.28 | 5 | 20.02 | W 895, RC 2756. |
| ${ }^{1} 369$ | $\begin{array}{lllll}75 & 8 & 59.9\end{array}$ | 73.78 | 4 | 20.03 | W 806. |
| 1370 | $\begin{array}{lllll}52 & 32 & 48 \cdot 8\end{array}$ | 71.50 | 5 | 20.03 | W $925, \mathrm{Y} 4986$. |
| 1371 | 50 32 47 <br> 1   | 79.56 | 4 | 20.03 | W 926. |
| 1372 | 6346 53*0 | 69.03 | 4 | 20.03 | W 928. |
| 1373 | $\begin{array}{llll}60 & 26 & 46\end{array}$ | 69.90 | 6 | 20.03 | W 953. |
| 1374 | 623731.6 | 75.63 | 6 | 20.04 | W 957 , Bn. |
| 1375 | 100 $\quad 1349$ | $74 \times 76$ | 2 | 20.04 | $\mathrm{L}_{5} \mathrm{r} 073$. |
| 1376 | $\begin{array}{llll}62 & 32 & 13.9\end{array}$ | $77 \cdot 75$ | 2 | 20.04 |  |
| 1377 | $\begin{array}{llll}64 & 9 & 59.4\end{array}$ | 73.00 | 5 | 20.04 | W 990. |
| 1378 | $93 \quad 40 \quad 393$ | 80.30 | 3 | 20.04 | W 867, $\mathrm{Si}_{2}, \mathrm{Sp} 43 \mathrm{I} 3, \mathrm{~L}_{3}$ |
| 1379 | $57 \quad 22 \quad 57 \%$ | 7r.08 | 5 | 20.04 | Wioor. [ $1263, \mathrm{Gl}_{3070}$ |
| 1380 | $91 \begin{array}{lll}91 & 19\end{array}$ | 75.07 | 4 | 20.05 | $\begin{aligned} & \mathrm{W} 895, \mathrm{Si}_{1}^{\mathrm{L}}, \mathrm{~L}_{1} 3523, \dot{\mathrm{Y}} \\ & {[5008, \mathrm{Gl} 3076 .} \end{aligned}$ |
| 1381 | $\begin{array}{llll}55 & 16 & 15\end{array}$ | 68.53 | 5 | 20.05 | W 1025, Y 5010. |
| 1382 | $57 \quad 3{ }^{5} \quad 47^{\circ} \mathrm{I}$ | 69.80 | 2 | 20.05 |  |
| 1383 | $99 \quad 44 \quad 46$ | 80.30 | 3 | 20.05 | See Notes. [ $\mathrm{Gl}^{2080}$ |
| 1384 | $\begin{array}{llll}76 & 55 & 36 \cdot 2 \\ 53 & 5 & 32 \cdot 8\end{array}$ | $70 \cdot 62$ | 6 | 20.05 | W 926, R 3779, Y 5024, |
| 1385 | $\begin{array}{llll}53 & 15 & 32 \cdot 8\end{array}$ | 69.79 | 6 | 20.05 | W 1066, Y 5026. |
| 1386 | $\begin{array}{llll}\text { ror } & 14 & 16.9\end{array}$ | 71.26 | 1 | 20.05 | W 942, $\mathrm{Si}_{\mathrm{s}} 14 \mathrm{IO}, \mathrm{L}_{6} 1094$. |
| 1387 | $46 \quad 12 \quad 43$ | $70 \cdot 31$ | 1 | 20.05 | See Notes. $\quad\left[\mathrm{Gl}_{3085}\right.$ |
| r388 |  | 74.57 | 4 | 20.05 | W 944, Bn, $\mathrm{Sp}_{4342} \mathrm{~L}_{6}$, |
| 1389 | $\begin{array}{llll}84 & 22 & 18.3\end{array}$ | 80.06 | 4 | 20.05 | W 972, $\mathrm{L}_{2} 792, \mathrm{Gl} 309 \mathrm{r}$. |
| I 390 | $86 \quad 8 \quad 29.9$ | 73.00 | 6 | 20.05 | W 975, R 3801, L $\mathrm{L}_{2} 795$. |
| 1391 | $5344 \begin{array}{lll}53 & 1 \times 6\end{array}$ | 68.51 | 5 | 20.05 | W 1126. |
| 1392 | $55 \quad 33 \quad 7 \times 5$ | $7{ }^{1} 75$ | 5 | 20.05 | W 1 If38. |
| 1393 | $95 \quad 9 \quad 1.5$ | 80.05 | 4 | 20.05 | W 994, $\mathrm{Si}_{2}, \mathrm{~L}_{3} \mathrm{I} 294$, |
| 1394 | $\begin{array}{lll}26 & 22 & 4.5\end{array}$ | $64 \cdot 08$ | 5 | 20.05 | See Notes. $\quad\left[\mathrm{Gl}_{3} 3097\right.$. |
| 1395 | $\begin{array}{llll}55 & 44 & 12\end{array}$ | 73.31 | I | +20.05 |  |


| No. | Lalande. | Mag. | Mean R.A. 18750. |  |  | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1396 | 22755 | 8.0 | $12{ }^{\text {b }}$ | $\mathrm{I}^{\text {m }}$ | $9^{8 \cdot 25}$ | 70.81 | 4 | $+3^{8.072}$ |
| I 397 | 22764 | $7 \cdot 2$ | 12 | 1 | 43.91 | 71'30 | 5 | 3.066 |
| I 398 | 22783 | $6 \cdot 8$ |  | 2 | 14.48 | 77'13 | 5 | 3.065 |
| I 399 | 22798 | $8 \cdot 5$ | 12 | 3 | 0.85 | 73.54 | 3 | 3.074 |
| 1400 | 22826 | $7{ }^{\circ}$ | 12 | 3 | $45 \cdot 34$ | $77 \cdot 69$ | 5 | $3 \cdot 065$ |
| 1401 | 22836 | $7 \cdot 2$ | 12 | 4 | $6 \cdot 78$ | 70'30 | 3 | 3.058 |
| 1402 | 22846 | $7 \cdot 1$ | 12 | 4 | 28.30 | 74.56 | 4 | 3.050 |
| 1403 | 22871 | $7{ }^{\circ}$ | 12 | 5 | II 55 | 79.33 | 4 | 3.051 |
| 1404 | 22880 | $6 \cdot 7$ | 12 | 5 | 39.68 | 71.30 | 4 | 3.054 |
| 1405 | 22902 | 7.5 | 12 | 6 | 31-83 | 72.31 | 4 | $3 \cdot 048$ |
| 1406 | 2293 I | $8 \cdot 0$ | 12 | 7 | 40.11 | 81.80 | 2 | 3.034 |
| 1407 | 22960 | $8 \cdot 2$ | 12 | 8 | 51.57 | 74.97 | 3 | 3.038 |
| 1408 | 22964 | $7 \cdot 8$ | 12 | 9 | 3.63 | 68.29 | 5 | 3.028 |
| 1409 | 22970 | $7 \cdot 2$ | 12 | 9 | I 2.52 | $68 \cdot 66$ | 3 | $3 \cdot 028$ |
| 1410 | 22991 | 8.0 | 12 | 9 | 51.80 | 65.29 | I | 3.075 |
| I4II | 23002 | $7 \cdot 2$ | 12 | 10 | $26 \cdot 26$ | 7111 | 5 | 3*02I |
| 1412 | 23006 | $6 \cdot 0$ | 12 | 10 | $36 \cdot 64$ | 79.52 | 5 | 3.090 |
| 1413 | 23018 | $5 \cdot 8$ | 12 | I I | 12.55 | 75.08 | 4 | 3.035 |
| 1414 | 23025 | 7.0 | 12 | I I | 22.78 | 79.31 | 4 | 3.053 |
| I4I5 | 23051 | $6 \cdot 5$ | 12 | 12 | 13.15 | 77.82 | 2 | $3 \cdot 030$ |
| 1416 | 23074 | 7'0 | 12 | 12 | 59:35 | 67.80 | 4 | 3.052 |
| 1417 | 23136 | $7 \cdot 2$ | 12 | 14 | $47 \cdot 45$ | 72.65 | 3 | $3 \cdot 030$ |
| 1418 | 23150 | 8.0 | 12 | 15 | $26 \cdot 10$ | 65.29 | 1 | 3.078 |
| 1419 | 23154 | $6 \cdot 8$ | 12 | 15 | $42 \cdot 64$ | $78 \cdot 33$ | 5 | $3 \cdot 044$ |
| 1420 | 23159 | 6.5 | 12 | 15 | $47^{\circ} 62$ | 72.64 | 6 | 2.970 |
| 142 I | 23188 | $8 \cdot 0$ | 12 | 17 | 2.31 | 79.66 | 3 | $3 \cdot 08 \mathrm{I}$ |
| 1422 | 23195 | $7{ }^{\circ}$ | 12 | 17 | 124.49 | 69.63 | 6 | 3.025 |
| 1423 | 23214 | $6 \cdot 3$ | 12 | 18 | 10.24 | 73.30 | 7 | 3.020 |
| 1424 | 23225 | $7 \cdot 2$ | 12 | 18 | 34.98 | 75.33 | 4 | $3 \cdot 005$ |
| 1425 | 23228 | $6 \cdot 5$ | 12 | 18 | 45.01 | 79.93 | 5 | 3.093 |
| 1426 | 23260 | 7'5 | 12 | 19 | 22.62 | $75 \cdot 33$ | 2 | 3.020 |
| 1427 | 23252 | $7 \cdot 7$ | 12 | 19 | $37 \cdot 66$ | 70.72 | 5 | $3 \cdot 067$ |
| 1428 | 23287 | $7 \cdot 1$ | 12 | 21 | $1 \times 00$ | 71.07 | 4 | 2.980 |
| 1429 | 23293 | $7{ }^{\circ}$ | 12 | 2 I | 15.17 | $75 \cdot 30$ | 3 | 3.031 |
| 1430 | 23296 | $8 \cdot 3$ | 12 | 2 I | I 7.49 | $76 \cdot 35$ | I | $3 \cdot 057$ |
| 1431 | 23312 | $7^{\circ}$ | 12 | 21 | $30 \cdot 65$ | $73 \cdot 12$ | 5 | 3.088 |
| 1432 |  | $7 \cdot 3$ | 12 | 21 | 56. |  |  | 3.061 |
| 1433 | 23334 | $6 \cdot 5$ | 12 | 22 | 23.36 | $74 \cdot 82$ | 4 | 3006 |
| 1434 | 23354 | $7{ }^{\circ}$ | 12 | 23 | $5 \cdot 28$ | $68 \cdot 79$ | 6 | 2.976 |
| 1435 | 23373 | 77 | 12 | 23 | $40^{\circ}$ |  |  | $3 \cdot 007$ |
| 1436 | 23375 | $8 \cdot 3$ | 12 | 23 | $45 \cdot 14$ | 69.31 | 2 | 3.009 |
| 1437 | 23381 | $7 \cdot 5$ | 12 | 24 | I I 89 | $73 \cdot \mathrm{I}$ | 6 | 3.062 |
| 1438 | 23382 | $8 \cdot 0$ | 12 | 24 | 12.80 | 79'59 | 4 | 3.046 |
| 1439 | 23387 | 8•0 | 12 | 24 | $25 \cdot 35$ | $70 \cdot 31$ | 1 | 3.079 |
| 1440 | 23396 | $5 \cdot 3$ | 12 | 24 | $45 \cdot 87$ | $77 \cdot 64$ | 3 | $+3.005$ |


| No. | Mean N.P.D. $1875 \cdot 0$. | Epoch. | Obs. | Ann. Prec. | Authorities. |
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| 1396 | $84^{\circ} 47^{\prime} 26^{\prime \prime} \cdot 0$ | 70.81 | 4 | +20".05 |  |
| 1397 | $58 \quad 15 \quad 12.5$ | 71.30 | 5 | 20.05 |  |
| 1398 | $\begin{array}{llll}62 & 48 & 34 \cdot 8\end{array}$ | $77 \times 1$ | 5 | 20.05 | W 1218 , R $3^{828}$. |
| 1399 | $\begin{array}{llll}\text { ror } & 9 & 18.7\end{array}$ | 69.80 | 4 | 20.05 | See Notes. |
| 1400 | $\begin{array}{llll}72 & 52 & 36 \cdot 1\end{array}$ | $77 \cdot 69$ | 5 | 20.05 | $\mathrm{W}_{33}, \mathrm{R}_{384 \mathrm{I}}$. |
| 1401 | $\begin{array}{llll}60 & 14 & 13.0\end{array}$ | 68-12 | 5 | 20.05 | W 49, Bn. |
| 1402 | $4924 \quad 46 \cdot 1$ | 74*56 | 4 | 20.05 | W $56, \mathrm{PM} \mathrm{r}_{3} 85, \mathrm{Bn}$. |
| 1403 | $55 \quad 2 \quad 347$ | 79.33 | 4 | 20.05 | W 77. |
| 1404 | $\begin{array}{llll}60 & 45 & 57.6\end{array}$ | $71 \cdot 31$ | 4 | 20.04 | W 96. |
| 1405 | $573026 \cdot 1$ | 72.31 | 4 | 20.04 | W Ir 4. |
| 1406 | 49 19 196 | 76.51 | 5 | 20.04 | W 138. |
| 1407 | $\begin{array}{lll}56 & 27 & 547\end{array}$ | 74.97 | 3 | 20.04 | W 158 |
| 1408 | $\begin{array}{llll}50 & 34 & 8 \cdot 7\end{array}$ | 68.56 | 4 | 20.04 | W 160. |
| 1409 | 50 | 68.66 | 3 | 20.04 | W 164. |
| 1410 | $9^{2} \quad 33^{2} \quad 181$ | 67.27 |  | $20 \cdot 03$ | $\begin{aligned} & \text { W r } 26, R 3886, \operatorname{Si}_{5} 448, \\ & {\left[L_{1} 3^{6} 4 \mathrm{I}, G 1\right.} \\ & \text { Gl } \end{aligned}$ |
| 1411 | $\begin{array}{lll}49 & 42 & 467\end{array}$ | 71•32 | 4 | 20.03 | W 886. |
| 1412 | 105595711 | 79'52 | 5 | 20.03 | Oe 12045. |
| 1413 | $\begin{array}{llll}60 & 22 & 98\end{array}$ | $75^{\circ} \mathrm{O}$ | 4 | 20.03 | W 199, Y $51188^{\prime}$. |
| 1414 | $\begin{array}{llll}74 & 9 & 358\end{array}$ | $79^{\circ} 31$ | 4 | 20.03 | W $200, \mathrm{Bn}$. |
| 1415 | 5939 | $77 \cdot 82$ | 2 | $20 \cdot 02$ | W 225. |
| 1416 | $744544^{\prime} 1$ | $66 \cdot 99$ | 3 | 2002 | W 245, R 3904. |
| 1417 | $64 \quad 16 \quad 46 \cdot 3$ | $75 \cdot 82$ | 2 | $20^{\circ} \mathrm{OI}$ |  |
| 1418 | 93 41 3004 | 67.27 | 1 | $20^{\circ} \mathrm{OI}$ | W $228, \mathrm{~L}_{3} \mathrm{I} 365, \mathrm{Gl} 3 \mathrm{I} 52$. |
| 1419 | $\begin{array}{llll}72 & 33 & 40 \cdot 8\end{array}$ | $78 \cdot 33$ | 5 | 20.01 | W 31 I . |
| 1420 | $\begin{array}{llll}42 & 7 & 24.6\end{array}$ | 73.31 | 5 | 20.01 | Oe 12583. |
| 142 I | $\begin{array}{llll}95 & 25 & 39.6\end{array}$ | 79.66 | 3 | 20.00 | W $258, \mathrm{Si}_{2}, \mathrm{~L}_{\mathrm{z}}{ }^{\text {I }} 376$. |
| 1422 | $\begin{array}{llll}64 & 42 & 46 \cdot 1\end{array}$ | 69.63 | 6 | 20.00 | W 338, R 3944, Bn. |
| 1423 | $\begin{array}{llll}63 & 43 & 27\end{array}$ | $76 \cdot 12$ | 5 | 19.99 | PM 1417. |
| 1424 | $\begin{array}{llll}58 & 16 & 24.4\end{array}$ | $75 \cdot 33$ | 4 | 19.99 |  |
| 1425 | $\begin{array}{lll}100 & 55 & 2.8\end{array}$ | 79.93 | 5 | 19.99 | $\mathrm{RC}_{2} \mathrm{I}$ I 86, $\mathrm{L}_{5} \mathrm{I} 149$. |
| 1426 | $\begin{array}{lll}65 & 57 & 25 \cdot 3\end{array}$ | 75'33 | 2 | 19.99 | $\text { W } 388, \text { R } 3964$ |
| 1427 | 87 15 56.0 | $70 \cdot 72$ | 5 | 19.98 | $\mathrm{W}_{295} \mathrm{R} 3967, \mathrm{Sp} 447 \mathrm{P},$ |
| 1428 | $\begin{array}{llll}52 & 55 & 57 \cdot 2\end{array}$ | 71.32 | 5 | 19.97 | W $418 .\left[L_{1} 3706, G 13166\right.$. |
| 1429 | $\begin{array}{llll}71 & 28 & 20.9\end{array}$ | 80.30 | 2 | 19.97 | W 419. |
| 1430 | $83 \quad 9 \quad 153$ | $76 \cdot 35$ | I | 工9.97 | W $325, L_{2} 920$. |
| 1431 | $\begin{array}{lll}97 & 59 & 6 \cdot 8\end{array}$ | 73.12 | 5 | $19 \times 97$ | W 334, 'L' 6624, Si. |
| 1432 | 845458 | $66 \cdot 28$ | 2 | 19.96 | See Notes. $\quad[3180$. |
| 1433 | $\begin{array}{llll}63 & 4 & 52 \cdot 9\end{array}$ | 74.82 | $\pm$ | 19.96 | W 440, $\mathrm{T}_{2}, 7 \mathrm{yr} 98 \mathrm{I}$, Cll |
| r 434 | 5436 21.0 | 69.96 | 6 | 19.95 | W 468. |
| 1435 | $\begin{array}{lll}64 & 5^{8} & 8 \cdot 7\end{array}$ | $65 \cdot 8 \mathrm{I}$ | 2 | $19 \times 95$ | W $47^{8,}$ Ar 2688, Bn, Y |
| I 436 | $\begin{array}{lll}64 & 45 & 39^{\circ} 1\end{array}$ | $65 \cdot 62$ | 3 | 1995 | $[936$ |
| 1437 | 85 | 73.01 | 6 | 1994 | $\mathrm{W}_{3} 80, \mathrm{Si}_{2}, \mathrm{Sp} 4503, \mathrm{~L}_{2}$ |
| 1438 | $\begin{array}{llll}79 & 35 & 30 \cdot 8\end{array}$ | 79.59 | 4 | 19.94 | W 3 81, PM1428,T 6649 . |
| 1439 | $\begin{array}{lll}93 & 22 & 134\end{array}$ | $67 \cdot 64$ | 3 | 19.94 | $\mathrm{W}_{3} 83, \mathrm{~L}_{3} \mathrm{I} 406\left[\mathrm{R}_{4} \mathrm{~L}_{4} 49\right.$ |
| 1440 | $644430 \cdot 6$ | $77 \cdot 64$ | 3 | +19.94 | See Notes. |


| No. | Lalamic. | Mag. | Mean R.A. 1875.0. |  |  | Epoch. | Obs. | Ann. Prec. |
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| 1441 | 23397 | $8 \cdot 5$ | $12^{\text {h }}$ |  | 50"19 | $74 * 3$ I | 1 | +3.061 |
| 1442 | 23422 | $8 \cdot 2$ | 12 | 25 | $19^{\circ} 91$ | 73.73 | 5 | $2 \cdot 995$ |
| 1443 | 23424 | $7 \cdot 3$ | 12 | 25 | 20.09 | $79^{\circ} 07$ | 4 | 2.974 |
| 1444 | 23433 | $7 \cdot 7$ | 12 | 25 | 39.87 | $68 \cdot 69$ | 5 | 3.075 |
| 1445 | 23453 | $8 \cdot 0$ | 12 | 26 | $30 \cdot 40$ | $69^{\circ} 31$ | 5 | 3.003 |
| 1446 | 23463 | $6 \cdot 0$ | I 2 |  | $5 \cdot 36$ | $76 \cdot 81$ | 2 | $3 \cdot 106$ |
| 1447 | 23487 | $5 \cdot 4$ | 12 | 27 | 29.2I | $72 \cdot 13$ | 5 | 2.965 |
| 1448 | 23500 | $7 \cdot 5$ | 12 | 28 | 1•26 | $74 \cdot 45$ | 7 | 3.039 |
| I 449 | 23506 | $6 \cdot 8$ | 12 | 28 | 4.29 | $78 \cdot 30$ | 3 | $2 \cdot 894$ |
| 1450 | 23529 | $6 \cdot 5$ | 12 |  | 53.33 | 79.56 | 4 | $3 \cdot 003$ |
| 1451 | 23531 | 7.5 | 12 | 29 | $4 \cdot 23$ | 72.81 | 2 | $3 \cdot 106$ |
| 1452 | 23536 | 7.0 | 12 | 29 | 12.42 | $66 \cdot 28$ | 2 | 3.121 |
| 1453 | 23546 | $7 \cdot 6$ | 12 |  | $16 \cdot 24$ | 72.33 | 1 | $2 \cdot 976$ |
| 1454 | 23570 | $7{ }^{\circ}$ | 12 | 29 | 53.93 | 69.45 | 7 | $2 \cdot 889$ |
| 1455 | 23584 | 75 | 12 |  | $40 \cdot 46$ | 70.72 | 5 | 3.080 |
| 1456 | 23590 | $7 \cdot 5$ | 12 | 30 | 53.81 | 73.00 | 3 | 3*095 |
| 1457 | 23605 | $7 \cdot 3$ | 12 |  | 29.97 | $78 \cdot 93$ | 5 | 3.056 |
| 1458 | 23608 | $6 \cdot 5$ | 12 | 31 | 42.01 | 74.50 | 6 | 3.059 |
| 1459 | 23618 | 6.0 | 12 | 32 | I3.1 1 | $78 \cdot 34$ | 3 | $3 \cdot 161$ |
| 1460 | 23621 | $6 \cdot 5$ | 12 |  | 17.66 | $72 \cdot 80$ | 2 | $3 \cdot 024$ |
| 1461 | 23625 | 8.0 | 12 |  | 32'76 | $76 \cdot 56$ | 4 | 3'073 |
| 1462 | 23640 | $7 \cdot 2$ | 12 | 32 | $36 \cdot 53$ | $76 \cdot 32$ |  | 2.871 |
| 1463 | 23653 | $6 \cdot 0$ | $1{ }_{1}$ | 33 | I I.84 | 69.72 | 5 | $2 \cdot 929$ |
| 1464 | 23659 | $7{ }^{\circ}$ | 12 | 34 | $5 \cdot 34$ | 74.09 | 4 | 3.119 |
| 1465 | 23672 | $7 \cdot 2$ | 12 | 34 | 26.88 | $65 \cdot 26$ | 2 | 2.951 |
| 1466 | 23681 | $8 \cdot 1$ | 12 | 34 | 47.06 | $70 \cdot 81$ | 2 | 2.932 |
| 1467 | 23704 | 8.0 | 12 | 35 | 53.07 | $75 \cdot 34$ | 3 | 3.127 |
| 1468 | 23719 | $7 \cdot 5$ | 12 | 36 | 30.82 | 69.31 | 5 | 2.954 |
| 1469 | 23735 | $6 \cdot 8$ | 12 | 37 | $8 \cdot 68$ | $78 \cdot 58$ | 4 | 2.963 |
| 1470 | 23740 | 7.5 | 12 | 37 | 27.90 | $74 \cdot 84$ | 4 | 2.964 |
| 1471 | 23755 | $6 \cdot 7$ | 12 | 38 | 6.16 | 70.51 | 5 | 2.909 |
| 1472 | 23753 | 7.0 | 12 | 38 | 9.44 | -72.33 | 4 | 3.14I |
| 1473 | 23780 | $7 \cdot 5$ | 12 | 38 | 55.29 | $80 \cdot 31$ | I | 2.951 |
| 1474 | 23781 | $7 \cdot 5$ | 12 | 39 | $5 \cdot 65$ | $76 \cdot 66$ | 6 | 3.087 |
| 1475 | 23802 | $7 \cdot 2$ | 12 | 39 | $40 \cdot 44$ | 73.93 | 5 | 2.915 |
| I 476 | 23809 | $8 \cdot 8$ | 12 | 40 | 0.45 | 69.31 | I | 3.029 |
| 1477 | 23808 | $6 \cdot 4$ | 12 | 40 | 1.58 | 75:73 | 5 | 3.030 |
| 1478 | 23838 | $7 \cdot 3$ | 12 | 40 | 55.46 | 71.32 | 4 | 3.003 |
| 1479 | 23849 | $8 \cdot 0$ | 12 | 41 | 3.42 | $70 \cdot 80$ | 4 | 2.916 |
| 1480 | 23858 | $7 \cdot 4$ | 12 | 4 I | $36 \cdot 94$ | $70 \cdot 56$ | 4 | 2.986 |
| 1481 | 23869 | $6 \cdot 8$ | 12 | 41 | $43 \cdot 8$ I |  | 2 | 2.931 |
| 1482 | 23900 | $6 \cdot 0$ | 12 | 42 | 41.67 | 68.53 | 5 | 2.954 |
| 1483 <br>  | 23902 | $8 \cdot 2$ | 12 |  | 5.17 | $75 \cdot 84$ | 4 | 3.046 |
| 1484 | 23913 | $6 \cdot 2$ | 12 | 43 | 11.71 | 70.52 | 5 | 2.938 |
| 1485 | 23903 | $6 \cdot 5$ | 12 |  | 12.II | 79.57 | 4 | +3'139 |


| No. | Mean N.P.D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
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| 1441 | $85^{\circ} 44^{\prime} 44^{\prime \prime} \cdot 5$ | 74.3I | I | $\underline{+19094}$ | W 391, Bn, Sp 4508, |
| 1442 | $\begin{array}{llll}62 & 14 & 36.4\end{array}$ | 73.73 | 5 | 19.93 | W 5i2. [ $\mathrm{L}_{2} 942$. |
| 1443 | 56 | 78.66 | 3 | 19.93 | W 5I4. [3755, Gl3 196. |
| I 444 | $\begin{array}{llll}9 \mathrm{I} & 4 & 59.4\end{array}$ | 69.05 | 4 | 19.93 | W $412, \mathrm{Si}_{1}, \mathrm{Si}_{5} 467, \mathrm{~L}_{1}$ |
| 1445 | $\begin{array}{llll}65 & 53 & 26 \cdot 8\end{array}$ | 69.32 | 5 | 19.92 | W 537. |
| 1446 | 102830.5 | $76 \cdot 81$ | 2 | 19*91 |  |
| 1447 | $\begin{array}{llll}56 & 3 & 42 \cdot 6\end{array}$ | 72.13 | 5 | 19*9 | N 7 yr 1490 , Gl 3204. |
| 1448 | $\begin{array}{llll}78 & 23 & 14.6\end{array}$ | 73.56 | 8 | 19.90 | $W_{449,} \mathrm{R}_{4027}, \mathrm{~L}_{4} 553, \mathrm{Gl}_{3206}$ |
| 1449 | $\begin{array}{llll}42 & 33 & 41 \cdot 3\end{array}$ | 75.32 | 4 | $19^{\circ} 90$ | Oex $2753,9 y \mathrm{yc} \times 58$. |
| 1450 | $67 \quad 2544^{\prime}$ | $78 \cdot 92$ | 5 | 19.90 | W 599, Y 5253. |
| 1451 | 101 19 53.6 | $72 \cdot 8 \mathrm{I}$ | 2 | 19.89 | W $464, \mathrm{Sia}_{2}, \mathrm{Si}_{3} \mathrm{I} 452, \mathrm{Sp} 4532$, |
| 1452 | 1068 |  |  | 19.89 | Oe $12265^{\circ} \quad\left[L_{5} 1179\right.$. |
| 1453 | $\begin{array}{llll}60 & 28 & 159\end{array}$ | 72.33 | I | 19.89 | R 4038. |
| 1454 | 43 31 $42 \div 3$ | $68 \cdot 89$ | 7 | 19.85 | Oe $12776, \mathrm{RC} 2887$. |
| I 455 | $\begin{array}{llll}91 & 37 & 40 \%\end{array}$ | $70 \cdot 72$ | 5 | 19.87 | W $490, \mathrm{Si}_{2}, \mathrm{Si}_{6} 474, \mathrm{~L}_{2}$ $[378 \mathrm{r}$. |
| 1456 | $\begin{array}{llll}97 & 36 & 41 \cdot 7\end{array}$ | $73 \cdot 00$ | 3 | 19.86 | W 494, $\mathrm{Si}_{2}$. [G1 3220 . |
| 1457 | 85 I 21. 5 | 78.93 | 5 | 19.86 | W 502, R 4251, Bn, L2 974. |
| 1458 | 86 I $45^{\circ} 2$ | 74.50 | 6 | 19.86 | $\mathrm{W}_{503} \mathrm{~L}_{8} 976$. |
| I 459 | 1073348.9 | $75 \cdot 33$ | 4 | 19.86 | [Y $5274, \mathrm{Gl} 3224$. |
| I 460 | $\begin{array}{llll}75 & 30 & 22.6\end{array}$ | $77 \cdot 82$ | 2 | 19.86 | $\begin{array}{r} W_{519}, \mathrm{~T}_{6714}, \mathrm{R}_{4054}, \\ {\left[3797, \mathrm{Gl}_{3225} .\right.} \end{array}$ |
| 1461 | 90 IO İ2 | $72 \cdot 56$ | 4 | 19.85 | W 522, $\mathrm{Si}_{1}, \mathrm{Sp} 4554, \mathrm{~L}_{1}$ |
| 1462 | $44 \quad 5 \quad 37 \cdot 1$ | $68 \cdot 34$ | 2 | 19.85 | Oe i2830, RC 289 y , see |
| I 463 | $\begin{array}{llll}53 & 21 & 38 \cdot 5\end{array}$ | $69^{\prime 7}$ | 5 | 19.85 | W 683, Y 5284. [Notes. |
| 1464 | $1032446 \cdot 8$ | 74.09 | 4 | 19.83 | W $547, \mathrm{Si}_{4}$ II8I, $\mathrm{L}_{6}$. |
| 1465 | $\begin{array}{lll}58 & 56 & 2 \cdot 1\end{array}$ | 60.01 | 4 | 19.83 | W 708, Ar 2725. |
| 1466 | $55 \quad 123 \mathrm{I}^{\prime} 5$ | 69.30 | 3 | 19.82 | W 7 I6. |
| 1467 | $104 \quad 33 \quad 26 \cdot 2$ | 73.08 | 4 | 19.81 | W $58 \mathrm{I}, \mathrm{Si}_{4} \mathrm{I} \mathrm{S}_{4}, \mathrm{~L}_{6}$. |
| 1468 | $\begin{array}{llll}60 & 57 & 8 \cdot 9\end{array}$ | $66 \cdot 74$ | 7 | 19.80 | T 6749, R 4084. |
| 1469 | 63 11 1799 | $78 \cdot 13$ | 5 | 19.79 | W 757, T' 6754. |
| 1470 | $\begin{array}{llll}63 & 3^{8} & 7 \cdot 8\end{array}$ | $74 \cdot 34$ | 3 | 19.79 | R 4089. |
| 1471 | $\begin{array}{llll}53 & 32 & 50^{\circ} 3\end{array}$ | $69 \cdot 64$ | 6 | 19.78 | R 4096. |
| 1472 | 107533.5 | 72.33 | 4 | 19.78 | Oe 12387. |
| 1473 | $6 \mathrm{x} 55 \mathrm{I} 6 \cdot 5$ | 72.82 | 2 | 1976 | W 788, R 4103. |
| 1474 | 947380 | $76 \cdot 66$ | 6 | 19.76 | W 642, $\left.\mathrm{Si}_{2,}, \mathrm{~L}_{3} \mathrm{I} 444, \mathrm{l}\right]$ |
| 1475 | $\begin{array}{llll}55 & 46 & 23.4\end{array}$ | 73.93 | 5 | 19.75 | W 805. [3246. |
| 1476 | $\begin{array}{llll}79 & 48 & 40 \cdot 8\end{array}$ | 64.35 | 2 | 19.75 |  |
| 1477 | $\begin{array}{llll}79 & 45 & 419\end{array}$ | $79 \cdot 84$ | 4 | 19.75 | See Noter. |
| 1478 | $\begin{array}{lll}73 & 43 & 29^{\circ}\end{array}$ | $70 \cdot 50$ | 6 | 19.74 | W 82t, Bn. |
| 1479 | $\begin{array}{llll}56 & 44 & 56 \cdot 0\end{array}$ | 69.30 | 3 | 19.73 | W 826, Bn. |
| 1480 | $\begin{array}{llll}70 & 17 & 35\end{array}$ | $70 \cdot 91$ | 5 | 19.73 | W 830. |
| 1481 | $\begin{array}{lll}59 & 47 & 6.9\end{array}$ | 71.00 | 3 | $19 \times 72$ | W 833. |
| 1482 | $\begin{array}{lll}64 & 28 & 25 \cdot 3\end{array}$ | 68.53 | 5 | 19.71 | W 854. |
| 1483 | $84 \quad 8 \quad 38 \cdot 1$ | $75 \cdot 84$ | 4 | 19.70 | W 714 , L ${ }_{2} 1055, \mathrm{Gl}_{3259}$ |
| 1484 | 6 I | $70 \cdot 58$ | 4 | 19.70 | See Notes. [iI94. |
| I 485 | 105 $12 \quad 0.9$ | 76.92 | 5 | +1970 | W $7 \mathrm{I} 5, \mathrm{Oe} 12458, \mathrm{Si}_{4}$ |


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| 1486 | 23905 | $8 \cdot 0$ | $12^{\text {i }}$ |  | $14^{8 \cdot 19}$ | $8 \mathrm{I} \cdot 35$ | 2 | $+3^{4} 136$ |
| 1487 | 23919 | 77 | 12 | 43 | 16.82 | $67 \cdot 30$ | 2 | 2.890 |
| 1488 | 23935 | $6 \cdot 5$ | 12 | 44 | $6 \cdot 88$ | $80 \cdot 34$ | 4 | $2 \cdot 961$ |
| 1489 | 23954 | $8 \cdot 2$ | 12 | 45 | 1.83 | $70 \cdot 48$ | 6 | 3.031 |
| 1490 | 23967 | 8•0 | 12 |  | 27.55 | $73 \cdot 17$ | 6 | 3.068 |
| 1491 | 23970 | $8 \cdot 3$ | 12 | 45 | $34^{\circ}$ |  |  | 2.980 |
| 1492 | 23980 | $7 \cdot 5$ | 12 | 45 | 47'17 | 70'12 | 5 | $2 \cdot 941$ |
| 1493 | 23983 | $6 \cdot 3$ | 12 | 45 | 59.40 | 79.32 | 3 | 2.986 |
| 1494 | 23989 | $7 \cdot 2$ | 12 | 46 | 9.59 | $77 \cdot 85$ | 6 | $2 \cdot 986$ |
| 1495 | 23999 | $8 \cdot 0$ | 12 | 46 | 36:26 | 74.33 | 4 | $3 \cdot 141$ |
| 1496 | 24027 | $6 \cdot 5$ | 12 | 47 | 22.44 | 7198 | 3 | 2971 |
| 1497 | 24039 | $7^{\circ}$ | 12 | 47 | $34 \cdot 86$ | $75 \cdot 34$ |  | $2 \cdot 773$ |
| 1498 | 24034 | $7{ }^{\circ}$ | 12 | 47 | $48 \cdot 33$ | $65 \cdot 31$ | 1 | $3 \cdot 126$ |
| 1499 | 24055 | $8 \cdot$ | 12 | 48 | 34* 6 | $76 \cdot 84$ | 2 | $3 \cdot 136$ |
| 1500 | 24063 | $7 \cdot 7$ | 12 |  | 44.37 | $70 \cdot 11$ | 5 | 2.765 |
| 1501 | 24061 | $7^{\circ}$ | 12 | 48 | 55.46 | 74.06 | 4 | 2.968 |
| 1502 | 24098 | 77 | 12 |  | 190 | 73.36 | I | $3 \cdot 073$ |
| 1503 |  | 74 | 12 |  | 56 |  |  | 3.026 |
| 1504 | 24155 | $7^{\circ}$ | 12 |  | 13.87 | $72 \cdot 74$ | 5 | 3.084 |
| 1505 | 24161 | $8 \cdot 5$ | 12 | 52 | 32.12 | 77:34 | 6 | $3 \cdot 101$ |
| 1506 | 24173 | $7^{\circ} \mathrm{O}$ | 12 | 52 | 32.46 | 69:70 | 5 | 2.904 |
| 1507 | 24164 | $8 \cdot 2$ | 12 | 52 | 34.80 | 74.33 | 5 | $3 \cdot 79$ |
| 1508 | 24186 | $8 \cdot 2$ | 12 | 53 | $7 \cdot 61$ | $76 \cdot 37$ | 5 | $3 \cdot 100$ |
| 1509 | 24197 | $7 \cdot 3$ | 12 | 53 | $30 \cdot 55$ | 72.92 | 5 | 2.903 |
| 1510 | 24195 | $8 \cdot 2$ | 12 | 53 | $42 \cdot 72$ | $72 \cdot 32$ | 3 | 3.075 |
| 1511 | 24234 | $6 \cdot 7$ | 12 | 54 | 58 |  |  | 2.970 |
| 1512 | 24243 | $7{ }^{\circ}$ | 12 | 55 | 27.90 | $72 \cdot 73$ | 5 | 2 '945 |
| 1513 | 24247 | $7 \cdot 8$ | 12 | 55 | $29^{\circ} 27$ | 69.13 | 6 | 2.815 |
| 1514 | 24253 | 7.5 | 12 | 56 | $20 \cdot 80$ | 79.34 | 2 | $3 \cdot 166$ |
| 1515 | 24265 | $6 \cdot 8$ | 12 | 56 | $25 \cdot 73$ | 72.72 | 5 | 2.922 |
| 1516 | 24275 | $5 \cdot 5$ | 12 | 57 | 4.67 | 80.00 | 3 | 3'191 |
| 1517 | 24294 | $8 \cdot$ | 12 | 57 | 26.99 | $75 \cdot 36$ | 4 | 3.087 |
| I518 | 24299 | $8 \cdot 0$ | 12 | 57 | 44.70 | 69.52 | 5 | 3.002 |
| 1519 | 24306 | $8 \cdot 0$ | 12 | 58 | 14.24 | 74.08 | 4 | $3 \cdot 072$ |
| 1520 | 24320 | $7 \bigcirc$ | 12 | 59 | 7.58 | 8I.35 | 2 | $3 \cdot 180$ |
| 1521 |  | $7 \cdot 5$ | 12 | 59 | 18. |  |  | 2.592 |
| 1522 | 24333 | $7 \cdot 4$ | 12 | 59 | 21*79 | 73.3 I | 5 | 2.988 |
| 1523 | 24340 | $7 \cdot 6$ | 12 | 59 | $39^{\circ} 70$ | 69.12 | 5 | $2 \cdot 895$ |
| 1524 | 24373 | 7.7 | 13 | 1 | 13.78 | 74.33 | 5 | 3.059 |
| 1525 | 24407 | $6 \cdot 8$ | 13 | 2 | 0.71 | 73.75 | 5 | 2.902 |
| 1526 | 24399 | $6 \cdot 0$ | 13 | 2 | I*52 | $78 \cdot 34$ | 5 | $3 \cdot 123$ |
| 1527 | 24414 | $6 \cdot 8$ | 13 | 2 | $30 \cdot 92$ | $70 \cdot 66$ | 3 | 3.035 |
| 1528 | 24468 | $6 \cdot 0$ | 13 | 3 | 52.74 | 67.84 | 2 | 2.783 |
| 1529 | 24471 | $7 \cdot 5$ | 13 | 4 | 26.37 | $65 \cdot 28$ | I | $3 \cdot 182$ |
| 1530 | 24489 | $7^{\circ}$ | I 3 | 4 | $35 \cdot 20$ | $72 \cdot 31$ | 2 | $+2.980$ |


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| 1486 | $104^{\circ} 23^{\prime} 50^{\prime \prime} \cdot 1$ | $76 \cdot 33$ | 3 | $+19^{\prime \prime} 70$ | W 7ı7, Si 1 195, $\mathrm{L}_{6}$. |
| 1487 | $\begin{array}{llll}53 & 59 & 449\end{array}$ | 63.41 | 3 | 19.70 | W 864, Y 535I. |
| 1488 | $\begin{array}{llll}66 & 27 & 10.8\end{array}$ | $80 \cdot 34$ | 4 | 19.69 | [3264. |
| 1489 | $\begin{array}{llll}81 & 6 & 32.3\end{array}$ | $69 \cdot 82$ | 6 | 19.67 | W751, Si, Sp 4634, Gl |
| 1490 | 89 14 0.9 | $73 \cdot 17$ | 6 | 19.66 | $\begin{gathered} \mathrm{W}_{757}, \mathrm{Si}_{1}, \mathrm{Bn}, \mathrm{Sp}_{4} 637, \mathrm{~L}_{1} \\ {\left[388 \mathrm{Y}, \mathrm{Y}_{53} 66, \mathrm{Gl} 3266 .\right.} \end{gathered}$ |
| 1491 | $\begin{array}{lll}70 & 5 & 303\end{array}$ | $66 \cdot 39$ | I | 19.66 | W 909, Ar 2761. |
| 1492 | $63 \quad 3842 \cdot 2$ | 70.12 | 5 | 19.66 | W 9ı7, PM 1468. |
| 1493 | $72 \begin{array}{lll}72 & 14.9\end{array}$ | $77 \cdot 83$ | 2 | 19.65 | W919, T 6821, Ar 2765 |
| 1494 | $\begin{array}{llll}72 & 12 & 37.2\end{array}$ | $77 \cdot 46$ | 8 | 19.65 | See Notes. [N 7yr 1524. |
| 1495 | 104174 | 74.33 | 4 | 1 9.64 | $\mathrm{W}_{774}, \mathrm{~T} 68{ }_{2}{ }_{7}, \mathrm{Si}_{4} \mathrm{I} 200$, $\left[\mathrm{I}_{6}\right.$. |
| I 496 | $69 \quad 50 \quad 19$ | 76.33 | 3 | 19.63 | W 943. |
| 1497 | 42395050 | $75 \cdot 34$ | 2 | 19.62 | Oe $13086, \mathrm{RC}_{2923 .} \mathrm{LL}_{5} 1229$. |
| 1498 | $\begin{array}{llll}100 & 58 & \text { II'7 }\end{array}$ | $65 \cdot 31$ | I | 19.62 | W $793, \mathrm{Si}_{2,}, \mathrm{Si}_{3} 1487$, Sp 4648 , |
| 1499 | $\begin{array}{llll}102 & 46 & 28 \cdot 4\end{array}$ | $73 \cdot 65$ | 3 | 19.61 | W 806, $\mathrm{Si}_{3} \mathrm{I} 488, \mathrm{~L}_{6} 1232$. |
| 1500 | $\begin{array}{llll}42 & 32 & 38 \cdot 2\end{array}$ | 69.06 | 4 | 19.60 | Oer3105. |
| 1501 | $\begin{array}{lll}69 & 42 & 179\end{array}$ | 72.5 1 | 5 | 19.60 | W 968, R ${ }_{4} \mathrm{I} 80$. |
| 1502 | $90 \quad 16 \quad 26.4$ | 64.66 | 3 | 19.58 | W835, $\mathrm{Si}_{1}, \mathrm{Si}_{6} 498, \mathrm{~L}_{13909}$ |
| 1503 |  | 66.06 | 4 | 19.56 | W 852, Si ${ }_{1}, \mathrm{Sp} 4670$. |
| 1504 | $\begin{array}{llll}92 & 13 & 39.2\end{array}$ | 72.74 | 5 | 19.54 | W870, $\mathrm{Si}_{2}, \mathrm{Si}_{5} 503, \mathrm{Sp} 4678$, G1] |
| 1505 | $95 \quad 24 \quad 55 \%$ | 79.92 | 5 | 19.53 | W875, Sp468I, $\mathrm{L}_{3} \mathrm{I} 470$. [3287. |
| 1506 | 61 ○ 16.3 | 69.70 | 5 | 19.53 |  |
| 1507 | 9 l | 74.33 | 5 | 19.53 | W 878, Y 5409. |
| I 508 | $\begin{array}{lll}78 & 39 & 29.8\end{array}$ | 76.37 | 1 | 19.52 | W 888. |
| 1509 | 6 I I5 $33^{\circ}$ | 72.92 | 5 | 19.51 | W 1043. |
| 1510 | $90 \quad 30 \quad 42.4$ | $68 \cdot 83$ | 4 | 19.51 | $\mathrm{W}_{902}, \mathrm{~L}_{1} 3936, \mathrm{Gl}_{3293}$. |
| 1511 | $72 \begin{array}{lll}72 & 70\end{array}$ | $65 \cdot 32$ | 5 | 19.48 | W ro74, $\operatorname{Ar} 2789$, N 7 yr |
| I5 I 2 | $68 \quad 3 \quad 25^{\prime} 2$ | 72.73 | 5 | 19.48 |  |
| I5I3 | $5 \mathrm{I} \quad 164 \mathrm{I}$ I | 69'13 | 6 | 19.47 |  |
| I514 | $106123^{1 \cdot 1}$ | 79.34 | 2 | 19.45 | Bn. |
| I5I5 | $\begin{array}{llll}65 & 49 & 45^{\prime} \mathrm{I}\end{array}$ | $72 \cdot 72$ | 5 | 19.45 | PM 1491. |
| 1556 | $10954 \quad 42 \%$ | 80.00 | 3 | 19.44 | Oeiz6i3, Bn. |
| 1517 | $92 \begin{array}{lll}92 & 43 \cdot 2\end{array}$ | $75 \cdot 36$ | 4 | 19.43 | See Notes. |
| 1518 | $\begin{array}{lll}78 & 5 & 49.9\end{array}$ | 68.65 | 6 | 19.42 | W 974, T 6909, Sp 4714 , |
| I519 | $\begin{array}{lll}90 & 3 & 23 \cdot 6\end{array}$ | 74.08 | 4 | 19.41 | $\mathrm{L}_{1} 3963 . \quad$ [Gl-33II. |
| 1520 | 107 $35 \quad 2 \mathrm{I} \cdot 2$ | $76 \cdot 67$ | 3 | 19.39 | OeI2635. |
| 1521 | $\begin{array}{lll}35 & 28 & 21 \cdot 2\end{array}$ | 65.90 | 5 | 19.39 | Ar 2798 , Oe 13276. |
| 1522 | $76 \quad 6 \quad 1377$ | 73.31 | 5 | 19.39 | WIoo4, Sp $4725, \mathrm{Gl} 33 \mathrm{I} 5$. |
| 1523 | $\begin{array}{lll}62 & 44 & 38 \cdot 8\end{array}$ | 68•13 | 5 | 19.38 | W 1154. |
| 1524 | 87 51 22.5 | 74.33 | 5 | 19.34 | $\mathrm{L}_{1} 3980$. |
| 1525 | $6430 \quad 6 \cdot 0$ | $73 \cdot 75$ | 5 | 19.32 | W 1194. |
| 1526 | $\begin{array}{lll}98 & 18 & 51 \\ 8\end{array}$ | $78 \cdot 34$ | 5 | 19032 |  |
| 1527 | $84 \quad 6 \quad 6 \cdot 5$ | 73.30 | I | 1931 | W 1063, $\mathrm{Si}_{1}$, Bn. See Notes. |
| 1528 | $\begin{array}{llll}51 & 54 & 36 \cdot 4\end{array}$ | $70 \cdot 36$ | 1 | 19.28 | W 33, R $4226, \mathrm{RC}_{2968}$ 29, |
| 1529 | $10625 \quad 24.0$ | 67.32 | 1 | 19.27 | Bn. ${ }^{\text {W }}$ 5473, 9yr $12 \pm 5$. |
| 1530 | $76 \quad 142.2$ | 69.82 | 2 | +19.26 | W32, Gl 3329. |



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| 1531 | $68^{\circ} 6^{\prime} 54^{\prime \prime} \cdot 1$ | 66.80 | 6 | $+19^{\prime \prime} \cdot 26$ | W 46. |
| 1532 | 55 I 58.0 | 74.33 | 4 | 19.26 | W 5 r . |
| 1533 | $67 \quad 24 \quad 56 \cdot 0$ | 76.35 | 4 | 19.24 | W 58. |
| 1534 | $78 \quad 6 \quad 54 \cdot 8$ | 70'93 | 5 | 19.23 | W 6 r . |
| 1535 | $\begin{array}{llll}73 & 12 & 23.6\end{array}$ | 80.14 | 5 | 19.23 | W 7 I . |
| 1536 | $91 \quad 36 \quad 50$ | 74.34 | 4 | 19.22 | $\mathrm{L}_{1} 4006$. |
| 1537 | $9153{ }^{1} \quad 27 \times 7$ | $72 \cdot 32$ | 4 | 19.21 | PM $1508, L_{14012}$ |
| ${ }_{1} 538$ | $\begin{array}{llll}63 & 38 & 156\end{array}$ | $7 \mathrm{~F} \cdot 46$ | 7 | 19.18 | W 120. |
| 1539 | $78 \quad 0 \quad 15.6$ | $76 \cdot 35$ | 4 | 19.17 | W 104, Gl 3343. |
| 1540 | $\begin{array}{llll}59 & 56 & 6.4\end{array}$ | 69.82 | 2 | 19.16 | R $4^{23} 3$. |
| 1541 | $\begin{array}{llll}70 & 25 & 10\end{array}$ | 77.33 | 5 | 19.15 | W 137. |
| 1542 | 8123096 | 67.83 | 6 | 19.14 | $\mathrm{W}_{12} \mathrm{~F}^{\text {, }} \mathrm{Si}_{1}, \mathrm{~L}_{2} \mathrm{I} 186$. |
| 1543 | 9043437 | 71.33 | 3 | 19.12 | $\mathrm{W}_{115},{\mathrm{Pr} 4239, \mathrm{~L}_{142} 7 .}^{\text {\% }}$ |
| 1544 | $\begin{array}{llll}70 & 26 & 12.8\end{array}$ | $76 \cdot 59$ | 4 | 19.11 | W 175 |
| 1545 | $60 \quad 1744.6$ | 68.90 | 5 | 19.10 | W 185, Bn. |
| 1546 | $\begin{array}{llll}98 & 4 & 20 \cdot 4\end{array}$ | 74.37 | 1 | 19.10 | W $160, \mathrm{Si}_{3}, \mathrm{~L}_{6}$. |
| 1547 | $72 \quad 2 \quad 50 \cdot 2$ | 75.86 | 2 | 19.09 | W I89, R 4250. |
| 1548 | $\begin{array}{llll}75 & 34 & 39.2\end{array}$ | 66.73 | 5 | 19.09 | $\text { W 165, T6I22, Ar } 2845$ |
| 1549 | 625833.5 | 72.01 | 6 | 19.05 | $\mathrm{W}_{226} \quad\left[\mathrm{Gl}_{334}\right.$ |
| 1550 | $492634^{\circ}$ | $7{ }^{1} 64$ | 3 | 19.05 | W 226. |
| 1551 | $60 \quad 46 \quad 413$ | 68.14 | 5 | 19.04 |  |
| 1552 | $\begin{array}{lllll}79 & 38 & 50 \cdot 9\end{array}$ | 70.83 | 2 | 19.03 |  |
| 1553 | $\begin{array}{llll}71 & 34 & 28.7\end{array}$ | 77.65 | 5 | $19^{\circ} 01$ | W 248, T 6146. |
| ${ }^{1} 554$ | 51 10 53.6 | 75.37 | 1 | 19.01 | See Notes. |
| 1555 | $\begin{array}{llll}51 & 29 & 14.5\end{array}$ | 74.95 | 5 | 18.98 | $\begin{array}{r} \mathrm{W}_{2} 74, \mathrm{R}_{428} 28, \mathrm{Ar}_{285} 8, \\ {\left[\mathrm{RC}_{2999}, \mathrm{Y}_{5532} .\right.} \end{array}$ |
| 1556 | $86 \quad 35 \quad 12.6$ | $76 \cdot 37$ | I | 18.97 | W 236, Gl 336 I . |
| 1557 | 63 20 49.3 | 68.98 | 6 | 18.96 | W 285. |
| ${ }^{1} 558$ | $\begin{array}{llll}59 & 3 & 9 \cdot 6\end{array}$ | $7 \mathrm{7} \cdot 85$ | 4 | 18.95 | W 295. |
| ${ }^{1} 559$ | $\begin{array}{llll}63 & 13 & 49.5\end{array}$ | 73.90 | 3 | 18.94 | W 296. |
| 1560 | $\begin{array}{llll}72 & 3 & 2.6\end{array}$ | 69.83 | 2 | 18.92 | W 309. |
| 1561 | $42 \begin{array}{lll}42 & 43.5\end{array}$ | $66 \cdot 30$ | 2 | 18.91 | Oe 13583. |
| ${ }^{1} 562$ | $\begin{array}{llll}76 & 55 & 0.8\end{array}$ | $72 \cdot 54$ | 5 | 18.90 | W 275, Sp 4798, G1 3373. |
| ${ }_{1} 563$ | $\begin{array}{llll}73 & 47 & 5.2\end{array}$ | $70 \cdot 48$ | 6 | 18.86 | W 352. [ $\mathrm{L}_{1} 4048, \mathrm{Gl}_{3} 337^{8}$. |
| I 564 | $\begin{array}{llll}90 & 32 & 30.8\end{array}$ | 63.66 | 3 | 18.85 | $\mathrm{W}_{295}, \mathrm{R}_{4300}, \mathrm{Si}_{1}, \mathrm{Si}_{5} 540$, |
| ${ }^{1} 565$ | $\begin{array}{lllll}83 & 38 & 28.6\end{array}$ | 74.34 | 6 | 18.84 | $\begin{array}{r} \mathrm{W} 301, \mathrm{Sp} 4809, \mathrm{~L}_{2} \mathrm{I} 223 . \\ {\left[\mathrm{Gl}_{3379} .\right.} \end{array}$ |
| 1566 | $\begin{array}{llll}58 & 38 & 53\end{array}$ | $71 \times 2$ | 5 | 18.83 | W 373. |
| 1567 | 107 16 40.8 | $66 \cdot 82$ | 2 | 18.83 |  |
| ${ }^{1} 568$ | $87 \cdot 655^{\prime}$ | 75.36 | 4 | 18.79 | W 330, $\mathrm{S}_{1}, \mathrm{~L}_{2} 1228, \mathrm{Gl}$ |
| 1569 | $\begin{array}{llll}79 & 53 & 25.2\end{array}$ | 80.32 | 1 | 18.78 |  |
| 1570 | $\begin{array}{llll}58 & 12 & 87\end{array}$ | $66 \cdot 12$ | 6 | 18.77 | W 418. $[\mathrm{Gl} 3389 .$ |
| 1571 | $85 \begin{array}{lll}85 & 28 & 51\end{array}$ | 72.94 | 5 | 18.76 | W 346, $\mathrm{T}_{2}, \mathrm{Bn}, \mathrm{L}_{2} \mathrm{I} 233$, |
| 1572 | $\begin{array}{llll}36 & 36 & 19.6\end{array}$ | $60 \cdot 31$ | 2 | $18 \cdot 76$ | R 4313, Oe 13654 . |
| 1573 | 88 I5 15.7 | 74.59 | 4 | 18.74 | ${ }_{\mathrm{Bn}} \mathrm{L}_{1} 4062 . \quad$ [3393. |
| 1574 | 82 Io 29.9 | 70.29 | 5 | 18.73 | W $365, \mathrm{Si}_{1}, \mathrm{Y} 55570, \mathrm{Gl}^{\text {a }}$ |
| 1575 | $91 \begin{array}{llllllll} & 142\end{array}$ | 73.33 | 2 | +18.73 |  |



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| 1576 | $43^{\circ} 37^{\prime} \quad 5{ }^{\prime \prime} \cdot 9$ | 70\%35 | 2 | +.18'.69 | R 4328, Oe 13694. |
| 1577 | $\begin{array}{llll}52 & 14 & 40 \cdot 2\end{array}$ | 72.32 | 3 | 18.66 | W 492. |
| 1578 | $\begin{array}{llll}52 & 32 & 15.9\end{array}$ | 67-18 | 6 | 18.64 | W 506, PM 153 I . |
| 1579 | $83 \quad 30174$ | 72'18 | 6 | 18.63 | W 428, Ar $2891, \mathrm{Sp} 4844$, |
| 1580 | $\begin{array}{lllll}96 & 58 & 46 \cdot 3\end{array}$ | $60 \cdot 52$ | 5 | 18.63 | See Notes. $\quad L_{2} 1250$. |
| 1581 | $65 \quad \circ \quad \mathbf{1 2 . 3}$ | 73.74 | 5 | 18.63 |  |
| 1582 | $\begin{array}{llll}58 & 36 & 31.8\end{array}$ | $70 \cdot 32$ | 3 | 18.63 | W 512. |
| ${ }^{1} 583$ | $\begin{array}{llll}46 & 37 & 32 \cdot 5\end{array}$ | $72 \cdot 1$ | 3 | 18.62 | RC 3040. |
| ${ }^{1} 584$ | 79 9 11\% 9 | 68.74 | 5 | 18.55 | W $4^{81}$, Gl 3408. |
| 1585 | $64 \quad 44 \quad 54.5$ | 68.18 | 6 | 18.49 | W 596. |
| 1586 | $86 \quad \begin{array}{lll}86 & 47.2\end{array}$ | $74 \cdot 15$ | 5 | 18.48 |  |
| 1587 | $\begin{array}{llll}75 & 3 & 38.4\end{array}$ | $72 \cdot 06$ | 7 | 18.46 | W $534, \mathrm{R} 439 \mathrm{I}$. |
| 1588 |  | 73.61 | 4 | 18.44 | W 542, Gl 3416. |
| 1589 | $\begin{array}{llllllllllll} & 4 & 34.6\end{array}$ | 69.31 | 5 | 18.44 | Bn. |
| 1590 | $1054840 \cdot 1$ | $8 \mathrm{I} \cdot 35$ | 1 | 18.42 |  |
| 1591 | $\begin{array}{llll}78 & 37 & 5 \cdot 8\end{array}$ | 69.97 | 3 | 18.41 |  |
| 1592 | $624043 \cdot 1$ | $76 \cdot 37$ | 1 | 18.40 | W 653, R 4404. |
| 1593 | $\begin{array}{llll}58 & 21 & 26.4\end{array}$ | 72.17 | 5 | 18.37 | W 685. |
| 1594 | 108216.6 | 66.32 | 2 | 18.35 | Oeizo6r. |
| 1595 | $\begin{array}{llll}36 & \text { I } & 21.4\end{array}$ | $65 \cdot 83$ | 4 | 18.34 | Oe 13869. |
| 1596 | 36 1о $25{ }^{\circ}$ | 71.85 | 4 | 18.34 | Oe 13875. |
| 1597 | 80 | 73.54 | 5 | 18.32 | W 600, R $4420, \mathrm{Gl}_{3428 .}$ |
| 1598 | $\begin{array}{llll}90 & 34 & 38\end{array}$ | 73.92 | 7 | 18.30 | W 6it, R 4426, $\mathrm{Si}_{1}, \mathrm{Si}_{4}$ |
| ${ }^{1} 599$ | $\begin{array}{lllll}66 & 2 & 53 *\end{array}$ | 73.48 | 7 | 18.30 | R 4430. [559, Sp 4894. |
| 1600 | 43 51 0 ¢ 7 | 71.35 | 4 | 18.24 | Oe 13917 , KC 3079. |
| 1601 | $\begin{array}{llll}79 & 2 & 43.2\end{array}$ | 74'11 | 4 | 18.21 | W 655. |
| 1602 | $\begin{array}{llll}84 & 15 & 22.6\end{array}$ | 75.37 | 5 | 18.18 | See Notes. |
| 1603 | $\begin{array}{llll}54 & 43 & 29.4\end{array}$ | 69.50 | 6 | 18.18 | W 82 r . |
| 1604 | $\begin{array}{lllll}62 & 8 & 48\end{array}$ | 73.45 | 4 | 18.17 | W 822, R 4455. |
| 1605 | 62 10 49.3 | 66.31 | 2 | 18.16 | W 829, R 4458. |
| 1606 | $\begin{array}{llll}61 & 29 & 42.4\end{array}$ | 73.32 | 3 | 18.06 | W 890. |
| 1607 | 80888 | 66.3 r | I | 18.04 | W 732, $\mathrm{Si}_{1}$, Gl 3450. |
| 1608 | $\begin{array}{lllll}52 & 44 & 47 \cdot 8\end{array}$ | 74.95 | 5 | 18.01 | W 929. |
| 1609 | $\begin{array}{llll}46 & 49 & 18 \cdot 2\end{array}$ | $72 \cdot 36$ | 4 | 17.98 | W 942, RC 3 Ioi. |
| 1610 | $\begin{array}{lllll}54 & 36 & 27\end{array}$ | 74.12 | 4 | 17.97 | $\begin{array}{r} \mathrm{W}_{953}, \mathrm{R}_{449 \mathrm{I}, \mathrm{Ar}_{2}}\left[\mathrm{~T}_{2,} \mathrm{Y}_{572 \mathrm{I}} .\right. \end{array}$ |
| 1611 | $\begin{array}{llll}54 & 42 & 50\end{array}$ | 72.55 | 5 | 1797 | W 957, $\operatorname{Ar} 2954, \mathrm{~T}_{2}, \mathrm{RC}_{2} \mathbf{1 3 3}_{3}$, |
| 1612 | $\begin{array}{llll}54 & 56 & 8.3\end{array}$ | 66.83 | 6 | 17.94 | $\mathrm{T}_{2,}$ Y 5726 . [9yr 1268. |
| 1613 | $49 \begin{array}{lll}42 & 39\end{array}$ | $73 \cdot 68$ | 6 | 17.93 | W 988. <br> W $777 \mathrm{Si}_{\mathrm{S}} \mathrm{Sp} 4056 \mathrm{~L}$ |
| 1614 | $\begin{array}{llll}95 & 34 & 9 & 9\end{array}$ | 71.66 | 3 | 17.90 | W 777, $\mathrm{Si}_{\mathrm{s}}, \mathrm{Sp} 4956, \mathrm{~L}_{\mathrm{s}}$ |
| 1615 | 6 l | 71.67 | 3 | 17.89 | W 1005 . $\quad[571$. |
| 1616 | $61 \begin{array}{lll}173 & 17\end{array}$ | $60 \cdot 33$ | I | 17.88 |  |
| 1617 | $\begin{array}{llll}55 & 35 & 49\end{array}$ | 6531 | I | ${ }^{17} 78$ | W 1024. [Sis. ${ }^{\text {Pre }} 1273$. |
| 1618 | $97 \quad 26 \quad 33.9$ | 6734 | 2 | 17.85 | W 804, T6473, Ar 2963, |
| 1619 | 52 I8 54*0 | 67.95 | 4 | 1782 | W 1070, Y 5752. [3476. |
| 1620 | $\begin{array}{llll}86 & 24 & 2.8\end{array}$ | 80.52 | 2 | +1777 | W 850, $\mathrm{Si}_{1}, \mathrm{~L}_{2} \mathrm{I} 33 \mathrm{I}$, Gl |


| No. | Lalançe. | Mag. | Mean I | R.A. 1 | 1875.0 | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1621 | 25646 | 7.0 | $13^{\text {b }}$ | $50^{m}$ | $24^{\text {e. }} 55$ | 69.95 | 5 | +2.725 |
| 1622 | 25645 | $6 \cdot 8$ | 13 | 50 | $25 \cdot 36$ | $75 \cdot 37$ | 5 | 2.763 |
| 1623 | 25694 | 7.7 | I3 | 52 | 24.83 | $73 \cdot 35$ | 3 | 2.662 |
| 1624 | 25695 | $8 \cdot 0$ |  | 52 |  |  |  | 2.901 |
| 1625 | 25693 | $8 \cdot 0$ |  | 52 | $55^{\circ}$ |  |  | $3 \cdot 125$ |
| 1626 | 25713 | $7 \cdot 3$ | 13 |  | 20.84 | 77.04 | 3 | 2.757 |
| 1627 | 25733 | $7{ }^{\circ}$ | 13 |  | $48 \cdot 38$ | 68.09 | 4 | $2 \cdot 385$ |
| 1628 | 25723 | 7.5 | 13 | 54 | $0 \cdot 41$ | $7+35$ | 5 | 3.035 |
| 1629 | 25764 | $6 \cdot 5$ | 13 | 55 | $6 \cdot 42$ | $74 \cdot 86$ | 2 | 2.539 |
| 1630 | 25746 | 6.0 | 13 | 55 | $9 \cdot 44$ | 72.13 | 5 | 2.964 |
| 1631 | 25816 | $7{ }^{\circ}$ | 13 |  | 24.43 | 70.02 | 3 | 2.978 |
| 1632 | 25837 | $7{ }^{\circ}$ | 13 |  | 50.58 | 77.03 | 3 | $2 \cdot 916$ |
| 1633 | 25836 | $7 \cdot 0$ | 13 | 57 | $50 \cdot 86$ | 72.62 | 4 | 2.934 |
| I 634 | 25849 | $6 \cdot 7$ | 13 | 58 | 17.35 | $78 \cdot 12$ | 4 | $3 \cdot 038$ |
| 1635 | 25874 | $6 \cdot 8$ | 13 |  | $3 \cdot 18$ | 65.94 | 5 | $2 \cdot 742$ |
| 1636 | 25862 | $4^{\circ} 0$ | 13 |  |  |  |  | 3.398 |
| 1637 | 25880 | 7.0 | 13 |  | 56.25 | 65.39 | 1 | 3.234 |
| 1638 | 25896 | $6 \cdot 5$ | 14 |  | 24.93 | 74.04 | 3 | 2.797 |
| 1639 | 25898 | $7{ }^{\circ}$ | 14 | $\bigcirc$ | 37.97 | 74.76 | 5 | 2.847 |
| 1640 | 25911 | $7^{\circ}$ | 14 | 1 | 26.49 | $71 \cdot 16$ | 5 | 3.066 |
| 1641 | 25930 | $8 \cdot 0$ | 14 | I | 55.30 | $78 \cdot 85$ | 2 | 2.859 |
| 1642 | 25943 | $6 \cdot 2$ | 14 | 2 | 31.71 | 78.01 | 3 | $2 \cdot 756$ |
| 1643 | 25981 | $6 \cdot 7$ | 14 | 3 | I 1.98 | $7 \mathrm{I} \cdot 3^{6}$ | 2 | 2.290 |
| 1644 | 25957 | $7 \cdot 5$ | 14 | 3 | 29.47 | $71 \cdot 61$ | 4 | 3.073 |
| 1645 | 26002 | $8 \cdot 1$ | 14 | 4 | 3.32 | 74.38 | I | $2 \cdot 399$ |
| 1646 | 26000 | $7 \cdot 2$ | 14 | 4 | 14.58 | 77:39 | 3 | 2.643 |
| 1647 | 26041 | $7 \cdot 0$ | 14 | 4 |  |  |  | 2.463 |
| 1648 | 26017 | $6 \cdot 6$ | 14 | 5 | 10.62 | $69 \cdot 65$ | 5 | 3.049 |
| 1649 | 26034 | $7 \cdot 7$ | 14 | 5 | $30 \cdot 13$ | 70.50 | 5 | 2.629 |
| 1650 | 26040 | 7.0 | 14 | 6 | 24.35 | 7774 | 5 | $3 \cdot 237$ |
| 1651 | 26056 | $6 \cdot 2$ | 14 | 7 | 1412 | 75.90 | 4 | 3.075 |
| 1652 | 26089 | $8 \cdot 0$ | 14 | 8 | $5 \cdot 65$ | $75^{\circ} 13$ | 4 | 2.812 |
| 1653 | 26093 | $6 \cdot 7$ | 14 | 8 | $35^{\prime} 13$ | 70.09 | 4 | 3.023 |
| 1654 |  | $7 \cdot 5$ | 14 | 8 | $59^{\circ}$ |  |  | 2.147 |
| 1655 | 26094 | $7 \cdot 5$ | 14 | 9 | 0.64 | $73 \cdot 34$ | 1 | 3.270 |
| 1656 | 26102 | $7^{\circ}$ | 14 | 9 | $6 \cdot 24$ | 74.37 | 3 | 3.161 |
| 1657 | 26122 | 6.5 | 14 | 9 | 18.15 | 73.40 | 4 | $2 \cdot 750$ |
| 1658 | 26143 | $7 \cdot 0$ | J 4 | 10 | $44 \cdot 34$ | $7 \mathrm{I} \cdot 85$ | 5 | $2 \cdot 799$ |
| 1659 | 26165 | $6 \cdot 3$ | 14 | II | $18 \cdot 86$ | $77 \cdot 88$ | 4 | 2.456 |
| 1660 | 26156 | $6 \cdot 2$ | 14 | II | 30.08 | 69.34 | 2 | 2.866 |
| 1661 | 26150 | $6 \cdot 5$ | 14 | 11 | 43.61 | $79 \cdot 36$ | I | 3.310 |
| 1662 | 26181 | $7 \cdot 0$ | 14 | 12 | 30.00 | 75.05 | 3 | 2.930 |
| 1663 | 26186 | $7 \cdot 2$ | 14 | 12 | 34.46 | 73.67 | 7 | 2.778 |
| 1664 | 26200 | $6 \cdot 3$ | I 4 | 13 | 18.24 | 72.56 | 6 | 3.059 |
| 1665 | 26226 | So | 14 | 14 | I I*44 | $76 \cdot 37$ | I | $+2.953$ |


| No. | Mean N.P.D. 18750. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1621 | $60^{\circ} 42^{\prime} 55^{\prime \prime} \cdot \mathrm{I}$ | 70'00 | 6 | +171.77 | W $1083, \mathrm{Y}_{5758 .}$ |
| 1622 | $63 \quad 28 \quad 6 \cdot 2$ | $75 \cdot 37$ | 5 | 17*77 | W 1о79, $\mathbf{R}_{4522, Y_{5759} \text {. }}$ |
| 1623 | 5647 22.0 | 73.35 | 3 | 17.69 | W II 39. [2975, N7yr 1620. |
| 1624 | $\begin{array}{llll}74 & 49 & 37.4\end{array}$ | 67.00 | 3 | 17.67 | W 1141, T 6511, R 4533, Ar |
| 1625 | $94 \quad 48 \quad 28 \cdot 8$ | 64.33 | 2 | 17.67 | $\begin{array}{r} \text { W } 886, \mathrm{Si}, \mathrm{~S}_{\mathrm{P}} 499^{6,} \mathrm{I}_{3} \times 590, \\ {[\mathrm{Gl} 3483 .} \end{array}$ |
| 1626 | $\begin{array}{llll}63 & 34 & 32.9\end{array}$ | 77.04 | 3 | 17.65 | W II 52, PM 5 570, Y 5779. |
| 1627 | $4^{2} 4744^{\circ} \mathrm{I}$ | 7140 | 4 | 17.63 | $\mathrm{R}_{4} 454 \mathrm{I}$, Oe 14138 . |
| 1628 | $86 \quad 43 \quad 377$ | 74.35 | 5 | 17.62 | W 906. |
| 1629 | $50 \quad 2 \mathrm{I} \quad 50 \cdot 3$ | 71.68 | 3 | 17.58 | W 1193. |
| 1630 | $80 \quad 29$ 57\% | 70.17 | 6 | 17.58 | W 932, G] 3490. |
| 1631 | $8 \mathrm{I} 5 \mathrm{I} \quad 6 \cdot 1$ | $74 \cdot 86$ | 2 | $17 \times 48$ | $\mathrm{W}_{\mathrm{W}} 982, \mathrm{RC} \mathrm{I}_{34} 8, \mathrm{Gl}_{3495}$ |
| 1632 | $76 \quad 40 \quad 18 \cdot 9$ | 77.03 | 3 | 17.46 | W 996, Gl 3496. |
| 1633 | $78 \quad 6 \quad 55 \%$ | 72.57 | 5 | 17.46 | W 995. |
| 1634 | $87 \quad 6 \quad 7 \cdot 9$ | $78 \cdot 12$ | 4 | 17.44 | W 1004. |
| 1635 | $\begin{array}{llll}63 & 34 & 42 \cdot 8\end{array}$ | 65.94 | 5 | $17 \% 41$ | W 1284, R $45^{8} 7$. |
| ${ }^{1636}$ | II6 44406 | 66. I I | 4 | 17040 | See Notes. |
| I 637 | $103 \quad 36 \quad 20 \cdot 5$ | $60 \cdot 35$ | I | 17.37 | $\mathrm{W}_{1035}, \mathrm{Si}_{4} \mathrm{I} 292, \mathrm{Y}_{5827}$ |
| 1638 | $67 \mathrm{I}+4.8$ | $70 \cdot 54$ | 5 | 17.35 | W 1303. |
| 1639 | $\begin{array}{llll}71 & 29 & 25.4\end{array}$ | 74.76 | 5 | 17.34 | W i3Io, R 4595. |
| 1640 | $89 \quad 27 \quad 36 \cdot 8$ | $70 \cdot 67$ | 7 | 17.30 | Pi4601, Si, Gl 3507. |
| 1641 | $\begin{array}{llll}72 & 32 & 16 \cdot 6\end{array}$ | $78 \cdot 85$ | 2 | 17.28 | W $1342, \mathrm{R}_{4606 .}$ |
| 1642 | $65 \quad 5 \quad 26 \cdot 1$ | $70 \cdot 34$ | 6 | I 7.26 | WII $, \mathrm{N}_{7 \mathrm{yr}} 1632, \mathrm{Y}_{5} 844$. |
| 1643 | 4 I I I $40 \cdot 4$ | 67\% | 3 | 17.23 | Oe 14307. |
| 1644 | $90 \quad 3 \quad 31.5$ | 75.37 | 3 | 17.21 | $\mathrm{W}_{2} 5, \mathrm{Sp} 5049, \mathrm{~L}_{1} 4294, \mathrm{Gl} 3514$. |
| 1645 | $\begin{array}{llll}45 & 39 & 50 \cdot 2\end{array}$ | $7 \mathrm{I} \cdot 3^{6}$ | 2 | 17.19 | $\mathrm{W}_{50}$, RC 3144. |
| 1646 | $\begin{array}{llll}58 & 9 & 16 \cdot 7\end{array}$ | $75 * 3$ | 4 | 17'18 | W 49. |
| 1647 | $\begin{array}{llll}48 & 37 & 48 \cdot 4\end{array}$ | $65 \cdot 85$ | 2 | 17.15 | W 72. [ $\mathrm{L}_{1} 4305, \mathrm{Gl} 3520$. |
| 1648 | $\begin{array}{llll}88 & 2 & 57\end{array}$ | 71.05 | 6 | 1714 | W 51, R 4629, $\mathrm{Si}_{1,} 7 \mathrm{y}^{\mathrm{r}} \mathrm{II} 33$, |
| 1649 | $57 \quad 32$ II•I | 71.90 | 6 | $17 \times 12$ | W 83. |
| 1650 | IO3 16 19,3 | $74 \cdot 84$ | 6 | 17.08 | $\mathrm{W}_{73}, \mathrm{Si}_{4}, 1297$. |
| 1651 | $90 \quad 15 \quad 16.2$ | $75^{\circ} 90$ | 4 | 17.04 | See Notes |
| 1652 | $69 \quad 50 \quad 3.0$ | $75^{\circ} 13$ | 4 | 17.00 | $\mathrm{K}_{4} \mathrm{C}_{43}$. |
| 1653 | $86 \quad 4 \quad 447$ | $67 \cdot 63$ | 7 | 16.98 | W II 4. |
| 1654 | 3737380 | 65.93 | 5 | 16.96 | See Noters. |
| 1655 | $\begin{array}{llll}105 & 29 & 58.0\end{array}$ | $73 \cdot 34$ | I | 16.96 | Oe $13501, Y_{583}{ }^{\text {c }}$ |
| 1656 | $97 \quad 4 \quad 544$ | 72.61 | 4 | 16.96 | W $123, \mathrm{Si}_{2}, \mathrm{~S}_{1} 5075$ |
| 1657 | $654347 * 5$ | 73.40 | 4 | I 6.95 | W 173. |
| 1658 | $69 \quad 17 \quad 387$ | 74.86 | 4 | 16.88 | W ig6, PM 1603. |
| $\times 659$ | $49 \quad 40 \quad 30 \cdot 3$ | $77 \cdot 88$ | 4 | 16.85 | W 225, T2, LiC 3175 G1 3543 |
| 1660 | $\begin{array}{ll}74 & 9\end{array} 27.5$ | $70 \cdot 34$ | 3 | 16.84 | W 220, I. |
| 1661 | 108 8 10.0 | $69 \cdot 85$ | 2 | 16.83 | $\mathrm{T}_{2}, \mathrm{Bn}, 9 y \mathrm{l}$ I 306. |
| 1662 | $\begin{array}{llll}78 & 54 & 46 \cdot 4\end{array}$ | 75.05 | 3 | 16.79 |  |
| 1663 | $68 \quad 7 \quad 6 \cdot 1$ | 74.00 | 6 | 16.79 | W $242, \mathrm{R}_{4654}$ |
| 1664 | $89 \quad 2 \quad 24 * 9$ | 73.97 | 5 | 16.76 | W $213, \mathrm{R} 46$ ¢7,Sp 5094, L $43+2$. |
| I 665 | $80 \quad 50 \quad 36 \cdot 9$ | $76 \cdot 37$ | I | +16.71 | W 228 , $\mathrm{Si}_{1}$, Wl 3554. |



| No. | Mean N.P.D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
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| I 666 | $50^{\circ} 37^{\prime} 50^{\prime \prime} \cdot 6$ | $68 \cdot 84$ | 4 | $+16^{\prime \prime} \cdot 69$ | W 292, RC 3187, N 7 yr 1655. |
| 1667 | 63 2 1 2.6 | 75.71 | 6 | 16.67 | W 297. |
| 1668 | 97 3I 5.9 | 77.39 | 4 | 16.66 | W $248, \mathrm{Si}_{2}, \mathrm{~L}_{3}$, I668. |
| 1669 | $\begin{array}{llll}53 & 2 & 3\end{array}$ | 72.58 | 5 | 16.65 | W 314. |
| 1670 | 117 Io 4 I .4 | 61.73 | 5 | 16.63 | See Notes. |
| 1671 | $\begin{array}{lll}90 & 3 & 56 \cdot 6\end{array}$ | 73.38 | 5 | 16.61 | W $27 \mathrm{I}, \mathrm{Si}_{1}$, Gl 3560. |
| 1672 | $87 \quad 9 \quad 18 \cdot 3$ | $76 \cdot 88$ | 4 | 16.61 |  |
| 1673 | 645403 | 72.86 | 6 | 工6.55 | W 359. |
| 1674 | $5^{2} 1333^{8 \cdot 1}$ | $68 \cdot 36$ | 2 | 16.51 | $\mathrm{T}_{0}, \mathrm{RC} 3196, \mathrm{Y}_{5952}$, G1 3568. |
| 1675 | $62 \quad 9 \quad 359$ | $73 \cdot 07$ | 3 | 16.51 | W 374 . |
| 1676 | $50 \quad 5 \quad 50.6$ | $60 \cdot 37$ | I | 16.51 | W 383 . |
| 1677 | $88 \quad 26 \quad 26 \cdot 8$ | 73.78 | 5 | 16.45 | R $4697, L_{14376, ~ Y 5960 . ~}^{\text {\% }}$ |
| 1678 | 63 10 78 | $73 \cdot 13$ | 8 | 16.41 | W 414. |
| 1679 | $\begin{array}{llll}83 & 29 & 53.2\end{array}$ | 76.12 | 4 | 16.41 | W 349, $\mathrm{L}_{2} \mathrm{I} 440$, Gl 3573. |
| 1680 | $83 \quad 28 \quad 21.4$ | $76 \cdot 39$ | 2 | 16.40 | W361, Sp $5^{129}$, $L_{2} 1442$. |
| 1681 | $118 \quad 55 \quad 40 \cdot 9$ | 62.30 | 9. | 16.38 | See Nutes. |
| I 682 | $96 \quad 20 \quad 180$ | $72 \cdot 98$ | 5 | 16.32 | See Notes. |
| 1683 | $62 \quad 59 \quad 53.3$ | 71.69 | 3 | 16.30 | IV 460. |
| 1684 | $\begin{array}{llll}61 & 8 & 57 \cdot 2\end{array}$ | $80 \cdot 37$ | 2 | 16.27 | W 472 . |
| 1685 | $\begin{array}{llll}53 & 14 & 35.6\end{array}$ | 75.91 | 4 | 16.27 | W 478, R 47I9. |
| ェ686 | $\begin{array}{llll}68 & 40 & 27\end{array}$ | 74.87 | 4 | 16.27 | W 474. |
| 1687 | 1044132.6 | $60 \cdot 36$ | 2 | 16.26 | W 402, $\mathrm{Si}_{4} \mathrm{I} 3 \mathrm{I} 8$. |
| 1688 | $88 \quad 3647 \circ$ | 72'12 | 4 | 16.25 | See Notes. |
| 1689 | $\begin{array}{llll}73 & \text { I } 3 & 59.6\end{array}$ | $80 \cdot 31$ | I | 16.23 | W 487. |
| 1690 | 8440 I $5 \cdot 2$ | 73.60 | 5 | 16:20 | W $427, \mathrm{R}_{4724}, \mathrm{Si}_{1}, \mathrm{Sp}$ [5152, $\mathrm{L}_{2}$ 1459, Gl 3592. |
| I691 | $\begin{array}{llll}71 & 48 & 5 \cdot 1\end{array}$ | $80 \cdot 38$ | I | 16.14 | W 522. |
| 1692 | $\begin{array}{llll}46 & 3 & 49\end{array}$ | $69 \% 1$ | 3 | 16.09 | W 550. |
| 1693 | $\begin{array}{llll}106 & \text { I6 } & 3.4\end{array}$ | $65 \cdot 31$ | I | 16.06 |  |
| I694 | $\begin{array}{llll}52 & 29 & 13.9\end{array}$ | $68 \cdot 36$ | 2 | 16.00 | W $580, \mathrm{~T}_{2}, \mathrm{RC}_{32 \mathrm{I}} \mathrm{l}, \mathrm{Y}$ |
| 1695 | $\begin{array}{llll}79 & 33 & 55^{\circ} \mathrm{O}\end{array}$ | 72.60 | 5 | 15.97 | W 504. [6009. |
| 1696 | $\begin{array}{llll}56 & 54 & 58 \cdot 6\end{array}$ | 80.16 | 4 | 15*97 | $\mathrm{W}_{595}, \mathrm{R}_{474}{ }_{4}, \mathrm{~T}_{2}, \mathrm{Gl}_{3} 607$. |
| 1697 | $50 \quad 30 \quad 41.5$ | 75.91 | 4. | 15.97 | W 599. |
| 1698 | $\begin{array}{lll}\text { II } & 37 & 46.5\end{array}$ | $66 \cdot 33$ | 3 | 15.96 | Oe 13745. |
| 1699 | $\begin{array}{lll}78 & 23 & 2.4\end{array}$ | 77.59 | 5 | 15.92 | W 527, Gl 3612. |
| 1700 | 66 12 16.I | 72.07 | 3 | 15.89 | R 4763 . |
| 1701 | $64 \quad 59 \quad 32 \cdot 8$ | $73 \cdot 89$ | 4 | $15 \cdot 84$ |  |
| 1702 | III 47 II. 6 | $65 \cdot 82$ | 2 | 15.81 | Oe 13780. [4444. |
| 1703 | 9345 | 72.39 | 2 | 15.80 | W 564, Si ${ }_{2}, \mathrm{Sp} 5 \mathrm{I92}, \mathrm{~L}_{4}$ |
| 1704 | 53 31 $36 \cdot 6$ | $75 \cdot 41$ | 4 | 15.80 | W 656, R 4770. |
| I705 | 82385 | $75 \cdot 38$ | 1 | 15.73 | W 592, $1_{\mathrm{m}_{2} \mathrm{I} 502 .}$ |
| 1706 | $45 \quad 49 \quad 404$ | 70.77 | 5 | 15972 | See Notes. |
| 1707 | $82 \quad 7 \quad 153$ | $76 \cdot 71$ | 6 | 15.70 | W $598, \mathrm{~L}_{\mathrm{g}} \mathrm{I} 505, \mathrm{Cl}_{3622 .}$ |
| 1708 | $\begin{array}{llll}67 & 29 & 157\end{array}$ | $73^{\circ} 00$ | 5 | 15.67 | W $703, \mathrm{R} 4779$. |
| 1709 | $\begin{array}{llll}58 & 56 & 24.6\end{array}$ | 73.72 | 3 | 15.63 | W 718. |
| 1710 | $\begin{array}{lll}12 & 53 & 23.9\end{array}$ | $60 \cdot 35$ | 1 | + 55.63 | De 13848 . |


| No. | Lalande. | Mag. | Mean | R.A. 1875.0. | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1711 | 2678 I | $9^{\circ}$ | $14^{\text {h }}$ | $35^{\mathrm{m}} 47^{\mathrm{c} \cdot} 76$ | 73.39 | I | $+2^{6.781}$ |
| 1712 |  | 6.0 |  | 36 - |  |  | 3.455 |
| 1713 | 26794 | 7'5 |  | $\begin{array}{lll}36 & 3 \cdot 87\end{array}$ | 71.69 | 3 | $2 \cdot 78$ r |
| 1714 | 26812 | $8 \cdot$ | 14 | $36 \quad 46 \cdot 80$ | 77.39 | 3 | 2.944 |
| I715 | 26851 | $6 \cdot 8$ | 14 | $37 \quad 35 \cdot 96$ | 74*21 | 5 | 2.426 |
| 1716 | 26826 | 7.5 | 14 | $37 \quad 36 \cdot 39$ | $70 \cdot 77$ | 5 | 3.188 |
| 1717 | 26869 | $6 \cdot 0$ | 14 | $\begin{array}{lll}38 & 45 \cdot 87\end{array}$ | $76 \cdot 40$ | 4 | 3.086 |
| 1718 | 26914 | $7{ }^{\circ}$ | 14 | 39 53.79 | $68 \cdot 88$ | 4 | $2 \cdot 864$ |
| 1719 | 26923 | $6 \cdot 6$ | 14 | 39 50.91 | $65 \cdot 39$ | 1 | $2 \cdot 507$ |
| 1720 | 26926 | $7 \cdot 2$ | 14 | $40 \quad 43 \cdot 77$ | $75 \cdot 40$ | 5 | $3 \cdot 049$ |
| I) 21 | 26929 | $6 \cdot 5$ | 14 | 415075 | 69.88 | 2 | $3 \cdot 261$ |
| 1722 | 26957 | $8 \cdot 5$ | 14 | 423.91 | 74.00 | 5 | 3.172 |
| 1723 | 26975 | $6 \cdot 7$ | 14 | $42 \quad 28.86$ | $76 \cdot 42$ | I | 3.077 |
| 1724 |  | $6 \cdot 5$ | 14 | 4257. |  |  | $3 \cdot 525$ |
| 1725 | 27004 | $7{ }^{\circ}$ | 14 | $43 \quad 22.75$ | $7 \mathrm{I} \cdot 63$ | 4 | 2.909 |
| 1726 | 26995 | $6 \cdot 0$ | I 4 | $434^{6}$ |  |  | 3.315 |
| 1727 | 27055 | $5 \cdot 8$ | 14 | $44 \quad 40 \cdot 48$ | 69.31 | I | 2.673 |
| 1728 | 27103 | 79 | 14 | $46 \quad 33 \cdot 61$ | $76 \cdot 81$ | 5 | 2778 |
| 1729 | 27120 | $6 \cdot 8$ | 14 | $46 \quad 55 \cdot 57$ | 69.55 | 6 | 2670 |
| 1730 | 27114 | $7 \cdot 2$ | 14 | 47 3*71 | $73 \cdot 20$ | 5 | 2.823 |
| 1731 | 27134 | $7 \cdot 8$ | 14 | $47 \quad 25.99$ | 74.60 | 4 | $2 \cdot 618$ |
| 1732 | 27161 | 7.5 | 14 | $48 \quad 57 \cdot 67$ | 69.99 | 5 | 2.817 |
| 1733 | 27177 | $7 \cdot 5$ | 14 | 5013. |  |  | $3 \cdot 493$ |
| I 734 | 27242 | 6.3 | 14 | 5048.06 | $70 \cdot 72$ | 3 | $2 \cdot 488$ |
| I 735 | 27233 | $6 \cdot 0$ | 14 | 518. |  |  | $3 \cdot 067$ |
| 1736 | 27297 | $6 \cdot 2$ | 14 | $53 \quad 8 \cdot 72$ | 69.89 | 2 | 2.991 |
| I 737 | 27324 | $7^{\circ}$ | 14 | 53 13.23 | $75^{\circ} \mathrm{II}$ | 5 | $2 \cdot 156$ |
| 1738 | 27304 | $6 \cdot 8$ | 14 | 53 17.30 | $77 \cdot 41$ | 5 | 2.651 |
| 1739 | 27325 | $7 \cdot 2$ | 14 | 54 4.92 | 71.58 | 5 | 2.820 |
| 1740 | 27343 | $8 \cdot 3$ | 14 | $54 \quad 29 \cdot 13$ | 79'13 | 4 | 2.589 |
| 1741 | 27358 | $6 \cdot 5$ | 14 | $54 \quad 38 \cdot 29$ | 69.17 | 5 | $2 \cdot 294$ |
| 1742 | 27342 | $7 \cdot 1$ | 14 | 55 5* |  |  | 3.111 |
| 1743 | 27374 | $7 \cdot 3$ | 14 | 55 16.54 | 74.67 | 4 | 2.49 I |
| I 744 | 27363 | $7 \cdot 2$ | 14 | 56 5*09 | $60 \cdot 36$ | 1 | 3.360 |
| I 745 | 27406 | $7{ }^{\circ}$ | 14 | $56 \quad 45 \cdot 34$ | 78-00 | 5 | $2 \cdot 795$ |
| 1 746 | 27403 | $8 \cdot 0$ | 14 | $57 \quad 0.80$ | 72*10 | 5 | 3.049 |
| 1747 | 27435 | $7 \cdot 1$ | 14 | $57 \quad 23 \cdot 03$ | $73 \cdot 89$ | 2 | 2.446 |
| 1748 | 27445 | $7{ }^{\circ}$ | 14 | $57 \quad 46 \cdot 48$ | $68 \cdot 98$ | 5 | 2.558 |
| I749 | 27470 | $7 \cdot 5$ | I 4 | $58 \quad 48 \cdot 98$ | $72 \cdot 71$ | 3 | 2.724 |
| $175{ }^{\circ}$ | 27509 | $7{ }^{\circ}$ | 14 | $59 \quad 55 \cdot 50$ | 70.02 | 5 | $2 \cdot 303$ |
| 1751 | 27496 | $7 \cdot 2$ | I 5 | - $6 \cdot 28$ | $75 \cdot 05$ | 3 | 2.972 |
| 1752 | 27507 | $7 \cdot 1$ | 15 | - $48 \cdot 13$ | $73 \cdot 89$ | 4 | 3.025 |
| 1753 | 27532 | $8 \cdot 0$ | 15 | 1 11.56 | $68 \cdot 79$ | 5 | 2.890 |
| 1754 | 27575 | $6 \cdot 1$ | I 5 | 1 41.09 | $75 \cdot 42$ | 4 | $2 \cdot 356$ |
| $\pm 755$ | 27572 | $4 \cdot 8$ | I 5 | I $48 \cdot 75$ | $79^{72}$ | 3 | $+2.620$ |


| No. | Mean N.P.D. 1875.0 | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1711 | $70^{\circ} 58^{\prime \prime} 49^{\prime \prime} \cdot 6$ | 73.39 | I | +15 $5^{\prime \prime} .60$ | W 736. |
| 1712 |  | 61.00 | 5 | I5.59 | See Notes. |
| 1713 | $\begin{array}{llll}70 & 58 & 3 \cdot 8\end{array}$ | 77.37 | 2 | 15.58 | W 742. |
| 1714 | $8123 \quad 26.5$ | 77.39 | 3 | 15.54 | PM 1647. |
| 1715 | $\begin{array}{llll}52 & 42 & 36 \cdot 9\end{array}$ | 73.60 | 5 | 15.50 | $\mathrm{W}_{7} 88, \mathrm{R}_{4} 8 \mathrm{O}_{3}, \mathrm{~T}_{2}, \mathrm{Y} 6065$. |
| 1716 | $\begin{array}{llll}97 & 43 & 24.5\end{array}$ | 70.77 | 5 | 15.50 | W 664, $\mathrm{Si}_{2}, \mathrm{~L}_{\mathrm{a}} 17599$. |
| 1717 | $9053{ }^{1} 77^{\circ} \mathrm{O}$ | $76 \cdot 40$ | 4 | 15.43 | W 695, Sis 638, $\mathrm{L}_{1} 4479 . \mathrm{Gl}$ |
| 1718 | $\begin{array}{lll}76 & 22 & 7 \cdot 2\end{array}$ | 66.78 | 5 | 15.37 | W 722, Gl $3647 . \quad\left[3^{642}\right.$. |
| 1719 | $\begin{array}{llll}56 & 40 & 49 & 7\end{array}$ | $60 \cdot 36$ | I | 15.36 | W 839, Y 6080. |
| 1720 | $88 \quad 30 \quad 10 \cdot 4$ | 75.40 | 5 | 15.32 | PM ${ }_{1657}$, R ${ }_{4814 .}^{\text {[4493 }}$ - $\mathrm{L}_{1}$ |
| 1721 | $\begin{array}{llll}102 & 18 & 42 \cdot 1\end{array}$ | 69.86 | 2 | 15.30 | $\mathrm{L}_{5} 165 \mathrm{I}$. [6091. |
| 1722 | $\begin{array}{llll}96 & 35 & 3.7\end{array}$ | 74.00 | 5 | 15.25 | W 759, $\mathrm{Si}_{2}, \mathrm{~L}_{3} \mathrm{I} 782, \mathrm{Y}$ |
| 1723 | 90 19 36.1 | $71 \times 90$ | 2 | 15.22 | W $772, \mathrm{~N} 7 \mathrm{yr} 1682, \mathrm{Si}_{5} 645, \mathrm{~J} \mathrm{~J}_{1}$ |
| 1724 | $\begin{array}{llll}117 & 26 & 15.9\end{array}$ | 63.70 | 5 | 15.20 | See Notes. [4502. |
| 1725 | $\begin{array}{lllll}79 & 25 & 57.5\end{array}$ | 72.87 | 4 | 15.17 | W 790,Sp 5259, Gl 3658. |
| 1726 | $105 \quad 28 \quad 3 \times 3$ | $66 \cdot 89$ | 2 | 15'15 | See Notes. |
| 1727 | 6534 14*0 | 69.31 | I | 15.10 | W 945, see Notes. |
| 1728 | $\begin{array}{llllll}71 & 42 & 174\end{array}$ | $76 \cdot 81$ | 5 | 14.99 | W 983. |
| 1729 | $\begin{array}{llll}65 & 41 & 8.8\end{array}$ | 69.71 | 6 | 14.97 | R 4842. |
| 1730 | $\begin{array}{llll}74 & 21 & 14.4\end{array}$ | 73.20 | 5 | 14.96 | W 992, R 4844. |
| 1731 | 63 I 19.5 | 75.88 | 4 | 14.94 | W 1004. |
| 1732 | $\begin{array}{lllll}74 & 9 & 57 \cdot 6\end{array}$ | 74.14 | 4 | 14.85 | W ro29, R 4856. |
| 1733 | $\begin{array}{lll}114 & 56 & 116\end{array}$ | $66 \cdot 38$ | 3 | 14.77 | See Notes. |
| 1734 | 57 II 36.5 | 75.90 | 2 | 14.74 | W 1079. [1204, B 314. |
| 1735 | $893946 \cdot 5$ | $67 \cdot 18$ | 5 | 14.72 |  |
| 1736 | $8455 \quad 57 \%$ | 69.89 | 2 | 14.60 | W 983, $\mathrm{Si}_{1}, \mathrm{~L}_{1} 1596, \mathrm{Gl}$ |
| 1737 | $45 \quad 154.6$ | 75.21 | 5 | 14.59 | W in 48 , Oe 14991 , RC |
| 1738 | 65 I9 50.5 | 77.41 | 2 | 14.59 | Wir40, R 4885. [3294. |
| 1739 | $74 \quad 4047$ | 71.58 | 5 | 14.54 | W in 55, R 4893. |
| 1740 | $62 \quad 2036.2$ | 79'13 | 4 | 14.52 | W 1172. |
| 1741 | $\begin{array}{lllll}49 & 51 & 27.2\end{array}$ | $71 \times 37$ | 4 | 14.51 | W $1182, \mathrm{~T}_{2}$. |
| 1742 | $\begin{array}{llll}92 & 39 & 54.4\end{array}$ | 62.39 | 4 | 14.48 | PM 1677, Ar 3I50. |
| 1743 | $\begin{array}{llll}57 & 53 & 29.5\end{array}$ | $70 \cdot 15$ | 8 | 14.47 | W 1194, Ar 3155. |
| 1744 | $\begin{array}{r}107 \\ \\ \hline\end{array}$ | 66.33 | 1 | 14.42 | Oe ı4i92, 7 yrimir, $\mathrm{St}_{1}$ |
| ${ }^{1} 745$ | $\begin{array}{llll}73 & 27 & 20 \cdot 3\end{array}$ | 78.00 | 5 | 14.38 | Wi2II. [596. |
| 1746 | 88374.8 | $75^{15}$ | 4 | 14.36 | W 1054, $\mathrm{Si}_{\mathrm{l}}, \mathrm{L}_{1} 4583$. |
| 1747 | $\begin{array}{llll}56 & 13 & 59.8\end{array}$ | 71.72 | 3 | 14.34 | W 1233. |
| 1748 | $\begin{array}{lllll}61 & 14 & 30 \%\end{array}$ | $68 \cdot 96$ | 5 | 14.32 | R 4919. |
| 1749 | $6940 \begin{array}{ll} & 14.2\end{array}$ | 7 r 38 | 4 | 14.25 | W 1260. |
| 1750 | $50 \quad 54$ 316 | 72.41 | 4 | 14.18 | W 1285. |
| 1751 | $8357 \quad 52.5$ | 79.86 | 2 | 14.17 |  |
| 1752 | $87 \quad 9 \quad 12.7$ | 73.89 | 4 | 14.13 | $\mathrm{W}_{1123,} \mathrm{R}_{4938, \mathrm{Si}_{1}, \mathrm{Sp} 5370 .}$ |
| 1753 | $\begin{array}{lllll}79 & 13 & 17 \%\end{array}$ | 68.59 | 5 | 14.11 | Wrins, ${ }^{\text {Wr }} 3169, \mathrm{Gl}_{3723}$. |
| 1754 | $\begin{array}{llll}53 & 3 & 44.3\end{array}$ | 75.42 | 4 | 14.08 | W 1326. |
| 1755 | $\begin{array}{llll}64 & 38 & 36 *\end{array}$ | $79^{\circ} 40$ | 2 | +14.07 | See Notes. |


| No. | Lalande. | Mag. | Menn | R.A. | $1875 \cdot 0$. | Epoch, | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1756 | 27564 | 8.0 | $15^{\text {h }}$ | $2^{\text {m }}$ | $2^{8 .} 71$ | 75.60 | 5 | +2.999 |
| I757 | 27563 | $6 \cdot 5$ | I 5 | 2 | 33•94 | $60 \cdot 36$ | 1 | $3 \cdot 486$ |
| 1758 | 27599 | $6 \cdot 8$ | 15 | 3 | 12.14 | 67.17 | 5 | 2.999 |
| 1759 | 27628 | $7{ }^{\circ}$ | 15 | 3 | 15.98 | $75^{\circ} \mathrm{O} 2$ | 5 | 2.421 |
| 1760 | 27644 | 7.8 | 15 | 3 | 53.47 | $80 \cdot 31$ | 5 | 2.431 |
| 1761 |  | $6 \cdot 8$ | 15 | 4 | 21'51 | 70•18 | 5 | $1 \cdot 902$ |
| 1762 | 27652 | $6 \cdot 5$ | I 5 | 4 | 33.22 | $76 \cdot 91$ | 4 | $2 \cdot 865$ |
| 1763 | 27665 | 8.0 | 15 | 5 | 12.65 | $70 \cdot 12$ | 4 | 3.015 |
| 1764 | 27704 | $7 \cdot 3$ | I5 | 5 | $38 \cdot 36$ | 79.01 | 5 | 2.520 |
| 1765 | 27705 | $7 \cdot 2$ | 15 | 5 | $55 \cdot 04$ | 72.05 | 5 | 2.709 |
| 1766 | 27718 | 5.9 | I 5 | 6 | 23.00 | 72.59 | 5 | 2.729 |
| 1 767 | 27725 | $6 \cdot 8$ | I 5 | 6 | $3 \mathrm{I} \cdot 11$ | $80 \cdot 32$ | 1 | $2 \cdot 664$ |
| 1768 | 27744 | $7^{\circ} 0$ | 15 | 7 | $35 \cdot 62$ | $66 \cdot 99$ | 5 | $3 \cdot 087$ |
| 1769 | 27777 | $8 \cdot 0$ | 15 | 7 | 41.09 | $78 \cdot 90$ | 2 | $2 \cdot 351$ |
| 1770 | 27763 | $6 \cdot 5$ | I 5 | 8 | I $5 \cdot 37$ | $74 \cdot 62$ | 5 | $3 \cdot 158$ |
| 1771 | 27822 | $7^{\circ} \mathrm{O}$ | 15 | 8 | $40 \cdot 78$ | 7207 | 5 | I 9942 |
| 1772 | 27781 | $6 \cdot 0$ | 15 | 9 | $8 \cdot$ |  |  | $3 \cdot 467$ |
| 1773 | 27813 | $7{ }^{1}$ | 15 | 9 | 33.54 | 71*19 | 5 | $2 \cdot 888$ |
| 1774 | 27817 | $7 \cdot 1$ | 15 | 9 | $44^{\circ} \mathrm{O} 4$ | $80 \cdot 32$ |  | 2.952 |
| 1775 | 27846 | $6 \cdot 8$ | 15 | 10 | 17.64 | $70 \cdot 40$ | 3 | $2 \cdot 589$ |
| 1776 | 27904 | $6 \cdot 8$ | I 5 | II | 35.11 | $75^{\circ} 41$ | 4 | $2 \cdot 310$ |
| 1777 | 27884 | $6 \cdot 2$ | I 5 | 12 | $1 \cdot 56$ | $80 \cdot 40$ | 2 | 3.072 |
| 1778 | 27910 | $7 \cdot 9$ | 15 | 12 | $9^{\circ} 10$ | $76 \cdot 42$ | 3 | $2 \cdot 555$ |
| 1779 |  | $8 \cdot 7$ | 15 | 12 | $9{ }^{\circ}$ |  |  | I.828 |
| 1780 | 27942 | $7^{\circ}$ | I 5 | 12 | 5 $1 \times 04$ | $73 \cdot 60$ | 5 | 2.466 |
| 1781 | 27943 | $6 \cdot 5$ | 15 | I. 2 | 59.48 | $69 \cdot 19$ | 5 | $2 \cdot 557$ |
| 1782 | 27950 | $6 \cdot 5$. | 15 | 14 | I.30 | $68 \cdot 2 \mathrm{I}$ | 6 | $3 \cdot 154$ |
| 1783 | 27957 | $6 \cdot 5$ | 15 | 14 | 20.14 | 79.63 | 4 | $3 \cdot 107$ |
| 1784 | 27976 | $7 \cdot 6$ | 15 | 14 | 22.28 | $74 \cdot 82$ | 5 | 2.772 |
| 1785 | 27990 | 6.8 | 15 | 14 | 27.50 | $76 \cdot 77$ | 3 | 2.422 |
| 1786 | 28028 | $7 \times 3$ | 15 | 15 | 46•19 | 71.40 | 5 | 2.444 |
| I787 | 28035 | $7^{\circ} \mathrm{O}$ | 15 | 16 | $8 \cdot 93$ | 67.40 | 4 | $2 \cdot 606$ |
| 1788 | 28027 | $7 \cdot 7$ | 15 | 16 | $8 \cdot 99$ | 76.65 | 4 | $2 \cdot 764$ |
| 1789 | 28012 | $7{ }^{\circ}$ | 15 | 16 | $29^{\circ} 21$ | $60 \cdot 36$ | 1 | $3 \cdot 364$ |
| 1790 | 28056 | 77 | 15 | 16 | 50.22 | $77 \cdot 17$ | 4 | $2 \cdot 586$ |
| I791 | 28036 | $6 \cdot 0$ | 15 | 17 | $1 \cdot$ |  |  | $3 \cdot 286$ |
| 1792 | 28064 | $7 \cdot 3$ | 15 | 17 | $2 \cdot 98$ | $75 \cdot 39$ | 2 | $2 \cdot 576$ |
| 1793 | 28083 | $7 \cdot 5$ | 15 | 17 | $30 \cdot 48$ | 71.17 | 5 | 2.521 |
| 1794 | 28118 | $7 \cdot 5$ | I 5 | 19 | 18.63 | 71.60 | 5 | 3.086 |
| 1795 | 28148 | $7 \cdot 5$ | 15 | 19 | 3794 | 8I•39 | I | $2 \cdot 248$ |
| 1796 | 28117 | $7^{\circ} \circ$ | ${ }^{1} 5$ | 19 | 39.56 | 67.02 | 3 | 3.436 |
| 1797 | 28139 | $7 \cdot 3$ | 15 | 19 | $49 \cdot 64$ | $76 \cdot 83$ | 5 | $2 \cdot 589$ |
| 1798 | 28164 | $5 \cdot 9$ | 15 | 19 | 52.27 | 69.77 | 5 | $2 \cdot 023$ |
| 1799 | 28152 | $6 \cdot 8$ | I 5 | 20 | I5.95 | $74 \cdot 21$ | 5 | 2.701 |
| 1800 | 28153 | 7.0 | 15 | 20 | $29 \cdot 69$ | 80.40 | 2 | +2.883 |


| No. | Mean N.P.D. 18750. | Epoch. | Obs. | Ann. Prec. | Authorities. |
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| 1756 | $85^{\circ} 35^{\prime} 17^{\prime \prime \prime} 0$ | 75.60 | 5 | +14"05 | $\mathrm{W}_{1152}, \mathrm{Si}_{1}, \mathrm{Sp} 5_{5380} \mathrm{~L}_{\mathrm{s}}$ |
| 1757 |  | 65.71 |  | 14.02 |  |
| 1758 | 8539 16.1 | 70.21 | 5 | 13.98 | W $19, \mathrm{Si}_{1}, \mathrm{~L}_{\mathrm{s}} \mathrm{I} 645, \mathrm{Gl}$ |
| 1759 | $55485^{516}$ | 75.02 8.58 | 5 | 13.98 | [3735. |
| 1760 | $\begin{array}{llll}56 & 15 & 25\end{array}$ | $80 \cdot 57$ | I | 13.94 | Bn |
| 1761 | $39 \quad 27 \quad 58.8$ | 70. 8 | 5 | 13.91 | Oe 15137, RC 3330. |
| 1762 | $77 \quad 5180$ | $76 \cdot 91$ | 4 | 13.90 |  |
| 1763 | $\begin{array}{llll}86 & 41 & 50 \cdot 9\end{array}$ | $71 \cdot 66$ | 4 | 13.85 | W ${ }_{56,}$ T $7085, \mathrm{~L}_{2} 1654$. |
| 1764 | $\begin{array}{llll}60 & 17 & 45 \%\end{array}$ | 79.01 | 5 | 13.83 | $\mathrm{R}^{\mathrm{R}} 497 \mathrm{I}, \mathrm{T}_{2}, \mathrm{Y} 6251, \mathrm{Gl}$ |
| 1765 | $\begin{array}{llllllllllll}68 & 28 & 58\end{array}$ | 73.91 | 4 | ${ }^{1} 3.85$ | W 95.3745. <br> 1713. <br> 10. |
| 1766 | $70 \quad 33 \quad 77$ | $72 \cdot 59$ | 5 | 13.78 | W ro6, R 4976, N 7 y yr |
| 1767 | $\begin{array}{llll}67 & 12 & 49\end{array}$ | $80^{\circ} 32$ | I | ${ }^{1} 377$ | W $113, \mathrm{~T} 7 \mathrm{ior}$. |
| 1768 | 900515120 | ${ }^{68} 388$ | 5 | ${ }^{13} 71$ | See Notes. |
| 1769 | $\begin{array}{llll}53 & 33 & 29.2\end{array}$ | 78.90 | 2 | 23.70 |  |
| 1770 | $9521 r \circ$ | $74^{\circ} 6$ | 5 | ${ }^{3} 3.66$ |  |
| 1771 | $\begin{array}{llll}40 & 57 & 6 \cdot 6\end{array}$ | 74.91 | 4 | ${ }_{1} 3.63$ | Oe 15196 , i2 yr 1229 , |
| 1772 | $\begin{array}{llll}111 & 56 & 8.7\end{array}$ | 64.40 | 5 | 13.60 | $\mathrm{S}_{\text {See Notes. }}^{\text {W }}$ I $2, \mathrm{Gl} 3758$. |
| 1773 | $\begin{array}{llll}79 & 24 & 29.5\end{array}$ | $7{ }^{1} \times 19$ | 5 | 13.58 | W I42, G1 3758. <br> W |
| 1774 | $\begin{array}{llll}83 & 4 & 14 \cdot 1 \\ 63 & 53 & 38 \cdot 1\end{array}$ | $80 \cdot 32$ 70.40 | I | 13.56 13.53 |  |
| 1775 | $6353{ }^{38.1}$ | $70^{4} 40$ | 3 | 13.53 | W 197, R 5008.13760. |
| 1776 | $\begin{array}{llllllll}52 & 28 & 13\end{array}$ | 75.08 | 3 | 13.45 | Sce Notes. |
| 1777 | $90 \bigcirc 1{ }^{9}$ | $80 \cdot 40$ | 2 | ${ }^{1} 3 \cdot 42$ | $\mathrm{L}_{1} 468 \mathrm{r}$. |
| 1778 | $\begin{array}{llll}62 & 31 & 274\end{array}$ | 76.43 | 2 | 13.41 | ${ }^{2}{ }^{243}$. ${ }^{\text {ar }}$ |
| 1779 | $\begin{array}{llll}38 & 36 & 163\end{array}$ | 62.64 | 4 | ${ }^{1} 3 \cdot 41$ | Ar 3197, Bn . W 26 I . |
| 1780 | $\begin{array}{llll}58 & 42 & 236\end{array}$ | $73 \cdot 60$ | 5 | 13.36 | W 26 I . |
| 1781 | $\begin{array}{llll}62 & 42 & 16 \cdot 8\end{array}$ | 69.20 | 5 | ${ }_{1} 3.35$ | W $263, \mathrm{PM} 1709$. |
| 1782 | $94 \quad 3955$ | $70 \cdot 87$ | 4 | 13.29 |  |
| 1783 |  | 73.63 | 4 | 13.27 13.26 1 | L 4702 , Aote. ${ }^{\text {G1 }} 3774$. |
| 1784 | $\begin{array}{cccc}73 & 21 & 36.0 \\ 57 & 1 & 50\end{array}$ | 73.92 76.77 | 6 | 13.26 13.26 | W 285. |
| 1785 | $\begin{array}{llll}57 & 1 & 500\end{array}$ | 76.77 | 3 | ${ }^{1} 326$ | W 295. |
| 1786 | $\begin{array}{llll}58 & 4 & 25^{\circ}\end{array}$ | 70.05 | 6 | 13.17 | $\mathrm{W}^{\mathrm{W}} 326$. |
| 1787 | $\begin{array}{llll}65 & 12 & 23 \cdot 8\end{array}$ | 68.07 | 3 | 13.15 | W 333, R 5045. |
| 1788 | $73{ }^{7} \quad 2{ }^{5} 55^{\circ}$ | 74.81 | 5 | 13.15 |  |
| 1789 | 106 6 $55^{\prime} \mathrm{I}$ <br> 64 18 26.5 | 60.34 | 1 | 13.13 |  |
| 1790 | $\begin{array}{llll}64 & 18 & 26 \cdot 5\end{array}$ | $77^{\prime} 17$ | 4 | 13.10 | W 352. |
| 1791 | 1015516.6 | $66 \cdot 14$ | 4 | ${ }^{1} 309$ | $\mathrm{Ar}_{\mathrm{W}} 3208$, N 7 yr 1733. |
| 1792 | $63 \quad 55 \quad 39 \cdot 2$ | $75 \cdot 39$ | ${ }^{2}$ | 13.09 | W $359, \mathrm{R} 5056$. |
| 1793 | 61 29 <br> 149  | 71.17 | 5 | 13.06 | $\mathrm{W}^{3362 .}{ }^{362 .} \mathrm{Si}_{1} 702, \mathrm{~L}_{2} 4735$ |
| 1794 | $\begin{array}{llll}90 & 48 & 44^{\circ} 2 \\ 51\end{array}$ | 73.16 88 | ${ }_{1}$ |  |  |
| 1795 | 5121580 | 8r'39 | I | 1292 | R 5072, I2 yr $1240, \mathrm{y}$ $[6348$. |
| 1796 | 1093355.3 | 72.88 | 2 | 12.91 | Oe 14559. |
| 1797 | $\begin{array}{llll}64 & 44 & 18.2 \\ 44 & \text { I7 } & 10.5\end{array}$ | $76 \cdot 83$ | 5 | 12.90 12.89 129 | $\mathrm{W}^{420}{ }^{\text {40, Oe }} 15347$. |
| 1798 1799 | $\begin{array}{rrrrr}44 & 17 & 10 \cdot 5 \\ 70 & 4 & 44.4\end{array}$ | 69.77 74.21 | 5 | 12.89 12.87 | $\mathrm{W} 418, \mathrm{Ar}_{32188 .}$ |
| 1799 1800 | 70   <br> 79 31 46 | 880 | 2 | +12.86 | $\mathrm{W}_{357}, \mathrm{Sp} 5474, \mathrm{Cl}_{3798}$. |


| No. | Lalande. | Mag. | Mean | R.A. | 1875.0 | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| r8oi | 28157 | $8 \cdot 0$ | $15^{\text {h }}$ |  | $55^{\text {日 }}$. 18 | 72.42 | 4 | $+3^{1 / 225}$ |
| 1802 | 28211 | $6 \cdot 0$ | 15 | 22 | 16.35 | 70.27 | 7 | 2.578 |
| 1803 | 28265 | $6 \cdot 5$ | 15 |  | $8 \cdot 52$ | 70.62 | 4 | 1.623 |
| 1804 | 28235 | $6 \cdot 8$ | 15 |  | 14.87 | $78 \cdot 03$ | 5 | 2.824 |
| 1805 | 28212 | $6 \cdot 8$ | I 5 | 23 | 22.88 | $60 \cdot 35$ | 2 | 3.456 |
| 1806 | 28244 | 73 | 15 | 23 | $27 \cdot 12$ | 76.42 | 4 | 2.531 |
| 1807 | 28271 | 6.9 | 15 |  | $28 \cdot 73$ | 70.01 | 5 | 2.603 |
| 1808 | 28270 | $6 \cdot 7$ | 15 | 24 | 51.50 | $80 \cdot 85$ | 2 | 2.907 |
| $\underline{1809}$ | 28283 | $7 \cdot 8$ | 15 | 25 | 21.47 | $72 \cdot 09$ | 6 | 3.048 |
| 1810 | 28318 | $6 \cdot 5$ | 15 | 25 | 43.57 | $7 \mathrm{r} \cdot \mathrm{r} 5$ | 6 | 2.278 |
| 18II | 28329 | $8 \cdot 2$ | r 5 | 26 | 27.92 | 77'18 | 4 | $2 \cdot 662$ |
| I8I2 | 28347 | $6 \cdot 5$ | r 5 | 26 | $37^{\circ} \mathrm{O}$ | 71.06 | 6 | $2 \cdot 280$ |
| I8I3 |  | $6 \cdot 5$ | 15 | 27 | 2. |  |  | 3.622 |
| 1814 | 28350 | $7{ }^{\circ}$ | r 5 | 27 | $44 \cdot 54$ | $78 \cdot 43$ | 3 | $3 \cdot 169$ |
| 1815 | 28369 | $7 \cdot 8$ | 15 |  | 25.75 | 73.40 | 2 | 3.067 |
| 18ı6 | 28405 | $8 \cdot 0$ | 15 | 29 | 37\%23 | 72.41 | I | 3.063 |
| 1817 | 28434 | $7 \cdot 5$ | 15 | 30 | ${ }^{1} 5 \cdot 08$ | $60 \cdot 38$ | 1 | $3 \cdot 176$ |
| I818 | 28474 | $5^{\circ}$ | 15 | 30 | 39.04 | 73.09 | 3 | 2.195 |
| I8I9 | 28460 | $7^{\circ}$ | 15 | 30 | $55^{\circ} \mathrm{O}$ | 77.73 | 3 | $2 \cdot 780$ |
| 1820 | 28496 | $6 \cdot 5$ | r 5 |  | 11•79 | 74*7 | 4 | $2 \cdot 216$ |
| 182 I | 28505 | $6 \cdot 5$ | 15 | 31 | $46 \cdot 45$ | $77^{\circ} 42$ | 4 | 2.446 |
| 1822 | 28514 | $7 \cdot 7$ | I 5 | 32 | $23 \cdot 12$ | 72.67 | 4 | $2 \cdot 643$ |
| 1823 | 28537 | $8 \cdot 1$ | 15 | $3^{2}$ | $48 \cdot 50$ | 7774 |  | $2.44{ }^{1}$ |
| 1824 | 28498 | $5 \cdot 5$ | 15 | 32 | $53^{\circ}$ |  |  | 3.536 |
| 1825 | 28571 | $7 \cdot 6$ | 15 | 33 | 41'76 | 78.94 | 2 | 2.402 |
| 1826 | 28572 | 6.5 | 15 | 34 | 15.84 | $68 \cdot 99$ | 5 | 2.835 |
| 1827 | 28601 | 5.5 | 15 | 34 | 16.20 | 77.95 | 2 | 1.910 |
| 1828 | 28553 | $8 \cdot 0$ | 15 | 34 | 18.57 | 70.05 | 6 | 3.331 |
| 1829 | 28589 | $7 \cdot 5$ | 15 | 34 | 50.95 | 73.50 | 5 | 2.699 |
| 1830 | 28640 | 6.6 | ${ }^{1} 5$ | 35 | $47 \cdot 06$ | $74 \cdot 63$ | 5 | 2.230 |
| 1831 | 28612 | 7.5 | I5 | 36 | $8 \cdot 62$ | $80^{\circ} 35$ | 2 | 2.916 |
| 1832 | 28607 | $6 \cdot 8$ | I 5 | 36 | 22.55 | $76 \cdot 00$ | 5 | $3 \cdot 272$ |
| 1833 | 28685 | $7 \cdot 8$ | 15 | 37 | $8 \cdot 38$ | $76 \cdot 44$ | 2 | 2.241 |
| 1834 | 28699 | $7 \cdot 3$ | I 5 | 37 | 41.63 | $76 \cdot 63$ | 5 | 2.390 |
| 1835 | 28673 | 6.1 | 15 | 37 | 44.60 | 80.42 | 1 | 3.017 |
| 1836 | 28719 | $7 \cdot 3$ | 15 | $3^{8}$ | 45.22 | 77.44 | I | $2 \cdot 568$ |
| 1837 | 28716 | $6 \cdot 7$ | 15 | 39 | 12.74 | 73.22 | 5 | 2.960 |
| r838 | 28729 | $7{ }^{\circ}$ | 15 | 39 | 24.50 | 71.08 | 3 | $2 \cdot 647$ |
| 1839 | 28737 | $8 \cdot 2$ | 15 | 40 | 4.81 | 76.03 | 5 | 2.947 |
| 1840 | 28734 | 7.0 | I 5 | 40 | 7.01 | 80.3 r | 1 | $3 \cdot 184$ |
| 184 r | 28782 | 7.2 | 15 | 41 | $6 \cdot 93$ | 74.93 | 2 | $2 \cdot 13$ I |
| 1842 | 28759 | $7{ }^{\circ}$ | 15 | 4 I | 28.04 | 73.93 | 2 | 3.328 |
| r843 | 28770 | 8'1 | 15 | 4 I | 35.30 | 74.93 | 6 | 2.982 |
| 1844 | 28805 | $7 \cdot 3$ | ${ }^{1} 5$ | 42 | 8.09 | 75.67 | 4 | 2.409 |
| 1845 | 28780 | 6.5 | r 5 | 42 | 43.40 | 69.59 | 5 | $+3.420$ |


| No. | Mean N.P.D. $1875 \cdot 0$. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1801 | $98^{\circ} 30^{\prime} 40^{\prime \prime} \cdot 2$ | 72.42 | 4 | +12 $2^{\prime \prime} .83$ | W 360. $\mathrm{L}_{3}$ I955. [3224. |
| 1802 | $\begin{array}{llll}64 & 27 & 43 \cdot 6\end{array}$ | $68 \cdot 24$ | 12 | 12.74 | IV 463, T $7223, \mathrm{I}$ 50)4, Ar |
| 1803 | $\begin{array}{llll}35 & 32 & 35 \%\end{array}$ | 70.05 | 6 | 12.68 | Oe 5539 I . |
| 1804 | $\begin{array}{llll}76 & 32 & 5.3\end{array}$ | $78 \cdot 03$ | 5 | 12.67 | W 4I5, Gl 3809. |
| 1805 | IIO I7 47\% | 65.45 | I | 12.66 | Oe 14605. |
| 1806 | $\begin{array}{llll}62 & 25 & 49 & 6\end{array}$ | $76 \cdot 42$ | 4 | 12.66 | W 496. |
| 1807 | $\begin{array}{lll}65 & 45 & 7\end{array}$ | 70.01 | 5 | 12.59 | W [ $3^{812}$. |
| 1808 | 80 | $80 \cdot 85$ | 2 | I2.56 | $\mathrm{W}_{435}, \mathrm{Si}_{1}, \mathrm{~L}_{4} \mathrm{I} 58 \mathrm{I}$, G1 |
| 1809 | 88 4I ITO | 72.09 | 6 | I2.53 | W 443, $\mathrm{Si}_{1}, \mathrm{Sp}_{5503}, \mathrm{~L}_{1} 4768$, |
| 1810 | $\begin{array}{llll}52 & 46\end{array}$ | 76•17 | 4 | 12.50 | $\mathrm{W}_{555}, \mathrm{R}_{5159}$ [ [Gl 3813. |
| 1811 | $\begin{array}{llll}68 & 37 & 59\end{array}$ | $77 \cdot 18$ | 4 | 12.45 | W 572. |
| 1812 | $\begin{array}{llll} & 2 & 57 & 2\end{array}{ }^{\circ}$ | $70 \cdot 90$ | 5 | 12.44 | W 579, Y 6397. |
| 1813 | $\begin{array}{llll}17 & 37 & 26.3\end{array}$ | $65 * 90$ | 4 | 12.45 | See Notes. |
| 1814 | 95 16. $26 \cdot 3$ | 73.45 | 3 | I 2.36 | V $486, \mathrm{Si}_{\text {. }}$. |
| I8I5 | 898331367 | 71*73 | 3 | 12.32 | $W_{502}, \mathrm{~L}_{1} 4786, \mathrm{Gl}_{3} 832$. |
| 1816 | $89 \quad 30 \quad 57.6$ | 72.41 | I | I2.23 | W $526, \mathrm{~L}_{1} 4793, \mathrm{Gl}_{3836}$ |
| 1817 | 9536400 | 65.45 | 3 | 12.19 | W $538, \mathrm{Si}_{2}, \mathrm{~L}_{3} \mathrm{I} 99 \mathrm{I}$. |
| 1818 | 50 | 73.09 | 3 | 12.17 | W690, R 5136 , 2 yr 1273. |
| 1819 | $\begin{array}{llll}74 & 39 & 36 \cdot 8\end{array}$ | $77 \cdot 73$ | 3 | 12.14 | W 683. [7yri240, Y6432. |
| 1820 | 5 I | 74'17 | 4 | I2'12 | W 705. |
| 182 I | $59 \quad 35 \quad 37 * 4$ | 77.42 | 4 | 12.09 | W 717. |
| 1822 | $\begin{array}{llll}68 & 8 & 55.5\end{array}$ | $72 \cdot 67$ | 4 | 12.04 | W 733 . |
| 1823 | $59 \quad 29$ I4.1 | 77'74 | 3 | 12.01 | W75I, PM 1737. |
| 1824 | $\begin{array}{llll}113 & 24 & 36 \cdot 2\end{array}$ | 65.91 | 4 | 12.01 | See Notes. |
| 1825 | $\begin{array}{lll}58 & 2 & 23.8\end{array}$ | 78.94 | 2 | I I.95 | W 782. |
| 1826 | $\begin{array}{llll}77 & 32 & 26 \cdot 5\end{array}$ | $68 \cdot 82$ | 5 | 1 I ¢ 9 | W639, Sp 5557, Gl 3857. |
| 1827 |    <br> 2 47 21.7 | $72 \cdot 42$ | 2 | 1199 | Ar 3264, RC 3424, RCi 1503. |
| 1828 | $1033355 \%$ | 72.90 | 5 | II'90 | W 63r, T $73 \mathrm{IO}, \mathrm{Si}_{4} \mathrm{L429}, \mathrm{~L}_{5}$ |
| 1829 | $\begin{array}{lll}70 & 55 & 26 \cdot 8\end{array}$ | 73.00 | 5 | I I 87 | W 8io. [1892, |
| 1830 | $\begin{array}{lll}52 & 4 & 429\end{array}$ | $74 \cdot 63$ | 5 | I I ${ }^{\text {8 }}$ - | W 862, R $5_{5156, ~ Y ~}^{6475}$. |
| 1831 | $\begin{array}{llll}8 \text { I } & 46 & 42 \cdot 2\end{array}$ | $80 \cdot 35$ | 2 | 11778 | $\mathrm{L}_{2} 1793$. |
| 1832 | $100 \quad 31 \quad 23.8$ | $76 \cdot 00$ | 5 | I 1.76 | Y 6479, Note. |
| 1833 | $\begin{array}{llll}52 & 33 & 53\end{array}$ | $76 \cdot 44$ | 2 | 11*7 | $\mathrm{R}_{5162, \mathrm{Bn} \text {. }}$ |
| 1834 | $57 \quad 53 \quad 3 \mathrm{I} \cdot 6$ | $76 \cdot 63$ | 5 | 1 1.67 | W 909. |
| 1835 | 8745 | 69.66 | 4 | I I * 66 | See Notes. |
| 1836 | $\begin{array}{llll}65 & 8 & 38 \cdot 9\end{array}$ | 77.44 | I | II'59 | W 938. |
| 1837 | $84 \quad 9 \quad 32 \cdot 1$ | $73 \cdot 22$ | 5 | II'56 |  |
| I 838 | $\begin{array}{llll}68 & 43 & 27\end{array}$ | $68 \cdot 22$ | 5 | II'55 | W960. |
| I839 | $\begin{array}{llll}83 & 29 & 49.4\end{array}$ | $76 \cdot 03$ | 5 | II*50 | W 752, $\mathrm{L}_{2}$ 土 $818, \mathrm{Gl}_{3} 876$. |
| 1840 | 9543 50.1 | 80.31 | I | I 1.50 | W 747, $\mathrm{Si}_{2}$ |
| 184 I | $\begin{array}{lll}49 & 25 & 537\end{array}$ | 72.08 | 3 | I I 42 |  |
| 1842 | 1036445 | 71.75 | 3 | I I * 40 | W 774, $\mathrm{Si}_{4} \mathrm{I} 439$. |
| 1843 | $85 \quad 18 \quad 49.8$ | 74.93 | 6 | I I'39 | W 781, Gl 3883. |
| 1844 | $59 \quad 2 \quad 455$ | 75.67 | 4 | I I 35 | W 1027, R 5174. |
| 1845 | 1073159 | 69.59 | 5 | +II3I | Oe I 4920. |


| No. | Lalande. | Mag. | Mean | R.A. | 1875\%. | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1846 | 28829 | $6 \cdot 5$ | $15^{\text {l/ }}$ | $43^{\mathrm{m}}$ | $2^{8 .} 93$ | 78.41 | 2 | + $2^{3.607}$ |
| 1847 | 28804 | $5 \cdot 5$ | 15 | 43 | 28. |  |  | 3.597 |
| 1848 | 28873 | $6 \cdot 5$ | 15 | 43 | $46 \cdot 18$ | 73.47 | 1 | 1.920 |
| 1849 | 28863 | 73 | 15 | 44 | 16.49 | $76 \cdot 64$ | 5 | 2.577 |
| 1850 | 28847 | 6.0 | 15 |  | 39.58 | $72 \cdot 89$ | 6 | $3 \cdot 344$ |
| 1851 | 28918 | 7.5 | 15 | 45 | $44 \cdot 63$ | 77'17 | 4 | 1.962 |
| 1852 | 28878 | $5 \cdot 5$ | 15 | 46 | 6. |  |  | 3.591 |
| 1853 | 28914 | 7.8 | 15 | 46 | 11'99 | 69.42 | 2 | $2.53{ }^{6}$ |
| 1854 | 28910 | 8.0 | 15 | 46 | 15.77 | 71.41 | 5 | 2.760 |
| 1855 | 28891 | 6.5 | 15 | 46 | 297\% | 66.39 | 1 | 3.560 |
| 1856 | 28929 | 7.5 | 15 | 47 | 12.16 | 76.43 | I | $2 \cdot 755$ |
| 1857 | 28934 | 6.5 | 15 | 47 | $17^{\circ}$ |  |  | 2.713 |
| 1858 | 28955 | 7.5 | 15 | 48 | 14*59 | 67.73 | 3 | 2.961 |
| 1859 | 28975 | 8.9 | 15 | 48 | $47^{\circ}$ |  |  | 2.895 |
| 1860 | 28991 | $6 \cdot 2$ | 15 | 49 | $4 * 04$ | $78 \cdot 36$ | 2 | 2.648 |
| 1861 | 28987 | $7{ }^{\circ}$ | 15 | 49 | $26 \cdot 35$ | 74.95 | 2 | 3.107 |
| 1862 | 28980 | $6 \cdot 0$ | 15 | 49 | 31*46 | 71.20 | 5 | $3 \cdot 362$ |
| 1863 | 29021 | $8 \cdot 0$ | 15 | 50 | $35 * 39$ | $75 \% 0$ | 4 | 3.079 |
| 1864 | 29074 | 8.0 | 15 | 50 | 41.16 | 76.47 | 1 | $2 \cdot 116$ |
| 1865 |  | 3.5 | 15 |  | $17^{\circ}$ |  |  | 3.618 |
| 1866 | 29073 | 73 | 15 | 52 | 1711 | 77.24 | 5 | 2.971 |
| 1867 | 29070 | $8 \cdot 3$ | 15 | 52 | 23.57 | 72.83 | 5 | $3 \cdot 126$ |
| 1868 | 29120 | $6 \cdot 2$ | 15 | 53 | 5.64 | 67.89 | 6 | 2.116 |
| 1869 | 29100 | $8 \cdot 1$ | 15 | 53 | $7 \cdot 22$ | 79.46 | 2 | $2 \cdot 738$ |
| 1870 | 29110 | 6.5 | 15 | 54 | $2 \cdot 69$ | $80 \cdot 37$ | 3 | 3.232 |
| 1871 | 29143 | $7{ }^{\circ}$ | 15 | 54 | 2.86 | 77.25 | 5 | 2.419 |
| 1872 |  | var. | 15 | 54 | 16.36 | 66.39 | 3 | 2.509 |
| 1873 | ${ }^{291} 38$ | $6 \cdot 1$ | 15 | 54 | 38.88 | 73.41 | 2 | 2.977 |
| 1874 |  | $6{ }^{\circ}$ | 15 | 55 | $47^{\circ}$ |  |  | 3.619 |
| 1875 | 29199 | 77 | 15 | 55 | 5177 | 77.43 | 3 | 2.501 |
| 1876 | 29223 | $6 \cdot 5$ | 15 | 56 |  |  | 3 | 1.940 |
| 1877 | 29190 | 7.8 | 15 | 56 | 18.67 | 69.83 | 5 | $3 \cdot \circ 73$ |
| 1878 | 29226 | 6.7 | 15 | 56 | 28.70 | $70 \cdot 60$ | 5 | 2.125 |
| 1879 | 29242 | $6 \cdot 8$ | 15 | 57 | 21.92 | 74.04 | 5 | 2.594 |
| 1880 | 29259 | 79 | 15 | 58 | 15.94 | 75.38 | 3 | 3.088 |
| 1881 | 29268 | 6.5 | 15 | 58 | 35.93 | 73.60 | 5 | 3•136 |
| 1882 | ${ }^{29341}$ | 7.0 | 15 | 59 | 28.80 | 74.24 | 5 | $2 \cdot 777$ |
| 1883 | 29317 | $6 \cdot 8$ | 15 | 59 | $34 \cdot 88$ | 78.19 | 4 | 2.901 |
| 1884 | 29349 | $7{ }^{\circ}$ | 16 | - | 13.33 | $70 \cdot 40$ | 5 | $2 \cdot 598$ |
| 1885 |  | 6.0 | 16 | - | $30^{\circ}$ |  |  | 3.638 |
| 1886 | 29378 | $77^{\circ}$ | 16 | $\bigcirc$ | $53^{\prime} 7{ }^{2}$ | $74 * 45$ | 2 |  |
| 1887 | 29362 | $8 \cdot 1$ | 16 | I | 14.62 | 72.44 | 3 | 2.996 |
| 1888 | 29410 | $6 \cdot 5$ | 16 | 1 | 57.20 | 77.25 | 1 | 2.598 |
| 1889 | 29407 | 7.5 | 16 | 2 | 2.64 | $76 \cdot 44$ | 1 | $2 \cdot 737$ |
| 1890 | 29448 | 7.5 | 16 | 3 | $9 \cdot 84$ | $76 \cdot 28$ | 6 | +2.735 |


| No. | Mean N.P.D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| I 846 | $67^{\circ}$ I I $^{\prime} 55^{\prime \prime} 3$ | 78.41 | 2 | +11". ${ }^{\prime \prime} 8$ | W 1050. |
| 1847 | II5 22 IO. 3 | $63 \cdot 68$ | 4 | II*25 | See Notes. |
| 1848 | 43552509 | 66.41 | I | I I. 23 |  |
| 1849 | $\begin{array}{llll}65 & 56 & 47 & 3\end{array}$ | $76 \cdot 64$ | 5 | II.20 | W 1074, $\mathrm{R}_{5187}{ }^{\text {\% }}$ |
| 1850 | $\begin{array}{ll}103 & 45\end{array}$ | $73 \cdot 74$ | 6 | 11'I7 | W839, $\mathrm{Si}_{4}, \mathrm{I} 4 \mathrm{I} 7$,Sp 5608. |
| 1851 | $45 \quad 5 \quad 53.2$ | 77 ${ }^{17}$ | 4 | I I '09 | W ir $30, \mathrm{Oe} 15682$. |
| 1852 | II4 57 6.1 | $65^{\circ} 9 \mathrm{I}$ | 4 | 1 1.06 | See Notes. |
| 1853 | $\begin{array}{lll}64 & 19 & 6.6\end{array}$ | 73.42 | I | I I.05 | W 1129 P 5205. |
| I854 | $\begin{array}{lll}74 & 23 & 0.8\end{array}$ | 71.41 | 5 | II.05 | W $1126, \mathrm{Bn}$. |
| I855 | $\begin{array}{llll}13 & 3^{6} & 15\end{array}$ | $66 \cdot 39$ | I | II.O3 | See Notes. |
| I 856 | 74 II 40\%7 | $68 \cdot 41$ | 2 | 10.98 | W is 49. [Ar 3309. |
| I857 | $72 \begin{array}{lll}72 & 13 & 20 \%\end{array}$ | 65.45 | 2 | 10.97 | W $1154, \mathrm{~T}_{7388} \mathrm{R}^{2} \mathbf{2 1 2}$, |
| 1858 | $84 \quad 20 \quad 13.5$ | 69.43 | 3 | 10.90 | W 898, Si ${ }_{1}$, Sp $5630, \mathrm{~L}_{2}$ |
| I 859 | $8 \mathrm{I} \quad 2 \quad 48 \cdot 8$ | $65 \cdot 77$ | 3 | 10.86 | See Notes. [1863. |
| I860 | 69 I9 17.4 | $78 \cdot 36$ | 2 | 10.84 | W 1204, T 7404, R 5225 , Ar [3316, Gl 39 r. 6. |
| I 86 I | $\begin{array}{llll}91 & 47 & 43 *\end{array}$ | $74 * 95$ | 2 | 10.82 | See Notes. |
| 1862 | $104 \quad 27 \quad 42 \cdot 2$ | 71.20 | 5 | 10.81 | W 916, R, $\mathrm{Si}_{4} 1454, \mathrm{~L}_{5} 1925$. |
| 1863 | $\begin{array}{llll}90 & 22 & 51.8\end{array}$ | 75.86 | 5 | 10.73 | W 940, Si $\mathrm{i}_{5} 763, \mathrm{Sp} 5643$, |
| I 864 | $49 \quad 5 \mathrm{I} \quad 28$ | $76 \cdot 47$ | I | 10.72 | W I254. [ $\mathrm{L}_{14920}$, Gl3924 |
| I865 | $\begin{array}{lllll}\text { II } & 45 & 8.7\end{array}$ | 64.40 | 5 | 10.68 | See Nctes. |
| I 866 | $84 \quad 53 \quad 7{ }^{\circ} \mathrm{O}$ | 77.24 | 5 | 10.61 | $\text { W973, Sp } 5649, \mathrm{Gl} 393 \mathrm{I} .$ |
| 1867 | $9^{2} \quad 42 \begin{array}{lll} & 57\end{array}$ | $72 \cdot 83$ | 5 | 10.60 | See Notes. |
| I 868 | $\begin{array}{llll}49 & 56 & 46 \cdot 9\end{array}$ | 68.79 | 5 | 10.55 | W $\mathbf{I}^{\text {I } 6, ~} \mathrm{RC}_{3476, \mathrm{Gl}}^{3934}$ |
| I 869 | $\begin{array}{llll}73 & 25 & 418\end{array}$ | 79.46 | 2 | 10.54 | W i 304, N 7 yr 1800. |
| 1870 | $\begin{array}{llll}98 & 3 & 23.2\end{array}$ | $80 \cdot 37$ | 3 | 10.48 | See Notes. |
| 187 I | $\begin{array}{llll}60 & 12 & 34.4\end{array}$ | 77.25 | 5 | 10.48 | W 1340. |
| 1872 | $\begin{array}{llll}63 & 43 & 28 \cdot 6\end{array}$ | $66 \cdot 39$ | 3 | 10.45 | See Notes. |
| 1873 | $85 \quad 13$ 16.9 | $72 \cdot 77$ | 3 | 10.43 | See Notes. |
| 1874 | $115 \quad 30 \quad 52.3$ | 61.90 | 2 | 10.34 | See Notes. |
| 1875 | $\begin{array}{llll}63 & 28 & 36 \cdot 9\end{array}$ | $77 \cdot 43$ | 3 | 10.34 | W 1389 , $\mathrm{N}_{7} 7 \mathrm{yr}$ I 809. |
| 1876 | $\begin{array}{llll}45 & 21 & 56 \cdot 3\end{array}$ | 74.47 | 3 | 10.32 | W i406. [Gl 3946. |
| 1877 | $90 \quad 3 \quad 49.6$ | 69.10 | 6 | $10 \cdot 31$ | $\mathrm{W}_{\mathrm{TO}} 43, \operatorname{Sp}_{5} 673, \mathrm{~L}_{1} 4954,$ |
| 1878 | $\begin{array}{lll}50 & 28 & \text { I6.5 }\end{array}$ | $70 \cdot 60$ | 5 | $10 \cdot 29$ | W 1408 , RC 3482. |
| 1879 | $\begin{array}{llll}67 & 24 & 47^{\circ} 2\end{array}$ | 74.04 | 5 | 10.22 |  |
| 1880 | $\begin{array}{llll}90 & 48 & 57\end{array}$ | 80.34 | 2 | 1016 | $\mathrm{L}_{1}$ 4967. See Notes. |
| 188 I | 93 11 $6 \cdot 3$ | 73.70 | 4 | 10'I3 | Wro90, $\mathrm{L}_{3} 2 \mathrm{IO}_{3}, \mathrm{Gl}_{3958}$. |
| 1882 | $\begin{array}{lll}55 & 28 & 43 \cdot 3\end{array}$ | 74.24 | 5 | 10.07 | W $1496 . \quad$ [3963. |
| 1883 | $8 \mathrm{8} \quad 3345^{\circ} \mathrm{O}$ | $78 \cdot 19$ | 4 | 10.06 | W I I I 4, Sí, $\mathrm{L}_{2}$ I 934, Gl |
| I 884 | $67 \quad 4548 \cdot 3$ | 70.40 | 5 | 10.01 | W I5II. |
| 1885 | $\begin{array}{llll}15 & 59 & 20.3\end{array}$ | $6 \mathrm{I} \cdot 09$ | 3 | 9.99 | See Notes. |
| 1886 | $\begin{array}{lll}57 & 24 & 43\end{array}$ | 77.45 | 2 | 9.96 | $\text { W } 1546 . \quad[3968 .$ |
| 1887 | $\begin{array}{lll}86 & 15 & 15.0\end{array}$ | 72.44 | 3 | 9.93 | $\mathrm{W}_{\mathrm{W}} \mathrm{I} \mathrm{I} 49, \mathrm{Si}_{1}, \mathrm{~L}_{2} 1943 \text {, } \mathrm{Gl}$ |
| 1888 | $67 \quad 50$ | 77.45 | I | $9 \cdot 88$ | W 1569. |
| 1889 | $\begin{array}{lll}73 & 57 & 14.8\end{array}$ | 76.44 | 1 | 9.87 |  |
| 1890 | $\begin{array}{llll}73 & 52 & 18.5\end{array}$ | $76 \cdot 28$ | 6 | +9.79 |  |


| No. | Lalande. | Mag. | Mean R.A. 1875.0. |  |  | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1891 | 29440 | 5.5 | $16^{\text {h }}$ | $3^{\text {m }}$ | $18^{8.07}$ | 71.41 | 5 | $+3^{8 \cdot 1} 3^{6}$ |
| 1892 | 2944 I | $7 \cdot 0$ | 16 | 3 | 19.80 | 68.42 | 5 | 3.049 |
| 1893 | 29457 | $7{ }^{\circ}$ | 16 | 3 | $52 \cdot 60$ | $78 \cdot 82$ | 5 | 3.033 |
| 1894 | 29496 | $7 \cdot 5$ | 16 | 4 | $9 \cdot 56$ | $75^{\circ} \mathrm{T} 3$ | 3 | 2.226 |
| 1895 | 29474 | $8 \cdot 0$ | 16 | 4 | 20.60 | $70 \cdot 44$ | 3 | $3 \cdot 012$ |
| 1896 | 29533 | 8.1 | 16 | 5 | $46 \cdot 90$ | 74.78 | 3 | 2.481 |
| 1897 | 29543 | $7 \cdot 3$ | 16 | 5 | $58 \cdot 97$ | $76 \cdot 78$ | 3 | 2.468 |
| 1898 | 29511 | $7 \cdot 5$ | 16 | 6 | 7.45 | $60 \cdot 38$ | 1 | $3 \cdot 383$ |
| 1899 | 29515 | $7{ }^{\circ}$ | 16 | 6 | $20^{\circ}$ |  |  | $3 \cdot 525$ |
| 1900 | 29545 | $7 \cdot 5$ | 16 | 6 | $46 \cdot 58$ | 71.2I | 5 | 3.074 |
| 1901 | 29582 | $6 \cdot 8$ | 16 | 7 | 19.56 | $77 \cdot 76$ | 3 | $2 \cdot 657$ |
| 1902 | 29646 | $7 \cdot 5$ | 16 | 8 | 27.90 | 73.45 | , | 2.041 |
| 1903 | 29678 | $7 \cdot 3$ | I6 | 9 | 34.90 | $78 \cdot 44$ | 1 | $2 \cdot 054$ |
| 1904 | 29649 | $7 \cdot 2$ | 16 | 9 | 52.56 | 67.81 | 5 | 3.099 |
| 1905 | 29656 | $7{ }^{\circ}$ | I6 | 10 | 10.44 | $75 \cdot 65$ | 5 | $3 \cdot 180$ |
| 1906 | 29664 | $7 \cdot 5$ | 16 | 10 | 20.82 | 73.47 | 1 | $3 \cdot 148$ |
| 1907 | 29672 | $8 \cdot 0$ | I6 | 10 | 21.42 | 78.19 | 4 | $2 \cdot 899$ |
| 1908 | 29693 | $7{ }^{\circ}$ | 16 | 10 | 56.96 | $77 \cdot 45$ | I | $2 \cdot 557$ |
| 1909 | 29680 | $8 \cdot 0$ | 16 | II | 11.08 | 74.44 | 2 | $3 \cdot 149$ |
| 1910 | 29689 | $7{ }^{\circ}$ | 16 | I I | $56 \cdot 97$ | 74.00 | 5 | $3 \cdot 382$ |
| I9II | 29706 | $7^{\circ}$ | 16 | 12 | 27.77 | 70.04 | 5 | 3.210 |
| 1912 | 29752 | $7 \cdot 2$ | 16 | 12 | 53.73 | 77.98 | 2 | $2 \cdot 324$ |
| 1913 | 29764 | $7 \cdot 8$ | 16 | 13 | $25^{\prime} 99$ | $76 \cdot 69$ | 4 | $2 \cdot 242$ |
| 1914 | 29777 | 6.5 | 16 | 14 | 38.90 | 72.41 | 4 | 2.602 |
| 1915 | 29776 | 77 | 16 | 15 | II'Io | 65.46 | 1 | $3 \cdot 064$ |
| 1916 | 29812 | 7'0 | 16 | 15 | $4^{8 \cdot 93}$ | 79*19 | 4 | 2.574 |
| 1917 | 29820 | 7.7 | 16 | 15 | $55^{\circ} \mathrm{I}$ I | $76 \cdot 64$ | 5 | $2 \cdot 555$ |
| 1918 | 29800 | $6 \cdot 7$ | 16 | 16 | 970 | $7 \mathrm{I} \cdot 04$ | 5 | $3 \cdot 110$ |
| 1919 | 29837 | 7.5 | 16 | 16 | 28.94 | $76 \cdot 01$ | 3 | $2 \cdot 583$ |
| 1920 | 29881 | $5 \cdot 3$ | 16 | 17 | $46 \cdot 68$ | $70 \cdot 87$ | 2 | $2 \cdot 258$ |
| 1921 | 29880 | $7{ }^{\circ} 2$ | 16 | 18 | $27 \cdot 87$ | $75 \cdot 65$ | 5 | $2 \cdot 847$ |
| 1922 | 29897 | $8 \cdot 2$ | 16 | 18 | $32 \cdot 54$ | 71.47 | 1 | 2.258 |
| 1923 | 29889 | $7 \cdot 5$ | 16 | 19 | $9 \cdot 43$ | $80 \cdot 31$ | 1 | 3•19 |
| 1924 | 29910 | $7 \cdot 7$ | 16 | 19 | 24.41 | $79^{\circ} 70$ | 4 | 2.567 |
| 1925 | 29915 | $7 \cdot 2$ | 16 | 20 | 4.33 | $72 \cdot 84$ | 5 | 3.013 |
| 1926 | 29924 | $7 \cdot 7$ | 16 | 20 | 12.33 | 76.06 | 5 | 2.884 |
| 1927 | 29930 | $7{ }^{\circ}$ | 16 | 20 | 32.50 | 75.49 | 4 | 3.016 |
| 1928 | 29934 | $7 \cdot 5$ | 16 | 21 | 7'94 | $60 \cdot 38$ | I | 3.419 |
| 1929 | 29962 | $7 \cdot 7$ | 16 | 21 | $9 \cdot 74$ | 77.45 | I | 2713 |
| 1930 | 2995 I | $7^{\circ}$ | 16 | 21 | $28 \cdot 27$ | 73.88 | 2 | $3 \cdot 355$ |
| 1931 | 29993 | $7 \cdot 3$ | 16 | 22 | 23.64 | $75^{\circ} 45$ | 3 | $2 \cdot 732$ |
| 1932 | 30001 | $7 \cdot 5$ | 16 | 22 | $42 \cdot 48$ | 80.42 | 1 | 2.729 |
| 1933 | 30041 | $6 \cdot 8$ | 16 | 23 | 33.51 | 74.96 | 4 | $2 \cdot 386$ |
| 1934 | 30038 | $8 \cdot 0$ | 16 | 23 | 39.67 | $78 \cdot 95$ |  | 2.550 |
| 1935 | 30044 | $7 \cdot 6$ | 16 | 24 | 19.73 | 75.46 | 3 | +2.975 |




| No. | Mean N P.D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1936 | $54^{\circ} 31^{\prime} 28^{\prime \prime} \cdot 3$ | $78 \cdot 46$ | 2 | +8".06 | W 730. |
| 1937 | $81 \quad 26 \quad 15.6$ | $75 \cdot 27$ | 5 | $8 \cdot 04$ | PM I83 $\mathrm{I}_{1} \mathrm{~L}_{3} 2090$. |
| 1938 | $\begin{array}{lll}67 & 32 & 57\end{array}$ | 73.88 | 5 | $8 \cdot 1$ | $\mathrm{R}_{5435} \mathrm{~T}_{8}$. |
| 1939 | 1023151.2 | 68.10 | 6 | 798 |  |
| 1940 | $\begin{array}{llll}54 & 30 & 16.8\end{array}$ | 72'16 | 7 | $7 \cdot 96$ | W $7^{81}$. |
| 1941 | $\begin{array}{lll}66 & 34 & 24.8\end{array}$ | 76.19 | 4 | 7.88 | W 803. [655, Gl 4080. |
| 1942 | $\begin{array}{llll}79 & \mathbf{2 1} & 55.9\end{array}$ | 74.05 | 5 | $7 \cdot 87$ | W 5ro, ' ${ }_{9}$, S'p 5854, L4 |
| 1943 | $44 \quad 8 \quad 909$ | $75 \cdot 47$ | 4 | $7 \cdot 83$ | PM 1838 , Oe r6289. |
| 1944 | $\begin{array}{lll}49 & 37 & 16 \cdot 7\end{array}$ | $78 \cdot 47$ | I | 781 | W 842, RC 3573. |
| 1945 | $64 \begin{array}{lll}64 & 37\end{array}$ | $76 \cdot 44$ | 2 | 776 | WV 853. |
| 1946 | $\begin{array}{lll}103 & 27 & 46 \cdot 2\end{array}$ | 70.23 | 6 | 770 | W 535. |
| 1947 | $9^{6}$ 17 4 | $67 \cdot 73$ | 7 | 757 | W 570, $\mathrm{Si}_{4}, \mathrm{~L}_{3} 2233$. |
| 1948 | $\begin{array}{lll}84 & 28 & 5 \cdot 5\end{array}$ | $78 \cdot 20$ | 4 | 7.56 | IV 577, Si ${ }_{1}, \mathrm{Sp} 5876, \mathrm{~L}$ |
| 1949 | $\begin{array}{lll}58 & 47 & 13.6\end{array}$ | $76 \cdot 06$ | 5 | $7 \cdot 55$ | W947. [2 127, Gl 4 Ioo. |
| 1950 | $\begin{array}{lll}55 & 55 & 22.6\end{array}$ | 77.44 | 3 | 753 | V9959. [2238. |
| 1951 | $\begin{array}{llll}98 & 22 & 2.6\end{array}$ | $70 \cdot 42$ | 5 | 7'51 | W $587, \mathrm{Si}_{2}, \mathrm{Sp} 5883, \mathrm{~L}_{3}$ |
| 1952 | $\begin{array}{llll}70 & 11 & 29.4\end{array}$ | $7 \mathrm{I} \cdot 62$ | 5 | $7 \cdot 49$ | W 973, R 5476. |
| 1953 | $62 \quad 42$ 14.7 | 72.49 | 1 | $7 \cdot 4$ | W 99r, T 7717. |
| 1954 | $9918 \quad 3 \cdot 1$ | $74 \cdot 65$ | 5 | 744 | W 604, $\mathrm{Si}_{2}, \mathrm{~L}_{8} 2010$. |
| 1955 | $72 \quad 2 \quad 49 \%$ | 77.45 | 2 | 730 | W 1052. |
| 1956 | 904502.5 | 68.63 | 5 | 7.29 | $\mathrm{L}_{1} 5257$. |
| 1957 | $93 \quad 5882 \mathrm{I} \cdot 4$ | $74 \cdot 67$ | 5 | $7 \cdot 28$ | $\text { W } 649, \operatorname{sp} 5905, L_{3} 2246 .$ |
| 1958 | $\begin{array}{llll}100 & 55 & 579\end{array}$ | 69.95 | 2 | $7 \cdot 21$ | W $668, \mathrm{Si}_{3} 1858$. |
| 1959 | $\begin{array}{rrrr}64 & 53 & 55 \cdot 1\end{array}$ | 69.45 | I | 7.21 | W rogi, $\mathrm{T}_{2}, \mathrm{Y}$ 689g. |
| 1960 | $\begin{array}{lllll}18 & 16 & 27 \%\end{array}$ | 65.93 | 4 | 7.09 | T 7745, Ar 345 I, Oe 15905, Y「6908, 9 yr 1522, St go81 |
| 1961 | $\begin{array}{lll}108 & 54 & 14.8\end{array}$ | $72 \cdot 78$ | 3 | $7 \times 1$ | Oe 15918. |
| 1962 | $87 \quad 25 \quad 55.6$ | $69 \cdot 67$ | 6 | 6.99 | W 7i8, PM 1860, Sp |
| 1963 | $90 \quad 45 \quad 45 \cdot 1$ | 77.21 | 4 | $6 \cdot 96$ | $\mathrm{L}_{1} 5299 .[5936, \mathrm{G} 14128$ |
| 1964 | $\begin{array}{llll}66 & 14 & 58 \cdot 1\end{array}$ | $7 \mathrm{I} \cdot 68$ | 5 | $6 \cdot 95$ | W 1201 , PM 1865. |
| 1965 | $884454{ }^{\circ}$ | 6I.95 | 4 | 6.93 | See Notes. |
| 1966 | 74 I 21.0 | $78 \cdot 21$ | 4 | 6.89 | W 1217. |
| 1967 | $85 \quad 43 \quad 40 \cdot 6$ | 74.06 | 5 | 6.88 | W 745, Si $, ~ L 1,2193, \mathrm{Gl}$ |
| 1968 | $8742 \begin{array}{ll} \\ 8 & 28 \cdot 2\end{array}$ | 70.06 | 5 | $6 \cdot 79$ | See Notes. [4134. |
| 1969 | $873644 \%$ | 63.70 | 4 | $6 \cdot 77$ | Ar $3463, L_{1} 5320$. |
| 1970 | $\begin{array}{llll}78 & 38 & 44\end{array}$ | $77^{\circ 1} 1$ | 4 | $6 \cdot 67$ | $\begin{aligned} & \text { W } 79 \mathrm{I}, \mathrm{R} 555 \mathrm{I}, \mathrm{~T}_{\mathrm{s}}, 7 \mathrm{yr} \\ & {\left[\mathrm{I} 6 \mathrm{I}, \mathrm{Sp}_{5967}, \mathrm{Gl}_{4} \mathrm{I}\right. \text {. }} \end{aligned}$ |
| 1971 | $\begin{array}{llll}94 & 17 & 26.0\end{array}$ | 73.95 | 4 | 6.67 | Sp 5966, $\mathrm{L}_{3} 2275$. |
| 1972 | $\begin{array}{llll}69 & 34 & 178\end{array}$ | $76 \cdot 96$ | 2 | 6.66 | WII $302.11404 . \mathrm{Gl} 4 \mathrm{If2}$ |
| 1973 | 76 I1 977 | 71.68 | 5 | 6.65 | W794, R 5552, 12 yr |
| 1974 | $\begin{array}{llll}100 & 33 & 34.8\end{array}$ | 62.58 | 7 | ¢リ2 | See 1 otes. |
| 1975 | $\begin{array}{llll}52 & 12 & 59\end{array}$ | 7745 | 2 | 6.59 | W 1341 , X 6954. |
| 1976 | $\begin{array}{llll}92 & 26 & 7.2\end{array}$ | $72 \cdot 84$ | 5 | 6.54 | $\mathrm{R}_{\text {W }} 5554, \mathrm{~L}_{1} 5349$. |
| 1977 | $\begin{array}{llll}74 & 24 & 16 \cdot 0\end{array}$ | $70 \cdot 80$ | 5 | 6.50 | W 135 I . |
| 1978 | 802237.6 | 78.47 | 1 | $5 \cdot 43$ | PM $1878, \mathrm{R} 5564$. |
| 1979 | $\begin{array}{lll}73 & 59 & 28.8\end{array}$ | 76.07 | 5 | 6.40 | W ı387, R 5566. [5366. |
| 1980 | $923510 \cdot 1$ | $68 \cdot 86$ | 5 | - +6.40 | W 855, $\mathrm{Si}_{2}, \mathrm{Si}_{8} 85 \mathrm{I}, \mathrm{Sp} 5,96, \mathrm{~L}_{1}$ |


| No. | Lalande. | Mag. | Mean | R.A. $1875 \cdot 0$. | Epoch. | Obs. | Ann. Pree. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1981 | 30671 | $8 \cdot 0$ | $16^{\text {b }}$ | $45^{m} 52^{\mathrm{m}} 5^{2}$ | 73.27 | 5 | +3'182 |
| 1982 | 30666 | $6 \cdot 5$ | 16 | $46 \quad 2$. |  |  | 3.539 |
| 1983 | 30696 | $7{ }^{\circ}$ | 16 | $46 \quad 28.04$ | 77.44 | I | $2 \cdot 815$ |
| 1984 | 30694 | $7^{\circ} \mathrm{O}$ | 16 | $46 \quad 4{ }^{\circ} \cdot 01$ | 71*68 | 5 | $3 \cdot 066$ |
| 1985 | 30734 | $6 \cdot 8$ | 16 | $46 \quad 53.43$ | 75.22 | 4 | $2 \cdot 372$ |
| 1986 | 30728 | $6 \cdot 5$ | 16 | $47 \quad 42 \cdot 16$ | 75*95 | 2 | 3'103 |
| 1987 | 30769 | $8 \cdot 0$ | 16 | $48 \quad 24^{\circ} \mathrm{OI}$ | $74 * 67$ | 5 | 2.574 |
| 1988 | 30750 | $6 \cdot 5$ | 16 | $484^{8}$ |  |  | 3.45 I |
| 1989 | 30756 | $6 \cdot 5$ | 16 | 49 I5. |  |  | $3 \cdot 612$ |
| 1990 | 30800 | $6 \cdot 0$ | 16 | 49 3I91 | 68.46 | 5 | $2 \cdot 579$ |
| I 991 | 30834 | 713 | 16 | $49 \quad 47 \cdot 2 \mathrm{I}$ | 77.45 | I | I $\cdot 841$ |
| 1992 | 30812 | 8.2 | 16 | $49 \quad 5 \mathrm{I} \circ 5$ | 74.67 | 5 | 2.493 |
| 1993 | 30816 | $7^{\circ}$ | 16 | $5 \mathrm{I}+66$ | 65.49 | 1 | $3 \cdot 395$ |
| 1994 | 30864 | $6 \cdot 5$ | 16 | $5 \mathrm{I} \quad 48.64$ | 71'45 | 4 | 2.752 |
| 1995 | 30854 | 7.0 | 16 | $5^{2} \quad 27^{\circ}$ |  |  | 3.489 |
| 1996 | 30894 | 6.8 | 16 | 52 58.68 | 78.45 | 2 | $2 \cdot 713$ |
| 1997 | 30909 | 8.6 | 16 | $534^{\circ}$ |  |  | 2.460 |
| 1998 | 30962 | 6.8 | 16 | $53 \quad 25.23$ | $73 \cdot 25$ | 4 | $1 \cdot 360$ |
| 1999 | 30911 | $6 \cdot 8$ | 16 | $53 \quad 28.46$ | 77.47 | 3 | 2.746 |
| 2000 | 30923 | 77 | 16 | $54 \quad 433$ | 70.47 | 5 | $2 \cdot 846$ |
| 2001 | 30930 | $7^{\circ}$ | 16 | $54 \quad 23 \cdot 71$ | 71.20 | 4 | 2.919 |
| 2002 | 30951 | 77 | 16 | $54 \quad 28 \cdot 67$ | $78 \cdot 48$ | 2 | 2.490 |
| 2003 | 30948 | $7 \cdot 5$ | 16 | $55 \quad 27.95$ | 71*14 | 3 | 3316 |
| 2004 | 30986 | 8.0 | 16 | 55 38'ı 2 | 77.45 | 2 | 2.428 |
| 2005 | 30990 | $5 \cdot 8$ | 16 | $55 \quad 41 \times 46$ | 74.73 | 4 | 2.532 |
| 2006 | 31008 | $7 \cdot 2$ | 16 | 56 36.90 | $70 \cdot 65$ | 6 | $2 \cdot 845$ |
| 2007 | 31038 | $7{ }^{7}$ | 16 | 57 I 5.63 | $76 \cdot 97$ | 2 | 2.581 |
| 2008 | 31022 | 6.8 | 16 | $57 \quad 17 \cdot 23$ | 71.22 | 4 | 3.072 |
| 2009 | 31087 | $7 \cdot 5$ | 16 | $58 \quad 32 \cdot 37$ | $70 \cdot 65$ | 5 | 2.179 |
| 2010 | 31099 | $7{ }^{\circ}$ | 16 | $58 \quad 52 \cdot 76$ | 75'10 | 5 | 2.184 |
| 2011 | 31079 | 77 | 16 | 59 21.43 | 74.95 | 2 | 2.983 |
| 2012 | 31118 | 6.2 | 16 | $59 \quad 22.58$ | 74.82 | 3 | 2.170 |
| 2013 | 31068 | $7{ }^{\circ}$ | 16 | $59 \quad 25.54$ | 74.44 | I | 3388 |
| 2014 | 31109 | $6 \cdot 3$ | 17 | - 2424 | $74 \cdot 15$ | 3 | 3.106 |
| 2015 | 31114 | $6 \cdot 5$ | 17 | - $59{ }^{\circ}$ |  |  | 3.477 |
| 2016 | 31158 | 6.0 | 17 | I 0.64 | 77.45 | I | 2.543 |
| 2017 | 31143 | $7 \bigcirc$ | 17 | 148.09 | $71 \cdot+7$ | 2 | $3 \cdot 461$ |
| 2018 | 31173 | $7{ }^{\circ}$ | 17 | $2 \quad 10.44$ | 68.96 | 6 | $2 \cdot 968$ |
| 2019 | 31171 | 6.5 | 17 | $2 \quad 20.05$ | 67.68 | 5 | $3 \cdot 156$ |
| 2020 | 31213 | 8.0 | 17 | $231 \times 60$ | $73 \cdot 28$ | 5 | $2 \cdot 375$ |
| 2021 | 31188 | $6 \cdot 0$ | 17 | $2 \quad 53.47$ | 80.47 | I | 3.309 |
| 2022 | 31229 | 73 | 17 | 3 21.53 | $76 \cdot 87$ | 5 | $2 \cdot 722$ |
| 2023 | 31210 | $7{ }^{\circ}$ | 17 | 3 43.16 | 73.09 | 3 | $3 \cdot 360$ |
| 2024 | 31231 | $7^{\circ}$ | 17 | 353.07 | 65.96 | 2 | $3 \cdot 057$ |
| 2025 | 31270 | 7.0 | 17 | $4 \quad 57 \cdot 64$ | 74.30 | 5 | +2.781 |


| No. | Mean N.P.D. 1875.0. | Epoclı. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1981 | $94^{\circ} 56^{\prime \prime}$ 18 $8^{\prime \prime}$ - | 73.27 | 5 | +6"37 | See Notes. [Y6978 |
| 1982 | $\begin{array}{llll}10 & 12 & 15 \%\end{array}$ | $60 \cdot 77$ | 6 | 6.26 | T78r6, Ar3472, Оer6065, |
| 1983 | $\begin{array}{llll}78 & 32 & 44.5\end{array}$ | 77.44 | I | 6.32 | W 872, Bn, Sp 6002, G] |
| 1984 | $89 \quad 45 \quad 5 \mathrm{I} \cdot 1$ | 71.68 | 5 | 6.30 | See Notes. [4160. |
| 1985 | 61725.2 | $75 \cdot 22$ | 4 | 6.29 | $\begin{aligned} & \text { PM i880. } \\ & {\left[6012, L_{1} 5378 .\right.} \end{aligned}$ |
| 1986 | $\begin{array}{lll}91 & 24 & 12.2\end{array}$ | 75.95 | 2 | 6.22 | W 89r, $\mathrm{Si}^{2}, \mathrm{Si}_{5} 854, \mathrm{Sp}$ |
| 1987 | $\begin{array}{llll}68 & 37 & 18 \cdot 1\end{array}$ | 74.67 | 5 | 6.16 |  |
| 1988 | $\begin{array}{llll}106 & 36 & 174\end{array}$ | 60.46 | 4 | 6.13 | See Notes. |
| 1989 | $\begin{array}{lll}112 & 57 & 1.8\end{array}$ | 62.4 I | 2 | 6.09 | T7846, Ar 3483 , De $16125, \mathrm{~N}$ |
| 1990 | $68 \quad 50 \quad 20.6$ | 6944 | 5 | $6 \cdot 07$ | WI5i3. [7yrigio, Y 7012. |
| 1991 | 46 - $33 \cdot 5$ | 77.45 | 1 | 6.05 | W 1537. |
| 1992 | $65 \quad 34 \quad 7 \cdot 6$ | 74.67 | 5 | $6 \cdot 04$ | W 1521. |
| 1993 | 1041036.1 | 65.46 | 1 | 5.94 | W 939, Si ${ }_{1} 517, \mathrm{~L}_{5} 2034$. |
| 1994 | $75 \quad 55 \quad 215$ | 71.45 | 4 | $5 \cdot 88$ | W964, Sp $6038, \mathrm{Gl}_{4178}$. |
| 1995 | 10835 | 62.94 | 2 | 5.83 | $\left\|\begin{array}{rrr} \text { T 7868, } & \mathrm{Ar} 3492, & 0 \\ {[16187,} & \mathrm{L}_{0} \end{array}\right\|$ |
| 1996 | $\begin{array}{llll}74 & 21 & 28.9\end{array}$ | 78.45 | 2 | $5 \cdot 78$ | W $1606, \mathrm{~T}$. |
| 1997 | $\begin{array}{llll}64 & 27 & 57 \cdot 8\end{array}$ | 58.95 | 2 | 577 | WV 1613, Ar 3496. |
| 1998 | $\begin{array}{llll}37 & 6 & 22.8\end{array}$ | 73.25 | 4 | 5.74 |  |
| 1999 | $\begin{array}{llll}75 & 43 & 40\end{array}$ | $77 \cdot 47$ | 3 | 5.74 | W992, $\mathrm{R}_{56 \mathrm{I}} 8$, Gl4 48 I . |
| 2000 | 80 - 45.5 | 69.63 | 6 | $5 \cdot 68$ | W iooz, L، 706 , $\mathrm{Cl}_{1} 1183$. |
| 2001 | $83 \mathrm{I} 3 \quad 37 \cdot 1$ | $7 \mathrm{I}^{\circ} 20$ | 4 | $5 \cdot 67$ | See Notes. |
| 2002 | $\begin{array}{llll}65 & 36 & 15 \%\end{array}$ | $78 \cdot 48$ | 2 | $5 \cdot 66$ | W 1650. |
| 2003 | 10046 1000 | 73.97 | 2 | 5.57 | $\mathrm{W}_{\mathrm{W}} \mathrm{O} 27, \mathrm{Si}_{3} \mathrm{I} 889, \mathrm{~L}_{5} 2045$. |
| 2004 | $\begin{array}{llll}63 & 19 & 45 \%\end{array}$ | 77.45 | 2 | $5 \cdot 56$ | W 1690. |
| 2005 | 67 10 56.4 | 74.73 | 4 | $5 \cdot 55$ | W 1688, R 5639. |
| 2006 | $\begin{array}{llllllllllllll}79 & 59 & 49\end{array}$ | $70 \cdot 65$ | 6 | 538 | Sp 6069, L، 714. |
| 2007 | $\begin{array}{llll}69 & 5 & 390\end{array}$ | $76 \cdot 97$ | 2 | 5.42 |  |
| 2008 | $89 \quad 5808$ | 71.22 | 4 | $5 \cdot 42$ | Wio62, $\mathrm{L}_{15454, \mathrm{Cl}_{4} \mathrm{I} 95 .}$ |
| 2009 | $\begin{array}{llll}55 & 16 & 53 \cdot 8\end{array}$ | $70 \cdot 65$ | 5 | 531 | W 178 r . |
| 2010 | $\begin{array}{llll}55 & 26 & 23.3\end{array}$ | 75'10 | 5 | 5.28 | W 1789. |
| 2011 | $86334 \cdot 1$ | 71.78 | 3 | $5 \cdot 25$ | $\mathrm{W}_{110}{ }^{\text {, }}$, $\mathrm{R}_{5665} \mathrm{~L}_{1} 234 \mathrm{I}$ |
| 2012 | $\begin{array}{llll}55 & 2 & 4.2\end{array}$ | 74.82 | 3 | $5 \cdot 24$ | W i806. [G] 4206. |
| 2013 | IO3 45449 | 74.44 | 1 | 5.24 | Soe Notes. [878,L, 5484. |
| 2014 | $\begin{array}{llll}91 & 29 & 9.3\end{array}$ | 74.15 | 3 | 5116 | $\mathrm{W}_{1125}, \mathrm{PM}_{1898} 8, \mathrm{Si}_{2}, \mathrm{Si}_{5}$ |
| 2015 | $\begin{array}{llll}107 & 26 & 26.8\end{array}$ | $60 \cdot 18$ | 7 | 511 | $\begin{aligned} \text { T } 793 \mathrm{I}, & \text { Ar } 3519, \quad \mathrm{Y} \\ \mathrm{w} & {[7098 .} \end{aligned}$ |
| 2016 | $6744 \quad 4 \times 7$ | 77.45 | 1 | 510 | W 1844, R $5^{688}$ r. |
| 2017 | 10644162 | $76 \cdot 47$ | I | 5.04 | Oe 16376. [2366, G1 4220. |
| 2018 | $85 \begin{array}{lll}85 & 12.8\end{array}$ | 69.66 | 5 | 501 | W $1160, \mathrm{Si}_{1}, \mathrm{R} 5690, \mathrm{~L}_{z}$ |
| 2019 | $93 \quad 4247 \%$ | 67.68 | 5 | 4.99 | W in6r, $\mathrm{Si}_{2}, \mathrm{~L}_{3} 2333$. |
| 2020 | $61 \quad 42 \quad 503$ | 73.28 | 5 | 4.98 | W 20. |
| 2021 | $\begin{array}{llll}100 & 21 & 29.9\end{array}$ | 80.47 | 1 | 4.95 | See Notes. |
| 2022 | $\begin{array}{llll}74 & 52 & 33.7\end{array}$ | $76 \cdot 87$ | 5 | 4.91 | W 35. |
| 2023 | $\begin{array}{llll}102 & 32 \quad 277\end{array}$ | 73.09 | 3 | $4 \cdot 88$ |  |
| 2024 | 89 21 $37^{\circ}$ | $65 \cdot 46$ | 1 | 4.86 | $\mathrm{W} 26, \mathrm{~L}_{1} 551 \mathrm{O}, \mathrm{Gl} 4228$. |
| 2025 | $\begin{array}{llll}77 & 22 & 32\end{array}$ | 74.30 | 5 | $+4.77$ | W 49, Gl 4232. |


| No. | Lalande. | Mag. | Mean | R.A. | $1875 \cdot 0$ | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2026 | 31292 | $7 \cdot 2$ | $17{ }^{\text {h }}$ |  | $0 \cdot 07$ | $73 \cdot 66$ | 5 | +2.212 |
| 2027 | 31301 | 77 | r 7 | 5 | $20 \cdot 38$ | $76 \cdot 50$ | 2 | $2 \cdot 041$ |
| 2028 | 31313 | $5^{\circ} 2$ | 17 |  | $30^{\prime} 15$ | $70 \cdot 46$ | 5 | 1.946 |
| 2029 | 31316 | $7{ }^{\circ}$ | 17 |  | $6 \cdot 55$ | 77*13 | 3 | $2 \cdot 249$ |
| 2030 | 3r349 | $7 \cdot 8$ | 17 | 8 | 0.49 | 70.47 | 5 | 2.460 |
| 2031 | 31357 | 6.5 | 17 | 8 | 19.51 | $75^{\prime} 47$ | 2 | 2.557 |
| 2032 | 31406 | 77 | I 7 | 10 | 2.94 | 73.70 | 5 | 2.649 |
| 2033 | 31392 | var. | 17 | 10 | I 1.18 | 70.81 | 3 | 3.039 |
| 2034 | 31428 | 75 | 17 | 1 I | 0.58 | $76 \cdot 68$ | 5 | 2.644 |
| 2035 | 31455 | $7{ }^{\circ}$ | 17 | I I | 731 | $70 \cdot 08$ | 5 | $2 \cdot 162$ |
| 2036 | 31434 | $7{ }^{\circ} 2$ | 17 | II | $24^{\prime} 5 \mathrm{I}$ | 72.70 | 5 | $2 \cdot 764$ |
| 2037 | 31483 | $6 \cdot 5$ | 17 | 12 | 21.79 | $77 \cdot 47$ | 1 | 2.511 |
| 2038 | 31482 | $6 \cdot 0$ | 17 | 12 | 32.05 | 74.30 | 5 | 2.661 |
| 2039 | 31523 | $7 \cdot 2$ | 17 | 13 | 25.47 | $75 \cdot 28$ | 5 | 2.435 |
| 2040 | 31494 | $7{ }^{\circ}$ | 17 | r 3 | 28-28 | $71 \cdot 32$ | 5 | $3 \cdot 020$ |
| 2041 | 31538 | 73 | 17 | 14 | 7.53 | $76 \cdot 51$ | I | $2 \cdot 608$ |
| 2042 | 31561 | $7 \cdot 8$ | 17 | 14 | 10.55 | $76 \cdot 48$ | 1 | 2.221 |
| 2043 | 31547 | $7 \cdot 4$ | 17 | 14 | 23.65 | 72.51 | 5 | $2 \cdot 696$ |
| 2044 | 31546 | 7.2 | 17 | 14 | $49^{1} 5$ | $68 \cdot 05$ | 5 | 3.037 |
| 2045 | 31588 | 6.8 | 17 | 15 | 54.23 | $67 \cdot 27$ | 5 | 2.954 |
| 2046 | 31601 | $6 \cdot 5$ | 17 | 15 | 59.06 | $76 \cdot 89$ | 5 | 2.675 |
| 2047 | 31636 | $7^{\circ}$ | 17 | 16 | 4130 | $76 \cdot 48$ | 5 | 2.561 |
| 2048 | 31693 | $6 \cdot 5$ | 17 | 17 | I1.07 | 71.89 | 5 | $1 \cdot 597$ |
| 2049 | 31672 | $8 \cdot 0$ | 17 | 17 | 13.51 | $72 \cdot 55$ | 2 | 2.120 |
| 2050 | $3^{1611}$ | $7{ }^{\circ}$ | 17 | I 7 | 18.03 | 72.51 | 4 | $3 \cdot 507$ |
| 2051 | 31664 | 7.5 | 17 | 17 | $59^{\circ} 21$ | $66 \cdot 29$ | 5 | 2.870 |
| 2053 | 31678 | 7.5 | 17 | 18 | 20.59 | 76.51 | 3 | 2.919 |
| 2053 | 31669 | 7.5 | 17 | 18 | $36 \cdot 84$ | 71.51 | 4 | 3.272 |
| 2054 | 31707 | $8 \cdot 2$ | r 7 | 19 | 9.41 | $76 \cdot 48$ | 3 | 2.921 |
| 2055 | 31760 | $7{ }^{\circ}$ | 17 | 20 | 0.97 | $75 \cdot 08$ | 5 | $2 \cdot 224$ |
| 2056 | $3174{ }^{1}$ | $6 \cdot 5$ | 17 | 20 | 16.96 | 70.09 | 5 | $2 \cdot 893$ |
| 2057 | 31754 | 6.2 | I 7 | 20 | 20.76 | 72.52 | 5 | 2.669 |
| 2058 | 31864 | 7.5 | 17 | 20 | 22.64 | $70 \cdot 31$ | 5 | 0.148 |
| 2059 | 31780 | $6 \cdot 5$ | 17 | 21 | $0 \cdot 52$ | 78.23 | 3 | 2.40 r |
| 2060 | 31795 | $7 \cdot 6$ | 17 | 21 | $45 \cdot 96$ | 70.08 | 5 | 2.644 |
| 2061 | 30801 | $7^{\circ}$ | 17 | 21 | $57 \cdot 65$ | 75.50 | 5 | $2 \cdot 680$ |
| 2062 | 31799 | $8 \cdot 6$ | 17 | 22 | 2.01 | 76.54 | 5 | 2.804 |
| 2063 | 31804 | $5 \cdot 5$ | 17 | 22 | $27^{\circ}$ |  |  | 3.062 |
| 2064 | 3 r 8 r 6 | $7 \cdot 5$ | r 7 | 23 | 6.40 | $70 \cdot 68$ | 6 | 3.206 |
| 2065 | 31860 | $8 \cdot 5$ | r 7 | 23 | $36 \cdot 87$ | 74.50 | 2 | 2.796 |
| 2066 | 31849 | 7.5 | 17 | 23 | 43'33 | $70 \cdot 34$ | 6 | 3.170 |
| 2067 | 31930 | $7 \cdot 2$ | 17 | 25 | 0.03 | $75 \cdot 87$ | 5 | $2 \cdot 146$ |
| 2068 | 31921 | 7.7 | 17 | 25 | 1.77 | 75.69 | 5 | 2.535 |
| 2069 | 31900 | $6 \cdot 8$ | $r 7$ | 25 | 33.70 | $71 \cdot 29$ | 5 | 3.069 |
| 2070 | 31948 | 6.5 | 17 | 25 | 53.49 | 7115 | 3 | $+2.601$ |



| No. | Lalande. | Mag. | Mcan | R.A. | 1875.0 | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2071 | 31978 | $7{ }^{\circ} 0$ | $17^{\text {h }}$ |  | 36*10 | 69.88 | 5 | +3.141 |
| 2072 | 32006 | $8 \cdot 0$ | 17 |  | 24.27 | $70 \cdot 39$ | 1 | 3.107 |
| 2073 | 32042 | $6 \cdot 8$ | 17 | 28 | 52.45 | 78.47 | 2 | $2 \cdot 678$ |
| 2074 | 32075 | $7 \cdot 7$ | 17 | 29 | 18.12 | 75.50 | 4 | 2.157 |
| 2075 | $3^{2138}$ | $6 \cdot 7$ | 17 |  | $40 \cdot 93$ | 70.27 | 5 | I.920 |
| 2076 | 32120 | $7^{\circ} \mathrm{O}$ | 17 | 30 | 47.94 | 68.28 | 5 | 3'137 |
| 2077 | 32133 | $6 \cdot 3$ | 17 | 31 | 12.92 | 77.44 | I | $2 \cdot 359$ |
| 2078 | 32081 | $6 \cdot 5$ | 17 | 31 | 14.27 | $70 \cdot 55$ | I | 3.604 |
| 2079 | 32165 | $6 \cdot 5$ | 17 |  | 24.46 | 72.51 | 5 | 2.059 |
| 2080 | 32147 | 7.5 | 17 |  | 41.70 | 74.52 | 5 | 2.581 |
| 2081 | 32192 | $7 \cdot 8$ | 17 |  | 46.16 | $76 \cdot 70$ | 5 | 2.563 |
| 2082 | 32255 | 6.0 | 17 | 33 | 21.54 | $70 \cdot 86$ | 5 | 1.563 |
| 2083 | 32203 | $7{ }^{\circ}$ | 17 | 33 | 4r*63 | 68.02 | 6 | 3.120 |
| 2084 | 32262 | $7{ }^{\circ}$ | 17 | 33 | 54*40 | $76 \cdot 86$ | 3 | I.914 |
| 2085 | 32256 | $7 \cdot 0$ | r 7 |  | 12.13 | 69.50 | 5 | 2.215 |
| 2086 | 32286 | 8•1 | 17 | 34 | 25.22 | $76 \cdot 53$ | I | r'924 |
| 2087 | 32267 | $7 \cdot 5$ | 17 | 34 | 28.85 | 72.91 | 5 | $2 \cdot 295$ |
| 2088 | 32260 | 8.1 | 17 | 34 | $32^{\circ}$ |  |  | 2467 |
| 2089 | 32294 | $6 \cdot 0$ | 17 | 35 | 32.20 | 72.01 | 6 | 2.710 |
| 2090 | 32280 | $7{ }^{\circ}$ | 17 | 35 | 56.79 | 68.79 | 7 | $3 \cdot 183$ |
| 2091 | 32333 | 7.5 | 17 | 36 | 29.05 | 7127 | 5 | 2.546 |
| 2092 | 32330 | $8 \cdot 5$ | 17 | 36 | $33 \cdot 81$ | 71.53 | 2 | 2.663 |
| 2093 | 32376 | $7 \cdot 8$ | 17 | 37 | 25.59 | 74.52 | 5 | 2.427 |
| 2094 | 32350 | $7 \cdot 7$ | 17 | 37 | $3 \mathrm{I}^{4} 42$ | 69.27 | 5 | 3'113 |
| 2095 | 32394 | $6 \cdot 5$ | 17 | 37 | $46 \cdot 68$ | 79.00 | 4 | 2.320 |
| 2096 | 32415 | $7 \cdot 8$ | 17 | 38 | 11.83 | $76 \cdot 49$ | 5 | 2.313 |
| 2097 | 32456 | $6 \cdot 0$ | 17 | 38 | 29.92 | 71.50 | 5 | 1.376 |
| 2098 | 32408 | $6 \cdot 0$ | 17 | $3^{8}$ | $35 \cdot 86$ | 66.51 | 6 | 2.729 |
| 2099 | 32434 | $7 \cdot 2$ | 17 | 39 | $35 \cdot 83$ | 70.03 | 2 | 2.814 |
| 2100 | 32422 | $8 \cdot 0$ | 17 | 39 | 44.47 | 72.53 | 5 | 3.257 |
| 2101 | 32442 | 7.5 | 17 | 39 | 59.46 | $76 \cdot 54$ | 1 | 2.942 |
| 2102 | 32424 | $7{ }^{\circ}$ | 17 | 40 | 12.64 | $63^{\circ} 03$ | 2 | $3 \cdot 622$ |
| 2103 | 32505 | $6 \cdot 5$ | 17 | 40 | $58 \cdot 05$ | 67.36 | 7 | 2.254 |
| 2104 | 32518 | $7^{\circ}$ | 17 | 41 | $37 \cdot 34$ | $78 \cdot 98$ | 4 | 2.428 |
| 2105 | 32509 | $8 \cdot 0$ | 17 | 42 | $6 \cdot 35$ | 72.02 | 4 | $3 \cdot 122$ |
| 2106 | 32568 | $6 \cdot 5$ | 17 | 42 | 30.26 | $66 \cdot 75$ | 4 | $2 \cdot 096$ |
| 2107 | 32572 | $8 \cdot 2$ | 17 | 42 | 53.42 | $77 \cdot 84$ | 3 | 2.339 |
| 2108 | 32624 | $8 \cdot 0$ | 17 | 43 | $28 \cdot 67$ | $75^{\circ} \mathrm{O}$ | 2 | I-811 |
| 2109 | 32601 | $7 \times$ | 17 | 44 | 14.42 | 72.11 | 5 | 2.840 |
| 2110 | 32626 | 73 | 17 | 44 | 36.39 | $78 \cdot 24$ | 4 | 2.562 |
| 2 III | 32619 | $7 \cdot 8$ | 17 | 44 | 41*35 | 74.92 | 5 | 2.847 |
| 2 I12 | 32584 | $8 \cdot 0$ | 17 | 44 | 44.91 | $70 \cdot 53$ | 5 | 3.628 |
| 2113 | 32628 | 6.4 | 17 | 44 | 54.90 | 64.27 | 5 | $2 \cdot 789$ |
| 2114 | 32633 | $6 \cdot 5$ | 17 | 45 | 31.64 | 69.89 | 5 | $3 \cdot 100$ |
| 2115 | 32688 | $6 \cdot 0$ | 17 | 45 | $3^{2 \cdot 12}$ | $79^{17}$ | 3 | +2.322 |


| No. | Meau N.P.D. $1875 \%$. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2071 | $92^{\circ} 57^{\prime} 59^{\prime \prime} \cdot 0$ | $72 \cdot 82$ | 3 | +2'183 | W $489, \mathrm{Si}_{8}, \mathrm{Si}_{5} 9 \mathrm{I} 8, \mathrm{Sp}$ |
| 2072 | $\begin{array}{lllll}91 & 31 & 10.6\end{array}$ | $70 \cdot 39$ | 1 | $2 \cdot 76$ | $\mathrm{W}_{505}, \mathrm{Si}_{2}, \mathrm{Si}_{5} 92 \mathrm{I}$. [6283. |
| 2073 | $\begin{array}{llll}73 & 24 & 35^{\circ}\end{array}$ | $78 \cdot 47$ | 2 | $2 \cdot 72$ | W 85I, R. |
| 2074 | $\begin{array}{llll}55 & 22 & 19\end{array}$ | $75 \cdot 50$ | 4 | $2 \cdot 68$ | W 880. |
| 2075 | $49 \quad 0 \quad 327$ | 69.48 | 6 | $2 \cdot 56$ | R 5923. |
| 2076 | $\begin{array}{lll}92 & 47 & 54.6\end{array}$ | 68.99 | 4 | $2 \cdot 55$ | W 56r, Sis 925. |
| 2077 | $6144 \quad 9.6$ | $77 \cdot 51$ | 2 | $2 \cdot 53$ | W 942 . |
| 2078 | II 50 <br> 1 I  | 70.55 | 1 | 2.51 | T 8141, Ar 3598, Oe |
| 2079 | $\begin{array}{lll}52 & 37 & 6 \cdot 5\end{array}$ | 72.51 | 5 | 2.50 | W96ı. [ijori. |
| 2080 | $69 \quad 39 \quad 52 \cdot x$ | 74.29 | 4 | 2.47 | W 958. |
| 2081 | $69 \quad 0 \quad 12.2$ | 76.70 | 5 | $2 \cdot 38$ |  |
| 2082 | $41 \begin{array}{lll}41 & 20 & 26.8\end{array}$ | 70.86 | 5 | $2 \cdot 33$ | See Notes. |
| 2083 | $\begin{array}{lll}92 & 4 & 55\end{array}$ | 70.90 | 5 | 230 | Sp 633 1, $\mathrm{L}_{1} 5730$. |
| 2084 | $\begin{array}{llll}48 & 54 & 58 \cdot 3\end{array}$ | $76 \cdot 86$ | 3 | $2 \cdot 28$ | Bn. |
| 2085 | 57 II 20.5 | 69.50 | 5 | 2.25 | W 1072, R 5948. |
| 2086 | $\begin{array}{llll}49 & 9 & 28 \cdot 2\end{array}$ | $76 \cdot 53$ | I | $2 \cdot 23$ | W 1091. |
| 2087 | $59 \quad 40 \quad 29.5$ | 72.91 | 5 | 2.23 | W io82. [1672. |
| 2088 | $65 \quad 30 \quad 549$ | $66 \cdot 16$ | 3 | 2.22 | W ro76, Ar $3606, \mathrm{RC}_{2}$ |
| 2089 | $\begin{array}{lll}74 & 45 & 218\end{array}$ | $75 \cdot 32$ | 5 | 2.14 | Wirio, R 5958 , Y 7369. |
| 2090 | $94 \begin{array}{lll}97 & \text { II } 3\end{array}$ | 70.16 | 6 | $2 \cdot 10$ | $\begin{array}{r} \text { W 677, } \mathrm{R}, \mathrm{Si}_{2,} \mathrm{I}_{\mathrm{s}} 2437, \\ {\left[\mathrm{Gl}_{2} 436 \mathrm{I} .\right.} \end{array}$ |
| 2091 | $68 \quad 25 \quad 51 \cdot 1$ | 71.27 | 5 | 2.05 | W II59, R 5968. |
| 2092 | 7254150 | $76 \cdot 54$ | 5 | 2.05 | W 1158. |
| 2093 | 648897 | $74 \cdot 52$ | 5 | 1.97 | W 1205. |
| 2094 | $9144 \quad 52 \cdot 6$ | $68 \cdot 64$ | 6 | 1.96 | $\mathrm{W}_{711}, \mathrm{Si}_{5} 937, \mathrm{~L}_{1} 5760$. |
| 2095 | $60 \quad 31 \quad 554$ | $79^{\circ} 00$ | 4 | 1.94 | W 1217 , R 5986. |
| 2096 | $\begin{array}{lll}60 & 17 & 16.7\end{array}$ | $76 \cdot 49$ | 5 | 190 | W 1230 . |
| 2097 | $\begin{array}{lll}38 & 7 & 149\end{array}$ | 71.50 | 5 | 1.88 |  |
| 2098 | $\begin{array}{lll}75 & 32 & 2.4\end{array}$ | 69.51 | 4 | I.87 | W 744, R 5992. [4380. |
| 2099 | $\begin{array}{lll}78 & 48 & 99\end{array}$ | 73.19 | 3 | 178 | W757,R $6004, \mathrm{~L}_{4} 827, \mathrm{Gl}$ |
| 2100 | $97 \quad 5545 * 2$ | 72.53 | 5 | 177 | $\begin{array}{r} \mathrm{W}_{755}, \mathrm{Sp} 63 \mathrm{~S}_{2}^{2,} \mathrm{I}_{2} 2453, \\ {[\mathrm{Y} 7405} \end{array}$ |
| 2101 | $84 \quad 25 \quad 5.0$ | $76 \cdot 54$ | 1 | 1.75 | W 770, L, 2680. |
| 2102 | $112 \quad 2543.5$ | $65 \cdot 46$ | 2 | 173 | Oe 172 I5. |
| 2103 | $\begin{array}{llll}58 & 26 & 40 \cdot 6\end{array}$ | 72.49 | 4 | 1.66 | W 1304. |
| 2104 | $64 \quad 12 \quad 33$ | $78 \cdot 98$ | 4 | 1.61 | W $1323, \mathrm{R} 6026$. |
| 2105 | $92 \quad 9 \quad 63$ | 71'11 | 5 | I'56 | W 812, Sis 947, Sp 6394, <br> [L 5808. |
| 2106 | 53 5I 53.9 | 67.70 | 4 | 1'53 | See Notes. |
| 2107 | $61 \quad 115007$ | $77 \cdot 84$ | 3 | I.50 |  |
| 2108 | $\begin{array}{llll}46 & 36 & 46 \cdot 0\end{array}$ | 72.77 | 3 | 1.44 | W 1396. |
| 2109 | $80 \quad 6 \quad 407$ | $72 \cdot 11$ | 5 | 138 | W 863, $\mathrm{Si}_{1}, \mathrm{~T}_{8}, \mathrm{~L}_{6}, \mathrm{Gl}$ |
| 2110 | $69 \quad 5 \quad 253$ | 78.24 | 4 | 1.35 | [4401, |
| 2 III | $\begin{array}{llll}80 & 25 & 11.9\end{array}$ | 74.92 | 5 | 1'34 | W 870, Gl 4402. |
| 2 II 2 | $\begin{array}{lll}12 & 3^{8} & 57\end{array}$ | $68 \cdot 51$ | 2 | $1 \cdot 34$ | Oe 17292. |
| 2113 | 78 0 54\% | $66 \cdot 45$ | 4 | 132 | W 877, Gl 4403. |
| 2114 | $9152 \quad 96$ | 69.89 | 5 | $1 \cdot 27$ | Sp $642 \mathrm{x}, \mathrm{L}_{1} 5833$. |
| 2115 | $\begin{array}{llll}60 & 38 & 34.6\end{array}$ | 79'17 | 3 | +1.26 | W 1438 . |


| No. | Lalande. | Mag. | Mean R.A. 1875.0. |  |  | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2116 | 32644 | 7.5 | $17{ }^{\text {h }}$ |  | $39^{*} \cdot 8$ | $69^{\circ} 00$ | 2 | $+3^{2} \cdot 046$ |
| 2117 | 32649 | $6 \cdot 8$ | 17 |  | 44.43 | $66 \cdot 52$ | 3 | 3.046 |
| 2118 | 32693 | $6 \cdot 5$ | 17 |  | 20.09 | 71.48 | 5 | $2 \cdot 706$ |
| 2119 | 32682 | 7.5 | 17 |  | $33 \cdot 98$ | 72.24 | 5 | 3.210 |
| 2120 | 32795 | $8 \cdot 5$ |  |  | $3{ }^{1}$ |  |  | 1.567 |
| 2121 | 32779 | $7 \cdot 2$ | 17 |  | 31.48 | 72.13 | 5 | 1740 |
| 2122 | 32750 | $7 \cdot 7$ | 17 | 47 | 33.47 | 7745 | 2 | $2 \cdot 385$ |
| 2123 | 32723 | $7{ }^{\circ}$ | 17 | 47 | 55.59 | 74.00 | 4 | 3.152 |
| 2124 | 32762 | $6 \cdot 5$ | 17 | 48 | 23.39 | 65.32 | 6 | 2.808 |
| 2125 | 32799 | $8 \cdot 2$ | 17 |  | $58 \cdot 62$ | 74.79 | 6 | $2 \cdot 681$ |
| 2126 | 32792 | 7 '1 | 17 |  | 19.22 | 69.45 | 5 | 3.023 |
| 2127 | 32838 | 8•1 | 17 |  | 44.56 | $76 \cdot 53$ | 1 | 2.542 |
| 2128 | 32849 | $8 \cdot 2$ | 17 |  | $18 \cdot 79$ | 7 F 77 | 4 | $2 \cdot 746$ |
| 2129 | 32876 | 8.0 | 17 |  | 50.57 | $80 \cdot 48$ | 1 | 2.546 |
| $213^{\circ}$ | 32880 | 713 | 17 | 51 | 1.08 | 74.53 | 4 | 2.588 |
| 2131 | 32889 | $7 \cdot 8$ | 17 |  | 22.33 | 76.53 | 2 | 2 '739 |
| 2132 | 32935 | $3 \cdot 5$ | 17 | 51 | 57.86 | 72.52 | 4 | 2.056 |
| 2133 | 32921 | $6 \cdot 5$ | 17 | 52 | 4.58 | 69.89 | 5 | 2.477 |
| 2 I 34 | 32913 | 8.5 | 17 | 52 | 731 | 80.55 | 1 | 2.739 |
| 2135 | 32965 | $6 \cdot 3$ | 17 | 52 | 50'1 I | 76.98 | 4 | 2'191 |
| 2136 | 32959 | 7.8 | I 7 | 53 | 28.43 | 81.53 | 1 | 2.741 |
| 2137 | 32962 | 71 | 17 | 53 | 53.27 | 68.49 | 2 | 3.057 |
| 2138 | 32980 | $7{ }^{\circ}$ | 17 | 54 | $25^{\circ} 4 \mathrm{I}$ | 71.51 | 2 | 3'132 |
| 2139 | 33041 | $6 \cdot 5$ | 17 | 55 | 18.58 | 67.90 | 5 | 2.711 |
| 2140 | 33107 | $6 \cdot 5$ | 17 | 55 | $49^{\circ} 85$ | 75'12 | 5 | 1.815 |
| 2 I4 | 33060 | $6 \cdot 0$ | 17 |  | 16. |  |  | 3.264 |
| 2142 |  |  | 17 | 56 | $36 \cdot 77$ | $77 \cdot 45$ | 1 | 3.197 |
| 2143 | 33II5 | $7{ }^{\circ}$ | 17 | 56 | 39.38 | 77.30 | 5 | 2.280 |
| 2 I 44 | 33131 | $6 \cdot$ | 17 | 57 | I'14 | 7x'79 | 5 | $2 \cdot 194$ |
| 2145 | 33112 | $7 \cdot 5$ | 17 | 57 | $9 \cdot 37$ | 71.08 | 5 | 2.668 |
| 2146 | 33138 | $7 \times 5$ | 17 | 57 | 52.70 | $70 \cdot 18$ | 6 | 2.736 |
| 2147 | 33168 | $8 \cdot$ | 17 | 58 | $9 \cdot 33$ | $68 \cdot 46$ | 3 | $2 \cdot 289$ |
| 2148 | 33158 | $8 \cdot 0$ | 17 | 58 | 30.02 | $76 \cdot 53$ | I | 27720 |
| 2149 | 33134 | $7{ }^{\circ}$ | 17 | 58 | 34.36 | 8 I 53 | 1 | 3.333 |
| 2150 | 33185 | $7{ }^{\circ}$ | 17 | $5^{8}$ | 53.51 | 68.50 | 6 | $2 \cdot 401$ |
| 2151 | $33^{193}$ | $6 \cdot 7$ | 17 | 59 | 767 | 70.47 | 3 | 2.288 |
| 2152 | $33^{198}$ | 71 | 17 | 59 | 30.29 | $77 \cdot 77$ | 4 | 2.479 |
| 2153 | 33183 | $6 \cdot 5$ | 17 | 59 | 42.01 | $70 \cdot 31$ | 5 | 3.083 |
| 2 I 54 | 33229 | $8 \cdot 0$ | 18 | - | 43.59 | 79'18 | 3 | 2.922 |
| 2 I55 | 3324 I | $7 \cdot 8$ | 18 | $\bigcirc$ | 52.29 | 71.94 | 5 | 2.863 |
| 2156 | 32264 | 7'5 | 18 | 2 | $1 \cdot 00$ | $70 \cdot 55$ | 2 | 3.350 |
| 2157 | 33320 | 9.0 | 18 | 2 | 22.28 | $76 \cdot 51$ | I | 2.478 |
| 2158 | 33347 | $7 \cdot 5$ | 18 | 2 | 43.50 | 75.78 | 5 | $2 \cdot 143$ |
| 2159 | 33301 | 7.5 | 18 | 2 | $46 \cdot 51$ | $70 \cdot 81$ | 3 | 3.350 |
| 2160 | 33341 | 5.9 | 18 | 2 | $47^{\circ} \mathrm{O}$ | $69 \cdot 58$ | 1 | $+2.418$ |


| No. | Mean N.P.D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities, |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2116 | $88^{\circ} 5^{\prime \prime} 12^{\prime \prime} \cdot 7$ | 72.51 | 1 | $+\mathrm{I}^{\prime \prime} \cdot 26$ | W 886, $\mathrm{L}_{1} 5835, \mathrm{Gl} 4406$. |
| 2117 | $88 \quad 51 \begin{array}{ll}17 \%\end{array}$ | 70.00 | 2 | 1.25 | W 892, L15837, G1 4407. |
| 2118 | $\begin{array}{llll}74 & 38 & 33.2\end{array}$ | 71.48 | 5 | $1 \cdot 20$ |  |
| 2119 | $95 \quad 53 \quad 51 \times 6$ | $78 \cdot 20$ | 3 | I'I6 | W 917, La ${ }_{\text {a }}$ 2491. [3775. |
| 2120 | $\begin{array}{llll}41 & 34 & 13.4\end{array}$ | 67.98 | 2 | 1.09 | T 8286, Ar 3638, Ru |
| 2121 | $45 \quad 3 \quad 35 \cdot 6$ | $72 \cdot 13$ | 5 | 1.09 | W 1511 |
| 2122 | $\begin{array}{llll}62 & 46 & 28 \cdot 5\end{array}$ | 77.45 | 2 | 109 | W 1493, R 6090. |
| 2123 | $\begin{array}{lllll}93 & 25 & 51\end{array}$ | $76 \cdot 51$ | 3 | 1.06 | W 946, $\mathrm{Si}_{\mathrm{y}}, \mathrm{L}_{\mathrm{z}} 2498$. |
| 2124 | $78 \quad 50118$ | $66 \cdot 28$ | 5 | $1 \cdot 02$ | See Notes. |
| 2125 | $\begin{array}{llllll}73 & 39 & 57\end{array}$ | $76 \cdot 13$ | 5 | $0 \cdot 96$ | [ $\mathrm{L}_{1} 587 \mathrm{I}, \mathrm{Gl} 4425$. |
| 2126 | $87 \quad 54 \quad 944$ | 68.47 | 5 | 0.93 | W981, R6107, Sp6452, |
| 2127 | $68 \quad 21574$ | $76 \cdot 53$ | I | 0.90 | W 1568. |
| 2128 | $\begin{array}{llll}76 & 17 & 48\end{array}$ | $71 \times 33$ | 5 | 0.85 | W iole, R. |
| 2129 | $\begin{array}{llll}68 & 29 & 15 \cdot 6\end{array}$ | 80.48 | 1 | 0.80 | W 1600, R. |
| 2130 | $\begin{array}{llll}70 & 5 & 30 \cdot 1\end{array}$ | 74.12 | 5 | $0 \cdot 79$ | W 1604, R 6127. |
| 2131 | $76 \quad 0 \quad 26 \cdot 1$ | $76 \cdot 53$ | 2 | 0.76 | W 1033. |
| 2132 | $\begin{array}{llll}52 & 43 & 54.2\end{array}$ | 72.52 | 4 | $0 \cdot 70$ | W $1647, \mathrm{~B}_{37} \mathrm{I}$. |
| 2133 | $65 \begin{array}{llll}659 & 25.7\end{array}$ | 69.89 | 5 | 0.69 | W 1635. |
| 2134 | $\begin{array}{llll}75 & 59 & 19.6\end{array}$ | $80 \cdot 55$ | I | 0.69 | W 1057. |
| 2135 | $\begin{array}{llll}56 & 35 & 0.2\end{array}$ | 76.98 | 4 | 0.63 |  |
| 2136 |    <br> 6 5 2.8 | 81.53 | 1 | $\bigcirc \cdot 57$ | W ro92. |
| 2137 | $89821.40 \cdot 7$ | 68.49 | 2 | 0.53 | $\mathrm{L}_{1} 59 \mathrm{I} 3 .\left[649 \mathrm{I}, \mathrm{Gl}_{445 \mathrm{I}}\right.$. |
| 2138 | $\begin{array}{llll}92 & 34 & 15.3\end{array}$ | 71.51 | ${ }^{2}$ | $0 \cdot 49$ |  |
| 2139 | $\begin{array}{ccc}74 & 53 & 49 \\ 46 & 45 \\ 38\end{array}$ | $68 \cdot 30$ $75 \cdot 12$ | 6 | 0.41 0.36 | W $\mathrm{W}_{\text {W }}^{11770,} \mathrm{RO} 3806$. |
| 2140 | $46 \quad 453^{8.0}$ | $75 \cdot 12$ | 5 | $0 \cdot 36$ | W 1770, RO 3806. |
| 2141 | 98 10 41*0 | 62.30 | 5 | 0.35 | See Notes. |
| 2142 | $\begin{array}{llll}95 & 22 & 17 & 8\end{array}$ | 77.45 | 1 | $0 \cdot 30$ |  |
| 2143 | $\begin{array}{llll}59 & 21 & 8.3\end{array}$ | 7730 | 5 | 0.29 |  |
| 2144 | $\begin{array}{llll}56 & 41 & 14.5\end{array}$ | 71.75 | 5 | 0.26 | W 1797. |
| 2145 | $\begin{array}{lllll}73 & 11 & 19.6\end{array}$ | 71.08 | 5 | 0.25 |  |
| 2146 | $\begin{array}{lllll}75 & 54 & 31.8\end{array}$ | $73{ }^{\circ} 13$ | 5 | 0.18 | W 1192. |
| 2147 | $\begin{array}{llll}59 & 39 & 13 \cdot 1\end{array}$ | 68.46 | 3 | $0 \cdot 16$ |  |
| 2148 | 75 I3 22.9 | $76 \cdot 53$ | I | 0.13 | W 1215 , PM 2043. |
| 2149 | $\begin{array}{llll}101 & 1 & 37.8\end{array}$ | 81.53 | 1 | $0 \cdot 12$ | W 1203, $\mathrm{Si}_{\mathrm{a}}$ 1982, L $\mathrm{L}_{\mathrm{s}}$ |
| 2150 | $\begin{array}{llll}63 & 21 & 3.5\end{array}$ | 72.09 | 5 | $\bigcirc \cdot 1$ | $W 1848, \mathrm{R} . \quad\lceil 2293$ |
| 2151 | 59 36  <br> 66   |  |  | 0.08 0.04 |  |
| 2152 2153 | $\begin{array}{rrr}66 & 3 & 41.4 \\ 90 & 27 & 15.8\end{array}$ | 7777 70.31 | 4 | 0.04 +003 | $\begin{aligned} & \mathrm{W} \mathbf{1 8 7 2 .} \\ & \mathrm{Si}_{6} 975, \mathrm{~L} .5967 . \end{aligned}$ |
| 2153 2154 | $\begin{array}{lll}90 & 27 & 15.8 \\ 83 & 35 & 58.4\end{array}$ | 70.31 79.18 | 5 3 | +003 -0.06 | $\begin{aligned} & \mathrm{Nl}_{5} 975, \\ & \mathrm{~L}_{\mathrm{s}} 2924 . \end{aligned}$ |
| 2154 2155 | $\begin{array}{rrrr}83 & 35 & 58.4 \\ 81 & 7 & 49\end{array}$ | 79.18 78.94 | 5 | -0.08 0.08 | See Notes. |
| 2156 | $\begin{array}{llll}101 & 45 & 33.6\end{array}$ | 80.55 | 1 | 0.18 | $W_{1289, S p} 6557, \mathrm{~L}_{6} 2312$. |
| 2157 | $\begin{array}{lll}64 & 38 & 4.7\end{array}$ | 76.51 | 1 | 0.21 | W 12. |
| 2158 | $\begin{array}{llll}55 & 11 & 21.3\end{array}$ | 74.56 | 6 | 0.24 0.24 |  |
| 2159 2160 | $\begin{array}{rrr}101 & 44 & 373 \\ 63 & 54 & 58.2\end{array}$ | 72.46 69.58 | 3 <br> 1 | 0.24 -0.24 | Wi310, $\mathrm{Si}_{3} 1989, \mathrm{~L}_{5} 2317$. <br> See Notes. |


| No. | Lalande. | Mag. | Mean R.A. 1875.0. |  |  | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2161 | 33318 | $8 \cdot 0$ | $18^{\text {b }}$ | $3^{\text {m }}$ | $7^{10} 60$ | $66 \cdot 59$ | 1 | $+3 \cdot 063$ |
| 2162 | 33342 | $7 \cdot 7$ | 18 | 3 | $28 \cdot 32$ | $79^{\circ} \mathrm{I}$ | 2 | 2.929 |
| 2163 | 33345 | $7 \cdot 0$ | 18 | 3 | $37 \cdot 63$ | $77 \cdot 84$ | 3 | $2 \cdot 927$ |
| 2164 | 33402 | $5 \cdot 9$ | 18 | 3 | $42 \cdot 07$ | $66 \cdot 92$ | 5 | $2 \cdot 087$ |
| 2165 | 33376 | $6 \cdot 0$ | 18 | 4 | 25.40 | 70.68 | 5 | $2 \cdot 995$ |
| 2166 | 33412 | $6 \cdot 0$ | 18 | 4 | 33.97 | 74.50 | 5 | 2.677 |
| 2167 | 33438 | $7 \cdot 2$ | 18 | 5 | 15.45 | 69.52 | 6 | 2.626 |
| 2168 | $3347^{2}$ | $6 \cdot 0$ | 18 | 5 | $37 \cdot 87$ | $76 \cdot 59$ | 3 | $2 \cdot 085$ |
| 2169 | 33461 | $6 \cdot 8$ | 18 | 6 | 24.42 | 74.71 | 5 | 3.007 |
| 2170 | 33449 | $6 \cdot 0$ | 18 | 6 | $45^{\circ}$ |  |  | $3 \cdot 655$ |
| 2171 | 33493 | $8 \cdot 1$ | 18 | 7 | $21 \cdot 36$ | 71*53 | 4 | $3 \cdot 057$ |
| 2172 | 33505 | $6 \cdot 9$ | 18 | 7 | $36 \cdot 16$ | 71*50 | 2 | $2 \cdot 792$ |
| 2173 | 33482 | $6 \cdot 0$ | 18 | 7 | 46. |  |  | 3.569 |
| 2174 | 33490 | $7 \cdot 5$ | 18 | 7 | $47 \cdot 63$ | $63 \cdot 00$ | 2 | 3.441 |
| 2175 | 33543 | $7 \cdot 0$ | 18 | 7 | $58 \cdot 58$ | $70 \cdot 30$ | 5 | 2.534 |
| 2176 | 33515 | $7 \cdot 5$ | 18 | 8 | 10.10 | $80 \cdot 48$ | 1 | 3.069 |
| 2177 | 33571 | $7 \cdot 4$ | 18 | 8 | $36 \cdot 42$ | $76 \cdot 58$ | 4 | 2.579 |
| 2178 | 33618 | 6.0 | 18 | 8 | $54 \cdot 64$ | $70 \cdot 89$ | 5 | 2.000 |
| 2179 | 33640 | $7{ }^{\circ}$ | 18 | 9 | 52.97 | $76 \cdot 84$ | 3 | $2 \cdot 326$ |
| 2180 | 33629 | $7 \cdot 0$ | 18 | 10 | $55 \cdot 96$ | 69*15 | 5 | $3 \cdot 378$ |
| 2 I 8 I | 33697 | $7 \times 5$ | 18 | II | 19.37 | $76 \cdot 17$ | 5 | 2.496 |
| 2182 | 33683 | $7 \cdot 6$ | 18 | 11 | $37 \cdot 26$ | $70 \cdot 64$ | 5 | 3.104 |
| 2183 | 33773 | $7{ }^{\prime} 2$ | 18 | 12 | 12.25 | $69 \cdot 37$ | 6 | 1.614 |
| 2184 | 33719 | $6 \cdot 1$ | 18 | 12 | 19.60 | $71 \cdot 22$ | 3 | 2.746 |
| 2185 | 33759 | $7 \cdot 0$ | 18 | 12 | $55^{\prime} 17$ | 78.50 | 2 | 2.499 |
| 2186 |  | $5 \cdot 8$ | 18 | 13 | $7{ }^{\circ}$ |  |  | 2.904 |
| 2187 | 33731 | $7 \cdot 0$ | 18 | 13 | 17.22 | $65 \cdot 85$ | 6 | $3 \cdot 260$ |
| 2188 | 33780 | $6 \cdot 9$ | 18 | 13 | 39.19 | $75 \cdot 54$ | 4 | $2 \cdot 695$ |
| 2189 | 33792 | 73 | 18 | 13 | $45 \cdot 66$ | 66.05 | 2 | 2.792 |
| 2190 | 33820 | $7 \cdot 7$ | 18 | 14 | 15.42 | $77 \cdot 37$ | 5 | 2.206 |
| 2191 | 33827 | $6 \cdot 9$ | 18 | 15 | 19.97 | 67.46 | 5 | $2 \cdot 946$ |
| 2192 | 33858 | $7 \cdot 2$ | 18 | 15 | 24.53 | 73.32 | 5 | $2 \cdot 513$ |
| 2193 | 33847 | $7 \cdot 1$ | 18 | 15 | $55 \cdot 83$ | $70 \cdot 93$ | 5 | $3^{-101}$ |
| 2 I 94 | 33850 | $7 \cdot 0$ | 18 | 16 | 18.52 | 81.53 | I | 3.364 |
| 2195 | 33896 | $7 \cdot 5$ | 18 | 16 | 2I'I5 | 67.71 | 5 | 2.451 |
| 2196 | 33897 | 7•5 | 18 | 16 | 29.88 | 80.55 | 2 | 2.548 |
| 2197 | 33929 | $7 \cdot 3$ | 18 | 16 | $35^{1} 13$ | $73 \cdot 35$ | 5 | 2.212 |
| 2198 | 33937 | $7 \cdot 4$ | 18 | 16 | $43 \cdot 06$ | $75 \cdot 38$ | 5 | 2.212 |
| 2199 | 33941 | $6 \cdot 5$ | 18 | 17 | 28.62 | $70 \cdot 24$ | 6 | $2 \cdot 674$ |
| 2200 | 33955 | $7 \cdot 3$ | 18 | 17 | 36.10 | 78-19 | 3 | 2.563 |
| 2201 | 33997 | 73 |  | 18 | $5 \cdot 32$ | 7191 | 5 | $2 \cdot 073$ |
| 2202 | 33959 | $6 \cdot 5$ | 18 | 18 | $28 \cdot 17$ | 67•14 | 6 | 3.11 1 |
| 2203 | 34021 | $5 \cdot 8$ | 18 | 19 | $37 \cdot 85$ | 71-29 | 4 | $2 \cdot 886$ |
| 2204 | 34061 | 7.7 | 18 | 19 | $39^{\prime 6}$ | 73.97 | 5 | $2 \cdot 159$ |
| 2205 | 34078 | $8 \cdot 2$ | 18 | 19 | 54.50 | $77 \cdot 92$ | 3 | $+2.167$ |




| No. | Mean N.P.D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2206 | $62^{\circ} 40^{\prime} 24^{\prime \prime} \cdot 1$ | $80 \cdot 56$ | 2 | $-1^{1 / 75}$ | PM 2090. |
| 2207 | 67 21 $433^{\circ} 9$ | $76 \cdot 57$ | 5 | $1 \cdot 77$ |  |
| 2208 | $\begin{array}{llll}74 & 18 & 35.8\end{array}$ | $70 \cdot 52$ | 5 | 1.78 |  |
| 2209 | $\begin{array}{llll}60 & 14 & 30 \cdot 2\end{array}$ | 74.32 | 5 | 185 |  |
| 2210 | $63 \quad 50 \quad 40 \cdot 2$ | 75.92 | 3 | 1.86 | W 590, Ar 3758. |
| 2211 | 86 I9 36.0 | 81.53 | I | 1.88 | $\mathrm{W}_{478}$, $\mathrm{L}_{2} 323 \mathrm{I}, \mathrm{Gl} 453 \mathrm{I}$. |
| 2212 | $83 \quad 52490$ | 69.09 | 5 | 1.90 | RC 3917, $\mathrm{L}_{2} 3236$. |
| 2213 | $70 \quad 46 \quad 51 \times 2$ | 78.55 | 4 | I.95 | W 607. |
| 2214 | $\begin{array}{lllll}65 & 22 & 45 \cdot 8\end{array}$ | 68.52 | 5 | r.98 | W 620, PM 2095. |
| 2215 | $\begin{array}{llll}75 & 5 & 23.4\end{array}$ | 77.38 | 5 | 2.03 | W $63 \mathrm{I}, \mathrm{R} 6525$. |
| 2216 | $95 \quad 48 \quad 19{ }^{\circ}$ | $71^{\prime} 5^{2}$ | 5 | 2.06 | W $\mathrm{F}^{2} 3, \mathrm{Si}_{2}, \mathrm{~L}_{3} 268 \mathrm{t}$. |
| 2217 | 76 | 73.97 | 5 | 2.07 | W 539. |
| 2218 | $\begin{array}{llll}72 & 5 & 45\end{array}$ | 80.24 | 3 | 2.08 | W650, R 6530, ${ }_{6}$. |
| 2219 | $100 \quad 5247$ I | $70 \cdot 05$ | 5 | 2.14 | See Notes. |
| 2220 | $1091237^{\circ}$ | $58 \cdot 54$ | 1 | $2 \cdot 17$ | Ar $3774, \mathrm{Oe} 18347, \mathrm{Bn}$. |
| 2221 | $\begin{array}{llll}90 & 34 & 2.3\end{array}$ | 74.39 | 5 | $2 \cdot 18$ | $\mathrm{L}_{1} 620 \mathrm{I}$. |
| 2222 | $57 \quad 21 \quad 275$ | $80^{\prime} 48$ | 1 | $2 \cdot 18$ | W 697. |
| 2223 | $\begin{array}{lllll}69 & 15 & 38.6\end{array}$ | 75.77 | 5 | 2.21 | W 700, R 6559. |
| 2224 | 57 26 37 <br> 18   | 77.45 | 1 | $2 \cdot 26$ | W 724. |
| 2225 | $\begin{array}{llll}83 & 18 & 18.4\end{array}$ | 81.22 | 3 | $2 \cdot 27$ | L 3309. |
| 2226 | $\begin{array}{llll}67 & 6 & 9.9\end{array}$ | 78.31 | 4 | 2.29 |  |
| 2227 | $\begin{array}{llll}76 & 21 & 23.8\end{array}$ | $72 \cdot 02$ | 5 | 23 I | W 6ri. |
| 2228 | $95 \quad 1597$ | 74.57 | 5 | 231 | W 599,Sp 6803, L 2694. |
| 2229 | $\begin{array}{llll}81 & 49 & 25.5\end{array}$ | 72.55 80.58 | 5 | 2.39 2.43 | $\mathrm{L}_{2} 3330$. R 6588. |
| 2230 | 71 10 29.3 | 80.58 | 1 | 2.43 | R 6588. |
| 2231 | $\begin{array}{llll}107 & 4 & 53.8\end{array}$ | 65.46 | 1 | $2 \cdot 43$ | $\text { T } 8555, \mathrm{Oe} 18417 .$ |
| 2232 | $\begin{array}{llll}59 & 32 & 179\end{array}$ | 72.73 | 5 | 2.45 | See Notes. |
| 2233 | $\begin{array}{lllll}86 & 57 & 34.5\end{array}$ | $80 \cdot 55$ | 1 | 2.47 | W 651, $\mathrm{I}_{2} 3344$. |
| 2234 | $\begin{array}{llll}59 & 12 & 66\end{array}$ | 79.38 | 5 | 2.50 | W 818. $\mathrm{W} 668, \mathrm{R} 6602, \mathrm{Gl} 4550$. |
| 2235 | $\begin{array}{llll}79 & 12 & 15 \%\end{array}$ | $67 \% 1$ | 5 | 2.52 | W 668, R 6602, $\mathrm{Gl}^{455}$ |
| 2236 | $693744 * 4$ | 72.54 | 5 | 2.53 |  |
| 2237 | $\begin{array}{llll}68 & 36 & 40 \cdot 5\end{array}$ | 80.91 | 3 | 2.57 | W 837, Bn. |
| 2238 | $\begin{array}{llll}55 & 38 & 53.4\end{array}$ | 72.09 | 4 | 2.59 | W 853. |
| 2239 | 71 | $76 \cdot 55$ | 5 | 2.59 | $W 845, L_{6}$. |
| 2240 | $\begin{array}{llll}55 & 41 & 194\end{array}$ | 72.15 | 5 | 2.61 | W 872 . |
| 2241 | 1 II 35 51*2 | 70'51 | 1 | 261 | Bn. |
| 2242 | $\begin{array}{lll}83 & 25 & 32 \cdot 1\end{array}$ | 79.97 | 5 | 2.67 | $\mathrm{L}_{2} 3385$. |
| 2243 | $\begin{array}{llll}55 & 38 & 31 \cdot 2\end{array}$ | $70 \cdot 01$ | 4 | $2 \cdot 68$ | W 893. ${ }_{\text {R }}$ 661. $6852, \mathrm{~L}$ |
| 2244 |  | 78.59 | 2 | 2.72 2.73 | R 6614, Sp 6852, $\mathrm{L}_{1}$ |
| 2245 | $\begin{array}{llll}67 & 59 & 41\end{array}$ | 70.47 | 5 | 2'73 | W902. 6253. |
| 2246 | $\begin{array}{llll}11 & 9 & 7.6\end{array}$ | 67.03 | 2 | 2.74 | Ar 3805, $\mathrm{I}_{6}$, B 392. |
| 2247 | $\begin{array}{llll}73 & 54 & 26.7\end{array}$ | 80.08 | 2 | $2 \cdot 75$ | W 905. |
| 2248 | 97 54 2.5 <br> 84   <br> 8 50 46.8 | 74.16 75 | 5 | 2.90 2.92 |  |
| 2249 2250 | $\begin{array}{llll}84 & 50 & 46 \cdot 8 \\ 72 & 30 & 34.9\end{array}$ | 75.58 76.58 | 5 | 2.92 -2.99 | W 796, $\mathrm{Si}_{1}, \mathrm{~L}_{2} 3448$, G1 [4570. |
| 2250 | $72 \quad 30 \quad 34.9$ | 76.58 | 5 | -299 | - $45 \%$. |


| No. | Lalunde. | Mag. | Mean R.A. 1875.0. |  |  | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2251 | 34632 | 73 | $18^{\text {n }}$ |  | $23^{1.89}$ | $70 \cdot 24$ | 4 | + $\mathbf{2}^{\mathbf{2}} \mathbf{8} 868$ |
| 2252 | 34636 | 6.7 | 18 |  | 29.74 | 72.06 | 6 | 2.793 |
| 2253 | 34643 | $7 \cdot 5$ | 18 |  | 47.04 | $78 \cdot 10$ | 5 | 2.870 |
| 2254 | 34653 | 73 | 18 |  | $8 \cdot 62$ | 80.91 | 3 | 2.969 |
| 2255 | 34665 | $7 \cdot 6$ | 18 | 35 | 19.36 | $76 \cdot 53$ | 1 | $2 \cdot 789$ |
| 2256 | 34700 | 75 | 18 | 35 | 26.61 | 71'15 | 5 | 2.045 |
| 2257 | 34674 | 6.5 | 18 | 35 | $39 \cdot 82$ | 79.82 | 4 | $2 \cdot 789$ |
| 2258 | 34664 | $7 \cdot 0$ | 18 |  | 51.40 | 66.35 | 5 | 3.239 |
| 2259 | 34754 | 6.5 | 18 |  | 57.98 | 7157 | 5 | $2 \cdot 264$ |
| 2260 | 34709 | $7{ }^{\circ}$ | 18 | 37 | 6.94 | 73.38 | 5 | 3.233 |
| 2261 | 34765 | 77 | 18 | 37 | 7.20 | 76.55 | 3 | $2 \cdot 183$ |
| 2262 | 34715 | $7 \cdot 5$ | 18 | 37 | $8 \cdot 46$ | 80.59 | 1 | 3.110 |
| 2263 | 34740 | 8.2 | 18 | 37 | 44*10 | 80.48 | 1 | 3.110 |
| 2264 | 34767 | $7 \cdot 3$ | 18 |  | $46 \cdot 25$ | 77.76 | 5 | 2.660 |
| 2265 | 34717 | $7{ }^{\circ}$ | 18 |  | $50 \cdot 65$ | 68.56 | 2 | $3 \cdot 582$ |
| 2266 | 34777 | $6 \cdot 7$ | 18 | 38 | 712 | 73.97 | 7 | $2 \cdot 791$ |
| 2267 | 24779 | $7 \cdot 2$ | 18 |  | $30 \cdot 35$ | 68.54 | 5 | 3.084 |
| 2268 | 34853 | 5.5 | 18 |  | 9.68 | 66.77 | 5 | $2 \cdot 255$ |
| 2269 | 34820 | 6.3 | 18 |  | 19.69 | 74.15 | 6 | 2.948 |
| 2270 | 34836 | $8 \cdot \mathrm{I}$ | 18 | 39 | $36 \cdot 55$ | 78.59 | 4 | 2.805 |
| 2271 | 34822 | 6.0 | 18 | 39 | 49.42 | 73.60 | 2 | 3.310 |
| 2272 | 34890 | 6.9 | 18 | 40 | 17.30 | $70 \cdot 31$ | 5 | 2.544 |
| 2273 | 34899 | 6.9 | 18 | 40 | $35^{\circ} \mathrm{O}$ | 77.21 | 5 | 2.635 |
| 2274 | 34960 | $7 \cdot 8$ | 18 | 40 | 42.05 | $71 \cdot 65$ | I | 1.767 |
| 2275 | 34906 | 7.5 | 18 | 41 | $2 \cdot 13$ | 80.60 | 2 | $2 \cdot 783$ |
| 2276 | 34931 | 4.9 | 18 | 4 T | $2 \cdot 16$ | 74.61 | 5 | 2.415 |
| 2277 | 34925 | $6 \cdot 4$ | 18 | 41 | $12 \cdot 37$ | 72.95 | 5 | 2.630 |
| 2278 | 34995 | $8 \cdot 5$ | 18 |  | 4132 | $7 \times 53$ | 1 | 1.917 |
| 2279 | 3495 I | $7{ }^{\circ}$ | 18 |  | $45^{\circ} 43$ | 80.30 | 4 | 2.667 |
| 2280 | 35016 | $6 \cdot 0$ | 18 |  | 13.19 | 73.05 | 6 | 1.917 |
| 2281 | 34978 | 8.1 | 18 |  |  | $76 \cdot 57$ | 2 | 2.829 |
| 2282 | 35042 | 7.0 | 18 |  | 39.38 | 69.59 | 1 | 1.829 |
| 2283 | 34981 | $8 \cdot 0$ | 18 | 42 | 48.28 | 73.53 | 5 | 3.098 |
| 2284 | 34985 | $8 \cdot 0$ | 18 | 43 | $\bigcirc$ |  |  | 3.212 |
| 2285 | 35045 | $6 \cdot 0$ | 18 | 43 | 14'13 | $76 \cdot 19$ | 5 | $2 \cdot 264$ |
| 2286 | 35005 | $6 \cdot 5$ | 18 | 43 | 14.97 | 66.06 | 7 | 3.056 |
| 2287 | 35028 | $7 \cdot 0$ | 18 | 43 | 29.33 | $7 \mathrm{~F} \cdot 85$ | 4 | $2 \cdot 732$ |
| 2288 | 35044 | $7 \cdot 1$ | 18 | 43 | 36.81 | $77 \cdot 60$ | 3 | 2.567 |
| 2289 | 35051 | $8 \cdot 4$ | 18 | 44 | $6 \cdot 64$ | 80.61 | 1 | 2.829 |
| 2290 | 35074 | 6.7 | 18 | 44 | 52.78 | 66.97 | 5 | 2.821 |
| 2291 | 35105 | $7 \cdot 1$ | 18 | 45 | 13.30 | 74.54 | 1 | 2.489 |
| 2292 | 35150 | 5.9 | 18 | 46 | 18.07 | 69.74 | 5 | $2 \cdot 750$ |
| 2293 | 35192 | 7.3 | 18 |  | 28.28 | $77 \cdot 23$ | 3 | $2 \cdot 178$ |
| 2294 2295 | 35189 | 6.0 6.5 | 18 |  | $32^{\circ}$ 40.93 | 7 7 05 | 4 | 3.588 +2.357 |


| No. | Mean N.P.D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
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| 2251 | $8 \mathrm{I}^{\circ} 14^{\prime} 39^{\prime \prime} \cdot 3$ | 71.68 | 6 | $-3^{\prime \prime} \cdot 00$ | See Notes. |
| 2252 | $78 \quad 3.29 \cdot 2$ | 72.06 | 6 | $3 \cdot 1$ | W 827, ${ }^{\text {Sp }} 6885, \mathrm{Gl}_{4576}$. |
| 2253 | $81 \quad 1923.3$ | 78•10 | 5 | $3 \cdot 03$ | W 836, $\mathrm{Si}_{1}, \mathrm{~L}_{2} 3473$. |
| 2254 | $85 \quad 33 \quad 22.5$ | 80.91 | 3 | 3.06 | Sp $689 \mathrm{r}, \mathrm{L}_{9} 348 \mathrm{r}$. |
| 2255 | $77 \quad 54 \quad 20 \cdot 5$ | $76 \cdot 53$ | I | 3.08 | W 849, Gl 4579. |
| 2256 | $\begin{array}{llll}52 & 7 & 217\end{array}$ | 71.I5 | 5 | 3.09 | $[\mathrm{Gl} 4582$. |
| 2257 | $\begin{array}{lllll}77 & 52 & 49\end{array}$ | 79.82 | 4 | 3'11 | W857, T8601, $\mathrm{Ar}^{\text {8 }}$ 19, |
| 2258 | 97 II 31.0 | 67.79 | 4 | $3 \cdot 12$ | W 854, $\mathrm{L}_{8} 2774$. |
| 2259 | $58 \quad 30 \quad 4.9$ | 71.57 | 5 | 3.22 | W riogr. |
| 2260 | $96 \quad 56 \quad 2 \mathrm{I} \times 5$ | $73 \cdot 38$ | 5 | $3 \cdot 23$ | W 897, $\mathrm{Si}_{8}, \mathrm{~L}_{5} 2787$. |
| 2261 | 56 I 13.2 | $76 \cdot 55$ | 3 | 3.23 | W iror, Bn. |
| 2262 | $9140 \quad 53.3$ | 80.59 | 2 | 3.23 | $\mathrm{W}_{901}, \mathrm{Si}_{5} 1045, \mathrm{~L}_{1} 6317$. |
| 2263 | $91404 \mathrm{r} \cdot 8$ | 80.48 | 1 | 3.29 | W 918, $\mathrm{Si}_{5} \mathrm{I} 046, \mathrm{~L}_{1} 6326$. |
| 2264 | $\begin{array}{lllll}72 & 37 & 54.7\end{array}$ | $77 \cdot 76$ | 5 | $3 \cdot 29$ | Wrimi. |
| 2265 | $\begin{array}{llllll}\text { II } & 7 & 34 \%\end{array}$ | 71.54 | 1 | 3.30 | Oe $18623, \mathrm{~L}_{6}, \mathrm{Y}_{7936}$ |
| 2266 | $\begin{array}{lll}77 & 57 & 16 \cdot 8\end{array}$ | 7「55 | 10 | $3 \cdot 32$ | Ar 3831, Bn. [Gl 4592. |
| 2267 | $\begin{array}{llll}90 & 29 & 55 \%\end{array}$ | $70 \cdot 55$ | 4 | $3 \cdot 35$ | W $942, \mathrm{R} 6654, L_{1} 6337$, |
| 2268 | 58 II $40 \cdot 2$ | 69.80 | 5 | 3.41 |  |
| 2269 | $\begin{array}{llll}84 & 37 & 41.4\end{array}$ | 74.15 | 6 | 3.42 | Sp 6938, $\mathrm{L}_{\text {s }} 3547$. |
| 2270 |    <br> 8 31 47 | 78.59 | 4 | $3 \cdot 45$ |  |
| 2271 | $\begin{array}{lll}100 & 15 & 21.4\end{array}$ | 81.62 | I | 347 | W $970, \mathrm{Si}_{2}, \mathrm{Si}_{\mathrm{a}} 2060, \mathrm{Sp}$ |
| 2272 | $\begin{array}{llll}68 & 8 & 42 \cdot 1\end{array}$ | $70 \cdot 31$ | 5 | 3.51 | W $1188, \mathrm{Bn}$. |
| 2273 | $\begin{array}{llll}71 & 38 & 34.6\end{array}$ | 77.21 | 5 | 3.53 | R 6702, $\mathrm{L}_{6}$. [18593. |
| 2274 | 45142003 | $71 \times 5$ | I | 3.55 | W 1224, Ar $3850, \mathrm{Oe}$ |
| 2275 | $\begin{array}{llll}77 & 34 & 42.4\end{array}$ | 80.60 | 2 | $3 \cdot 57$ | $\mathrm{W}_{1009} \mathrm{~L}_{4} \mathrm{I} 087, \mathrm{Gl}_{4609}$ |
| 2276 | $\begin{array}{llll}63 & 28 & 13.3\end{array}$ | 74.61 | 5 | 3.57 | W 1218. |
| 2277 | $\begin{array}{llll}71 & 25 & 32.5\end{array}$ | 72.95 | 5 | 3.59 |  |
| 2278 | $48 \quad 43 \quad 37{ }^{\circ} \mathrm{O}$ | $71 \times 53$ | 1 | 3.63 | W $1257, \mathrm{RC}_{4053}$ |
| 2279 | $\begin{array}{lllll}73 & 13 & 32.2\end{array}$ | 80.30 | 4 | 3.63 | W 1241. |
| 2280 | $48 \quad 41 \quad 29^{\circ}$ | $7{ }^{2} 70$ | 7 | $3 \cdot 67$ | W $1276, \mathrm{RO}_{405} 8$. |
| 2281 | $\begin{array}{llll}79 & 29 & 38.5\end{array}$ | $76 \cdot 57$ | 2 | 3.68 | $\mathrm{L}_{4} 1103$. |
| 2282 | $\begin{array}{llll}46 & 34 & 26 \cdot 6\end{array}$ | 67.65 | 2 | $3 \cdot 71$ | W $129 \mathrm{I}, \mathrm{RO} 4063$. |
| 2283 | $\begin{array}{llll}91 & 7 & 13.2\end{array}$ | 73.53 | 5 | $3 \cdot 72$ | See Notes. [Y 7985. |
| 2284 | $\begin{array}{llll}96 & 5 & 29\end{array}$ | 67.53 | 1 | 3'74 | Wrio58, $\operatorname{Ar}_{3} 857, \mathrm{~L}_{\mathrm{a}} 2844$, |
| 2285 | $\begin{array}{llll}58 & 22 & 497\end{array}$ | 76.19 | 5 | $3 \cdot 76$ | R 675 I . |
| 2286 | 89 I8 $81 \times 5$ | 68.28 | 5 | 3.76 | Sp 6972, L 6392. |
| 2287 | $\begin{array}{llll}75 & 28 & 53.5\end{array}$ | 72.01 | 5 | 3.78 |  |
| 2288 | $\begin{array}{llll}68 & 58 & \text { 21.2 }\end{array}$ | 77.60 | 3 | 3779 | W 1302, PM 2167. Wiog6, $\mathrm{L}_{4} \mathrm{II} 18, \mathrm{Gl}_{4} 62 \mathrm{I}$. |
| 2289 2290 | $\begin{array}{rrrr}79 & 31 & 34.3 \\ 79 & 10 & 6.4\end{array}$ | 80.61 69.87 | 4 | 3.83 3.90 | Wiog6, $\mathrm{L}_{4} \mathrm{II} 18$, Gl4621. $\mathrm{W}_{1115}, \mathrm{PM}_{2170} \mathrm{~L}_{4} 1122$. |
| 2291 | $\begin{array}{llll}66 & 2 & 15 \% 7\end{array}$ | 70'14 | 2 | 3.93 | R 6772. |
| 2292 | 76 10 55'9 | 69.88 | 6 | 4.02 | W II52, Gl 4629. |
| 2293 | $\begin{array}{llll}55 & 45 & \text { I2 } 21\end{array}$ | 77.23 | 3 | 4.04 | W 1398. [2073, Y 8002. |
| 2294 | $\begin{array}{lllll}11 & 30 & 36.5\end{array}$ | 67.54 | 2 | 4.04 | T 8674, Ar 3873, ${ }^{\text {N 7 }}$ 7r |
| 2295 | $\begin{array}{lllllllllll}61 & 21 & 52 \cdot 6\end{array}$ | 70.96 | 5 | -4.06 | W.i40I, R 6795. |


| No. | Lalande. | Mag. | Mean R.A. $1875 \cdot 0$. |  |  | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2296 | 35205 | $8 \cdot 2$ | $18^{\text {h }}$ |  | 5*53 | 71'57 | 1 | +2.357 |
| 2297 | 35204 | 77 | 18 | 47 | 10.16 | 79.59 | 5 | 2.437 |
| 2298 | 35222 | $6 \cdot 3$ | 18 | 47 | 12.87 | $72 \cdot 61$ | 5 | 2.108 |
| 2299 | 35203 | 7.6 | 18 | 47 | 33.33 | $78 \cdot 5$ | 7 | $2 \cdot 853$ |
| 2300 | 35238 | 7.5 | 18 | 47 | 42'15 | $80 \cdot 61$ | I | 2.073 |
| 2301 | 35236 | $7{ }^{\circ}$ | 18 | 48 | 27.03 | 78.94 | 3 | 2.725 |
| 2302 | 35237 | $7 \cdot 5$ | 18 | 48 | $39 \cdot 66$ | 79.07 | 2 | 2.853 |
| 2303 | 35271 | 7.0 | 18 | 49 | $8 \cdot 55$ | $75 \cdot 19$ | 5 | $2 \cdot 718$ |
| 2304 | 35279 | $6 \cdot 5$ | 18 | 49 | $9 \cdot 64$ | 65.27 | 4 | $2 \cdot 585$ |
| 2305 | 35297 | $6 \cdot 2$ | 18 | 49 | 15.02 | 69.00 | 5 | $2 \cdot 385$ |
| 2306 | 35284 | $7{ }^{\circ}$ | 18 | 49 | 41*46 | 73.78 | 5 | 2.912 |
| 2307 | 35303 | $6 \cdot 5$ | 18 | 49 | $47 \cdot 28$ | $77 \cdot 00$ | 5 | $2 \cdot 741$ |
| 2308 | 35281 | $6 \cdot 5$ | 18 | 49 | 53'19 | $80 \cdot 24$ | 3 | $3 \cdot 117$ |
| 2309 | 35334 | $4^{\circ} 0$ | 18 | 50 | 0.14 | $70 \cdot 31$ | 4 | 2.980 |
| 2310 | 35332 | $7 \cdot 5$ | 18 | 50 | 5\%6 | 71.16 | 5 | $2 \cdot 289$ |
| 2311 | 35329 | $7{ }^{\circ}$ | 18 | 50 | 32.25 | $80 \cdot 60$ | 2 | $2 \cdot 652$ |
| 2312 | 35392 | $5 \cdot 5$ | 18 | 50 | 51.92 | 77.95 | 5 | 1.921 |
| 2313 | 35416 | $7{ }^{\circ}$ | 18 | 51 | $37 \cdot 36$ | 72.18 | 5 | 1.903 |
| 2314 | 35407 | $7 \cdot 5$ | 18 | 52 | 2.88 | 78.01 | 5 | 2.439 |
| 2315 | 35384 | 7.5 | 18 | 52 | I5.20 | 8I•58 |  | 3.184 |
| 2316 | 35395 | $6 \cdot 8$ | 18 | 52 | 16.92 | $70 \cdot 31$ | 5 | 2.934 |
| 2317 | 3542 I | $5 \cdot 8$ | 18 | 52 | $40 \cdot 87$ | $70 \cdot 80$ | 5 | 2.669 |
| 2318 | 3546 I | $7 \cdot 6$ | 18 | 52 | 52.12 | 76.21 | 5 | 2.032 |
| 2319 | 35452 | $8 \cdot 0$ | 18 | 52 | 54. |  |  | 2.233 |
| 2320 | 35440 | 7.5 | 18 | 53 | 2.91 | $80 \cdot 07$ | 2 | 2.478 |
| 2321 |  | $8 \cdot 5$ | 18 | 53 | $9^{\circ}$ |  |  | 2.232 |
| 2322 | 35445 | $5 \cdot 8$ | 18 | 53 | 18.88 | 73.41 | 5 | 2.608 |
| 2323 | 35434 | $6 \cdot 5$ | 18 | 53 | 21.92 | 74.78 | 5 | $2 \cdot 844$ |
| 2324 | 35488 | $6 \cdot 8$ | 18 | 53 | $59 \cdot 80$ | 69.85 | 4 | 2.321 |
| 2325 | 35476 | $6 \cdot 6$ | 18 | 54 | $6 \cdot 19$ | $79 \cdot 59$ | 2 | $2 \cdot 697$ |
| 2326 | 35472 | 7.5 | 18 | 54 | 32.52 | $7 \mathrm{I} \cdot 8 \mathrm{I}$ | 4 | 3•177 |
| 2327 | 35511 | $5 \cdot 8$ | 18 | 54 | $39 \cdot 84$ | $68 \cdot 36$ | 5 | 2.437 |
| 2328 | 35507 | $6 \cdot 5$ | 18 | 54 | 41.94 | $76 \cdot 00$ | 5 | 2.531 |
| 2329 | 35590 | $7 \cdot 5$ | 18 | 55 | $32 \cdot 64$ | 76.99 | 5 | 1.869 |
| 2330 | 35497 | 6.4 | 18 | 55 | $42 \cdot 99$ | 74.99 | 7 | 3.530 |
| 2331 | 35578 | $7^{\circ} 0$ | 18 | 55 | 47'73 | $74^{20}$ | 5 | 2.211 |
| 2332 | 35561 | $6 \cdot 7$ | 18 | 55 | 56.84 | $70 \cdot 57$ | 5 | $2 \cdot 565$ |
| 2333 | 35584 | $6 \cdot 2$ | 18 | 56 | 12.58 | 68.11 | 5 | 2.436 |
| 2334 | 35604 | $6 \cdot 8$ | 18 | 56 | 18.64 | 74.08 | 4 | 2.210 |
| 2335 | 35562 | $6 \cdot 5$ | 18 | 56 | $20 \cdot 77$ | 79'17 | 5 | $2 \cdot 885$ |
| 2336 | 35680 | $4 \cdot 8$ | 18 | 57 | 491 | 80.55 | 1 | 1.508 |
| 2337 | 35598 | 6.0 | 18 | 57 | 12.78 | 72.02 | 5 | 3.035 |
| 2338 | 35707 | $5 \cdot 5$ | 18 | 57 | 54.14 | $66 \cdot 94$ | 5 | 1.696 |
| 2339 | 35655 | $6 \cdot 8$ | 18 | 58 | 0.20 | $75 \cdot 82$ | 4 | 2.674 |
| 2340 | 35673 | 73 | 18 | $5^{8}$ | 11.47 | 72.56 | 3 | $+2.451$ |


| No. | Mean N.P.D. $1875{ }^{\circ} 0$. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2296 | $6 \mathrm{I}^{\circ} 22^{\prime} 50^{\prime \prime} \cdot 2$ | 71.57 | I | -4.09 | W 1413. |
| 2297 | $\begin{array}{lll}64 & 7 & 237\end{array}$ | 79.59 | 5 | 4.10 |  |
| 2298 | $\begin{array}{lllll}53 & 36 & 35\end{array}$ | $72 \cdot 61$ | 5 | 4'10 | W 1418. |
| 2299 | 8029 36.0 | 78.59 | 7 | 413 | $\mathrm{W}_{1186, \mathrm{~L}_{4} \mathrm{II} 48, \mathrm{Gl} 4632 .}$ |
| 2300 | $\begin{array}{llll}52 & 38 & 0.9\end{array}$ | $80 \cdot 61$ | I | $4^{*} 14$ |  |
| ${ }^{2} 301$ | $\begin{array}{llll}75 & 8 & 49 \\ \end{array}$ | 78.94 | 3 | 4.21 | W 1444, $\mathrm{L}_{4} \mathrm{II} 58$. |
| 2302 | $\begin{array}{llll}80 & 28 & 79\end{array}$ | 79.07 | 2 | 4.23 | W 1213, Sp 7030, $L_{4}$ |
| 2303 | $\begin{array}{lllll}74 & 48 & 48.9\end{array}$ | 75'19 | 5 | $4 \cdot 26$ | W $1469 . \quad[1160$. |
| 2304 | $\begin{array}{lllll}69 & 32 & 26.5\end{array}$ | 69.07 | 6 | 4.27 |  |
| 2305 | $\begin{array}{llll}62 & 14 & 36 \cdot 5\end{array}$ | 70.04 | 5 | $4 \cdot 28$ | W 1489. |
| 2306 | $\begin{array}{llll}82 & 58 & 554\end{array}$ | 73.78 | 5 | 431 | See Notes. |
| 2307 | $\begin{array}{llll}75 & 46 & 21 \cdot 6\end{array}$ | 77.00 | 5 | 432 | W $125 \mathrm{I}, \mathrm{R} 6855, \mathrm{Bn}, \mathrm{GH}$ |
| ${ }^{2} 308$ | $\begin{array}{llll}91 & 57 & 33.5\end{array}$ | $80 \cdot 24$ | 3 | 4.33 | Bn, L $6465 . \quad$ [ 4646. |
| ${ }^{2} 309$ | $\begin{array}{lllll}85 & 57 & 26 \cdot 3\end{array}$ | 7031 | 4 | 4.34 | W $1252, \mathrm{~T} 8701$, R 6858, |
| 2310 | 59 - $3^{8 \cdot 7}$ | 71'16 | 5 | 435 | [L3715, Y 803 I . |
| 2311 | $\begin{array}{llll}72 & 9 & 54 \cdot 1\end{array}$ | $80 \cdot 60$ | 2 | 439 | W 1522, R 6868. |
| 2312 | $\begin{array}{llll}48 & 33 & 23 \cdot 8\end{array}$ | 77.95 | 5 | 4.41 | W $155 \mathrm{I}, \mathrm{T}_{2}, \mathrm{RO}_{4} 125$. |
| 2313 | $\begin{array}{llll}48 & 6 & 9 \cdot 3\end{array}$ | $72 \cdot 18$ | 5 | 4.48 | W $1583, \mathrm{Bn}$. |
| 2314 | $64 \quad 4 \quad 7{ }^{6}$ | 78.01 8.58 | 5 | 4.51 |  |
| 2315 | $\begin{array}{lllll}94 & 53 & 37 \%\end{array}$ | 81.58 | I | 4.53 | $\mathrm{W}_{1297}, \mathrm{Si}_{2}, \mathrm{~L}_{8} 2955, \mathrm{Gl}$ |
| 2316 | $83 \quad 55 \quad 2 \mathrm{I} \cdot 8$ | 70.35 | 6 | $4 \times 33$ |  |
| 2317 | $\begin{array}{llll}72 & 48 & 20.2\end{array}$ | $70 \cdot 80$ | 5 | $4 \cdot 57$ | W 1593 . |
| 2318 | $\begin{array}{llll}51 & 22 & 0.8\end{array}$ | 76.21 | 5 | 459 |  |
| 2319 | 57 10 $37{ }^{\circ}$ | $59^{\prime} 59$ | 4 | 4.59 | Ar 3909. |
| 2320 | $\begin{array}{lllll}65 & 27 & 30 \%\end{array}$ | 80.07 | 2 | 4.60 |  |
| 232 I | $\begin{array}{llll}57 & 15 & 26 \cdot 3\end{array}$ | 64.86 | 4 | 4.61 | Ar 3911. |
| 2322 | $70 \quad 22 \quad 26 \cdot 1$ | 73.41 | 5 | $4 \cdot 62$ | W 1610. |
| 2323 | 80 I 4 4.8 | $74 \cdot 78$ | 5 | 4.63 | W 1329, $\mathrm{L}_{4} 1195, \mathrm{Gl}$ |
| 2324 | $\begin{array}{llll}59 & 59 & 45 \%\end{array}$ | $70 \cdot 54$ | 3 | 4.68 | 4666. |
| 2325 | $\begin{array}{lllll}73 & 54 & 52 \cdot 8\end{array}$ | 79.59 | 2 | $4 \cdot 69$ | R 6933. |
| 2326 | $\begin{array}{llll}94 & 36 & 474\end{array}$ | $70 \cdot 34$ | 6 | $4 \cdot 73$ | W ${ }_{1355}, \mathrm{Si}_{2,} \mathrm{R} 6936, \mathrm{Sp}$ |
| 2327 | $\begin{array}{lllll}63 & 56 & 27 \cdot 1\end{array}$ | $70 \cdot 31$ | 5 | 4.74 | W [7092, L $\mathrm{L}_{3} 2987$. |
| ${ }^{2} 328$ | $\begin{array}{llll}67 & 21 & 29.5\end{array}$ | $76 \cdot 00$ | 5 | 4.74 | W 1660, $\mathrm{I}_{6}$. |
| 2329 | $47 \quad 935{ }^{\circ}$ | $76 \cdot 99$ | 5 | $4 \cdot 81$ |  |
| 2330 | $10925 \quad 26.6$ | $76 \cdot 90$ | 6 | $4 \cdot 82$ | Y 8087. |
| 2331 | $\begin{array}{llllllllllll}56 & 25 & 57\end{array}$ | 74.20 | 5 | $4 \cdot 83$ | W 1715 |
| 2332 | $\begin{array}{llll}68 & 39 & 43 \cdot 6\end{array}$ | $70 \cdot 57$ | 5 | 484 | R 6970. |
| 2333 | $63 \quad 53$ 5*6 | 69.05 | 4 | 487 | W 1721. |
| 2334 | $\begin{array}{llll}56 & 22 & 26.9\end{array}$ | 74.08 | $\pm$ | 4.88 |  |
| 2335 | $8 \mathrm{8r} 48 \begin{array}{lll} & 18 \cdot 1\end{array}$ | $79^{17}$ | 5 | $4 \cdot 88$ | W $1408, \mathrm{~L}_{2} 38 \mathrm{I}_{9}, \mathrm{Gl}_{4} 685$. |
| 2336 | $\begin{array}{llll}39 & 38 & 34\end{array}$ | $80 \cdot 55$ | I | 4.94 | Oe 18838. |
| 2337 | 88 21 $36 \cdot 6$ | 72.02 | 5 | 4.95 | W i431, L 6545. |
| 2338 | $\begin{array}{llll}43 & 14 & 28.4\end{array}$ | 68.94 | 5 | 5.01 | Oe 18849 , RC 4171 |
| 2339 | $\begin{array}{lll}72 & 54 & 1\end{array}$ | 75.82 | 4 | 5.02 | W I773, R 7014. |
| 2340 | $64 \begin{array}{lll}41 & 213\end{array}$ | 72.56 | 3 | -5.04 |  |



| No. | Mean N.P.D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2341 | $72^{\circ} 37^{\prime} 49^{\prime \prime} \cdot 6$ | $78 \cdot 62$ | 4 | - 5'.07 | W 1796. |
| 2342 | 9 I 4 I 56.0 | 71.64 | 6 | 5.09 | R 703I, $\mathrm{L}_{1} 6575$. |
| 2343 | $\begin{array}{lll}74 & 27 & 0.8\end{array}$ | 73.04 | 4 | $5 \cdot 12$ | W 1817. [10383. |
| 2344 | 1124159 | $62 \cdot 16$ | 2 | 5•14 | Ar 3931, Oe r9069, St |
| 2345 | $\begin{array}{lll}64 & 24 & 0 \cdot 5\end{array}$ | $75 \cdot 06$ | 2 | $5 \cdot 16$ |  |
| 2346 | $\begin{array}{lll}58 & 26 & 27.2\end{array}$ | $76 \cdot 09$ | 4 | 5.21 | W $1868, \mathrm{~T}_{2}$ |
| 2347 | $60 \quad 16 \quad 3 \cdot 6$ | 70.87 | 3 | $5{ }^{\circ} 7$ | W 1885 , Ar 3938, Bn |
| 2348 | $\begin{array}{llll}67 & 17 & 59.6\end{array}$ | $76 \cdot 57$ | 5 | $5 \cdot 30$ | W $1895, \mathrm{R} 7078$, $\mathrm{L}_{6}$. |
| 2349 | то3 9 т 3 | $80 \cdot 54$ | 1 | $5 \cdot 31$ | W $\mathrm{I}_{1547}$, Sifi4 $1709 . \mathrm{L}_{5} 2683, \mathrm{Y}$ |
| 2350 | 68 I $3 \cdot 2$ | 74.6 | 5 | 532 |  |
| 2351 | 83 I2 $35^{\prime}$ I | 72.30 | 6 | $53^{2}$ | Bn, L $\mathrm{L}_{2} 3920$. |
| 2352 | $88 \quad 53 \quad 45^{\circ} 2$ | 71'16 | 5 | $5 \cdot 35$ |  |
| 2353 | $694546 \cdot 0$ | $78 \cdot 37$ | 4 | $5 \cdot 36$ | See Notes. [4707. |
| 2354 | $\begin{array}{lll}73 & 54 & 149\end{array}$ | 80.58 | 2 | $5 \cdot 36$ | W i9i9, R 709 I . |
| 2355 | $\begin{array}{llll}73 & \text { I9 } & 54\end{array}$ | $76 \cdot 61$ | 8 | $5 \cdot 39$ | See Notes. |
| 2356 | $\begin{array}{llll}70 & 19 & 53.8\end{array}$ | 70.99 | 5 | $5 \cdot 39$ | R 7 I02, $L_{6}$. |
| 2357 | 1095956.2 | 67.80 | 4 | $5 \cdot 39$ | T 8793, Ar 3945, Oe |
| 2358 | 5548 II•I | 69.07 | 6 | $5 \cdot 44$ | W 38. [19165, Y 8 I60. |
| 2359 | $73{ }^{7} 20034 \%$ | 80.61 | 3 | $5 \cdot 45$ | W 29, R 7 İ6. |
| 2360 | $\begin{array}{lll}78 & 54 & 144\end{array}$ | $77^{\circ} 00$ | 5 | $5 \cdot 45$ | $L_{4} \mathrm{I} 266$. |
| 2361 | 66 I $6 \cdot 0$ | $78 \cdot 55$ | 4 | $5 \cdot 48$ | W 49, R 7121. |
| 2362 | $\begin{array}{llll}90 & 37 & 38 \cdot 3\end{array}$ | 74.63 | 4 | $5 \cdot 48$ | See Notes. |
| . 2363 | $51 \quad 2 \quad 367$ | $65 \cdot 73$ | 1 | $5 \cdot 52$ | W 78, T 88ir, Ar 396 i. |
| 2364 | $59 \quad 53 \quad 5 \mathrm{I} \cdot 2$ | $70 \cdot 51$ | 5 | $5 \cdot 53$ | Ar 3960. |
| ${ }^{2} 365$ | $\begin{array}{llll}46 & 13 & 52 \cdot 2\end{array}$ | $71 \times 00$ | 3 | $5 \cdot 54$ | W91. |
| 2366 | $\begin{array}{llll}55 & 36 & 247\end{array}$ | $68 \cdot 05$ | 2 | $5 \cdot 57$ |  |
| 2367 | 55 | $70 \cdot 33$ | 4 | $5 \cdot 57$ | PM 2246. |
| 2368 | 79 51 $23 \cdot 8$ | 77.99 | 5 | 5.60 | See Notes. $\quad[\mathrm{Gl} 4725$. |
| 2369 | $85 \quad$ 1 25.6 | 73.13 | 4 | 5.60 | $W_{6}, \mathrm{Si}_{1}, \mathrm{R}_{7} \mathrm{I} 43, \mathrm{~L}_{2} 3973$ |
| 2370 | $69 \quad 53.5$ | $76 \cdot 21$ | 5 | 5'64 | Wiit, R 7 I56. |
| 2371 | $54 \quad 3{ }^{52} \quad 30^{\circ} 0$ | 72.61 | 5 | $5 \cdot 65$ | $\mathrm{W}_{123} 2 \cdot\left[\mathrm{~L}_{1} 665 \mathrm{I}, \mathrm{G}\right]_{4728}{ }^{\text {c }}$ |
| 2372 | 8735009 | 80.11 | 2 | 5.68 | W85, PM $2249, \mathrm{Sp} 7$ 197, |
| 2373 | $9^{8} 8848 \cdot 1$ | $8 \mathrm{I} \cdot 64$ | 1 | 5.6.9 | R $7159, L_{3} 3098, \mathrm{Y} 8$ 18ı, |
| 2374 | 63 488 $6^{62 \cdot 4}$ | 71.22 | 6 | $5{ }^{\prime} 72$ | Bn. [St IO433. |
| 2375 | $\begin{array}{llll}63 & 55 & 39 \cdot 8\end{array}$ | 74.88 | 4 | 5'74 | W 159. |
| 2376 | $\begin{array}{lll}63 & 57 & 27 \%\end{array}$ | 79.01 | 6 | $5 \times 75$ 5.76 | $W_{165}, \mathrm{PM}_{2250}$ |
| 2377 | $\begin{array}{lll}4 & 25 & 49\end{array}$ | 69.76 | 5 | $5 \cdot 76$ $5 \cdot 77$ | RC 4217. <br> W 170 |
| 2378 | $\begin{array}{lll}73 & 21 & 43 \cdot 8 \\ 68 & 39 & 16 \cdot 9\end{array}$ | 74.35 81.20 | 4 | 5.77 5.80 | W 170. <br> T, GI 4738. |
| 2379 | $\begin{array}{lll}68 & 39 & \text { I } 6 \cdot 9 \\ 84 & 41 & 419\end{array}$ | 81.20 70.05 | 3 | 5.80 5.83 | $\mathrm{T}_{2}, \text { GI } 4738$ <br> W $145, \mathrm{Bn}, \mathrm{L}_{2} 4020$. |
| 2380 | 84 4I 419 | 70.95 | 5 | $5 \cdot 83$ | W I45, Bn, L 24020. <br> [ $317, G] 4744$. |
| 2381 | $78 \quad 30 \quad 20$ | $80 \cdot 36$ | 4 | $5 \cdot 88$ | Wi68, $\mathrm{R}_{7217, \mathrm{Sp}_{2} 229, \mathrm{~L}_{4}}$ |
| 2382 | 50 | $58 \cdot 84$ | 5 | $5 \cdot 91$ | $\text { W 232, Ar } 3981$ |
| 2383 | $84 \quad 9 \quad 56 \% 7$ | 78.81 | 5 | $5 \cdot 91$ | W i 69, Bn, $\mathrm{L}_{2} 4036$, G1 |
| 2384 | $42 \quad 50 \quad 8 \cdot 7$ | 70.80 | 5 | $5 \cdot 92$ | \4746. |
| 2385 | $\begin{array}{lll}64 & 27 & 15 \%\end{array}$ | 72.47 | 6 | $-5.93$ |  |


| No. | Lalande. | Mag. | Mean R.A. 1875.0. |  |  | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2386 | 36160 | 7.8 | $19^{\text {h }}$ |  | $46^{\text {a }} 42$ | 75.58 | 6 | - $2^{8.895}$ |
| 2387 | 36199 | 7.4 | 19 |  | 8.77 | $76 \cdot 40$ | 5 | 2.482 |
| 2388 | 36173 | $8 \cdot 0$ | 19 |  | 27.91 | 76.03 | 5 | 3.273 |
| 2389 | 36207 | $6 \cdot 1$ | 19 |  | $38 \cdot 31$ | 70.83 | 4 | $2 \cdot 733$ |
| 2390 | 36237 | 6.3 | 19 |  | $2 \cdot 15$ | $80 \cdot 61$ | 3 | 2.650 |
| 2391 | 36282 | $5 \cdot 8$ | 19 | 10 | 33.14 | $72 \cdot 60$ | 3 | 2327 |
| 2392 | 36268 | 5.9 | 19 |  | $43 \cdot 38$ | 78.56 | 2 | $2 \cdot 747$ |
| 2393 | 36271 | $7^{\circ} 0$ | 19 |  | 35.31 | 75.95 | 3 | 3.408 |
| 2394 | 36353 | 6.1 | 19 | 12 | 26.26 | 67.78 | 5 | 2.537 |
| 2395 | 36409 | 6.7 | 19 |  | 375 | 71.80 | 5 | 2.048 |
| 2396 | 36447 | $5 \cdot 5$ | 19 | 13 | $49 \cdot 37$ | $76 \cdot 21$ | 5 | 2'799 |
| 2397 | 36385 | $7{ }^{\circ}$ | 19 | 13 | 58.43 | $80 \cdot 20$ | 5 | 3.106 |
| 2398 | 36432 | 6.7 | 19 | 14 | 2.24 | 71.28 |  | 2.426 |
| 2399 | 36435 | $7 \cdot 2$ | 19 | 14 | 6.25 | $77 \cdot 20$ | 5 | ${ }^{2.434}$ |
| 2.400 | 36376 | $7^{\circ}$ | 19 | It | 17. |  |  | 3.520 |
| 2401 | 36461 | 6.8 | 19 | 14 | 23.01 | 73.23 | 5 | 2.244 |
| 2402 | 36.428 | $7 \cdot 8$ | 19 | 14 | $32 \cdot 34$ | 71.89 | 4 | $2 \cdot 860$ |
| 2403 | 36.478 | 6.2 | 19 | 14 | 37.03 | 69.76 | 5 | $2 \cdot 110$ |
| 2404 | 36466 | 8.0 | 19 | 14 | 59.83 | 79.55 | 2 | 2.640 |
| 2405 | 36499 | 6.8 | 19 |  | 29.39 | 79.6 I | 2 | $2 \cdot 639$ |
| 2406 | 36474 | $7{ }^{\circ}$ | 19 | 15 | 39.53 | $71 \times 19$ |  | 2.284 |
| 2407 | 36489 | $5^{\circ}$ | 19 | 15 | 55.75 | 67.90 | 6 | 3.083 |
| 2408 | 36540 | $7{ }^{\circ}$ | 19 | 16 | 18.62 | 72.45 | 7 | 2.474 |
| 2409 | 36502 | $7{ }^{\circ}$ | 19 | 16 | 19.37 | 8I'I4 | 4 | 3.242 |
| 2.410 | $3^{6} 549$ | 7.5 | 19 |  | 29.88 | $73^{\circ 11}$ | 4 | 2.474 |
| 2.111 | 36574 | 7.5 | 19 | 16 | $42^{\prime} 95$ | $75 \cdot 96$ | 3 | $2 \cdot 268$ |
| 2412 | 36570 | $7 \cdot 2$ | 19 | 16 | $46 \cdot 87$ | $77 \cdot 60$ | 5 | 2.352 |
| 2413 | 36542 | 6.5 | 19 | 16 | 51•16 | $70 \cdot 85$ | 4 | 2857 |
| 2414 | 36532 | 77 | 19 |  | $52 \cdot 15$ | $80 \cdot 62$ | 1 | $2 \cdot 887$ |
| 2415 | 36578 | 6.5 | 19 |  | 25.67 | 75.80 | 5 | $2 \cdot 742$ |
| 2416 | 36572 | 7 '5 | 19 | 17 | $38 \cdot 16$ | 80.92 | 3 | 2.886 |
| 2417 | 36654 | 6.7 | 19 | 18 | 16.98 | $77 \cdot 80$ | 4 | 2.111 |
| 2418 | 36594 | $7{ }^{\circ}$ | 19 |  | $23 \cdot 38$ | $73 \cdot 12$ | 4 | 3.185 |
| 2419 | 36663 | 6.9 | 19 | 18 | 50.95 | $70 \cdot 07$ | 6 | $2 \cdot 256$ |
| 2420 | 36685 | 75 | 19 | 19 | 13.38 | $77 \cdot 65$ | 2 | $2 \cdot 271$ |
| 2421 | 36683 | $7{ }^{\circ}$ | 19 | 19 | 2129 | 71.62 | 5 | $2 \cdot 408$ |
| 2422 | 36666 | 8.0 | 19 | 20 | 23.51 | $70^{\prime} 70$ | I | $3 \cdot 495$ |
| 2423 | 36747 | $8 \cdot 0$ | 19 | 20 | $46 \cdot 37$ | 80.61 | 1 | 2492 |
| 2424 | 36688 | $6 \cdot 5$ | 19 | 20 | 48.90 | 73.00 | 3 | 3.495 |
| 2425 | 36741 | 72 | 19 | 21 | $5 \cdot 57$ | 79.60 | 5 | 2.810 |
| 2426 | 36769 | 73 | 19 | 21 | 22.00 | 77.21 | 5 | 2.58 r |
| 2427 | 36719 | 7.5 | 19 | 21 | 28. |  |  | $3 \cdot 417$ |
| 2428 | 36785 | 7.8 | 19 | 21 | 28.69 | 72.44 | 5 | $2{ }^{4} 431$ |
| 2429 | 36751 | 7.8 | 19 | 21 | $33^{\circ} 24$ | $77 \cdot 80$ | 5 | 3.030 |
| 2430 | 36781 | 6.0 | 19 | 21 | $48 \cdot 95$ | 7559 | 5 | +2759 |




| No. | Mean N.P.D. 1875.0 | Epoch. | Obs. | Ann. Prec. | Authorities |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 243 I | $77^{\circ} 45^{\prime} 49^{\prime \prime} \cdot 0$ | 81.39 | 4 | $7{ }^{\prime \prime} \cdot 01$ | $\mathrm{W}_{512}, \mathrm{Sp} 734 \dot{4}, \mathrm{~L}_{4} \mathrm{I} 427$, |
| 2432 | $\begin{array}{lll}71 & 57 & 18 \cdot 2\end{array}$ | 73.39 | 5 | 7'01 | R 7467, $\mathrm{L}_{6}$. [Gl 4794. |
| 2433 | $\begin{array}{llll}72 & 24 & 189\end{array}$ | 69.94 | 5 | 7.07 | W 654, R 7478. |
| 2434 | $81 \quad 23 \quad 24.7$ | 76.15 | 2 | $7 \times 7$ | See Notes. $\quad\left[\mathrm{L}_{5} 2865\right.$. |
| 2435 | $\begin{array}{ll}102 & 54\end{array}$ | $80 \cdot 58$ | I | 7.07 | $\mathrm{W}_{520} \mathrm{Si}_{4} \mathrm{I} 743, \mathrm{Sp} 735^{2}$, |
| 2436 | 97 I7 57'1 | 72.84 | 5 | 7.08 | $\mathrm{W}_{522}, \mathrm{Si}_{2,} \mathrm{Bn}, \mathrm{L}_{3} 3260$. |
| 2437 | 90 ○ 31.2 | $70 \cdot 60$ | 5 | 7'10 | Sp 7356, L1 6854. |
| 2438 | $\begin{array}{lll}77 & 47 & 54\end{array}$ | 80.48 | 1 | 7-12 | W 545. |
| 2439 | $52 \quad 18 \quad 443$ | $71 \times 6$ | 2 | $7 \times 12$ |  |
| 2440 | $65 \quad 15 \quad 32.4$ | 69.04 | 5 | $7 \cdot 12$ | R 7493, Ar 4073. [4290, Gl 48io. |
| 2441 | $\begin{array}{llll}86 & 48 & 533\end{array}$ | $7 \mathrm{I} \cdot 84$ | 5 | $7{ }^{72} 1$ | $\mathrm{W}_{573}, \mathrm{Si}_{1}, \mathrm{Sp} 7376, \mathrm{~L}_{2}$ |
| 2442 | $\begin{array}{llll}67 & 33 & 7 \cdot 6\end{array}$ | 80.09 | 4 | $7 \cdot 23$ | R 7500. |
| 2443 | $\begin{array}{llll}77 & 26 & 29\end{array}$ | 80.64 | 2 | $7 \cdot 24$ | $\mathrm{Bn}, \mathrm{Sp} 73^{81}, \mathrm{~L}_{4} \mathrm{I} 458$. |
| 2444 | $\begin{array}{llll}73 & 32 & 55\end{array}$ | 77.27 | 6 | $7 \cdot 25$ | W 717. |
| 2445 | $723354{ }^{7}$ | 75.6I | 5 | $7 \cdot 25$ | W 719. |
| 2446 | $\begin{array}{lll}73 & 27 & 30 \%\end{array}$ | 77.88 | 4 | $7 \cdot 26$ | W 724, $\mathrm{Bn}, \mathrm{L}_{8}$. |
| 2447 | $84 \quad 2938 \cdot 1$ | 72.65 | 5 | 731 | W 608, $\mathrm{L}_{2} 43 \mathrm{I} 3, \mathrm{GI}_{48 \mathrm{l}} 8$. |
| 2448 | $56 \quad 31 \quad 52 \cdot 2$ | 69.59 | 6 | $7 \cdot 32$ |  |
| 2449 | 72 I8 1903 | 81.32 | 3 | 7.35 | $\mathrm{W}_{757}$, R 7552. |
| 2450 | $80 \quad 26 \quad 30 \cdot 8$ | $78 \cdot 60$ | 4 | 737 | $\mathrm{L}_{4} 1475$. |
| 2451 | 80 | 74.6I | 5 | 737 | $\mathrm{L}_{4} 1476$. |
| 2452 | $63 \quad 38489$ | 73.38 | 4 | $7 \cdot 37$ | W 770, R 7564. |
| 2453 | $\begin{array}{llll}56 & 47 & 317\end{array}$ | 79.62 | 2 | 739 | W 783. |
| 2454 | 95 ○ 34*0 | $70 \cdot 56$ | 4 | 742 | W 646, R, $\mathrm{Si}_{2}, \mathrm{~L}_{3} 3306$. |
| 2455 | $84 \quad 48$ 6.0 | 68.12 | 6 | $7 \cdot 48$ | W 668, Bn, $\mathrm{L}_{2} 4359$. |
| 2456 | $\begin{array}{lll}68 & 25 & 14\end{array}$ | 72.64 | 5 | $7{ }^{\prime} 5$ | W 8i6. |
| 2457 | $\begin{array}{lll}59 & 1 & 54.5\end{array}$ | 70.61 | 5 | 752 | [19736, $\mathrm{L}_{6}$ |
| 2458 | $11334 \begin{array}{ll}19 & 327\end{array}$ | 66.96 | 3 | $7 \cdot 52$ | T 8990, Ar 4095, Oe |
| 2459 | $\begin{array}{llll}66 & 46 & 15 \cdot 6\end{array}$ | $76 \cdot 42$ | 5 | 752 | Bn. |
| 2460 | 79 33 27 | $77 \times 94$ | 3 | 755 | $L_{4} \mathrm{I}_{5} \mathrm{O}_{3}$. |
| 2461 | $\begin{array}{lll}79 & \text { I9 } & 6.4\end{array}$ | 76.21 | 5 | 757 | [7438, $\mathrm{L}_{\mathbf{3}} 3324$. |
| 2462 | $97 \quad 43 \quad 51 \cdot 2$ | 71.60 | 5 | 757 | W 689, 6 yr 1270 , Sp |
| 2463 | $\begin{array}{llll}61 & 7 & \text { II4 }\end{array}$ | 74*10 | 4 | $7 \cdot 65$ | W 882 . |
| 2464 | $\begin{array}{llll}74 & 39 & 477\end{array}$ | $7 \mathrm{I} \cdot 60$ | 5 | 7.66 | R $7638, \mathrm{~L}_{6}$. |
| 2465 | $\begin{array}{llll}68 & 6 & 53.3\end{array}$ | $78 \cdot 82$ | 5 | $7 \cdot 66$ | R 7643, $\mathrm{L}_{6}$. |
| 2466 | $48 \quad 20 \quad 42 \cdot 2$ | 72.23 | 5 | $7 \cdot 69$ |  |
| 2467 | $\begin{array}{lll}79 & 7 & 314\end{array}$ | 8I.16 | 2 | $7 \cdot 69$ | $\mathrm{L}_{4} \mathrm{I}_{5} \mathrm{I} 9$. |
| 2468 | $55 \quad 35$ 13.0 | $68 \cdot 24$ | 5 | 773 | W 933. |
| 2469 | 79 ○ 513 | 77*19 | 5 | 775 | $\mathrm{W}_{7} 60, \mathrm{~L}_{4} \mathrm{I} 533, \mathrm{Gl}_{4853}{ }^{\text {c }}$ |
| 2470 | $\begin{array}{lll}94 & 55 & 29 \cdot 6\end{array}$ | $80 \cdot 63$ | 4 | 778 | R 7668, Ar 4iI8, RC 2 $\left[1869, L_{6} 3355\right.$. |
| 2471 | $\begin{array}{llll}68 & 16 & 22.4\end{array}$ | $77 \cdot 62$ | 5 | 7.81 | W 960, $\mathrm{R}_{7690} \mathrm{~L}_{6}{ }^{\text {\% }}$ |
| 2472 | $\begin{array}{llr}100 & 26 & 12.4\end{array}$ | 69.87 | 5 | 7.82 | PM2 $322, \mathrm{~L}_{5} 2947$, Y84I $7^{\prime}$. |
| 2473 | 7 7 18 8 8.5 | 75.80 | 5 | 7.82 | $\text { W } 965, \text { R } 7692 .$ |
| 2474 | $\begin{array}{lll}6 \mathrm{I} & 46 & 36 \cdot 8 \\ 8 \mathrm{I} & 31 & 58.4\end{array}$ | 77.88 | 4 | 788 -7.85 | $\text { W } 988 .$ |
| 2475 | 8 I | $81 \cdot 64$ | 2 | $-785$ | $\mathrm{W}_{78}{ }_{7}, \mathrm{~L}_{2} 4449, \mathrm{Gl}_{4} 859$. |


| No. | Lalande. | Mag. | Mean R.A. $1875^{\circ} 0$. |  |  | Epoeh. | Obs. | Ann. Pree. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2476 | 37232 | $7{ }^{\circ}$ | $19{ }^{\text {h }}$ | $32^{\text {m }}$ | $4 \mathrm{I}^{8.60}$ | $65 \cdot 96$ | 5 | $+\mathrm{I}^{8.82 I}$ |
| 2477 | 37325 | $6 \cdot 8$ | 19 | 32 | 54.70 | 73.44 | 5 | 2.IOI |
| 2478 | 37323 | $6 \cdot 5$ | 19 | 33 | 3.09 | 71.25 | 5 | 2.220 |
| 2479 | 37335 | $7 \cdot 8$ | 19 |  | 17.86 | 81'10 | 2 | $2 \cdot 256$ |
| 2480 | 37292 | $7{ }^{\circ}$ |  |  | $42 \cdot 05$ | 70'75 | 5 | 3*195 |
| 2481 | 37356 | 7'5 | 19 | 33 | 51*38 | 7460 | 5 | $2 \cdot 302$ |
| 2482 | 37384 | $7 \cdot 3$ | 19 | 34 | 34.29 | 77.82 | 5 | $2 \cdot 362$ |
| 2483 | 37375 | $7 \cdot 3$ | 19 | 34 | $36 \cdot 37$ | $76 \cdot 62$ | 6 | 2.520 |
| 2484 | 37387 | $6 \cdot 7$ | I9 | 35 | 0.47 | 70.43 | 5 | $2 \cdot 622$ |
| 2485 | 37410 | 6.5 |  | 35 | $2 \cdot 60$ | 71•24 | 5 | $2 \cdot 256$ |
| 2486 | 37363 | 7'0 | I9 | 35 | 13.38 | 72.93 | 5 | 3.276 |
| 2487 | 37394 | $5 \cdot 8$ | 19 | 35 | 18.27 | 75.99 | 5 | $2 \cdot 778$ |
| 2488 | 37415 | $8 \cdot 2$ | 19 | 35 | 32.02 | $79^{\circ} 14$ | 4 | $2 \cdot 52 \mathrm{I}$ |
| 2489 | 37425 | $6 \cdot 7$ | 19 | 35 | $52 \cdot 55$ | $77 \cdot 62$ | I | 2.575 |
| 2490 | 37487 | $6 \cdot 7$ | I 9 | 36 | $38 \cdot 07$ | $72 \cdot 24$ | 5 | I•943 |
| 2491 | 37465 | $7^{\circ}$ | 19 | 36 | $45 \cdot 33$ | $76 \cdot 82$ | 5 | $2 \cdot 672$ |
| 2492 | 37472 | $7 \cdot 1$ | 19 | 36 | $46 \cdot 34$ | 69.8I | 4 | 2.448 |
| 2493 | 37463 | $8 \cdot 0$ | 19 | 37 | 7.53 | 8 I 3 I | 3 | 2.989 |
| 2494 | 37495 | $8 \cdot 4$ | 19 | 37 | 25.37 | 68'74 | 6 | 2.453 |
| 2495 | 37488 | $7 \stackrel{ }{ }{ }^{\prime}$ | 19 | 37 | 27.18 | $76 \cdot 21$ | 5 | $2 \cdot 566$ |
| 2496 | 37513 | $7 \cdot 1$ | I9 | 37 | $50 \cdot 88$ | 72.04 | 5 | 2.522 |
| 2497 | 37527 | $6 \cdot 0$ | 19 | 37 | $55 \cdot 88$ | $75 \cdot 82$ | 4 | $2 \cdot 308$ |
| 2498 | 37521 | $7^{\circ}$ | I9 | 38 | $2 \cdot 96$ | 78*12 | 4 | $2 \cdot 576$ |
| 2499 | 37537 | $6 \cdot 2$ | 19 | 38 | 14.38 | 77*10 | 4 | 2.359 |
| 2500 | 37504 | $7 \cdot 5$ | I9 | 38 | 19.98 | 71.03 | 5 | $2 \cdot 973$ |
| 2501 | 37639 | $8 \cdot 1$ | I9 | 40 | 57.00 | 79*26 | 3 | 2.579 |
| 2502 |  | $8 \cdot 6$ | I9 | 4 I | $5^{\circ}$ |  |  | $2 \cdot 824$ |
| 2503 | 37655 | $6 \cdot 5$ | 19 | 41 | 24.40 | $70 \cdot 76$ | 5 | 2.513 |
| 2504 | 37686 | $5 \cdot 4$ | I9 | 4 I | $40 \cdot 79$ | $77^{\circ} 01$ | 5 | 2.275 |
| 2505 | 37692 | $6 \cdot 5$ | I9 | 41 | 47.56 | 75.42 | 5 | 2.301 |
| 2506 | 37676 | $7^{\circ}$ | 19 | 41 | $53 \cdot 67$ | 7400 | 5 | 2.598 |
| 2507 | 37667 | $8 \cdot 1$ | 19 | 41 | $58 \cdot 98$ | $80 \cdot 56$ | 2 | 2.865 |
| 2508 | 37710 | $6 \cdot 2$ | 19 | 42 | 34.35 | 72.40 |  | $2 \cdot 508$ |
| 2509 | 37728 | $7^{\circ}$ | 19 | 42 | $55 \cdot 42$ | 75.41 | 5 | 2.444 |
| 2510 | 37730 | $7 \cdot 5$ | 19 | 42 | $58 \cdot 27$ | $78 \cdot 62$ | 2 | $2 \cdot 448$ |
| 2511 | 37753 | $6 \cdot 1$ | 19 | 43 | I 44 | 71•67 | 5 | 2.128 |
| 2512 | 37734 | 73 | 19 | 43 | $6 \cdot 76$ | $76 \cdot 97$ | 3 | 2.518 |
| 2513 | 37766 | $7{ }^{\circ}$ | 19 | 44 | I 48 | $80 \cdot 55$ |  | $2 \cdot 448$ |
| 2514 | 37785 | $7{ }^{\circ}$ | 19 | 44 | $3 \cdot 96$ | $76 \cdot 61$ | 5 | 2.231 |
| 2515 | 37747 | $7{ }^{\circ}$ | 19 | 44 | II*90 | $80 \cdot 58$ | 1 | 3.178 |
| 2516 | 37758 | $7{ }^{\circ}$ | 19 | 44 | I 3.55 | $77 \cdot 13$ | 2 | 2.912 |
| 2517 | 37823 | $7 \cdot 3$ | 19 | 45 | $38 \cdot 40$ | $73 \cdot 61$ | 5 | 2.531 |
| 2518 | 37842 | 7.5 | 19 | 45 | $43 \cdot 29$ | $76 \cdot 22$ | 5 | 2.209 |
| 2519 | 37819 | 7.5 | I9 | 46 | $3 \cdot 19$ | $80 \cdot 62$ | 1 | 2.923 |
| 2520 | 37866 | $7{ }^{\circ}$ | 19 | 46 | 17.28 | $72 \cdot 10$ | 7 | $+2 \cdot 154$ |



| No. | Lalande. | Mag. | Mean | R.A. | $1875 \cdot 0$ | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2521 | 37847 | $5 \cdot 5$ | $19^{\text {h }}$ | $46^{m}$ | $19^{8 \cdot} 72$ | 70.60 | 5 | +2.058 |
| 2522 | 37851 | 79 | 19 | 46 | 23.47 | $76 \cdot 62$ | 5 | 2.459 |
| 2523 | 37832 | $6 \cdot 0$ | 19 | 46 | $45 \cdot 69$ | 70.98 | 5 | 3'144 |
| 2524 | 37868 | $5 \cdot 7$ | 19 |  | 46.05 | 75.03 | 5 | 2.523 |
| 2525 | 37855 | $6 \cdot 5$ | 19 | 47 | 9.27 | $78 \cdot 42$ | 5 | 2.987 |
| 2526 | 37887 | $7^{\circ} 1$ | 19 | 47 | 10.95 | 73.82 | 6 | 24439 |
| 2527 | 37917 | $6 \cdot 3$ | 19 | 47 | $40 \cdot 83$ | $77 \cdot 62$ | 3 | 2.203 |
| 2528 | 37861 | $5 \cdot 5$ | 19 | 48 | $9{ }^{\circ}$ |  |  | 3.670 |
| 2529 | 37957 | $5 \cdot 8$ | 19 | 48 | 12.94 | 7130 | 5 | 1.808 |
| 2530 | 37945 | $7 \cdot 3$ | 19 | 48 | 4190 | $76 \cdot 61$ | 4 | 2.485 |
| 2531 | 38029 | $6 \cdot 9$ | 19 | 50 | $7 \cdot 24$ | 74.38 | 4 | 2391 |
| 2532 | 38030 | $7 \cdot 3$ | 19 | 50 | 730 | 80.94 | 3 | 2.378 |
| 2533 | 38039 | 6.0 | 19 | 50 | 14'16 | 76.87 | 4 | $2 \cdot 190$ |
| 2534 | 37994 | $7{ }^{\circ}$ | 19 | 50 | $42 \cdot 79$ | 73.03 | 5 | 3.218 |
| 2535 | 38063 | $7{ }^{\circ}$ | 19 | 51 | 18'I9 | 72.86 | 5 | 2.557 |
| 2536 | 38085 | $6 \cdot 8$ | 19 | 51 | 19.67 | $78 \cdot 62$ | 4 | 2.086 |
| 2537 | 38068 | $7^{\circ}$ | 19 | 51 | 29.44 | $76 \cdot 61$ | 5 | 2.560 |
| ${ }^{2} 538$ | 38088 | $6 \cdot 5$ | 19 | 51 | 44.97 | 75.01 | 5 | 2.373 |
| 2539 | 38056 | $8 \cdot 5$ | 19 | 51 | $53 \cdot 83$ | $80 \cdot 61$ | I | 3.169 |
| 2540 | 38048 | $7{ }^{\circ}$ | 19 | 52 | 9.45 | 69.27 | 3 | 3.561 |
| 2541 | 38084 | $8 \cdot 0$ | 19 | 52 | 17.43 | 70'43 | 5 | $2 \cdot 856$ |
| 2542 | 38047 | $7 \cdot 1$ | 19 | 52 | 23.64 | $70 \cdot 15$ | 5 | 3.045 |
| 2543 | 38100 | $6 \cdot 5$ | 19 | 52 | 59.58 | 73.67 | 6 | $3 \cdot 286$ |
| 2544 | 38156 | $6 \cdot 8$ | 19 | 52 | 59.87 | 77.62 | 1 | 2.148 |
| 2545 | $3^{81} 7^{2}$ | $8 \cdot 0$ | 19 | 53 | 9.44 | 76.97 | 3 | $2 \cdot 150$ |
| 2546 | $3^{81} 30$ | $6 \cdot 7$ | 19 | 53 | 16.57 | 7102 | 5 | 2.844 |
| 2547 | $3^{8177}$ | $5 \cdot 8$ | 19 | 53 | $40 \cdot 45$ | $70 \cdot 10$ | 6 | 2.375 |
| 2548 | 38182 | $7{ }^{\circ}$ | I 9 | 54 | 0.33 | 76.23 | 5 | 2.469 |
| 2549 | 38202 | $6 \cdot 7$ | 19 | 54 | 3.91 | $76 \cdot 83$ | 5 | $2 \cdot 162$ |
| 2550 |  | $8 \cdot 8$ | 19 | 54 | 17.22 | $80 \cdot 55$ | I | 2.150 |
| 2551 | 38222 | $7{ }^{\circ}$ | 19 | 54 | 52.83 | $79 \cdot 60$ | 4 | 2.510 |
| 2552 | 38233 | $6 \cdot 4$ | 19 | 55 | $2 \cdot 11$ | 72.28 | 5 | $2 \cdot 504$ |
| 2553 | 38237 | $8 \cdot 0$ | 19 | 55 | 20.37 | 74.81 | 5 | 2.654 |
| 2554 |  | $8 \cdot 2$ | 19 | 55 | 23.15 | 77.62 | 4 | 2.480 |
| 2555 | 38214 | 7.5 | 19 | 55 | 32.97 | 69.43 | 6 | 3.182 |
| 2556 | 38267 | 6.9 | 19 | 56 | 1.8I | 71.65 | 6 | 2.373 |
| 2557 | 38263 | $7 \cdot 5$ | 19 | 56 | $6 \cdot 37$ | 75.64 | 2 | 2.780 |
| 2558 | 38242 | $8 \cdot 0$ | 19 | 56 | 13.71 | 81.64 | 2 | 3.262 |
| 2559 | 38327 | $6 \cdot 2$ | 19 | 56 | 26.8I | 73.65 | 2 | 2.542 |
| 2560 | 38345 | $7 \cdot 3$ | 19 | 56 | $35^{\circ} 23$ | $60 \cdot 56$ | I | 1.589 |
| 2561 | $3^{8} 302$ | $8 \cdot 3$ | 19 | 56 | 52.20 | $76 \cdot 60$ | 1 | $2.53{ }^{\circ}$ |
| 2562 | 38281 | 7.5 | 19 | 56 | 59.78 | 71.02 | 5 | 2.983 |
| 2563 | 38350 | $7 \cdot 1$ | 19 | 57 | 41.04 | 76.33 | 7 | 2.449 |
| 2564 | 38370 | $6 \cdot 7$ | 19 | 58 | 15.30 | $77 \cdot 24$ | 5 | 2.588 |
| 2565 | 38380 | 6.0 | 19 | 58 | 28.72 | 71'12 | 6 | +2.413 |


| No. | Mean N.P.D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2521 | $49^{\circ} 43^{\prime} \quad \mathrm{I}^{\prime \prime} 9$ | 69.93 | 6 | -8"97 | W 1497, RC 4469, Y |
| 2522 | $62 \begin{array}{lll} & 51 & 29.2\end{array}$ | $76 \cdot 62$ | 5 | $8 \cdot 98$ | W 1482. |
| 2523 | $93 \quad 26 \quad 11 \times 5$ | 70.98 | 5 | $9 \cdot 1$ | $\mathrm{T}_{\mathrm{w}}, \mathrm{Bn}, \mathrm{I}_{3} 3483$. |
| 2524 | 65 19 38.1 | $75^{\circ} \mathrm{O}$ | 5 | $9 \cdot 1$ | W 150 I . |
| 2525 | $85 \quad 55184$ | 78.42 | 5 | $9 \cdot 04$ | $\mathrm{W}_{\mathrm{II} 67}, \mathrm{Si}_{1}, \mathrm{~L}_{2} 47 \mathrm{I} 4, \mathrm{Gl}$ |
| 2526 | $62 \quad 3 \quad 59.5$ | 73.82 | 6 | 9.04 |  |
| 2527 | $53 \quad 5319.5$ | $77 \cdot 62$ | 3 | 9.08 |  |
| 2528 | $\begin{array}{llll}16 & 37 & 45^{\circ}\end{array}$ | $67 \cdot 12$ | 4 | $9 \cdot 12$ | See Notes. |
| 2529 | $\begin{array}{llll}43 & 17 & 39\end{array}$ | 71.30 | 5 | $9 \cdot 12$ | Oe 19720. |
| 2530 | $\begin{array}{lllll}63 & 43 & 51\end{array}$ | $76 \cdot 61$ | 4 | $9 \cdot 16$ | W 1561. |
| 2531 | $\begin{array}{lll}60 & 8 & 0 \cdot 3\end{array}$ | $74 \cdot 38$ | 4 | 9.27 | W 1616. |
| 2532 | $\begin{array}{llll}59 & 38 & 30 \cdot 4\end{array}$ | $80^{\circ} 94$ | 3 | 9.27 |  |
| 2533 | 53 19 588 | $76 \cdot 87$ | 4 | $9 \cdot 28$ |  |
| 2534 | 97 I $30^{\circ} 0$ | 73.03 | 5 | $9 \cdot 32$ | W $1247, \mathrm{~L}_{\text {a }} 3507$. |
| 2535 | $\begin{array}{llll}66 & 26 & 37 \cdot 2\end{array}$ | 72.86 | 5 | $9 \cdot 36$ | W 1649. |
| 2536 | $\begin{array}{llll}50 & 9 & 28.8\end{array}$ | 78.62 | 4 | $9 \cdot 36$ |  |
| 2537 | $66 \begin{array}{llll}66 & 35 & 25\end{array}$ | $76 \cdot 61$ | 5 | $9 \cdot 37$ | W 1652. |
| 2538 | $\begin{array}{lllllllllllllll}59 & 23 & 12 \cdot 6\end{array}$ | 75.01 | 5 | 9.39 | W 167 I . |
| 2539 | $94 \begin{array}{lll}91 & 30.5\end{array}$ | $80 \cdot 6 \mathrm{I}$ | 1 | 9.41 | W $1272, \mathrm{~L}_{9} 3514$. |
| 2540 | $\begin{array}{llll}112 & 32 & 54.1\end{array}$ | 69.27 | 3 | 9.43 | $\text { T9173, } \operatorname{Ar}_{4213}, \mathrm{I}_{4}, \mathrm{Y}$ |
| 2541 | $\begin{array}{llll}79 & 36 & 27\end{array}$ | $70 \cdot 44$ | 5 | 9.44 | Wi290,Sp7717, $\mathrm{L}_{4} \mathrm{I} 738$. |
| 2542 | $8840{ }^{71}$ | 70'15 | 5 | 9.45 |  |
| 2543 | $\begin{array}{llll}100 & 16 & 58.9\end{array}$ | $73 \cdot 6$ | 6 | $9 \cdot 48$ | See Notes. [4955. |
| 2544 | $\begin{array}{llll}51 & 52 & 28 \cdot 9\end{array}$ | $77 \cdot 62$ | 1 | 9.48 | T 9189, $\mathrm{Ar}_{42288, \mathrm{RC}}^{4519, \mathrm{Gl}}$ |
| 2545 | $\begin{array}{llll}51 & 56 & 4.2\end{array}$ | $76 \cdot 97$ | 3 | $9 \cdot 50$ | Ar ${ }^{2} 33, \mathrm{RC} 45^{22}, \mathrm{Bn}$. |
| 2546 | 79 I $57^{\circ} \mathrm{O}$ | $71 \times 02$ | 5 | 9.51 |  |
| 2547 | 59 21 16.1 | 69.09 | 6 | $9 \cdot 54$ | W1739. [4956. |
| 2548 | $624936 \cdot 6$ | $76 \cdot 23$ | 5 | $9 \cdot 57$ | W 1749.* ${ }^{\text {W }}$ |
| 2549 | $52 \begin{array}{lll}52 & 13 & 56\end{array}$ | $76 \cdot 83$ | 5 | $9 \cdot 57$ | W i766, PM 2392, Y |
| $255^{\circ}$ | $\begin{array}{lllllllllllllllll}51 & 58 & 24.6\end{array}$ | 80.55 | 1 | 9.59 |  |
| 2551 | $\begin{array}{llll}64 & 23 & 24.6\end{array}$ | 79.60 | 4 | 9.63 | W 17776. |
| 2552 | $64 \quad 9 \quad 13{ }^{\circ} \mathrm{O}$ | $72 \cdot 28$ | 5 | 9.65 | W 1778. |
| 2553 | $\begin{array}{lll}70 & 20 & 19.4\end{array}$ | 74.81 | 5 | $9 \cdot 67$ |  |
| 2554 | $\begin{array}{llll}63 & 12 & 0.8\end{array}$ | $77 \cdot 62$ | 4 | $9 \cdot 67$ |  |
| 2555 | $95 \quad 20 \quad 30$ | $70 \cdot 37$ | 5 | $9 \cdot 69$ | R 7893, $\mathrm{L}_{\text {s }} 3537$. |
| 2556 | $\begin{array}{lll}59 & 6 & 48 \cdot 4\end{array}$ | 71.65 | 6 | 9.72 |  |
| 2557 | $\begin{array}{llll}63 & 9 & 17 & 7\end{array}$ | $75 \cdot 64$ | 2 | $9 \cdot 73$ |  |
| 2558 | $\begin{array}{llll}99 & 23 & 8.5\end{array}$ | 8r.64 | 2 | 974 | W 1386, Sp 7760. |
| 2559 | $\begin{array}{llll}65 & 32 & 44.4\end{array}$ | 73.65 | 2 | 976 | W I822, Y 8659. |
| 2560 | $\begin{array}{lllll} & 38 & \text { II } & 36 \cdot 8\end{array}$ | 60.97 | 5 | $9 \times 77$ | Ar $4255, \mathrm{RC} 4554$. |
| 2561 | $\begin{array}{llll}65 & \text { II } & 32.7\end{array}$ | $76 \cdot 60$ | I | 979 |  |
| 2562 | $85 \quad 37 \quad 5 \cdot 2$ | $7 \mathrm{r} \cdot 02$ | 5 | 9.80 | W i408, $L_{s} 4873$. |
| 2563 | $6150 \mathrm{r} \circ$ | $76 \cdot 33$ | 7 | $9 \cdot 85$ | $\text { W } 1873$ |
| 2564 | $\begin{array}{llll}67 & 24 & 32.8\end{array}$ | 77.24 | 5 | 9.89 -9.91 | See Notes. |
| 2565 | $\begin{array}{llll}60 & 26 & 6 \cdot 5\end{array}$ |  | 6 | -991 |  |


| No. | Lalande. | Mag. | Mean | R.A. | 1875.0. | Epoch. | Obs. | Ann. Prec. |
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| 2566 | 38392 | 7.5 | $19^{\text {b }}$ |  | $42^{\text {n }}$ - 11 | $74 \cdot 65$ | 5 | +2'412 |
| 2567 | 38371 | $7{ }^{\circ}$ | 19 | 58 | 50.77 | 80.00 | 5 | 3.036 |
| 2568 | 38374 | $7{ }^{\circ}$ | 19 |  | $56 \cdot 86$ | 71.16 | 8 | 3.071 |
| 2569 | 38418 | 7.4 | 19 |  | 15.05 | 79167 | 3 | $2 \cdot 379$ |
| 2570 | $3^{8411}$ | 8.0 | 19 |  | 27.93 | 8I'I4 | 2 | $2 \cdot 706$ |
| 2571 | 38389 | $7^{\circ} 0$ | 19 | 59 | $36 \cdot 88$ | $68 \cdot 46$ | 5 | 3.162 |
| 2572 | 38438 | $6 \%$ | 19 | 59 | 41.86 | $75^{\circ} \mathrm{O} 2$ | 5 | $2 \cdot 352$ |
| 2573 | 38447 | 7.5 | 20 | - | 19.90 | $77 \cdot 68$ | 1 | $2 \cdot 594$ |
| 2574 | 38442 | $8 \cdot 3$ | 20 | $\bigcirc$ | 32.97 | $72 \cdot 60$ | 5 | 2.926 |
| 2575 | 38525 | $6 \cdot 2$ | 20 | 0 | $44: 33$ | 68.1 I | 4 | 1•795 |
| 2576 | 38454 | $7 \cdot 2$ | 20 | I | 11.2I | $76 \cdot 42$ | 5 | $2 \cdot 806$ |
| 2577 | 38480 | $7{ }^{\circ}$ | 20 | 1 | 21.59 | $77 \cdot 03$ | 5 | $2 \cdot 854$ |
| 2578 | $3^{8} 45^{8}$ | $7 \cdot 7$ | 20 | 1 | 26.05 | 72.28 | 5 | $3 \cdot 217$ |
| 2579 |  | $7{ }^{\circ}$ | 20 | 1 | 37.42 | 7597 | 3 | $2 \cdot 749$ |
| 2580 | 38506 | $6 \cdot 5$ | 20 | I | 48.96 | $75^{\circ} \mathrm{O}$ | 5 | 2.889 |
| 2581 | 38501 | $8 \cdot 2$. | 20 | 1 | 59.38 | 80.61 | 1 | 3.086 |
| 2582 | 38554 | $6 \cdot 0$ | 20 | 2 | $40 \cdot 58$ | 69.93 | 7 | $2 \cdot 862$ |
| 2583 | 38592 | $6 \cdot 0$ | 20 | 2 | 54.18 | 73.83 | 6 | 2.295 |
| 2584 | 38586 | 8.1 | 20 | 3 | 4 |  |  | 2.512 |
| 2585 | $3^{8582}$ | 7.5 | 20 | 3 | 25.26 | 80.64 | 4 | 2.861 |
| 2586 | 38612 | $6 \cdot 5$ | 20 | 4 | $4 \cdot 87$ | 77:29 | 6 | 2.910 |
| 2587 | 38670 | $7 \cdot 3$ | 20 | 4 | $42 \cdot 65$ | 71.10 | 7 | 2.320 |
| 2588 | 38672 | $7 \cdot 6$ | 20 | 4 | 53.78 | $74 \times 3$ | 5 | 2.471 |
| 2589 | 38664 | 7.5 | 20 | 5 | 17.71 | 77.03 | 5 | 2.905 |
| 2590 | 3869 r | $6 \cdot 3$ | 20 | 5 | 33.39 | 76.91 | 4 | $2 \cdot 639$ |
| 2591 | 38694 | $7 \cdot 5$ | 20 | 5 | 38•15 | 75:46 | 5 | 2.679 |
| 2592 | 38706 | $6 \cdot 0$ | 20 | 5 | 53.14 | $68 \cdot 62$ | 5 | 2.622 |
| 2593 | 38758 | 7.2 | 20 | 6 | $4 \cdot 33$ | 72.45 | 4 | 1.988 |
| 2594 | 38716 | $8 \cdot 2$ | 20 | 6 | $34^{\circ}$ |  |  | $3 \cdot 014$ |
| 2595 | 38752 | 8.0 | 20 | 6 | 40*07 | $80 \cdot 57$ | 3 | 2.577 |
| 2596 | 38806 | $7 \cdot 1$ | 20 | 7 | $33 \cdot 18$ | 80.90 | 4 | $2 \cdot 187$ |
| 2597 | 38813 | $6 \cdot 9$ | 20 | 7 | 39.92 | 77.63 | 5 | 2.180 |
| 2598 | 38761 | $9^{\circ}{ }^{\circ}$ | 20 | 7 | 44.55 | 68.78 | 7 | 3.200 |
| 2599 | 38821 | 7.0 | 20 | 8 | 18.52 | 74.63 | 5 | $2 \cdot 571$ |
| 2600 | 38800 | 8.0 | 20 | 8 | $37 \cdot 89$ | 76.05 | 5 | 3•149 |
| 2601 | 38804 | $7{ }^{\circ} \mathrm{O}$ | 20 | 8 | 45.07 | 77*17 | 6 | $3 \cdot 190$ |
| 2602 | 38830 | $7{ }^{\circ}$ | 20 | 8 | 52.92 | 71.25 | 6 | 2.87 I |
| 2603 | 38896 | $5^{\circ} \cdot$ | 20 | 9 | 58.08 | $68 \cdot 65$ | 5 | $2 \cdot 541$ |
| 2604 | 38944 | 7.4 | 20 | 10 | 27.37 | $71 \times 0$ | 3 | $2 \cdot 214$ |
| 2605 | 38943 | $6 \cdot 2$ | 20 | 10 | $32 \cdot 45$ | 77.56 | 2 | 2.331 |
| 2606 | 38972 | 77 | 20 | II | 30'39 | 78.04 | 5 | 2.472 |
| 2607 | 38942 | 8.0 | 20 | I I | 34.07 | 73.64 | 5 | 3'173 |
| 2608 | 38995 | 7.5 | 20 | 12 | 41.28 | 73.46 | 5 | $3 \cdot 036$ |
| 2609 | 39018 | $7^{\circ} \circ$ | 20 |  | 53.76 | 77.83 | 6 | 2.73 1 |
| 2610 | 39046 | $7 \cdot 3$ | 20 | 12 | 59.03 | 80.68 | I | +2.545 |


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| 2566 | $60^{\circ} 21^{\prime} 42^{\prime \prime \prime} \cdot 6$ | $74 \cdot 65$ | 5 | -9'93 | W 1915 , Bn. [Gl 4992. |
| 2567 | 88 13 51.5 | 80.00 | 5 | 9.94 | $\mathrm{W}_{1453}, \mathrm{R}_{7951}, \mathrm{~L}_{17}{ }^{267}$, |
| 2568 | $89 \quad 53 \quad 57 \cdot 2$ | $72 \cdot 10$ | 7 | 9.94 | W i456, Bn, $\mathrm{L}_{1} 7269$, |
| 2569 | $59635^{\circ}$ | $79 \cdot 67$ | 3 | 9.97 | Bn, Y 8680. [Gl 4994. |
| 2570 | $\begin{array}{llll}72 & 28 & 32\end{array}$ | 8I'14 | 2 | 9.98 |  |
| 2571 | $\begin{array}{llll}94 & 25 & 58 \cdot 2\end{array}$ | 70.95 | 3 | 10.00 | W $1472, L_{3} 3574$. |
| 2572 | $\begin{array}{llll}58 & 8 & 4\end{array}$ | $75^{\circ} \mathrm{O}$ | 5 | 10. | W 1957. |
| 2573 | $67 \quad 33 \quad 32 \cdot 7$ | $77 \cdot 68$ | 1 | 10.05 | W 1972, R 7970, $\mathrm{L}_{6}$. |
| 2574 | 8246151.3 | $76 \cdot 15$ | 2 | 10.07 | W $1497, \mathrm{R}_{7971}$, Si. |
| 2575 | $\begin{array}{llll}42 & 7 & 35\end{array}$ | 67.22 | 5 | 10.07 | Oe 19983. |
| 2576 | $77 \quad 2 \quad 4 \times$ | $76 \cdot 42$ | 5 | $10 \cdot 12$ | W $1514, \mathrm{Gl} 5003$. |
| 2577 | $\begin{array}{llll}79 & 18 & 15.1\end{array}$ | 77.03 | 5 | 10.13 | $\mathrm{L}_{4} 1837$. |
| 2578 | $\begin{array}{llll}97 & 7 & 16 \cdot 8\end{array}$ | $72 \cdot 28$ | 5 | 10.I3 | $\mathrm{R}_{7990} \mathrm{~S}_{\mathrm{p}} ; 824, \mathrm{~L}_{3} 359 \mathrm{t}$. |
| 2579 | $\begin{array}{lll}74 & 17 & 0 \cdot 8\end{array}$ | 75.97 | 3 | 10.15 | W $2025, \mathrm{R} 8001, \mathbf{L}_{6}$. |
| 2580 | $\begin{array}{llll}80 & 57 & 38 \cdot 2\end{array}$ | $75^{\circ} 02$ | 5 | 10'I6 |  |
| 2581 | $\begin{array}{llll}90 & 39 & 37 \times 2\end{array}$ | 80.61 | 1 | 10.18 |  |
| 2582 | $\begin{array}{llll}79 & 38 & 12.8\end{array}$ | $70 \cdot 65$ | 5 | 10.23 | W 9, R 8022, $\mathrm{L}_{4} 1845$, |
| 2583 | $\begin{array}{llll}55 & 56 & 19.8\end{array}$ | 73.83 | 6 | 10.25 | [Gl 5015 . |
| 2584 | $64 \bigcirc 44^{\circ}$ | 67.01 | 5 | 10.26 | Ar 4284. |
| 2585 | $\begin{array}{llll}79 & 34 & 40 \%\end{array}$ | 80.64 | 4 | 10.28 | W 32, $\mathrm{L}_{4} \mathrm{I} 852$. |
| 2586 | $8 \mathrm{I} 55 \quad \mathrm{I} 9$ | 77.29 | 6 | 10.33 | See Notes. |
| 2587 | $\begin{array}{llll}56 & 41 & 6 \cdot 4\end{array}$ | 71.99 | 6 | 10.38 | W 123. |
| 2588 | $\begin{array}{llll}62 & 5 & 53\end{array}$ | 74.03 | 5 | 10.39 | W 130. [5027, Gl 5030. |
| 2589 | 81 39 9.2 <br> 6   | 77.03 | 5 | 10.42 | W 79, R 8072, $\mathrm{Si}_{1}, \mathrm{~L}_{2}$ |
| 2590 | $\begin{array}{llll}69 & 14 & 10.8\end{array}$ | $76 \cdot 91$ | 4 | 10.44 | $\mathrm{W}_{\text {I5 }}, \mathrm{R} 8079, \mathrm{Ar}_{4301}$, <br> $\left[\mathrm{T}_{29}, \mathrm{Gl}_{5} \mathrm{O}_{2}\right.$. |
| 2591 | 710151 | 75.46 | 5 | $10 \% 45$ | W 159, R 8082. |
| 2592 | $\begin{array}{llll}68 & 29 & 42.0\end{array}$ | 67.81 | 5 | 10.47 | W i $72, \mathrm{R} 8090$, Bn . |
| 2593 | $\begin{array}{llll}46 & 25 & 37 & 3 \\ 87 & 4 & 1\end{array}$ | 72.45 | 4 | 10.48 | W 207, RC 4619. |
| 2594 | $\begin{array}{lll}87 & 4 & 1.5\end{array}$ | 63.71 | 3 | $10 \cdot 52$ | $\mathrm{WIII}^{2}, \mathrm{Ar}_{4305} \mathrm{~L}_{3} 735 \mathrm{I}$, |
| 2595 | $\begin{array}{lll}66 & 27 & 9.8\end{array}$ | 80.57 | 3 | 10.53 | $\mathrm{W}_{212}$ [ $\mathrm{Gl}_{5} \mathrm{O}_{3} 8$. |
| 2596 | $\begin{array}{rrrr}52 & 1 & 5.8\end{array}$ | 80.90 | 4 | 10.59 | W 258. |
| 2597 | 5 I | 77.63 | 5 | 10.60 |  |
| 2598 | $\begin{array}{llllll}96 & 25 & 27.6\end{array}$ | 69.45 | 6 | 10.61 | W $\mathrm{W} 34, \mathrm{Si}_{\mathrm{p}}, \mathrm{L}_{\mathrm{a}} 3655$. |
| 2599 | $\begin{array}{rrrr}66 & 8 & 20.4\end{array}$ | 74.63 | 5 | 10.65 | W 278 , PM 244 I . |
| 2600 | 93542490 | 76.05 | 5 | 10.67 | $\text { W I66, } \mathrm{Si}_{2}, \mathrm{~L}_{\mathrm{a}} 366_{3}, \mathrm{Gl}$ |
| 2601 | $\begin{array}{llll}95 & 54 & 58 \cdot 8\end{array}$ | 77'17 | 6 | 10.68 | $\mathrm{L}_{3} 3665$. |
| 2602 | 79 54 24. <br> 1   | $7 \mathrm{~F} \cdot 87$ | 5 | 10.69 | $\mathrm{L}_{4} 190 \mathrm{I}$. |
| 2603 | $64 \quad 47$ 19*0 | 68.65 | 5 | 10.77 | W 338, $\mathrm{T}_{8}$, Gl 5063. |
| 2604 | 5248159 | 71.00 | 3 | 10.81 | W 361, Ar 3331. |
| 2605 | $\begin{array}{llll}56 & 38 & 54 \\ \end{array}$ | 77.56 | 2 | 10.81 | W 358. |
| 2606 | $\begin{array}{llll}61 & 51 & 39 \cdot 8\end{array}$ | 78.04 | 5 | 10.89 |  |
| 2607 | 95 6 51.2 <br> 88   | 73.64 | 5 | 10.89 |  |
| 2608 | $\begin{array}{llll}88 & 9 & 19.9\end{array}$ | 73.46 | 6 | 10.97 10.99 | See Notes. W 438, R 8ı8ı. |
| 2609 2610 | $\begin{array}{rrrr}73 & 1 & 37.4 \\ 64 & 44 & 23.4\end{array}$ | 77.83 80.68 | 6 | 1099 -10.99 | W 438, R 8181. <br> W 448. |


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| 2611 | 39060 | $7 \cdot 8$ | $20^{\text {h }} 13^{\text {m }}$ | $3^{1 / 33}$ | 75.07 | 5 | +2.326 |
| 2612 | 39023 | $8 \cdot 3$ | 2013 | 19.59 | $70 \cdot 85$ | 5 | 3.041 |
| 2613 | 39035 | $3 \cdot 5$ | 2013 | 58 |  |  | 3.375 |
| 2614 | 39091 | $7 \cdot 2$ | 2014 | $3 \cdot 64$ | 80.62 | 4 | 2.451 |
| 2615 | 39078 | $7 \cdot 5$ | 2014 | 19.49 | 73*19 | 2 | 2.931 |
| 2616 | 39112 | 7*0 | 2014 | 32:23 | $76 \cdot 81$ | 5 | $2 \cdot 386$ |
| 2617 | 39102 | $6 \cdot 2$ | $20 \quad 14$ | $40 \cdot 83$ | $75 \cdot 04$ | 5 | $2 \cdot 723$ |
| 2618 | 39117 | $6 \cdot 8$ | 2014 | $43 \cdot 67$ | $78 \cdot 84$ | 5 | 2.447 |
| 2619 | 39149 | $6 \cdot 6$ | 2014 | 49'I I | $68 \cdot 37$ | 4 | 1.923 |
| 2620 | 39127 | $7 \cdot 0$ | 2015 | 13.70 | 71•87 | 5 | 2.626 |
| 2621 | 39108 | $7 \cdot 5$ | 2015 | 15.67 | $71 * 85$ | 5 | 3.047 |
| 2622 | 39135 | $5 \cdot 5$ | 2016 | 12.70 | 73.35 | 6 | $3 \cdot 269$ |
| 2623 | 39181 | 7.4 | 2016 | $25^{6}$ I | $70 \cdot 66$ | 5 | 2.428 |
| 2624 | 39134 | 8.1 | 2016 | 52.08 | $78 \cdot 87$ | 4 | $2 \cdot 534$ |
| 2625 | 39176 | $5 \cdot 5$ | 2016 | $59 \cdot 10$ | $75 \cdot 36$ | 3 | 2.977 |
| 2626 | 392 I I | 73 | 20.17 | 15.40 | $76 \cdot 92$ | 7 | 2.536 |
| 2627 | 39196 | $7 \cdot 8$ | 2017 | 17.80 | 77.22 | 5 | $2 \cdot 864$ |
| 2628 | 39232 | $6 \cdot 5$ | 2017 | 35.52 | 81.00 | 3 | 2.413 |
| 2629 | 39251 | $6 \cdot 5$ | 2017 | $37 \cdot 36$ | $70 \cdot 54$ | 6 | $2 \cdot 122$ |
| 2630 | 39239 | $6 \cdot 8$ | 2018 | 8.92 | 79.05 | 5 | $2 \cdot 764$ |
| 2631 | 39270 | 73 | 2018 | 50.53 | $77 \cdot 60$ | 3 | $2 \cdot 762$ |
| 2632 | 39294 | $7 \cdot 4$ | 2018 | 59.47 | $74 \cdot 27$ | 5 | 2.473 |
| 2633 | 39313 | $6 \cdot 0$ | $20 \quad 19$ | $3 \cdot 65$ | 70.05 | 5 | 2.242 |
| 2634 | 39304 | $6 \cdot 5$ | 2019 | $43 \cdot 34$ | $72 \cdot 12$ | 5 | 2.886 |
| 2635 | 39329 | $5 \cdot 6$ | $20 \quad 20$ | $9 \cdot 1$ | $76 \cdot 03$ | 5 | 2.652 |
| 2636 | 39326 | $6 \cdot 5$ | $20 \quad 20$ | 10.32 | 80.58 | 3 | 2.809 |
| 2637 | 39343 | $6 \cdot 5$ | $20 \quad 20$ | $40^{\prime} 72$ | 77.31 | 3 | 2.740 |
| 2638 | 39337 | $7 \cdot 5$ | 2021 | $8 \cdot 06$ | 71*42 | 5 | $3 \cdot 188$ |
| 2639 | 39366 | 7.5 | 2021 | $39^{\circ} \mathrm{6I}$ | 73'16 | 6 | $3 \cdot 260$ |
| 2640 | 39408 | $7 \cdot 5$ | 2021 | 52.2I | 79.85 | 5 | 2.444 |
| 2641 | 39426 | $6 \cdot 7$ | $20 \quad 22$ | 14.82 | 67.90 | 5 | $2 \cdot 341$ |
| 2642 | 39432 | $7 \cdot 2$ | 2022 | 42.04 | $73 \cdot 89$ | 5 | $2 \cdot 639$ |
| 2643 | 39464 | 73 | $20 \quad 22$ | 55.36 | $71 \cdot 29$ | 5 | 2.070 |
| 2644 | 39428 | $8 \cdot 2$ | 20.22 | 57.69 | $78 \cdot 43$ | 5 | 2.882 |
| 2645 | 39459 | $7 \cdot 2$ | 20.23 | 9'12 | $76 \cdot 63$ | 5 | $2 \cdot 355$ |
| 2646 | 39496 | $7 \times 4$ | $20 \quad 23$ | $50 \cdot 49$ | 72.03 | 5 | 2.198 |
| 2647 | 39462 | $6 \cdot 8$ | $20 \quad 23$ | 54.83 | $80 \cdot 61$ | 5 | 2.884 |
| 2648 | 39502 | $4 \cdot 2$ | $20 \quad 24$ | 17.02 | $77 \cdot 15$ | 8 | 2.450 |
| 2649 | 39506 | $7^{\circ}$ | $20 \quad 24$ | $36 \cdot 77$ | 69.06 | 5 | 2.700 |
| 2650 | 39509 | $8 \cdot 0$ | $20 \quad 25$ | 19.03 | $80 \cdot 55$ | I | $3 \cdot 186$ |
| 2651 | 39558 | 777 | $20 \quad 25$ | $38 \cdot 92$ | $76 \cdot 62$ | 5 | $2 \cdot 541$ |
| 2652 | 39591 | $6 \cdot 5$ | $20 \quad 25$ | $5 \mathrm{I} \cdot 52$ | $71 \cdot 10$ | 6 | r'978 |
| 2653 | 39540 | $8 \cdot 2$ | $20 \quad 25$ | 58.21 | 74.4 x | 4 | $3 \cdot 038$ |
| 2654 | 39570 | $6 \cdot 5$ | 2026 | $0 \cdot 50$ | $78 \cdot 65$ | 5 | 2.649 |
| 2655 | 39542 | $7 \cdot 5$ | $20 \quad 26$ | $0 \cdot 56$ | $80 \cdot 65$ | 2 | $+3.040$ |


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| 2611 | $56^{\circ} \mathrm{I} 7^{\prime} 53^{\prime \prime} \cdot 1$ | 75.07 | 5 | - 1 I' ${ }^{\prime \prime} 00$ | W $46 \mathrm{I}, \mathrm{Bn}$. |
| 2612 | $88 \quad 23 \quad 48 \cdot 9$ | 70.88 | 4 | II ${ }^{\circ} \mathrm{O} 2$ |  |
| 2613 | $10510 \quad 27.5$ | $67 \cdot 60$ | 4 | I I '07 | See Notes. |
| 2614 | $\begin{array}{llll}60 & 53 & 30 \cdot 5\end{array}$ | 80.62 | 4 | II 07 | W $488 . \quad$ [5086. |
| 2615 | $824630 \cdot 7$ | 80.63 | I | 1 I.09 | W $327, \mathrm{Si}_{1}, \mathrm{~L}_{2} 5 \mathrm{~L} 57, \mathrm{Gl}$ |
| 2616 | $\begin{array}{llll}58 & 20 & 39.2\end{array}$ | $76 \cdot 81$ | 3 | II'II | W 504. |
| 2617 | $\begin{array}{llll}72 & 35 & 56.4\end{array}$ | 75.04 | 5 | II'12 | R 8206, $\mathbf{L}_{6}$. |
| 2618 | $60 \quad 39 \quad 56 \cdot 4$ | $78 \cdot 84$ | 5 | II'12 | W 508. |
| 2619 | $44 \quad 4 \quad 7.5$ | 66.10 | 5 | II•13 | Oe $20366, \mathrm{RC}_{4725}$ |
| 2620 | $68 \quad 7 \quad 20$ | $7 \times 187$ | 5 | 11'16 | $\mathrm{W}_{517} \mathrm{~L}_{6}$. |
| 2621 | $\begin{array}{lll}88 & 43 & 28 \cdot 0\end{array}$ | $71 \cdot 85$ | 5 | II.I6 | $\mathrm{W}_{345}, \mathrm{Si}_{1}, \mathrm{Bn}, \mathrm{L}_{1} 7466$. |
| 2622 | $\begin{array}{lll}100 & 3 & 8.7\end{array}$ | 74.90 | 5 | 11.23 | $\mathrm{L}_{6} 3198$. |
| 2623 | $59 \quad 48 \quad 28 \cdot 0$ | $70 \cdot 66$ | 5 | II. 25 | W 57 r . |
| 2624 | $\begin{array}{llll}64 & 3 & 34.6\end{array}$ | $80 \cdot 58$ | 2 | 11.28 | W 586. |
| 2625 | $85 \quad 3 \quad 184$ | $75 \cdot 36$ | 3 | II'29 | W 392, R 8232, $\mathrm{Si}_{1}, \mathrm{~T}_{2}$, [Y 8842, Gl 5 ror. |
| 2626 | $64 \quad 6 \quad 2 \cdot 1$ | $76 \cdot 92$ | 7 | 11.30 | W 600. |
| 2627 | $\begin{array}{llll}79 & 18 & 52.2\end{array}$ | $77 \cdot 22$ | 5 | I r 30 | $\mathrm{L}_{4}$ I984. |
| 2628 | $59 \quad 7 \quad 3 \cdot 2$ | $8 \mathrm{I} \cdot 00$ | 3 | I 1.33 |  |
| 2629 | $\begin{array}{llll}49 & 15 & 59 \cdot 2\end{array}$ | $69 \cdot 26$ | 7 | 11.33 | $\mathrm{RC}_{\mathrm{D}}^{\mathrm{RC}} 474 .$ |
| 2630 | $\begin{array}{llll}74 & 21 & 18.2\end{array}$ | 79.05 | 5 | I 1.37 | R 8255, $\mathrm{L}_{8}$. |
| 2631 | $\begin{array}{lll}74 & 15 & 34.2\end{array}$ | $77^{\circ} 60$ | 3 | II42 | $\mathrm{L}_{6}$. |
| 2632 | $\begin{array}{llr}61 & 24 & 8 \cdot 3\end{array}$ | 74.27 | 5 | I 1.43 |  |
| 2633 | 52555 | $70 \cdot 14$ | 6 | I1.44 | W 665. [Gl 5irg. |
| 2634 | $\begin{array}{lll}80 & 20 & 55.7 \\ 68 & 59 & 47.5\end{array}$ | $72 \cdot 12$ | 5 | II'48 | $\mathrm{W}_{465,} \mathrm{~L}_{4} 20 \mathrm{r6,9yr} 1897$, |
| 2635 | $\begin{array}{llll}68 & 59 & 47.5\end{array}$ | $76 \cdot 03$ | 5 | II.51 | K 8285, L $\mathrm{L}_{6}$. |
| 2636 | $76 \quad 29 \quad 400$ | $80 \cdot 58$ | 3 | 11.5 | $W_{473}, \mathrm{R}_{8282}, \mathrm{~L}_{4} 2022$ |
| 2637 | 7351530 | 77.31 | 3 | II.55 | W 706. [Gl 512 I . |
| 2638 2639 | $\begin{array}{rrr}96 & 3 & 52 \cdot 9 \\ 99 & 46 & 57 \cdot 1\end{array}$ | 71.42 | 5 | 11.58 | $\mathrm{L}_{\mathrm{a}} 3793$. |
| 2639 | $\begin{array}{lll}99 & 46 & 57 \cdot 1 \\ 600\end{array}$ | 74.68 70.85 | 5 | $1 \mathrm{I} \cdot 62$ | W 507, $\mathrm{Si}_{2}, \mathrm{Sp} 8056, \mathrm{~L}_{5}$ |
| 2640 | $60 \quad 2 \quad 26.2$ | $79 \cdot 85$ | 5 | I I 64 | W 747. [3244. |
| 2641 | $56 \quad 4 \quad 53 \cdot 8$ | $66 \cdot 06$ | 5 | 1 1166 | $\text { W } 757 \text {. }$ |
| 2642 | 68 I6 3 6 | $73 \cdot 89$ | 5 | II.69 | $\mathrm{L}_{6}$. |
| 2643 | 47 15 51.7 | $7 \mathrm{I} \cdot 29$ | 5 | 11.71 |  |
| 2644 | 80645 | $78 \cdot 43$ | 5 | 11.71 | R 832I, $\mathbf{L}_{4} 2055$. |
| 2645 | $\begin{array}{llll}56 & 31 & 29.7\end{array}$ | $76 \cdot 63$ | 5 | 11'73 | W 786. |
| 2646 | $5 \mathrm{x} \quad 5 \quad 9.6$ | $72 \cdot 03$ | 5 | 11.78 |  |
| 2647 | $\begin{array}{lll}80 & 6 & 47.3\end{array}$ | $80 \cdot 61$ | 1 | 11.78 | $\mathrm{L}_{4} 2063$. |
| 2648 | $\begin{array}{rrr}60 & 2 & 52.0 \\ 70 & 59 & 45.9\end{array}$ | 77.36 | 7 | 11.81 | See Notes. |
| 2649 | $\begin{array}{rrr}70 & 59 & 45.9 \\ 96 & 1 & 26.6\end{array}$ | 69.89 80.55 | 4 | 11.83 11.88 |  |
| 2650 | $96 \quad 1 \quad 26 \cdot 6$ | $80 \cdot 55$ | 1 | 11*88 | $\begin{array}{r} W_{597}, \mathrm{R} 8366, \mathrm{~L}_{\mathrm{s}} 3835 \\ {\left[\mathrm{Gl} \mathrm{SI}_{5} \mathrm{I} .\right.} \end{array}$ |
| 2651 | $\begin{array}{lll}63 & 43 & 59.6\end{array}$ | $76 \cdot 62$ | 5 | II 90 | $\text { W } 856 .$ |
| 2652 | $\begin{array}{llll}44 & 29 & 43.5\end{array}$ | 71.90 | 5 | IT92 | See Notes. $\quad\left[5{ }^{1} 56\right.$. |
| 2653 | $\begin{array}{llr}88 & 12 & 6.3\end{array}$ | 74.67 | 5 | I I 92 | W 620, $\mathrm{Si}_{1}, \mathrm{~L}_{1} 76 \mathrm{I} 8$, Gl |
| 2654 | $\begin{array}{llll}68 & 31 & 33^{\circ} \\ 88 & 17 & \end{array}$ | $78 \cdot 65$ | 5 | II93 | $\text { W 868, } \mathrm{L}_{6}$ |
| 2655 | $\begin{array}{llll}88 & 17 & 201\end{array}$ | $80 \cdot 65$ | 2 | - 1 I'93 | W 622, $\mathrm{L}_{1} 7619, \mathrm{Gl} 5157$. |


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| 2656 | 39593 | $6 \cdot 5$ | $20^{\text {h }}$ |  | $14^{\text {s. }} 25$ | 74.50 | 5 | $+2^{\text {m }} 277$ |
| 2657 |  | $8 \cdot 5$ |  |  | 23. |  |  | ェ.853 |
| 2658 | 39595 | $6 \cdot 0$ | 20 |  | 37.22 | $68 \cdot 02$ | 5 | 2.563 |
| 2659 | 39612 | $7{ }^{\circ}$ | 20 |  | $42 \cdot 14$ | 79.87 | 5 | $2 \cdot 351$ |
| 2660 | 39599 | $8 \cdot 4$ | 20 |  | $43 \cdot 58$ | 71•64 | 5 | $2 \cdot 574$ |
| 2661 | 39644 | 7'1 | 20 | 27 | 34.33 | 73.08 | 5 | 2.532 |
| 2662 | 39637 | $7 \cdot 5$ | 20 | 27 | 52.36 | 75.52 | 6 | 2.891 |
| 2663 | 39639 | 8.0 | 20 | 28 | 7.77 | 80.61 | 1 | 3.093 |
| 2664 | 39672 | 7.5 | 20 | 28 | 12.81 | $76 \cdot 43$ | 5 | 2.478 |
| 2665 | 39692 | $7 \cdot 5$ | 20 | 28 | 30.82 | $70 \cdot 86$ | 5 | 2'393 |
| 2666 | 39681 | $6 \cdot 2$ | 20 | 28 | $35 \cdot 69$ | 78.63 | 5 | 2.673 |
| 2667 | 39724 | $7 \cdot 2$ | 20 | 29 | 8.14 | 70.63 | 5 | $2 \cdot 348$ |
| 2668 | 39699 | $7 \cdot 2$ | 20 | 29 | 20.94 | 73.89 | 5 | 2.951 |
| 2669 | 39690 | $7 \cdot 6$ | 20 | 29 | 22.10 | 71.19 | 6 | 3.080 |
| 2670 | 39676 | 7.0 | 20 | 29 | 22.78 | 80.64 | 2 | 3.314 |
| 2671 | 39740 | $6 \cdot 7$ | 20 | 29 | 43.35 | 77'03 | 5 | 2.407 |
| 2672 | 39763 | $7^{\circ}$ | 20 | 30 | $30 \cdot 77$ | $78 \cdot 44$ | 5 | $2 \cdot 761$ |
| 2673 | 39813 | $6 \cdot 7$ | 20 | 30 | 50.51 | 73.23 | 5 | 2.138 |
| 2674 | 39760 | $6 \cdot 6$ | 20 | 30 | 53'74 | 69.95 | 6 | 3.078 |
| 2675 | 39756 | $7 \cdot 0$ | 20 | 3 I | $5 \prime 71$ | $8 \mathrm{I} \cdot 67$ | 1 | $3 \cdot 287$ |
| 2676 | 39790 | $7 \cdot 6$ | 20 | 3 I | 23.97 | 77.47 | 5 | 2.960 |
| 2677 | 39788 | $8 \cdot 0$ | 20 | 3 I | 33.82 | $7 \times 69$ | 7 | $3 \cdot 161$ |
| 2678 | 39798 | $8 \cdot 5$ | 20 | 31 | $46 \cdot 17$ | 80.93 | 3 | $3 \cdot 164$ |
| 2679 | 39827 | 7.0 | 20 | 32 | 30.03 | 74.47 | 6 | $3 \cdot 171$ |
| 2680 | 39885 | $6 \cdot 0$ | 20 | 32 | 41'36 | 7101 | 6 | $2 \cdot 254$ |
| 2681 | 39855 | 5.5 | 20 | 32 | $49 \cdot 96$ | $69 \cdot 64$ | 5 | $2.832$ |
| 2682 | 39833 | $5 \cdot 0$ | 20 | 32 | $55^{\circ}$ |  |  | 3.426 |
| 2683 | 39905 | $6 \cdot 0$ | 20 | 33 | 37.37 | 71'29 | 5 | $2 \cdot 662$ |
| 2684 | 39934 | 7.0 | 20 | 33 | $56 \cdot 68$ | $76 \cdot 24$ | 5 | $2 \cdot 248$ |
| 2685 | 39923 | $7 \cdot 3$ | 20 | 33 | 59*15 | 73.70 | 4 | 2.570 |
| 2686 | 39897 | 7.5 | 20 | 34 | $\bigcirc 35$ | $78 \cdot 84$ | 5 | 3.017 |
| 2687 | 39948 | 7.5 | 20 | 34 | 28.72 | $80 \cdot 65$ | 2 | 2.460 |
| 2688 | 39944 | $7 \cdot 5$ | 20 | 34 | $5{ }^{1}$ |  |  | 2.809 |
| 2689 | 39967 | $7 \cdot 2$ | 20 | 35 | 1'74 | 73.90 | 5 | $2 \cdot 343$ |
| 2690 | 39956 | $6 \cdot 5$ | 20 | 35 | $6 \cdot 12$ | 77.85 | 5 | 2'703 |
| 2691 | 39939 | $7{ }^{\circ} 0$ | 20 | 35 | 33'13 | 80.6 r | I | 3.42 I |
| 2692 |  | 8.0 | 20 | 35 | $35^{\circ}$ |  |  | 1.472 |
| 2693 | 40001 | $7 \cdot 3$ | 20 | 36 | 14.67 | $77 \cdot 69$ | 4 | 2.616 |
| 2694 | 40064 | $7 \times 9$ | 20 | 38 | 1.61 | 80.67 | 2 | 2.588 |
| 2695 | 40083 | 6.4 | 20 | $3^{8}$ | 30'60 | 74*10 | 5 | 2.347 |
| 2696 | 4008r | 6.1 | 20 | $3^{8}$ | 57.50 | $78 \cdot 46$ | 5 | $2 \cdot 856$ |
| 2697 | 40103 | $7 \cdot 4$ | 20 | 39 | $9 \cdot 82$ | 73.47 | 5 | 2.241 |
| 2698 | 40073 | $8 \cdot 0$ | 20 | 39 | 28.48 | 81.72 | I | 3.444 |
| 2699 | 40088 | $7{ }^{\circ}$ | 20 | 39 | 35.80 | $76 \cdot 65$ | 5 | 3.087 |
| 2700 | 40097 | $7 \times 2$ | 20 | 39 | $48 \cdot 33$ | 70.86 | 5 | $+2.948$ |


| No. | Mean N.P.D. 18750 | Epoch. | Obs. | Ann. Prec. | Authorities. |
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| 2656 | $53^{\circ} 29^{\prime} \quad 4^{\prime \prime} \cdot 8$ | 74.50 | 5 | - I I' ${ }^{\prime \prime} 94$ | W882,Ar4406,9yrigio. |
| 2657 | 4 I 22 I7.2 | 66:37 | 3 | I I.96 | Ar 4409, Oe 20647. |
| 2658 | $64 \quad 36 \quad 5977$ | 68.86 | 5. | I I'97 | R 8394. |
| 2659 | $56522 \cdot 8$ | 79.87 | 5 | I I 988 | W 900. |
| 2660 | $\begin{array}{lll}65 & 4 & 143\end{array}$ | 71.64 | 5 | 11.98 | W 892. |
| 266 I | 63 I 2 44* | $73 \cdot 08$ | 5 | 12.04 | W 920, R 8409. |
| 2662 | $80 \quad 21580$ | $77 \cdot 67$ | 5 | 12.06 | $\mathrm{L}_{4}$ 2II3. |
| 2663 | $9 \mathrm{I} \quad 6 \quad 73$ | 80.61 | I | 12.08 | W 683, $\mathrm{Si}_{2}, \mathrm{Si}_{5}$ ¢ $206, \mathrm{~L}_{1}$ |
| 2664 | $60 \quad 54 \quad 2.4$ | $76 \cdot 43$ | 5 | 12.08 | [7648 Gl 5167 |
| 2665 | $57 \quad 3 \mathrm{I} \quad 5.5$ | $70 \cdot 86$ | 5 | $12 \cdot 10$ | W 957, R 8433 . |
| 2666 | $\begin{array}{lll}69 & 26 & 30 \cdot 5\end{array}$ | $78 \cdot 63$ | 5 | I 2 ¹I | W 949, R 8432. |
| 2667 | $5544 \begin{array}{lll}55 & \\ 5\end{array}$ | 70.63 | 5 | 12.15 |  |
| 2668 | $83 \quad 28 \quad 58 \cdot 9$ | 73.89 | 5 | 12.16 | $\mathrm{L}_{2} 53^{8} 3 . \quad \quad \quad \mathrm{Gl} 5^{1} 7 \mathrm{I}$. |
| 2669 | $\begin{array}{llll}90 & 25 & 49.6\end{array}$ | $72 \cdot 31$ | 5 | 12.16 | $\mathrm{W}_{7} \mathrm{I}_{5}, \mathrm{Si}_{5} \mathrm{I} 207, \mathrm{~L}_{17667}$ |
| 2670 | 1024844.9 | $80 \cdot 62$ | 2 | I2.16 | $\mathrm{W}_{7 \mathrm{II}}, \mathrm{R} 8437, \mathrm{Si}_{4} \mathrm{I} 872$, <br> [Sp 8i53, $\mathrm{L}_{6} 3301$. |
| 2671 | $\begin{array}{llll}57 & 55 & 24.4\end{array}$ | $77^{\circ} \circ 3$ | 5 | 12.19 |  |
| 2672 | $\begin{array}{llll}73 & 37 & 3.4\end{array}$ | $78 \cdot 44$ | 5 | I $2 \cdot 24$ | R 8467, $\mathrm{L}_{6}$. |
| 2673 | $\begin{array}{llll}48 & 32 & 30 \cdot 2\end{array}$ | 75.23 | 5 | 12.27 | $\mathrm{T}_{2} .$ |
| 2674 | 9020106 | 69.95 | 6 | 12.27 | W 754, $\mathrm{Si}_{1}, \mathrm{~L}_{1} 7687$, GI |
| 2675 2676 | $\begin{array}{ccc}\text { IOI } & 27 & 59.6 \\ 83 & 56 & \end{array}$ | $8 \mathrm{r} \cdot 67$ | I | 12.28 | $W_{755}, \mathrm{R}_{847 \mathrm{I}}, \mathrm{Si}_{3} 2299$, [ $\mathrm{L}_{5} 3317, \mathrm{Y} 8952$. |
| 2676 | 83 | 77.47 | 5 | 12.30 | W 773, $\mathrm{Si}_{1}, \mathrm{~L}_{2} 5410, \mathrm{Gl} 5186$. |
| 2677 | $\begin{array}{llrr}94 & 49 & 1 \cdot 2\end{array}$ | 72.62 | 6 | 12.32 | W772, Siz, $\mathrm{L}_{2} 3887, \mathrm{Gl}_{5187}$ |
| 2678 | $\begin{array}{llll}94 & 56 & 52 \cdot 2\end{array}$ | 77.59 | 4 | 12.33 |  |
| 2679 | $\begin{array}{crr}95 & 22 & 2.7\end{array}$ | $76 \cdot 24$ | 5 | 12.38 | $\mathrm{W}_{799}, \mathrm{Si}_{2}, \mathrm{~L}_{3} 3900$. |
| 2680 2681 | $\begin{array}{lll}52 & 6 & 19 \cdot 8 \\ 77 & 7 & 21.0\end{array}$ | $7 \mathrm{I} \cdot 01$ 69.64 | 6 5 | 12.39 12.40 | [N7yr 2329, Gl 5194. W8I5, T9529,7yri702, |
| 2682 | $\begin{array}{rrr}708 & 34 & 35.6\end{array}$ | 67.59 | 2 | 12.41 | See Note. |
| 2683 | $\begin{array}{llll}68 & 37 & 19\end{array}$ | 71.29 | 5 | 12.46 | W ixi6. |
| 2684 | 5147489 | $76 \cdot 24$ | 5 | 12.48 | W in 40 , Note. |
| 2685 | $\begin{array}{lll}64 & 22 & 5 \cdot 8\end{array}$ | 73.72 | 5 | 12.48 | W 1135 |
| 2686 | 87 0 0.0 | $78 \cdot 84$ | 5 | 12.48 | W 843, $\mathrm{Si}_{1}, \mathrm{Sp} 8207, \mathrm{~L}_{1}$ |
| 2687 | 59 37 30 <br> 1   | 80.65 | 2 | 12.52 | W II54. [7719. |
| 2688 | $\begin{array}{llll}75 & 54 & 57.2\end{array}$ | 58.67 | 2 | I 2.54 | Ar $4449, L_{4} 2$ I 86. |
| 2689 | $55 \quad 3 \quad 79$ | 73.90 | 5 | I2.55 | W II72. |
| 2690 | $70 \quad 3 \mathrm{I}$ | $77 \cdot 85$ | 5 | 12.56 | $\mathrm{W}_{1164}, \mathrm{~L}_{6} . \quad\left[\mathrm{Y}_{9004}\right.$. |
| 2691 | 1083318.7 | $80 \cdot 61$ | I | 12.59 | T 9550, Ar 445 ${ }^{\text {a }}$, $\mathrm{L}_{6}$, |
| 2692 | 33 I 33.1 | $67 \cdot 65$ | 2 | 12.59 | Oe 20909, Ar 4456. |
| 2693 | 66 I5 44.5 | 74.28 | 5 | I 2.64 | W ing8. |
| 2694 | $64 \quad 50 \quad 49.2$ | 74.00 | 3 | 12.76 |  |
| 2695 | $54 \quad 5 \mathrm{I} \quad 4 \mathrm{I} \cdot 8$ | 74*10 | 5 | 12.79 | W 1276. |
| 2696 | $78 \quad 8 \quad 24^{\circ} 0$ | 78.46 | 5 | 12.82 | PM 25 I5. |
| 2697 | $\begin{array}{rrr}50 & 59 & 26.9\end{array}$ | 73.47 | 5 | 12.83 | $\text { W } 1301 .$ |
| 2698 | 1095333.6 | 81.72 |  | 12.85 | $\text { Oe } 20839, \mathrm{~L}_{6}, \mathrm{Y}_{9} 046$ |
| 2699 | $\begin{array}{llll}90 & 47 & 39.4\end{array}$ | 76.65 | 5 | 12.86 -12.88 | W 99I, Si., $L_{1} 7786$. |
| 2700 | $83431 \times 9$ | 70.86 | 5 | - I2.88 | $\mathrm{L}_{2} 5538$ |


| No. | Lalande. | Mag. | Mean R.A. 1875.0. |  |  | Epoch. | Obs. | Ann. F̌rec. |
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| 2701 | 40125 | $7{ }^{\prime}$ | $20^{\text {h }}$ |  | 19.83 | $77 \cdot 32$ | 3 | +3 ${ }^{\text {R }} 4 \mathrm{4} 7$ |
| 2702 | 40172 | $7 \cdot 2$ | 20 | 41 | $42 \cdot 34$ | 69.05 | 5 | 2.437 |
| 2703 | 40160 | $7 \cdot 3$ | 20 | 41 | 43.82 | 72.52 | 5 | 2.893 |
| 2704 | 40164 | $6 \cdot 8$ | 20 | 42 | 7.83 | $77 \cdot 35$ | 5 | 3.016 |
| 2705 | 40170 | $7 \times 5$ | 20 | 42 | 13.16 | $75 \cdot 31$ | 5 | 2.945 |
| 2706 | 40193 | 7*0 | 20 | 42 | $32 \cdot 87$ | $68 \cdot 73$ | 5 | 2.552 |
| 2707 | 40182 | $6 \cdot 8$ | 20 | 42 | 51*51 | 7 I 00 | 6 | 3.090 |
| 2708 | 40212 | $7 \cdot 7$ | 20 | 43 | $0 \cdot 45$ | 72.96 | 5 | $2 \cdot 652$ |
| 2709 | 40184 | $8 \cdot 0$ | 20 | 43 | $9 \cdot 32$ | $76 \cdot 67$ | 5 | 3.200 |
| 2710 | 40249 | $6 \cdot 7$ | 20 | 43 | 17.00 | $73 \cdot 20$ | 5 | $2 \cdot 258$ |
| 2711 | 40229 | $6 \cdot 4$ | 20 | 43 | $46 \cdot 11$ | $80 \cdot 64$ | 4 | 2.982 |
| 2712 | 40234 | $7 \cdot 2$ | 20 | 43 | $46 \cdot 86$ | $77 \cdot 50$ | 6 | $2 \cdot 875$ |
| 2713 | 40280 | 77 | 20 | 44 | 16.01 | $78 \cdot 96$ | 3 | $2 \cdot 273$ |
| 2714 | 40277 | $7 \cdot 5$ | 20 | 44 | 16.18 | 72.92 | 4 | $2 \cdot 364$ |
| 2715 | 40328 | $6 \cdot 0$ | 20 | 44 | 56.29 | $73 \cdot 72$ | 2 | I-811 |
| 2716 | 40316 | $7{ }^{\circ}$ | 20 | 45 | 50.22 | 71-09 | 5 | 2.926 |
| 2717 | 40334 | $6 \cdot 8$ | 20 | 45 | $56 \cdot 59$ | $70 \cdot 06$ | 5 | 2.389 |
| 2718 |  | $8 \cdot 4$ | 20 | 46 | 0.95 | $75 \cdot 69$ | I | $2 \cdot 394$ |
| 2719 | 40311 | $7{ }^{\circ}$ | 20 | 46 | 25.67 | 81.72 | I | 3.420 |
| 2720 |  | $7 \cdot 5$ | 20 | 46 | $40 \cdot 49$ | $80 \cdot 54$ | I | 3.533 |
| 2721 | 40369 | $8 \cdot 0$ | 20 | 46 | $44^{\circ} \mathrm{I} 3$ | $74 \cdot 69$ | 5 | $2 \cdot 266$ |
| 2722 | 40367 | $6 \cdot 7$ | 20 | 46 | 54.97 | $70 \cdot 30$ | 5 | 2.439 |
| 2723 | 40373 | $7 \cdot 5$ | 20 | 47 | 3.79 | $72 \cdot 96$ | 5 | $2 \cdot 395$ |
| 2724 | 40352 | $7 \cdot 5$ | 20 | 47 | 11.76 | $76 \cdot 31$ | 5 | $3 \cdot 028$ |
| 2725 | 40381 | $7 \cdot 0$ | 20 | 47 | 26.11 | 79.46 | 4 | 2.619 |
| 2726 | 40354 | $7 \cdot 5$ | 20 | 47 | $30 \cdot 02$ | 71'02 | 6 | $3 \cdot 160$ |
| 2727 | 40393 | $8 \cdot 0$ | 20 | 47 | $40 \cdot 27$ | $77 \cdot 67$ | 5 | $2 \cdot 524$ |
| 2728 | 40403 | $6 \cdot 6$ | 20 | 47 | 52.51 | 73.11 | 4 | $2 \cdot 517$ |
| 2729 | 40405 | $6 \cdot 7$ | 20 | 48 | $40 \cdot 51$ | $73 \cdot 85$ | 6 | $3 \cdot 104$ |
| $273{ }^{\circ}$ | 40450 | 73 | 20 | 49 | 45.55 | $70 \cdot 67$ | 3 | $3 \cdot 142$ |
| 2731 | 40506 | $7 \cdot 2$ | 20 | 50 | 1712 | $75 \cdot 68$ | 5 | 2.452 |
| 2732 | 40484 | $7 \cdot 7$ | 20 | 50 | $26 \cdot 38$ | $65 \cdot 66$ | 1 | 3.052 |
| 2733 | 40515 | $8 \cdot 0$ | 20 | 50 | $34 \cdot 82$ | 72.93 | 5 | $2 \cdot 544$ |
| 2734 | 40518 | $7 \cdot 2$ | 20 | 50 | $40 \cdot 69$ | 67.31 | 5 | $2 \cdot 569$ |
| 2735 | 40492 | $7 \cdot 2$ | 20 | 50 | 41*05 | $76 \cdot 78$ |  | 2.250 |
| 2736 | 40538 | 77 | 20 | $5^{\circ}$ | $49 \cdot 82$ | 78.03 | 3 | 2.292 |
| 2737 | 40590 | $6 \cdot 7$ | 20 | 51 | 32:33 | 73.51 | 5 | $2 \cdot 130$ |
| 2738 | 40577 | $6 \cdot 5$ | 20 | 51 | $45 \cdot 96$ | $76 \cdot 67$ | 5 | 2.178 |
| 2739 | 40522 | $7^{\circ} \mathrm{O}$ | 20 | 51 | $46 \cdot 43$ | $80 \cdot 68$ | I | $3 \cdot 334$ |
| 2740 | 40572 | $7{ }^{\circ}$ | 20 | 52 | 12.56 | 81.69 | 2 | 2.597 |
| 2741 | 40604 | $7 \cdot 8$ | 20 | 52 | 12.65 | 71.67 | 4 | 2'179 |
| 2742 | 40588 | $6 \cdot 5$ | 20 | 52 | 13.56 | $77 \cdot 24$ | 5 | 2.392 |
| 2743 |  | $5 \cdot 1$ | 20 | 52 | 4 I -09 | $70 \cdot 80$ | 4 | $2 \cdot 681$ |
| 2744 | 40600 | $8 \cdot$ | 20 |  | 41*48 | 80.67 | 1 | 2.650 |
| 2745 | 40601 | $7{ }^{\circ}$ | 20 |  | 44.99 | $79 \cdot 86$ | 6 | +2.667 |


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| 2701 | $108^{\circ} 39^{\prime} 38^{\prime \prime} \cdot 3$ | 75.64 | 4 | - $1 \mathbf{2}^{\prime \prime} \cdot 98$ | PM ${ }_{25}{ }^{\text {I }}$, $\mathrm{Oe} 2086 \mathrm{I}, \mathrm{L}_{\text {g }} \mathrm{Y}$ |
| 2702 | $58 \quad 2 \quad 12 \cdot 1$ | 67.86 | 5 | 13.00 | WI355. [9062,9yr 9942. |
| 2703 | $79 \quad 59354$ | 72.52 | 5 | 13.00 | W Io49, $\mathrm{L}_{4} 2255$. |
| 2704 | $86 \quad 48 \quad 39 \cdot 5$ | 77.35 | 5 | 13.03 | See Notes. |
| 2705 | 82 51 53.9 | $75 \cdot 3 \mathrm{I}$ | 5 | 13.04 | W io60, $\mathrm{Si}_{1}$. Gl 5253. |
| 2706 | $625149{ }^{\circ}$ | 69.71 | 4 | 13.06 | W $1376, \mathrm{Bn} . \quad[5258$. |
| 2707 | $91 \quad 1826$ | 7130 | 5 | 13.08 | W io69, $\mathrm{Si}_{2}, \mathrm{~L}_{1} 7832$, Gl |
| 2708 | $67 \quad 26 \quad 56 \cdot 2$ | 72.96 | 5 | 13.09 |  |
| 2709 | $\begin{array}{llll}97 & 9 & 36.4\end{array}$ | $76 \cdot 67$ | 5 | 13.10 | W 1075, $\mathrm{Si}_{\mathrm{g},} \mathrm{L}_{8} 3990$. |
| 2710 | $5^{1} \quad 10 \quad 21.3$ | 73.20 | 5 | 13.11 | $\mathrm{W}_{1407}$, $\mathrm{R}_{5750} \mathrm{Y}^{9092}$. |
| 2711 | $84 \quad 55 \quad 6 \cdot 8$ | 80.64 | 4 | 13.14 | $\mathrm{L}_{9} 559 \mathrm{~m}$. |
| 2712 | $\begin{array}{llll}78 & 5^{8} & 5 \times 1\end{array}$ | 77.50 | 6 | 13.14 | W inioi, Gl 5268. |
| 2713 | $5 \mathrm{5I} 35 \begin{array}{lll}\text { r.9 }\end{array}$ | $78 \cdot 96$ | 3 | 13.17 | W 1439. |
| 2714 | $54 \begin{array}{lll}54 & 53 & 53\end{array}$ | 72.92 | 4 | 13.17 | Y 9108. |
| 2715 | $\begin{array}{llll}38 & 33 & 9\end{array}$ | $73^{\prime} 72$ | 2 | 13.22 | Oe2irit. |
| 2716 | $8 \mathrm{I} 4 \mathrm{l} \quad 42 \cdot \mathrm{I}$ | $71 \times 09$ | 5 | 13.28 | $\mathrm{L}_{9} 5612$. |
| 2717 | $\begin{array}{llll}55 & 42 & 46 \cdot 3\end{array}$ | $70 \cdot 06$ | 5 | 13.28 | W 1470. |
| 2718 | $\begin{array}{llll}55 & 5^{8} & 27 & \end{array}$ | $75 \cdot 69$ | 1 | 13.29 | W 1474. |
| 2719 | 109 35 | $8{ }^{1} 72$ | I | 13.31 |  |
| 2720 | $\begin{array}{lllll}114 & 45 & 3.6\end{array}$ | $80 \cdot 54$ | I | 13.34 | Oe 20933, $\mathrm{L}_{6}, \mathrm{Y} 9122$, |
| 2721 | $5 \mathrm{I} 4 \begin{array}{lll} & 3 \mathrm{r} & 8\end{array}$ | $74 \cdot 69$ | 5 | 13.34 | W 1493. |
| 2722 | $57 \quad 37$ 10'9 | $70 \cdot 30$ | 5 | 13.35 | W 1494. |
| 2723 | 554848 | $72 \cdot 96$ | 5 | 13.36 |  |
| 2724 | $87 \quad 28 \quad 90$ | $76 \cdot 31$ | 5 | 13.37 | Wri82,Sp 8355,Gl 525 I. |
| 2725 | $\begin{array}{llll}65 & 33 & 20 \cdot 6\end{array}$ | $79 \cdot 46$ | 4 | 13.38 | $W_{1505}$ |
| 2726 | $\begin{array}{lll}95 & \circ & 53.5\end{array}$ | 7149 | 5 | 13.39 |  |
| 2727 | 6 I | $77 \cdot 67$ | 5 | 13.40 | W $1509 .\left[8358, \mathrm{~L}_{3} 4030\right.$. |
| 2728 | 6049 11.3 | 73.11 | 4 | 13.41 | W 1518. |
| 2729 | 915054.3 | $75^{\circ} 5^{\circ}$ | 5 | 13.46 | See Notes. |
| 2730 | $\begin{array}{lll}94 & 20 \cdot 9\end{array}$ | 70.67 | 3 | 13.53 | $\begin{array}{r} \text { W } 1240, \mathrm{Sp} 8384, \mathrm{~L}_{2} \\ {\left[4053, \mathrm{Gl}_{5295} .\right.} \end{array}$ |
| 2731 | $5747 \begin{array}{lll}57 & 14.5\end{array}$ | $75 \cdot 68$ | 5 | 13.57 | W 1583. |
| 2732 | $88 \quad 45 \quad 20 \cdot 5$ | 67.57 | I | 13.58 | See Notes. |
| 2733 | $\begin{array}{lllll}61 & 46 & 37 \%\end{array}$ | 72.93 | 5 | 13.58 |  |
| 2734 | $6254 \quad 9.2$ | 66.30 | 5 | 13.59 | W 1596. |
| 2735 | 50 Iо $37^{\circ}$ | $76 \cdot 78$ | 2 | 13.59 |  |
| 2736 | $\begin{array}{llll}51 & 34 & 29.7\end{array}$ | 78.03 | 3 | 13.60 |  |
| 2737 | $46 \quad 6 \quad 18 \cdot 9$ | 73.51 | 5 | ${ }^{1} 3.65$ | Bn, B 456. |
| 2738 | $47 \quad 42 \quad 35 \cdot 9$ | 76.67 | 5 | ${ }^{1} 3.66$ | W 1630. ${ }^{\text {W }}$ |
| 2739 | 104 57 $51^{\circ}$ <br>    | 80.68 | 1 | 13.66 | W I293, $\mathrm{Si}_{4}$ I919, $\mathrm{L}_{a}$. W I63I. |
| 2740 | $64 \quad 4 \quad 45^{\prime}$ I | 8ז'69 | 2 | 13.69 | W I63I. |
| 2741 | $47 \begin{array}{lll}47 & 35 & 33.5\end{array}$ | $7 \mathrm{~F} \cdot 66$ | 3 | 13.69 |  |
| 2742 | 55 1о 9.6 | 77.24 | 5 | I 3.69 | W 1636. $\left[2366, \mathrm{Gl}_{5307}\right.$. |
| 2743 | $\begin{array}{llll}68 & 9 & 22.3\end{array}$ | 70.49 | 6 | 13.72 | T 9703, Ar 4527, ${ }^{\text {a }} 7 \mathrm{yr}$ |
| 2744 2745 | $\begin{array}{lll}66 & 35 & 13.8 \\ 67 & 26 & 10.5\end{array}$ | 80.67 79.86 | $\underline{1}$ | 13.72 -13.72 | W 1644. |




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| 2791 | 41269 | $7 \times$ | $2 \mathrm{I}^{\text {h }}$ | $8^{\mathrm{m}}$ | $49^{8 .} 73$ | 68.88 | 5 | +28.561 |
| 2792 | 41259 | $6 \cdot 8$ | 21 |  | $54 \cdot 34$ | 7 r 34 | 5 | $2 \cdot 812$ |
| 2793 | 41290 | 7.5 | 2 I |  | 50.27 | 78.58 | 5 | 2.897 |
| 2794 | 41299 | 6.5 | 21 | 9 | 51*49 | 75.27 | 5 | 2.809 |
| 2795 | 41347 | $7{ }^{1}$ | 21 |  | r.97 | $7{ }^{\text {' }} 99$ | 4 | 1.908 |
| 2796 | 41312 | $7 \cdot 2$ | 21 |  | $7 \times 7$ | 73.49 | 4 | 2.758 |
| 2797 | 41293 | $7 \cdot 5$ | 21 |  | 11.54 | $71 \times 94$ | 5 | 3'106 |
| 2798 | 41287 | $7{ }^{\circ}$ | 21 |  | 13.86 | 81.67 | 1 | 3.242 |
| 2799 | 41291 | $7{ }^{\circ}$ | 21 |  | 22.72 | 74.66 | 5 | 3.294 |
| 2800 | 41326 | 6.7 | 2 I |  | ${ }^{2} 5 \cdot 76$ | $70^{\circ} 91$ | 5 | 2.653 |
| 2801 | $4{ }^{1} 338$ | $7 \cdot 5$ | 21 |  | $57 \cdot 48$ | 77.25 | 5 | 2.857 |
| 2802 |  | $8 \cdot 3$ | 21 | 11 | 9.86 | 78.80 | , | $2 \cdot 896$ |
| 2803 | 41380 | $6 \cdot 3$ | 21 | 11 | 15.01 | 69.50 | 6 | 2.094 |
| 2804 | 41344 | $8 \cdot 0$ | 21 |  | $16 \cdot 28$ | 79.36 | 5 | 2.951 |
| 2805 | 41376 | $7{ }^{\circ}$ | 21 |  | $35 \cdot 89$ | 69.53 | 5 | 2.426 |
| 2806 | 41386 | 7.0 | 21 | 12 | 3257 | $77 \cdot 18$ | 2 | 2.898 |
| 2807 | 41420 | $6 \cdot 5$ | 21 | 13 | $5 \cdot 12$ | 71.28 | 5 | $2 \cdot 673$ |
| 2808 | 41439 | 8.2 | 21 | ${ }_{1}$ | 29.16 | 75.47 | 4 | 2.647 |
| 2809 | 41428 | $7{ }^{\circ}$ | 21 | 13 | 3277 | $76 \cdot 59$ | 5 | 2.932 |
| 2810 | 41448 | 73 | 21 | 14 | 4.33 | $7{ }^{\circ} 33$ | 5 | $2 \cdot 877$ |
| 28 II | 41493 | 73 | 21 | 14 | 22.38 | 79*93 | 5 | 2.374 |
| 2812 | 41476 | 6.0 | 21 | 14 | $33^{2} 24$ | 71.86 | 6 | $2 \cdot 724$ |
| 2813 | 41486 | 8.5 | 21 | 15 | 4'19 | $8 \mathrm{I} \times 75$ | I | 3*037 |
| 2814 | 41557 | $7 \cdot 8$ | 21 | 16 | $4 \cdot 13$ | 71.75 | 1 | $2 \cdot 312$ |
| 2815 | 41554 | 6.0 | 21 | 16 | $6 \cdot 00$ | 77.88 | 2 | $2 \cdot 522$ |
| 2816 | 41533 | $7 \cdot 2$ | 2 I | 16 | 16.59 | $8 \mathrm{I} \times 15$ | 2 | 3.035 |
| 2817 | 41569 | $7 \cdot 8$ | 21 | 17 | 12.81 | 78.74 | 5 | 2.935 |
| 2818 | 41588 | 6.5 | 21 | 17 | 19.36 | 69.10 | 5 | 2.573 |
| 2819 | 41585 | 7.2 | 21 | 17 | 37.49 | 76.71 | 5 | 2.863 |
| 2820 | 41610 | 7.7 | 2 I | 17 | 45.23 | 7 F 92 | 5 | $2 \cdot 588$ |
| 2821 | 41624 | $7{ }^{\circ}$ | 2 I | 17 | 47.55 | 71.15 | 5 | $2 \cdot 391$ |
| 2822 | 41619 | 8.0 | 21 | 17 | 54.68 | 74.45 | 5 | $2 \cdot 585$ |
| 2823 | 41627 | $7 \cdot 5$ | 21 | 17 | 55.17 | 72.80 |  | $2 \cdot 389$ |
| 2824 | 41650 | $7{ }^{\circ}$ | 21 | 18 | 8.82 | $73^{\circ} \mathrm{O} 4$ | 3 | 2.075 |
| 2825 | 41615 | 6.5 | 21 | Ј8 | 18.45 | 77.11 | 5 | +2.925 |
| 2826 | 41852 | $6 \cdot 3$ | 21 | 18 | 27.25 | 64.76 | 1 | $-2.220$ |
| 2827 | 41637 | $6 \cdot 5$ | 21 | 18 | 32.86 | $80 \cdot 36$ | 3 | $+2.672$ |
| 2828 | 41601 | $7{ }^{\circ}$ | 21 | 18 | $32 \cdot 97$ | 80.69 | 3 | 3.302 |
| 2829 | 41648 | $6 \cdot 2$ | 21 | 18 | $46 \cdot 6$ | $8 \mathrm{~B} \cdot 75$ | 1 | 2.686 |
| 2830 | 41674 | $7 \times$ | 21 | 19 | 14.64 | 69.99 | 4 | 2.663 |
| 2831 | 41655 | $6 \cdot 3$ | 21 | 19 | 27.50 | 65.65 | I | 3.072 |
| 2832 | 41684 | $7{ }^{\circ}$ | 21 | 19 | 29.77 | 73.36 | 5 | $2 \cdot 635$ |
| 2833 | 41686 | 79 | 21 | 19 | 39.65 | 80.61 | I | 2.690 |
| 2834 | 41697 | 73 | 21 | 19 | 54.75 | $78 \cdot 36$ | 5 | 2.597 |
| 2835 | 41700 | $8 \cdot 5$ | 21 | 20 | 26.79 | 74.24 | 2 | +2999 |


| No. | Mean N.P.D. 1 S750. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2791 | $60^{\circ} 33^{\prime \prime} 54^{\prime \prime} \cdot 1$ | 68.06 | 5 | - 14'72 | Y 9281. |
| 2792 | $74 \quad 2 \quad 15.6$ | 71.34 | 5 | 14.72 |  |
| 2793 | $\begin{array}{llll}79 & 2 & 22 \cdot 1\end{array}$ | $78 \cdot 58$ | 5 | 14.76 | Bn. |
| 2794 | $\begin{array}{llll}73 & 47 & 18 \cdot 5\end{array}$ | 75.27 | 5 | 14.77 | R $9061, L_{6}$. |
| 2795 | $\begin{array}{llll}37 & 48 & 177\end{array}$ | 68.50 | 5 | 14.79 |  |
| 2796 | $\begin{array}{llll}70 & 48 & 18.4\end{array}$ | 73.36 | 5 | 14.79 | W $207, \mathrm{R} 9068, \mathrm{~L}_{6}$. |
| 2797 | $\begin{array}{llll}92 & 7 & 39.4\end{array}$ | 71.94 | 5 | 14.80 | Wi87, $\mathrm{Si}_{6} 12$ 16, $\mathrm{L}_{1} 8176$. |
| 2798 | 1003919.8 | $8 \mathrm{8} \cdot 67$ | 1 | 14.80 | See Notes. [ $\mathrm{L}_{s} 3576$. |
| 2799 | $1034759 \% 3$ | 74.66 | 5 | 14.81 |  |
| 2800 | $\begin{array}{lll}65 & 5 & 4.4\end{array}$ | 70.91 | 5 | 14.82 | $\mathrm{W}_{212}$, R 9074. |
| 2801 | $\begin{array}{lll}76 & 34 & 7 \cdot 1\end{array}$ | 77.25 | 5 | 14.84 | W 2 II, Gl 5408. |
| 2802 | $\begin{array}{llll}78 & 57 & 43 \cdot 8\end{array}$ | $78 \cdot 80$ | 2 | 14.85 | W $215, \mathrm{Sp} 8601, \mathrm{~L}_{4} 2543$. |
| 2803 | $\begin{array}{llll}42 & 32 & 45 *\end{array}$ | 68.90 | 6 | 14.86 | Oe 21933. |
| 2804 | $82 \begin{array}{llll}82 & 17 & 16.2\end{array}$ | 79.36 | 5 | 14.86 | $\mathrm{L}_{2} 5887$. |
| 2805 | 54 If $57 \%$ | 69.35 | 5 | 14.88 |  |
| 2806 | $\begin{array}{llll}78 & 57 & 14.9\end{array}$ | 74.47 | 4 | 14.93 | See Notes. |
| 2807 | $65 \quad 5155{ }^{6}$ I | 71-28 | 5 | 14.97 | W 284. |
| 2808 | $\begin{array}{lll}64 & 26 & 6 \cdot 1\end{array}$ | 75.47 | 4 | 14.99 | [ $\mathrm{L}_{8} 5902, \mathrm{Gl} 5420$. |
| 2809 | 81 ○ $5^{\circ} 2$ | $76 \cdot 59$ | 5 | 14.99 | $\mathrm{W}_{271}, \mathrm{PM} 2583, \mathrm{R}, \mathrm{SiL}^{1}, \mathrm{Sp} 862 \mathrm{I}$, |
| 2810 | $77 \quad 33 \quad 54.4$ | $71^{1} 3^{2}$ | 5 | 15.02 | W 293, Gl 5423. |
| 28 II | $5 \mathrm{5I} 43 \mathrm{ll} \mathbf{1 3}^{7} 7$ | $79 \times 93$ | 5 | 15.04 | W 322, Y 9318. |
| 2812 | $68 \quad 30 \quad 8 \cdot 2$ | $73^{\prime} 10$ | 5 | 15.05 | W 319. |
| 2813 | $87 \begin{array}{llll}88 & 32.7\end{array}$ | 81'75 | 1 | 15.08 | W 315, Gl 5430. |
| 2814 | $\begin{array}{llll}49 & 5 & 157\end{array}$ | $71 \times 75$ | 1 | 15.14 | W 366. |
| 2815 | $\begin{array}{lll}57 & 55 & 2.5\end{array}$ | 72'13 | 3 | 15.14 | $\text { W } 360 .$ |
| 2816 | $\begin{array}{llll}87 & 36 & 509\end{array}$ | 81'15 | 2 | 15.15 | $\mathrm{W}_{347}, \mathrm{Si}_{1}, \mathrm{~L}_{1} 8253, \mathrm{Gl}$ |
| 2817 | 814 | $78 \cdot 74$ | 5 | 15.20 | $\mathrm{L}_{2} 5938$. |
| 2818 | $\begin{array}{llll}60 & 13 & 26.8\end{array}$ | 69.28 | 5 | 15.21 | W 395. |
| 2819 | $\begin{array}{llll}76 & 29 & 3.8\end{array}$ | 76.71 | 5 | 15.22 |  |
| 2820 | $\begin{array}{llll}60 & 53 & 21.5\end{array}$ | 71•93 | 5 | 15.23 | W 404. |
| 282 I | 5153540 | $7 \mathrm{I} \cdot 15$ | 5 | 15.24 | $\text { Y } 9350 .$ |
| 2822 | $60 \quad 431771$ | 74.45 | 5 | 15.24 | W 410. |
| 2823 | $5 \mathrm{I} 4934^{\circ}$ | 72.82 | 5 | 15.24 | Y 9353. ${ }^{\text {O }}$ |
| 2824 | $\begin{array}{llll}41 & 2 & 30 \%\end{array}$ | 69.95 | 4 | 15.25 | Oe 22146, RO 521 If . |
| 2825 | 80 2r 443 | 77'II | 5 | 15.27 | W 396, $\mathrm{Si}_{1}, \mathrm{~L}_{4} 2620$. |
| 2826 | $\begin{array}{llll}9 & 17 & 43.6\end{array}$ | 64.76 | 1 | 15.28 | RC 5228. |
| 2827 | $\begin{array}{llll}65 & 13 & 26.7\end{array}$ | $80 \cdot 36$ | 3 | 15.28 | W ${ }^{1979} \mathrm{~L}_{6} 3625$. |
| 2828 | $10448 \quad 52.8$ | 7735 | 5 | 15.18 | W 392, Oe $21375, \mathrm{Si}_{6}$ |
| 2829 | 66 - 26.9 | 8 8 '75 | 1 | 15.29 |  |
| 2830 | $\begin{array}{llll}64 & 39 & 24.6\end{array}$ | $68 \cdot 12$ | 5 | 15.32 | 8295, Gl 5458. |
| 2831 | 90 ○ 17.8 | 64.76 | I | 15.33 | $\mathrm{W}_{420}, \mathrm{Bn}, \mathrm{Sp} 8674, \mathrm{~L}_{1}$ |
| 2832 | $63 \quad 7 \quad 10 \cdot 3$ | $73 \cdot 36$ | 5 | 15.33 |  |
| 2833 | $66 \quad 2 \quad 49 \cdot 1$ | $80 \cdot 61$ | 1 | 15.34 | W $454 \cdot$ |
| 2834 | $\begin{array}{lll}61 & 4 & 36 \cdot 2 \\ 85 & 5 & 24.8\end{array}$ | $78 \cdot 36$ | 5 | 15.36 | W 459. |
| 2835 | $\begin{array}{llll}85 & 5 & 24.8\end{array}$ | 73.74 | 1 | $-1539$ | See Notes. |



| No. | Mean N.P.D. $1875 \cdot 0$ | Epoch. | Obs. | Ann. Prec | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2836 | $7 \mathrm{I}^{\circ} \quad 9^{\prime} 52^{\prime \prime} \cdot 4$ | $70 \cdot 30$ | 5 | - $155^{\prime \prime} \cdot 40$ | $\mathrm{W}_{466}, \mathrm{R}_{9182} \mathrm{~S}_{2}, \mathrm{~L}_{6}$. |
| 2837 | $79 \quad 52$ 11.2 | 76.71 | 5 | I5.41 | $\mathrm{W}_{457} \mathrm{~L}_{4} 2640, \mathrm{Gl}_{547 \mathrm{I}}$. |
| 2838 | 858584.5 | 74.55 | 6 | 15.42 | $\mathrm{W}_{461} \mathrm{Si}_{1}, \mathrm{~L}_{2} 5975, \mathrm{Gl} 5472$. |
| 2839 | $\begin{array}{llll}74 & 24 & 49 \cdot 4\end{array}$ | 71.54 | 5 | 15.43 | W $468, \mathrm{R} 9185, \mathrm{~L}_{6}$, Gl 5473. |
| 2840 | 37 40 45* | $66 \cdot 38$ | 2 | $\mathrm{r} 5 \cdot 46$ | R 9193, Oe 22256, RC [5233. |
| 2841 | $62 \quad 40 \quad 6 \cdot 7$ | $74 * 09$ | 5 | 15.48 | W 505 |
| 2842 | $\begin{array}{llll}68 & 48 & 28 \cdot 6\end{array}$ | $76 \cdot 73$ | 5 | 15.48 | W 503. [7yr 2436. |
| 2843 | $62 \quad 56 \quad 50$ | 71.35 | 5 | 15.48 | $\mathrm{W}_{507}{ }^{\text {, T9963, }{ }^{\text {Ar }} 4662, \mathrm{~N}}$ |
| 2844 | 82 20 51.7 | $79^{\prime} 18$ | 3 | 15.49 | W $509, \mathrm{Si}_{1}, \mathrm{~L}_{5} 5984, \mathrm{Gl} 5477$. |
| 2845 | $37 \quad 3840 \cdot 5$ | $72 \cdot 76$ | 1 | 15*5 | $\begin{array}{r} \mathrm{T} 9973, \operatorname{Ar}_{4668, \mathrm{Oe} 22285, \mathrm{RC}} \\ {\left[5238, \mathrm{RC}_{2} 2093 .\right.} \end{array}$ |
| 2846 | 58 19 17\% | $78 \cdot 55$ | 4 | I 5*52 | W 526,R ${ }_{\text {2206, Gl }} 5478$. |
| 2847 | $64 \quad 37 \quad 22.9$ | 68.73 | 6 | 15.53 | W 529. |
| 2848 | $68 \quad 2 \mathrm{I}$ 58•1 | 73.43 | 4 | I5.54 | W 536, R 9212. |
| 2849 | 6157580 | 80.63 | 2 | 15.57 | [3666. |
| 2850 | $1001720 \% 7$ | $69 \cdot 64$ | 1 | r $5 \cdot 63$ | W $546, \mathrm{Si}_{2}, \mathrm{Si}_{2} 24 \mathrm{I} 6, \mathrm{~L}_{5}$ [5252, 9yr 2010. |
| 2851 | $44 \quad 7 \quad 1509$ | 62.53 | 3 | I 5.64 | Ar 4680, Oe 22336 , RC |
| 2852 | $\begin{array}{llll}78 & 24 & 39 \cdot 8\end{array}$ | 73.45 | 4 | L5.65 | W $557, \mathrm{Bn}, \mathrm{L}_{4} 267 \mathrm{I}, \mathrm{Gl}$ |
| 2853 | 102493.1 | 7 1*73 | 4 | 15.67 | See Notes. [5491. |
| 2854 |  | $72 \cdot 98$ | 4 | I5.68 | W 606. |
| 2855 | 6950200 | $70 \cdot 35$ | 5 | 15\%76 | PM 2606, R $9255^{\circ}$ |
| 2856 | 3755 | 68.47 | 3 | 15.76 | Oe 22397, $\mathrm{T}_{2}, \mathrm{RC}_{5273}$. |
| 2857 | $57 \quad 46$ 3r•8 | $75 \cdot 28$ | 5 | 15.78 | W 647. |
| 2858 | $\begin{array}{llll}68 & 57 & 47^{\circ} 2\end{array}$ | 72.94 | 5 | 15.78 | W 643, $\mathrm{L}_{6}$. |
| 2859 | $\begin{array}{llll}93 & 57 & 5 \mathrm{I} \times \mathrm{I}\end{array}$ | $80 \cdot 29$ | 3 | 15.79 | W 624. |
| 2860 | $\begin{array}{lll}73 & 6 & 31 \cdot 1\end{array}$ | $76 \cdot 7 \mathrm{I}$ | 4 | 15.81 | W 653, R $9260, \mathbf{L}_{6}$. [Y 9416, St 11402. |
| 2861 | $114 \quad 0 \quad 34.4$ | 67.64 | 2 | r $5 \cdot 81$ | $\text { Tio007, Ar } 4689, \mathrm{Oe} 21484, \mathrm{~L}_{6} .$ |
| 2862 | $72 \begin{array}{lll}72 & 177\end{array}$ | 72.71 | 5 | 15.85 | W 67I, $\mathrm{L}_{6}$. |
| 2863 | $69 \quad 9 \quad 6 \cdot 8$ | 69.65 | 3 | 15.88 |  |
| 2864 | $58 \quad 46 \quad 209$ | 79.32 | 3 | 15.89 | W 695. |
| 2865 | $\begin{array}{lll}48 & 9 & 74\end{array}$ | 73.60 | 6 | r $5 \cdot 89$ | W 704. |
| 2866 | $\begin{array}{llll}62 & 21 & 30.6\end{array}$ | 77.84 | 5 | 15.90 | W 699. |
| 2867 | $\begin{array}{llll}95 & 36 & 39 & 3\end{array}$ | 71'16 | 5 | 15.91 | W678,Sp ${ }^{\text {W752, }}$, $\mathrm{L}_{3} 4324$. |
| 2868 | $74 \quad 5 \mathrm{I}$ | 69.95 | 6 | 15.94 | W703, $\mathrm{R}_{92} 88, \mathrm{~L}_{6,}, \mathrm{Gl}_{55} \mathrm{I} 8$. |
| 2869 | $78 \quad 50 \quad 2711$ | 79.45 | 3 | 15.96 | W 712, R 9294, Sp 8768, L4 |
| 2870 | $\begin{array}{llll}90 & 56 & 59.5\end{array}$ | 74*10 | 5 | 15.97 | See $N$ otes. [2716, Gl 552 I . |
| 2871 | $70 \quad 46 \quad 30 \%$ | $77^{\circ} 00$ | 3 | 15.97 | W 737, R 9300, $\mathrm{L}_{6}$. |
| 2872 | 45 II 3.3 | 73'13 | 5 | 15.98 | W 757, Oe 22524. |
| 2873 | $84 \quad 47 \quad 279$ | 71.22 | 4 | 16.03 | See Notes. |
| 2874 | $101820 \cdot 1$ | 74'17 | 5 | 16.05 | $\mathrm{W}_{749}, \mathrm{Si}_{3} 2434, \mathrm{~L}_{5} 37 \mathrm{II}$. |
| 2875 | $\begin{array}{llll}65 & 3 & 52 \cdot 1\end{array}$ | 75'78 | 5 | 16.07 |  |
| 2876 | $7017 \quad 520$ | 70*53 | 5 | 16.08 | $\operatorname{Ar}_{4754}, \mathrm{R} 9336, \mathrm{~L}_{6} .$ |
| 2877 | 47 16 21.3 | 72.15 | 5 | 16.10 | $\text { W } 816 .$ |
| 2878 | 664 II.9 | 73.12 | 5 | 16.10 | W 8i2, Bn. [5541. |
| 2879 | $81522 \begin{array}{lll} \\ 81\end{array}$ | $68 \cdot 88$ | 5 | 16.1 1 | W789, $\mathrm{Si}_{1}, \mathrm{Sp} 8792, \mathrm{~L}_{2} 6086, \mathrm{Gl}$ |
| 2880 | $\begin{array}{llll}79 & 57 & \text { I2.9 }\end{array}$ | $78 \cdot 71$ | 5 | -16.14 | W 808, $\mathrm{Si}_{1}, \mathrm{~L}_{4} 2746, \mathrm{Gl} 5542$. |


| No. | Lalande. | Mag. | Mean R.A. | $1875 \cdot 0$ | Epoch. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2881 | 42258 | $8 \cdot 5$ | $2 \mathrm{I}^{\mathrm{h}} 35^{\mathrm{m}}$ | $8^{8.67}$ | 75.88 | 5 | +2.918 |
| 2882 | 42273 | $7 \cdot 1$ | 2135 | 10.07 | 72.53 | 5 | 2.649 |
| 2883 | 42286 | $7 \cdot 1$ | 2135 | 27.05 | 77.78 | 4 | $2 \cdot 684$ |
| 2884 | 42292 | $6 \cdot 7$ | 2135 | 37.03 | 80.70 | 3 | $2 \cdot 764$ |
| 2885 | 42345 | $8 \cdot 0$ | 2135 | $42^{\circ} 75$ | $72 \cdot 79$ | 1 | 2.869 |
| 2886 | 42315 | $6 \cdot 6$ | 35 | 45'55 | 78.90 | 1 | 2.539 |
| 2887 | 42310 | $7 \cdot 0$ | 2135 | 51.77 | 69.97 | 5 | 2.770 |
| 2888 | 42295 | $5 \cdot 5$ | 2 r 36 | -153 | 74.94 | 4 | 3.002 |
| 2889 | 42396 | $7 \cdot 1$ | 2137 | 43.75 | 7131 | 5 | 2.085 |
| 2890 | 42355 | 75 | 2137 | 5I•54 | $76 \cdot 72$ | 5 | $3 \pm 48$ |
| 2891 | 42394 | 7.5 | 2138 | $28 \cdot 17$ | 78.72 | 3 | $2 \cdot 717$ |
| 2892 | 42384 | 77 | $21 \quad 38$ | 28.34 | 74.28 | 5 | 3'039 |
| 2893 | 42452 | $8 \cdot 5$ | 2139 | $48 \cdot 52$ | 78.74 | 4 | $2 \cdot 360$ |
| 2894 | 42444 | 73 | 2139 | $56 \cdot 39$ | 74.23 | 4 | $2 \cdot 589$ |
| 2895 | 4243 I | 7.5 | 2140 | $3 \cdot 41$ | 71.35 | 5 | $3 \times 109$ |
| 2896 | 42470 | 6.6 | 40 | 26.41 | 70.75 | 5 | 2.53 I |
| 2897 | 42476 | 7.7 | 2140 | 51.73 | $72 \cdot 75$ | 5 | 2.811 |
| 2898 | 42457 | $7 \bigcirc 0$ | 2140 | $52 \cdot 35$ | 72.35 | 4 | 3.142 |
| 2899 | 42479 | $7 \cdot 8$ | 41 | $1 \cdot 14$ | 79.75 | 1 | 2.805 |
| 2900 | 42463 | 6.0 | 2141 | $3 \cdot 37$ | 76.29 | 5 | 3'159 |
| 2901 | 42524 | $7 \cdot 2$ | 2142 | 28.44 | 71.08 | 6 | $2 \cdot 738$ |
| 2902 | 42542 | $7{ }^{\circ}$ | 2 I 43 | $0 \cdot 55$ | 73.93 | 5 | 2.770 |
| 2903 | 42549 | 7.5 | 2143 | 22.54 | $70 \cdot 53$ | 5 | 2.869 |
| 2904 | 42559 | $6 \cdot 5$ | 2143 | $36 \cdot 22$ | 65.92 | 5 | 2.801 |
| 2905 | 42544 | $7{ }^{\circ}$ | 2143 | 51.14 | 65.66 | 1 | $3 \cdot 362$ |
| 2906 | 42586 | $7 \times$ | 44 | 10.81 | 76.08 | 4 | 2.592 |
| 2907 | 4258 I | $7 \cdot 5$ | 2144 | 15.31 | $69^{\circ} 90$ | 3 | 2.817 |
| 2908 | 42569 | $8 \cdot 0$ | 2144 | 24.50 | 80.08 | 3 | 3.213 |
| 2909 | 42594 | 7.5 | 2144 | 31.24 | 72.13 | 5 | 2.724 |
| 2910 | 42606 | 77 | 2144 | 43.94 | $74 * 53$ | 5 | $2 \times 565$ |
| 2911 | 42598 | $8 \cdot 0$ | 2144 | $44 \cdot 18$ | 79.72 | 1 | $2 \cdot 781$ |
| 2912 | 42614 | 6.7 | 2145 | $4 \cdot 82$ | $78 \cdot 50$ | 6 | $2 \cdot 607$ |
| 2913 | 42619 | $7{ }^{\circ}$ | 2145 | 44.22 | 71.20 | 5 | 2.935 |
| 2914 | 42631 | 7.2 | 2145 | 4760 | 75.89 | 4 | 2.822 |
| 2915 | 42654 | 6.3 | 2146 | 28.39 | 72.14 | 5 | +2794 |
| 2916 | 42764 | $7{ }^{\circ}$ | 2146 | $40 \cdot 55$ | 64.76 | 1 | $-0.283$ |
| 2917 | 42694 | 8.0 | $2 \mathrm{I} \quad 47$ | 14.46 | 77.28 | 2 | +2.384 |
| 2918 | 42690 | $5 \cdot 8$ | $21 \quad 47$ | $44 \cdot 53$ | $7 \mathrm{r} \times 6$ | 3 | 2.820 |
| 2919 | 42687 | $7{ }^{\circ}$ | 2148 | 5.94 | $70 \cdot 05$ | 3 | 3:122 |
| 2920 | 42704 | $6 \cdot 8$ | 2148 | 17.55 | 81.17 |  | 2915 |
| 2921 | 42713 | $6 \cdot 8$ | 2 I 48 | 19.40 | $73^{\prime 7}$ | 5 | 2.690 |
| 2922 | 42708 | 6.9 | 2 I 48 | 24.90 | 70.25 | 5 | 2.820 |
| 2923 | 42719 | $8 \cdot 0$ | 2148 | 52.94 | 77.34 | 5 | 2.883 |
| 2924 | 42746 | 7.2 | 2149 | 1770 | 77.71 | 4 | 2.619 |
| 2925 | 42748 | $6 \cdot 8$ | 2 I 49 | 25.48 | 74.20 | 4 | $+2.626$ |


| No. | Mean N.P.D. 1875*0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 2881 | $78^{\circ} 55^{\prime} 28^{\prime \prime} \cdot 6$ | $75 \cdot 88$ | 5 | $-16^{\prime \prime} \cdot 18$ | W 821,Sp8804, $\mathrm{L}_{4} 2749$, |
| 2882 | $614844^{\circ}$ | 71 37 | 6 | $16 \cdot \mathrm{r}$ | W85 ${ }_{\text {I, }}$ R 9359. ${ }^{\text {[Gl }} 55549$. |
| 2883 | $\begin{array}{llll}63 & 48 & 50 \cdot 1\end{array}$ | $77 \times 8$ | 4 | 16.19 | See Notes. |
| 2884 | $\begin{array}{llll}68 & 37 & 24.4\end{array}$ | $80 \cdot 70$ | 3 | 16.20 | W 863, R 9364. |
| 2885 | $\begin{array}{lllll}75 & 31 & 25\end{array}$ | 69*73 | 2 | $16 \cdot 2 \mathrm{I}$ | W 838, R $9365, \mathrm{Sp} 8808$, <br> $\left[L_{4} 2754, G\right] 5555$. |
| 2886 | $55 \quad 53 \quad 33.9$ | 78.90 | I | 16.21 | W 871, Y 9484. |
| 2887 | $\begin{array}{llll}68 & 57 & 537\end{array}$ | 69:15 | 5 | 16.22 | W 869, R 9373. |
| 2888 | $845319{ }^{\circ}$ | $75 \times 2$ | 5 | 16.23 | See Notes. |
| 2889 | $\begin{array}{llll}38 & 16 & 4 \mathrm{I}\end{array}$ | 69.40 | 6 | 16.31 | Oe 22716 , RC 5369. |
| 2890 | $95 \quad 18$ хп7 7 | 74.72 | 6 | 16.32 | $T \text { rooge, } R$ |
| 2891 | $\begin{array}{llll}65 & 23 & 37 \cdot 6\end{array}$ | $78 \cdot 72$ | 3 | 16.35 |  |
| 2892 | $87 \quad 34 \quad 50 \cdot 9$ | 74.28 | 5 | 16.35 |  |
| 2893 | 4788419 | $78 \cdot 74$ | 4 | 16.42 | W 963. |
| 2894 | $\begin{array}{lllll}57 & 47 & 36 \cdot 8\end{array}$ | 74.23 | 4 | 16.42 | R 9454. |
| 2895 | $\begin{array}{llll}92 & 47 & 22.0\end{array}$ | $7 \mathrm{~F} \cdot 35$ | 5 | 16.43 | $\mathrm{W}_{942}, \mathrm{~L}_{1} 8526, \mathrm{Gl}_{5572}$. |
| 2896 | $\begin{array}{llll}54 & 43 & 7 \times 1\end{array}$ | 70.18 | 6 | 16.45 |  |
| 2897 | 715 59*0 | 72.75 | 5 | 16.47 |  |
| 2898 | 95 II 10.2 | 75.35 | 4 | 16.47 | R, $\mathrm{L}_{\mathrm{f}} 43^{87}$, Gl 5580. |
| 2899 | $7039 \quad 20 \cdot 6$ | $79 \times 5$ | 1 | 16.48 |  |
| 2900 | $\begin{array}{llll}96 & 29 & 43 \cdot 8\end{array}$ | 74.53 | 6 | 16.48 | R 9470, Bn, $L_{8} 4390$. |
| 2901 | $66 \quad 6 \quad 52.9$ | 7 7 .08 | 6 | 16.55 | W 102 x . |
| 2902 | $68 \quad 9 \quad 4.0$ | 7303 | 5 | 16.58 | W 1028. |
| 2903 | $\begin{array}{lllll}74 & 49 & 1 \pi & 5\end{array}$ | $70 \cdot 53$ | 5 | 16.60 | W 1010, Gl 5590. |
| 2904 | $\begin{array}{lll}70 & 7 & 77\end{array}$ | $65^{\circ 92}$ | 5 | $16.6 x$ | W 1042, R 9524, $\mathrm{L}_{88}$. |
| 2905 | $\begin{array}{llll}111 & 7 & \mathbf{2 4 . 2}\end{array}$ | 64.76 | I | 16.62 |  |
| 2906 | $\begin{array}{llll}57 & 16 & 10 \%\end{array}$ | 76.08 | 4 | 16.63 | W 1059. [ $\mathrm{L}_{6}$. |
| 2907 | $7 \mathrm{7} \quad 9 \quad 3 \mathrm{~J} 5$ | $65 \cdot 76$ | 7 | 16.64 | Wio56,R9535, $\mathrm{Ar}_{4770}$, |
| 2908 | $1003720 \cdot 0$ | 80.08 | 3 | 16.65 | See Notes. |
| 2909 | $64 \quad 59 \quad 11 \times 5$ | $72 \cdot 13$ | 5 | 16.65 | W 1069, R 9543. |
| 2910 | 5545310 | 74.53 | 5 | 16.66 | W io8r. |
| 2911 | $\begin{array}{llll}68 & 38 & 25 \%\end{array}$ | 79.72 | $\pm$ | r6.66 | W ro76, R 9546. |
| 2912 | $\begin{array}{llll}57 & 55 & 28 \cdot 4\end{array}$ | $78 \cdot 50$ | 6 | 16.68 | W 1083, R 9552. [s606. |
| 2913 | $\begin{array}{lllll}79 & 29 & 40\end{array}$ | 71.20 | 5 | 16.71 | W ros8, $\mathrm{R} 9562, \mathrm{~L}_{4} 2826, \mathrm{Gl}$ |
| 2914 | $\begin{array}{llll}71 & 16 & 40 \%\end{array}$ | 75.89 | 4 | 16.71 | W rog8, PM 2636, R |
| 2915 | $\begin{array}{lllllllllllll}69 & 18 & 49.8\end{array}$ | $72 \cdot 14$ | 5 | 16.75 | Winio. [9566, $\mathrm{L}_{6}$. |
| 2916 | $12 \quad 20 \quad 517$ | 59\%91 | 1 | 16.76 | Oe 22994, RC 5440, Bn. |
| 2917 | $46 \quad 48$ 13'7 | 73.42 | 3 | 16.78 | W r132, RC 5432. |
| 2918 | $70 \quad 55 \quad 13.5$ | $70 \cdot 77$ | 5 | 16.81 | W i $136, \mathrm{R} 9600$. |
| 2919 | $\begin{array}{llll}93 & 53 & 22 \cdot 2\end{array}$ | 68.68 | 5 | 16.82 | See Notes. |
| 2920 | $77 \quad 5017 \times 1$ | 81-17 | 2 | 16.83 | R 9614, $\mathrm{L}_{4} 2845$. |
| 2921 | $62 \begin{array}{llll}62 & 14 & 34\end{array}$ | 73.71 | 5 | 16.83 | $\mathrm{W} 1153, \mathrm{R} 9618, \mathrm{Bn}$. |
| 2922 | $\begin{array}{llll}70 & 52 & 13.5\end{array}$ | 71.17 | 5 | 16.84 | W Ix5I, PM 2642, La: |
| 2923 | 75 2I 5r.o | 77.34 | 5 | 16.86 |  |
| 2924 | $\begin{array}{lll}57 & 55 & 0.4\end{array}$ | $77 \% 7$ | 5 | 16.88 |  |
| 2925 | $\begin{array}{llll}58 & 15 & 7 \%\end{array}$ | 74.20 | 4 | -16.89 | Bn . |


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| 2926 | 42725 | 7.5 | $2 \mathrm{I}^{\text {h }}$ | $49^{\mathrm{m}} .3 \mathrm{I}^{\text {b }} \cdot 86$ | $80 \cdot 32$ | 2 | $+3^{1 \cdot 153}$ |
| 2927 | 42756 | 6.8 | 21 | $4934^{\prime} 78$ | 69.82 | 5 | 2.582 |
| 2928 | 42797 | $6 \cdot 8$ | 21 | 5045.00 | 71.76 | 4 | 2.611 |
| 2929 | 42780 | $8 \cdot 0$ | 21 | 51 1.35 | 71.77 | 2 | $3 \cdot 187$ |
| 2930 | 42802 | 73 | 21 | 515.30 | $77 \cdot 58$ | 6 | $2 \cdot 853$ |
| 2931 | 42818 | 73 | 21 | $51 \quad 33.32$ | 79.24 | 4 | 2.949 |
| 2932 | 42849 | $7 \cdot 2$ | 21 | 5153.00 | 70'19 | 6 | 2.684 |
| 2933 | 42843 | $7 \cdot 2$ | 21 | $52 \quad 11.56$ | 7517 | 4 | 3.033 |
| 2934 | 42846 | $7{ }^{\circ}$ | 21 | $\begin{array}{lll}52 & 23.82\end{array}$ | 71.56 | 5 | $3 \cdot 133$ |
| 2935 | 42878 | $7 \cdot 6$ | 21 | $52 \quad 5 \mathrm{I} \circ 05$ | 71.30 | 6 | 2.515 |
| 2936 | 42883 | 74 | 2 I | $53 \quad 8.68$ | 74.31 | 5 | 2.679 |
| 2937 | 42875 | $7 \cdot 5$ | 21 | $\begin{array}{ll}53 & 22.94\end{array}$ | 71.40 | 3 | 2.949 |
| 2938 | 42939 | 7.5 | 21 | $\begin{array}{ll}54 & 2 \cdot 89\end{array}$ | $76 \cdot 13$ | 5 | 2.772 |
| 2939 | 42898 | 7.5 | 21 | $54 \quad 20 \cdot 84$ | 74.47 | 3 | 3.241 |
| 2940 | $4294{ }^{\circ}$ | $6 \cdot 8$ | 21 | $54 \quad 50 \cdot 78$ | $79^{\circ} 00$ | 5 | 2.603 |
| 2941 | 42929 | $5 \cdot 8$ | 21 | $5456^{\text {- }}$ |  |  | 2.979 |
| 2942 | 42943 | $7{ }^{\circ}$ | 21 | $54 \quad 57 \% 4$ | 69.62 | 5 | 2.631 |
| 2943 | 42942 | 73 | 21 | 557 720 | 77.83 | 3 | 2.802 |
| 2944 | 42977 | $7 \cdot 8$ | 21 | $55 \quad 36 \% 3$ | 56.92 | 1 | 2.293 |
| 2945 | 42974 | $6 \cdot 8$ | 21 | 55 50.58 | 74.48 | 5 | 2.52 I |
| 2946 | 42972 | $8 \cdot 0$ | 2 I | $56 \quad 0.35$ | 81.00 |  | $2 \cdot 739$ |
| 2947 | 42963 | $8 \cdot 0$ | 21 | $\begin{array}{ll}56 & 23 \cdot 62\end{array}$ | 69.55 | 6 | $3 \cdot 182$ |
| 2948 | 42989 | $6 \cdot 8$ | 21 | $56 \quad 3770$ | 72.38 | 5 | 2.883 |
| 2949 | 42994 | $8 \cdot 0$ | 21 | $56 \quad 42 \cdot 16$ | 74.12 | 5 | $2 \cdot 782$ |
| 2950 | 42995 | 8.0 | 2 I | $\begin{array}{lll}56 & 52 & 38\end{array}$ | 75.67 | I | 29.909 |
| 2951 | 43018 | 77 | 21 | $57 \quad 14.56$ | 71.92 | 5 | 2.676 |
| 2952 | 43038 | $6 \cdot 8$ | 21 | $58 \quad 21.76$ | 81 79 | 1 | 2.957 |
| 2953 | 43073 | $7{ }^{\circ}$ | 21 | $59 \quad 2.94$ | $78 \cdot 18$ | 5 | $2 \cdot 646$ |
| 2954 | 4308 I | 6.2 | 21 | $59 \quad 2749$ | 72.20 | 6 | 2.743 |
| 2955 | 43091 | $7 \cdot 2$ | 22 | - 0.34 | 76.20 | 2 | 2.961 |
| 2956 | 43104 | 6.0 | 22 | - 38.60 | 72.41 | 3 | 3.202 |
| 2957 | 43144 | $7 \cdot 8$ | 22 | 14.42 | 78.90 | 1 | 2.749 |
| 2958 | 43142 | $7 \cdot 1$ | 22 | 20.33 | 71.02 | 4 | 2.967 |
| 2959 | 43177 | $7 \cdot 2$ | 22 | 23.13 | 77.50 | 4 | 2.194 |
| 2960 | 43160 | 7.2 | 22 | 29.54 | 74.30 | 5 | $2 \cdot 695$ |
| 2961 | 43151 | 6.5 | 22 | $1{ }^{1} 1.23$ | 72.95 | 5 | $2 \cdot 865$ |
| 2962 | 43207 | $7 \cdot 8$ | 22 | $1 \quad 43 \cdot 84$ | 79.78 | 5 | 2.572 |
| 2963 | 43196 | $7{ }^{\circ}$ | 22 | 23 r 02 | 71.46 | 4 | $2 \cdot 765$ |
| 2964 | 43250 | 6.2 | 22 | 3 38.01 | $70 \cdot 18$ | 4 | 2.414 |
| 2965 | 43256 | $6 \cdot 9$ | 22 | $\begin{array}{lll}3 & 44 \cdot 35\end{array}$ | 74.52 | 5 | $2 \cdot 367$ |
| 2966 | 43249 | 7.5 | 22 | $3 \quad 52.72$ | 77.75 | I | $2 \cdot 626$ |
| 2967 | 43270 | $7{ }^{\circ}$ | 22 | $4 \quad 5 \cdot 17$ | 79.93 | 5 | 2.354 |
| 2968 | 43266 | 6.9 | 22 | $4 \quad 8 \cdot 77$ | 74.69 | 5 | 2.442 |
| 2969 | 43255 | 7.9 | 22 | 4 2r.55 | 68.53 | 5 | 2.849 |
| 2970 | 43258 | 6.0 | 22 | $4 \quad 29.36$ | 72.73 | 5 | +2.946 |


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| 2926 | $96^{\circ} 25^{\prime}$ 土 $3^{\prime \prime} 3$ | $80 \cdot 32$ | 2 | - $16^{\prime \prime} .89$ | Bn, Sp 8922, $\mathrm{L}_{3} 4430$. |
| 2927 | $55 \quad 49 \quad 27$ | 71*03 | 4 | 16.89 | W im80, R 9644. |
| 2928 | 57 13 32.7 | 70.54 | 6 | 16.95 | W II20, Bn. |
| 2929 | $\begin{array}{lll}99 & 9 & 32.3\end{array}$ | 74*12 | 3 | 16.95 |  |
| 2930 | $\begin{array}{llll}72 & 54 & 43 \cdot\end{array}$ | 77.58 | 6 | 16.96 | R9669, $\mathrm{L}_{6}$ [8936, $\mathrm{L}_{5} 3793$. |
| 2931 | $80 \quad 9 \quad 10 \cdot 3$ | $79^{\circ} 24$ | 4 | 16.98 | W is $89, L_{4} 2870, \mathrm{Gl}$ |
| 2932 | 6 I $\quad 16 \quad 58 \cdot 5$ | 70.09 | 5 | 17.00 | $[564 \mathrm{I}$ |
| 2933 | $86 \quad 48 \quad 52 \cdot 3$ | $75 \cdot 68$ | 5 | 17.01 | See Notes. |
| 2934 | $\begin{array}{llll}94 & 57 & 37 \cdot 2\end{array}$ | 71.56 | 5 | 17.02 | Sp 8954, L ${ }_{\text {a }} 444 \mathrm{I}$. |
| 2935 | $5 \mathrm{I} \quad 40 \quad 70$ | 71*30 | 6 | I 7 \% 04 | $\mathrm{W}_{1275}, \mathrm{R}_{9710} \mathrm{Y}_{9} \mathbf{6 3 1}$ |
| 2936 | $\begin{array}{llll}60 & 46 & 13.6\end{array}$ | $74.3{ }^{1}$ | 5 | 17.06 | See Notes. [ $2883, \mathrm{Gl} 5654$. |
| 2937 | $80 \quad 1 \quad 16.1$ | 71.34 | 5 | 17.07 | W 1222, R 9718, Sp 8965, L4 |
| 2938 | $\begin{array}{llll}66 & 39 & 24 \%\end{array}$ | 76.13 | 5 | 17.09 | PM 2652, R 9737. |
| 2939 | $103 \quad 37 \quad 23 \cdot 6$ | 74'47 | 3 | I7*II | See Notes. |
| 2940 | $\begin{array}{llll}55 & 58 & 10 \%\end{array}$ | 79.00 | 5 | I7.14 | W i 33 I , Y 9644. |
| 2941 | 82 20 34.7 | 64.82 | 3 | I7 ${ }^{\text {² }} 4$ | See Notes. |
| 2942 | 573544.2 | 68.42 | 6 | I7.14 | W I336. |
| 2943 | $\begin{array}{llll}68 & 43 & 58 \cdot 4\end{array}$ | 77.59 | 5 | 17.15 | W 1337. |
| 2944 | $\begin{array}{llll}41 & 32 & 507\end{array}$ | $56 \cdot 69$ | 2 | 17*17 | Ar 48 Io , Oe 232 I , RC |
| 2945 | 5 I | 74.48 | 5 | 17*18 | W137x, $\mathrm{RC}_{5507}$ [5505. |
| 2946 | $\begin{array}{llll}64 & 13 & 24 * 9\end{array}$ | 81.00 | 3 | 17.19 | W 1370. |
| 2947 | $\begin{array}{llll}99 & 6 & 8.8\end{array}$ | 69.55 | 6 | 17.21 | W 1279, Sp 8988, $\mathrm{L}_{6}$ |
| 2948 | $\begin{array}{llll}74 & 36 & 55.5\end{array}$ | 72.38 | 5 | 17.22 | R 9780. [3820. |
| 2949 | 67 I 23.5 | $74^{*} 12$ | 5 | 17.22 |  |
| 2950 | $\begin{array}{lll}76 & 33 & 48 \cdot 8\end{array}$ | $75 \cdot 67$ | I | 17.23 | $\begin{array}{rrlr} \mathrm{W} & \mathbf{1 2 9 7}, & \mathrm{R} & 9783, \mathrm{Gl} \\ {[5668 .} \end{array}$ |
| 2951 | $59 \quad 49 \quad 5 \mathrm{I} \cdot 2$ | 7x'92 | 5 | 17.24 | W 1408. |
| 2952 | $802 \mathrm{I} \quad 5 \mathrm{x} 4$ | 81.79 | 5 | 17.29 | $\mathrm{W}_{1323}{ }^{\text {2 }}$ R $9799, \mathrm{~L}_{4} 2917$, |
| 2953 | $57 \quad 39 \quad 49 \%$ | 78-18 | 5 | 17*33 | W 1467. [Gl 5679. |
| 2954 | $\begin{array}{llll}63 & 56 & \mathrm{I} \cdot 2\end{array}$ | $73^{\circ} \mathrm{OI}$ | 6 | 17.34 | R 9817. [2930, Gl 5686. |
| 2955 | 803049.8 | $76 \cdot 20$ | 2 | 1737 | W $\mathrm{I}_{3} 63, \mathrm{PM} 2662, \mathrm{R} 9820, \mathrm{~L}_{4}$ [383I,Y9686,Gl 5692. |
| 2956 | rot 3 214 | 72.41 | 3 | 17.40 | W $1373, \operatorname{Ar~}^{\text {d }} 828, \mathrm{Si}_{3} 248 \mathrm{I}, \mathrm{L}_{5}$ |
| 2957 | $\begin{array}{llll}63 & 59 & 11.6\end{array}$ | $78 \cdot 90$ | 1 | 17.42 | W I534. [5696. |
| 2958 | 80 | $70 \cdot 75$ | 6 | 17.43 | Wi391, Sp 9026, L2 6224, Gl |
| 2959 | $36 \quad 59 \quad 5 \cdot 5$ | 75.91 | 6 | 17.43 | Oe $23385, \mathrm{Y} 9699$. |
| 2960 | $\begin{array}{lll}60 & 17 & 293\end{array}$ | 74.30 | 5 | 17.43 | W 1543. |
| 2961 | $\begin{array}{llll}72 & 36 & 28 \cdot 9\end{array}$ | 7295 | 5 | 17.43 | W |
| 2962 | $\begin{array}{lll}52 & 42 & 29.8\end{array}$ | $79^{\circ} 78$ | 5 | 17.44 | $\text { W } 1554$ |
| 2963 | $\begin{array}{llll}65 & 3 & 58\end{array}$ | 7 x -06 | 6 | 17.48 | W 12. |
| 2964 | $44 \begin{array}{lll}44 & 52 & 157\end{array}$ | 69.70 | 5 | 17.52 | W 46. |
| 2965 | $\begin{array}{llll}42 & 40 & 39\end{array}$ | 74.52 | 5 | 17.53 | Oe 23481, RC 557 x , Gl [57 Io. |
| 2966 | $\begin{array}{llll}55 & 28 & 549\end{array}$ | 77.75 | I | 17.53 | W 49. |
| 2967 | $42 \quad 5 \quad 43.4$ | 79.93 | 5 | 17.54 | Oe 23494. |
| 2968 | $\begin{array}{llll}45 & 45 & 577\end{array}$ | 74.69 | 5 | 17.54 | W 69. [Gl 5720 |
| 2969 | 70 | 69:73 | 5 | 17.55 |  |
| 2970 | $78 \quad 59 \quad 15 \%$ | 72'73 | 5 | - 17.56 | $\mathrm{W}_{53}, \mathrm{R}_{988}{ }^{\text {, }} \mathrm{L}_{4} 2958$, |


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| 2971 | 43273 | $6 \cdot 8$ | $22^{\text {h }}$ | $4^{\mathrm{m}} 37^{\text {b }} \cdot 44$ | 7730 | 4 | +2.627 |
| 2972 | 43286 | $8 \cdot 0$ | 22 | $537^{\circ}$ |  |  | 3.205 |
| 2973 | 43314 | $7 \cdot 2$ | 22 | $5 \quad 41.95$ | 8r'79 | 1 | 2.723 |
| 2974 | 43319 | $7 \times 0$ | 22 | $5 \quad 43.97$ | 76.27 | 4 | 2.613 |
| 2975 | 43309 | $7 \cdot 5$ | 22 | $5 \quad 56 \cdot 51$ | 71'76 | 5 | 3.049 |
| 2976 |  | 799 | 22 | $6 \quad 5 \cdot 96$ | $65 \cdot 66$ | 1 | 2.800 |
| 2977 | 43331 | $6 \cdot 5$ | 22 | $6 \quad 19.52$ | 71.44 | 4 | 2.784 |
| 2978 | 43340 | 75 | 22 | $6 \quad 35.88$ | 65.30 | 2 | 2.801 |
| 2979 | 43355 | $7{ }^{\circ}$ | 22 | $7 \quad 10.83$ | 80.75 | 3 | 2.871 |
| 2980 | 43383 | $7 \cdot 2$ | 22 | $7 \quad 29.31$ | $72 \cdot 55$ | 5 | 2.663 |
| 2981 | 43386 | $7 \cdot 5$ | 22 | 8 14.2I | 76.01 | 5 | $3 \cdot 144$ |
| 2982 | 43392 | $7 \cdot 5$ | 22 | $8 \quad 15.05$ | $70 \cdot 93$ | 5 | 2.991 |
| 2983 | 43420 | 73 | 22 | $8 \quad 52 \cdot 67$ | 78:23 | 5 | $2 \cdot 737$ |
| 2984 | 43417 | $6 \cdot 6$ | 22 | $8 \quad 55.28$ | $76 \cdot 11$ | 5 | 2.821 |
| 2985 | 43448 | $8 \cdot 1$ | 22 | $\begin{array}{lll}9 & 13.87\end{array}$ | $77 \cdot 74$ | 2 | 2.493 |
| 2986 | 43443 | $7{ }^{\circ}$ | 22 | $9 \quad 46 \cdot 21$ | $70 \cdot 40$ | 3 | 2.986 |
| 2987 |  | $9^{\circ} \mathrm{O}$ | 22 | 1028. |  |  | 1.882 |
| 2988 | 43493 | 4.8 | 22 | 1031.24 | 7193 | 6 | 2.607 |
| 2989 | 43524 | 75 | 22 | 1136.75 | 75'10 | 5 | 2.778 |
| 2990 | 43518 | $7{ }^{\circ}$ | 22 | 1139.72 | $69^{\circ} 50$ | 5 | 3.081 |
| 2991 |  | $9 \cdot 1$ | 22 | $1 \mathrm{I} 57^{\circ}$ |  |  | 2.151 |
| 2992 | 43533 | 79 | 22 | $12 \quad 0 \cdot 65$ | 72.97 | 5 | 2.870 |
| 2993 | 43537 | $8 \cdot$ | 22 | $12 \quad 27.05$ | 70.73 | 4 | 2995 |
| 2994 | 43555 | $8 \cdot 5$ | 22 | $13 \quad 19.54$ | 81.50 | 4 | 3.121 |
| 2995 | 43568 | 79 | 22 | $13 \quad 21.00$ | 73.91 | 5 | $2 \cdot 766$ |
| 2996 | 43569 | $7 \cdot 5$ | 22 | $13 \quad 22.25$ | $78 \cdot 64$ | 5 |  |
| 2997 | 43578 | $7 \cdot 2$ | 22 | $13 \quad 36 \cdot 40$ | $76 \cdot 79$ | 5 | $2 \cdot 685$ |
| 2998 | 43584 | 7.5 | 22 | 13 44.29 | 71.16 | 5 | 2.670 |
| 2999 | 43594 | 7.3 | 22 | $13 \quad 52.66$ | 68.13 | 3 | $2 \cdot 468$ |
| 3000 | 43601 | $8{ }^{\circ}$ | 22 | $14 \quad 51.29$ | $75 \cdot 73$ | 2 | 3'144 |
| 3001 | 43630 | 6.9 | 22 | $14 \quad 58.21$ | 74.30 | 5 | 2.632 |
| 3002 | 43635 | $7{ }^{\circ}$ | 22 | $15 \quad 20.57$ | $71 \times 16$ | 5 | 2.722 |
| 3003 | 43660 | $7{ }^{\circ}$ | 22 | $15 \quad 22.54$ | 74.69 | 1 | 2.929 |
| 3004 | 43648 | $7{ }^{\circ}$ | 22 | $16 \quad 0.38$ | $70 \cdot 78$ | 4 | 2.915 |
| 3005 | 43650 | 79 | 22 | $\begin{array}{lll}16 & 17.63\end{array}$ | $72 \cdot 12$ | 5 | 3.012 |
| 3006 | 43645 | $6 \cdot 5$ | 22 | $16 \quad 32 \cdot 74$ | 66.23 | 2 | 3.349 |
| 3007 | 43686 | 7.5 | 22 | $16 \quad 49 \cdot 55$ | $76 \cdot 79$ | 5 | 2.740 |
| 3008 | 43672 | 7.8 | 22 | 1653.97 | 78.83 | 2 | 2.982 |
| 3009 | 43706 | 7.5 | 22 | $\begin{array}{ll}17 & 11.64\end{array}$ | 72.94 | 4 | 2.696 |
| 3010 | 43707 | 8.0 | 22 | $17 \quad 43.28$ | $76 \cdot 60$ | 4 | 3.099 |
| 3011 | 43715 | $8 \cdot 0$ | 22 | ${ }^{17} 582 \cdot 60$ | 81.75 | 2 | 3'193 |
| 3012 | 43729 | $7{ }^{\circ}$ | 22 | $17 \quad 54.67$ | 68.17 | 5 | 2.922 |
| 3013 | 43734 | 73 | 22 | $18 \quad 20 \cdot 59$ | $70 \cdot 10$ | 5 | 2.912 |
| 3014 | 43751 | $6 \cdot 8$ | 22 | $18 \quad 22.23$ | 74.48 | 5 | 2.625 |
| 3015 | 43736 | 77 | 22 | $18 \quad 30 \cdot 74$ | $80 \cdot 75$ | I | +2.980 |


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| 2971 | $55^{\circ} 23^{\prime} 55^{\prime \prime} \cdot 4$ | $773{ }^{\circ}$ | 4 | --17'57 | W 80. |
| 2972 | 1OI 40 <br> 0  | 66.75 | 2 | 17.61 | See Notes. |
| 2973 | 6121380 | 81.79 | 1 | 17.61 |  |
| 2974 | $\begin{array}{llll}54 & 21 & 2 \cdot 2\end{array}$ | 76.80 | 5 | 17.61 | W 113, Y 974ir. |
| 2975 | $875253{ }^{\circ}$ | 7176 | 5 | 17.62 | $\mathrm{W} 84, \mathrm{Bn}, \mathrm{~L}_{1} 8721, \mathrm{Gl}$ |
| 2976 | 6650 |  |  | 17.63 | R 9932. |
| 2977 | $\begin{array}{llll}65 & 39 & 56 \cdot 2\end{array}$ | $71 \times 1$ | 5 | 17.64 |  |
| 2978 | $\begin{array}{llll}66 & 51 & 28 \cdot 2\end{array}$ | 64.94 | 1 | 17.65 | W 133, R 9946. |
| 2979 | $\begin{array}{llll}72 & 20 & 133\end{array}$ | $80 \cdot 75$ | 3 | 17.67 |  |
| 2980 | 57 1 000 | 72.55 | 5 | 17.68 |  |
| 298 I | $\begin{array}{llll}96 & 30 & 9.4\end{array}$ | $76 \cdot 0$ i | 5 | 17.72 | [ $6250, \mathrm{Gl} 5746$. |
| 2982 | 8238834.5 | 70.90 | 6 | $177{ }^{2}$ | $\mathrm{W}_{\mathrm{I} 35}, \mathrm{Si}_{1}, \mathrm{Sp} 9080, \mathrm{~L}_{2}$ |
| 2983 | $\begin{array}{lll}61 & 2 & 477 \\ 68 & 5 & 47\end{array}$ | $78 \cdot 23$ | 5 | 17.74 | W 187, PM 2686. |
| 2984 | $68 \quad 5 \quad 47 \%$ | $76 \cdot 1$ I | 5 | 17.74 | W i86, R 9990, $\mathrm{L}_{\text {\% }}$ |
| 2985 | $\begin{array}{llll}46 & 57 & 29 & \text { I }\end{array}$ | 7774 | 2 | 1776 |  |
| 2986 | 82.4176 | $70^{117}$ | 5 | 17.78 |  |
| 2987 | $\begin{array}{llll}27 & 29 & 55 \cdot 1\end{array}$ | $65 \cdot 96$ | 4 | 17.81 | Ar $4890, \mathrm{Oe} 23749$. |
| 2988 | $\begin{array}{llll}52 & 52 & 23.5\end{array}$ | 75.25 | 5 | 17.81 | See Notes. |
| 2989 | $6414{ }^{6} 15^{\circ}$ | 75.10 | 5 | 17.85 |  |
| 2990 | $905 \mathrm{I} \quad 35^{\circ} 3$ | 69.40 | 6 | 17.86 | See Notes. |
| 2991 | $\begin{array}{lll}33 & 20 & 18.4\end{array}$ | 67.20 | 2 | 17.86 | Ar 4895, Oe 23779. |
| 2992 | $\begin{array}{llrr}71 & 35 & 1.2 \\ 82\end{array}$ | 72.97 | 5 | 17.87 | $\mathrm{R} 10058, \mathrm{~L}_{6}$. |
| 2993 | 82855033.8 | $70 \cdot 56$ | 5 | 17.89 | $\mathrm{W} 224, \mathrm{Si}_{1}, \mathrm{Gl} 5780$. |
| 2994 | $\begin{array}{lllll}94 & 41 & 32.5\end{array}$ | 81.50 | 4 | 17.92 | $\mathrm{W} 238, \mathrm{Si}_{2}, \mathrm{~L}_{3} 4543$. |
| 2995 | $62 \quad 56 \quad 367$ | $73^{\circ} 9$ | 5 | 17.92 | W 288. |
| 2996 | $\begin{array}{llll}61 & 46 & 46 \cdot 5\end{array}$ | 78.64 | 5 | 17.92 | W 289. |
| 2997 | $\begin{array}{rrrr}57 & 7 & 9.8\end{array}$ | $76 \cdot 79$ | 5 | 17.93 |  |
| 2998 | $\begin{array}{llll}56 & 5 & 10\end{array}$ | $71 \times 16$ | 5 | 17.94 | W 295. |
| 2999 | 44 37 $16 \cdot 1$ <br> 6   | 67.78 | 5 | 17.94 | W 302, Oe 23836. |
| 3000 | $\begin{array}{lllll}96 & 52 & 17\end{array}$ | $72 \cdot 73$ | 3 | 17.98 | $\mathrm{L}_{3} 4553, \mathrm{Y} 9800, \mathrm{Gl}_{5792}$. |
| 3001 | $\begin{array}{llll}53 & 19 & 45 \%\end{array}$ | 72.87 | 6 | 17.98 | W 322, R $10122, \mathrm{Y} 9802$. |
| 3002 | $\begin{array}{lll}59 & 19 & 5 \times\end{array}$ | $71 \times 16$ | 5 | 18.00 | W 326, Bn. |
| 3003 | $76 \begin{array}{llll}76 & 15 & 30\end{array}$ | $74 \cdot 69$ | I | 18.00 | W 290, Bn. |
| 3004 | $74 \quad 58 \quad 39 \cdot 5$ | 69.75 | 6 | 18.03 | W 302, Gl 5802. |
| 3005 | $84 \quad 9 \quad 23.4$ | 71.01 | 6 | 18.04 |  |
| 3006 | 115 23 40.1 <br> 15   | $66 \cdot 23$ | 2 | 18.04 | T io374, Ar 4908, $\mathrm{RC}_{2}$ |
| 3007 | $\begin{array}{lll}60 & 16 & 21.2\end{array}$ | $76 \cdot 79$ | 5 | 18.06 | W 354. |
| 3008 | 81 10 15.2 | 78.83 | 2 | 18.06 | $\mathrm{L}_{2} 6279$, Note. |
| 3009 | $\begin{array}{llll}57 & 2 & 3.5\end{array}$ | 71.65 | 5 | 18.07 | W 360. |
| 3010 | 9241391 | 76.6x | 5 | 18.09 | $\begin{array}{r} \mathrm{W}_{342}, \mathrm{Si}_{5} 1267, \mathrm{Gl}_{5} 8 \mathbf{1 1 .} . \\ {\left[3897, \mathrm{Y}_{9829} .\right.} \end{array}$ |
| 3011 | IOI 47200 | $8 \mathrm{I} \cdot 75$ | $\stackrel{2}{5}$ | 18.10 |  |
| 3012 | $\begin{array}{llll}75 & 21 & 0\end{array}$ | 6737 | 5 | $18 \cdot 10$ | W 356, R $10175, \mathrm{Sp} 9158, \mathrm{Gl}$ |
| 3013 | $\begin{array}{llll}74 & 22 & 90\end{array}$ | 72.28 | 4 | 18.11 | R 10181, $\mathrm{L}_{6}$. [5813. |
| 3014 | $\begin{array}{llll}52 & 3 & 46 \cdot 5\end{array}$ | 74.67 | 4 | 18.11 | W 384, Bn, Note. |
| 3015 | $\begin{array}{llll}80 & 49 & 22.8\end{array}$ | $80 \cdot 75$ | 1 | $-18.12$ | W 368, $\mathrm{Si}_{1}$, Gl 58 I 9. |



| No. | Mean N.P.D. $1875 \cdot 0$ | Epoch. | Obs. | Ann. Prec | Authorities. |
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| 3016 | $81^{\circ} 53^{\prime} 46^{\prime \prime} \cdot 9$ | 75'77 | I | -18'12 | R IOI88. |
| 3017 | 64 1 20.1 | 73.36 | 5 | 18.15 | $\mathrm{W}_{403}$ |
| 3018 | IIf 49 I9 0.8 | 67.03 | 3 | $18 \cdot 15$ | T io389, Ar 4923, Oe |
| 3019 | $57 \quad 50 \quad 3 \mathrm{I} 4$ | 80.42 | 4 | $18 \cdot 15$ | [22I44, L6, St II 736. |
| 3020 | 1072234.5 | $69 \cdot 76$ | 5 | 18.17 | T 10392, R 10209, Ar 4924. <br> [12 yr 2007, 9 yr 2104. |
| 3021 | 64 42 25.1 | $76 \cdot 53$ | 5 | 18.18 | W $420, \mathrm{R} 10225$. |
| 3022 | $8 \mathrm{I} 42 \begin{array}{lll} & 43 \cdot 6\end{array}$ | 78.91 | 1 | 18.21 | WV 42 I , Gl 5832. |
| 3023 | 53 II $30 \% 7$ | 69.85 | 6 | 18.22 | PM $27 \mathrm{I} 4, \mathrm{Y} 9856$ [ 3838. |
| 3024 | $\begin{array}{llll}78 & 23 & 19 & \end{array}$ | $76 \cdot 80$ | 5 | 18.25 | $\mathrm{W}_{443}$, R 10252, $\mathrm{L}_{4} 3072, \mathrm{Gl}$ |
| 3025 | $\begin{array}{llll}112 & 42 & 29.5\end{array}$ | 67.67 | 2 | 18.25 | Oe 22168, $\mathrm{L}_{6}, \mathrm{Y} 9864$, [St II747. |
| 3026 | $\begin{array}{llll}50 & 49 & 35 \cdot 6\end{array}$ | 73.34 | 5 | 18.25 | W 467 . |
| 3027 | $65 \quad 50 \quad 43 \cdot 2$ | 72.95 | 5 | $18 \cdot 26$ | W 475. |
| 3028 | $63 \begin{array}{lll}637 & 2 \cdot 8\end{array}$ | 68.51 | 6 | 18.26 | W 478. |
| 3029 | 463150 | 77•16 | 5 | 18.27 | W 487. |
| 3030 | $60 \quad 50 \quad 34 \cdot 8$ | $76 \cdot 24$ | 4 | 18.29 | W 495. |
| 3031 | 88 | 69.95 | 4 | 18.32 | $\mathrm{W}_{4} 8 \mathrm{I}, \mathrm{Si}_{1}, \mathrm{~L}_{1} 8864, \mathrm{Gl} \mathrm{Gl}^{\text {¢ }}$ |
| 3032 | $42 \quad 52320$ | 56.96 | 1 | 18.33 | Al 4947 , Oe 2.4 I 69, RC |
| 3033 | 59 25 25  | 75.98 | 5 | $18 \cdot 33$ | W 515. [5708. |
| 3034 | 82 12 2477 | 81.75 | 2 | I $8 \cdot 35$ |  |
| 3035 | 97 II 32.2 | $69^{\circ} 70$ | 6 | 18.35 | See Notes. |
| 3036 | $\begin{array}{lll}93 & 33 & 4.6\end{array}$ | 71*48 | 4 | $18 \cdot 35$ | W 494, $\mathrm{Si}_{2}, \mathrm{~L}_{3} 4587, \mathrm{Gl}$ |
| 3037 | 51533449 | 7155 | 5 | $18 \cdot 38$ | W 547. [58 53. |
| 3038 | $\begin{array}{lll}97 & 6 & 39\end{array}$ | 72.77 | 5 | 18.39 | W 5i9, R 10329, $\mathrm{Si}_{2}$, |
| 3039 | $88 \quad 3$ 17.8 | 75*11 | 5 | $18 \cdot 39$ | $\mathrm{L}_{1} 8874 . \quad$ [ $\mathrm{L}_{\mathrm{a}} 4589$. |
| 3040 | $\begin{array}{lll}87 & 38 & 6 \cdot 7\end{array}$ | $76 \cdot 57$ | 5 | 18.41 | $\mathrm{W}_{529}, \mathrm{~L}_{1} 888 \mathrm{I}, \mathrm{Gl}_{5} 865$. |
| 3041 | 7 I I I 41 | 79.87 | 3 | 18.41 | W $557,1_{6}{ }_{6}$ |
| 3042 | $\begin{array}{llll}111 & 20 & 53.3\end{array}$ | $65 \cdot 75$ | 5 | 18.46 | See Notes. |
| 3043 | 92 1о 8.0 | $58 \cdot 76$ | 3 | 18.48 | $\mathrm{W}_{577}$, Ar $^{\text {4961, }} \mathrm{L}_{1} 8901$. |
| 3044 | $\begin{array}{llll}76 & 2 & 6 \cdot 2\end{array}$ | $61 \cdot 76$ | 4 | $18 \cdot 50$ | See Notes. |
| 3045 | $80 \quad 19 \quad 5.6$ | $54^{\circ} 72$ | I | 18.51 | $W_{595}, \mathrm{R}_{\text {IO400, }} \mathrm{L}_{4} 3121$, <br> [Gl 588i. |
| 3046 | $\begin{array}{llll}70 & 55 & 469\end{array}$ | 78.72 | I | 18.52 | W $636, \mathrm{R}$ 10406. |
| 3047 | 57 51 25'7 | $70 \cdot 28$ | 2 | 18.53 | W 645, R 104I3. |
| 3048 | $55 \quad 4 \quad 2.6$ | $76 \cdot 77$ | 5 | 18.54 |  |
| 30.49 | $47 \quad 2 \quad 51 \cdot 7$ | 76.16 | 5 | 18.58 |  |
| 3050 | $66 \quad 38 \quad 48 \cdot 1$ | $72 \cdot 79$ | 5 | $18 \cdot 58$ | IV 692. |
| 3051 | 475050 | 69.90 | 7 | 18.59 |  |
| 3052 | $\begin{array}{llll}98 & 32 & 47 \cdot 8\end{array}$ | 81.79 | 1 | 18.59 |  |
| 3053 | $60 \quad 43 \quad 27^{6} 0$ | 74.57 | 5 | I 8.60 | $\text { W713. } \quad[4615 .$ |
| 3054 | $\begin{array}{lll}60 & 48 & 30.4\end{array}$ | $70 \cdot 85$ | 1 | 18.62 | W 733 |
| 3055 | $45 \quad 5 \begin{array}{lll}48 & 49^{2}\end{array}$ | $73^{\circ} 6$ I | 6 | $18 \cdot 63$ |  |
| 3056 | $53 \quad 3 \cdot 29 \cdot 1$ | $78 \cdot 82$ | 2 | 18.65 |  |
| 3057 | 515480 | 73.34 | 5 | 18.66 | W $772, \mathrm{Y} 9965$. |
| 3058 | 70 | $73 \cdot 78$ | 5 | 18.67 | W 780, R 10494, L ${ }_{6}$. |
| 3059 | $\begin{array}{lll}65 & 26 & 27.6\end{array}$ | 79.45 | 3 | 18.69 | WV 805. $\quad\left[L_{3} 4628\right.$. |
| 3060 | $95 \quad 45 \quad 12.8$ | 69.04 | 4 | -18.71 | W 727, PM 2742, $\mathrm{Si}_{2}$, |


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| 3061 |  | 7'0 | $22^{\text {h }}$ | $36^{\mathrm{m}}$ | $30^{\circ \prime}$ |  |  | $+3^{8.147}$ |
| 3062 | 44430 | $7{ }^{\circ}$ |  | 36 | 33.00 | 74.32 | 4 | 3.036 |
| 3063 |  | $8 \cdot 5$ | 22 |  | $54^{\circ}$ |  |  | $3 \cdot 148$ |
| 3064 | 44459 | $7 \cdot 5$ | 22 | 37 | 28.80 | 74.72 | 5 | $3 \cdot 046$ |
| 3065 | 44492 | $8 \cdot 2$ | 22 | 38 | $5 \cdot 14$ | 72.59 | 5 | $2 \cdot 719$ |
| 3066 | 44486 | $6 \cdot 0$ | 22 |  |  |  |  | $3 \cdot 298$ |
| 3067 | 44518 | $7 \cdot 4$ | 22 | 38 | 50.98 | 74.00 | 5 | $2 \cdot 868$ |
| 3068 | 44520 | $8 \cdot 3$ | 22 |  | 16.82 | 80.03 | 4 | $3 \cdot 048$ |
| 3069 | 44540 | 8.0 | 22 |  | $52 \cdot 60$ | $70 \cdot 78$ | 5 | 2.918 |
| 3070 | 44519 | $7{ }^{\circ}$ | 22 |  | 10.87 | $77 \cdot 75$ | I | $3 \cdot 016$ |
| 3071 | 44573 | $7 \cdot 6$ | 22 | 40 | 46.74 | 74.63 | 5 | 2.860 |
| 3072 | 44605 | 6.5 | 22 | 40 | 53.00 | 70.79 | 3 | $2 \cdot 611$ |
| 3073 | 44575 | $7 \cdot 7$ | 22 | 40 | 5495 | 80.81 | 3 | $2 \cdot 937$ |
| 3074 | 44568 | $7{ }^{\circ}$ | 22 | 4 I | 447 | 83.93 |  | $3 \cdot 191$ |
| 3075 | 44627 | $7 \cdot 5$ | 22 | 4 I | 55.93 | $73 \cdot 70$ | I | $2 \cdot 614$ |
| 3076 | 44639 | $7^{\circ}$ | 22 | 42 | 6.49 | 72.2I | 5 | 2.486 |
| 3077 | 44625 | $7 \cdot 8$ | 22 | 42 | 23.53 | 73.51 | 5 | 3.016 |
| 3078 | 44636 | $8 \cdot 2$ | 22 | 42 | 39'16 | 75.93 | 5 | $2 \cdot 995$ |
| 3079 | 44655 | $6 \cdot 8$ | 22 | 43 | 16.86 | $78 \cdot 18$ | 5 | $2 \cdot 996$ |
| 3080 | 44685 | $7{ }^{\circ}$ | 22 | 44 | I'6I | $70 \cdot 14$ | 3 | $2 \cdot 681$ |
| 3081 | 44670 | 7'5 | 22 | 44 | 17.31 | 72'II | 3 | 3.082 |
| 3082 | 44692 | $7 \cdot 3$ | 22 | 44 | $43 \cdot 98$ | 71.68 | 5 | 2.938 |
| 3083 | 44738 | $7 \cdot 2$ | 22 | 45 | 25.44 | $78 \cdot 91$ | I | 2.536 |
| 3084 | 4472 I | $6 \cdot 7$ | 22 | 45 | 27.45 | 71.80 | 5 | 2.866 |
| 3085 | 44726 | 77 | 22 | 45 | $29^{\circ} 70$ | 74.55 | 5 | 2.679 |
| 3086 | 44734 | 7'0 | 22 |  | 10.81 | 73'73 | 2 | $3 \cdot 153$ |
| 3087 |  | 7.5 | 22 | 46 | 19. |  |  | 3.001 |
| 3088 | 44770 | 79 | 22 | 46 | 2774 | 75.40 | 5 | 2.524 |
| 3089 | 44786 | $6 \cdot 8$ | 22 | 47 | 9.38 | 67.29 | 2 | 2.747 |
| 3090 | 44782 | $8 \cdot 0$ | 22 | 47 | 29.02 | $73 \cdot 69$ | 1 | $3 \cdot 064$ |
| 3091 | 44815 | $7 \%$ | 22 | 48 | I 3.64 | $76 \cdot 76$ | 5 | 2.859 |
| 3092 | 44824 | $6 \cdot 8$ | 22 | 48 | 35.73 | 83.92 | I | 3.069 |
| 3093 | 44842 | $7 \cdot 8$ | 22 | 48 | $43 \cdot 02$ | 77.88 | 3 | 2.692 |
| 3094 | 44845 | $7 \cdot 4$ | 22 | 48 | 57'16 | 73.03 | 5 | 2.861 |
| 3095 | 44854 | $5 \cdot 9$ | 22 | 49 | 13.84 | 74*18 | 5 | 2.772 |
| 3096 | 44862 | 6.0 | 22 | 49 | 54.99 | 69.87 | 5 | $2 \cdot 782$ |
| 3097 | 44872 | 7.5 | 22 | 50 | 39.43 | $76 \cdot 97$ | 5 | 3.099 |
| 3098 | 44888 | $6 \cdot 5$ | 22 | 51 | $10 \cdot 76$ | 71.80 | 6 | 3.050 |
| 3099 | 44904 | $6 \cdot 5$ | 22 | 51 | 57.31 | $72 \cdot 80$ | 4 | 3.086 |
| 3100 | 44920 | $6 \cdot 8$ | 22 | 52 | 14.95 | $77 \cdot 13$ | 4 | 3.012 |
| 3 IOI | 44939 | $6 \cdot 9$ | 22 | 52 | 57.91 | $70 \cdot 84$ | 5 | 3.047 |
| 3102 | 44942 | $9^{\circ}$ | 22 | 53 | 2.23 | 8I.25 | 2 | $3 \cdot 096$ |
| 3103 | 44946 | $6 \cdot 0$ | 22 | 53 | 3.13 | 83.92 | 1 | 3.070 |
| 3104 | 44963 | $7{ }^{\circ}$ | 22 | 53 | $5 \cdot 20$ | 73.95 | 6 | 2.710 |
| 3105 | 44966 | 7.0 | 22 | 53 | $38 \cdot 78$ | 73.30 | 4 | $+3.042$ |


| No. | Mean N.P.D. 1875•0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
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| 3061 | $98^{\circ} 57^{\prime} 55^{\prime \prime} \cdot 3$ | 65.72 | 2 | -18'•74 | $\mathrm{W}_{755}$, Ar ${ }_{5001}, \mathrm{PM}_{2} 745$. |
| 3062 | $85 \quad 4 \mathrm{l}$ | 74.32 | 4 | $18 \cdot 74$ | W $760, \mathrm{Si}_{1}$, Gl 5920. |
| 3063 | $99422 \cdot 1$ | 65.74 | 2 | 18.75 | W765, T $10518, \mathrm{~L}_{5} 3956$. |
| 3064 | $864647^{\circ} \mathrm{I}$ | 74.72 | 5 | 18.77 | W 772, Y 9989, Gl 5922. |
| 3065 | $\begin{array}{lll}52 & 57 & 20 \cdot 2\end{array}$ | 72.59 | 5 | $18 \cdot 79$ | $\text { W } 877{ }_{[\mathrm{St} 1 \mathrm{I}} 857, \mathrm{~B} 487 .$ |
| 3066 | $\begin{array}{llll}15 & 53 & 38 \cdot 9\end{array}$ | 66.42 | 3 | 18.80 | T $10526, \operatorname{Ar}_{5006, Y_{9995}}$ |
| 3067 | $\begin{array}{llll}66 & 16 & 38 \cdot 8\end{array}$ | 72.62 | 6 | I $8 \cdot 8$ I | W 893, Bn. |
| 3068 | $\begin{array}{lll}87 & \text { I } & 33.4\end{array}$ | 80.03 | 4 | 18.82 | W 8ı0. [10585, $\mathrm{L}_{6}$. |
| 3069 | $\begin{array}{llll}71 & 24 & 25.7\end{array}$ | $70 \cdot 78$ | 5 | 18.84 | W 909, PM 2751, R |
| 3070 | $83 \quad 4 \quad 294$ | 77.83 | 2 | $18 \cdot 85$ | W 82I, R 10589. |
| 307 I | $64 \quad 5 \mathrm{I}$ 15.7 | 74.63 | 5 | 18.87 |  |
| 3072 | $44 \quad 26 \quad 3 \mathrm{I} \cdot 3$ | 70.79 | 3 | 18.87 | See Notes. |
| 3073 | $\begin{array}{lll}73 & 25 & 29.8\end{array}$ | 80.8ı | 3 | 18.87 | R 10613. |
| 3074 | 1044250.6 | 83.93 | I | 18.88 | See Totes. |
| 3075 | $\begin{array}{lll}44 & 27 & 1.8\end{array}$ | 73.70 | I | 18.90 | Ar 5023, Oe 24658 , RC $15832, \mathrm{RC}_{2} 2262$. |
| 3076 | 37 16 36.0 | 72.2I | 5 | I $8 \cdot 9 \mathrm{I}$ | Oe 24662. |
| 3077 | 8248482 | 73.51 | 5 | $18 \cdot 92$ | W $868 . \quad$ [Gl 5955. |
| 3078 | 80 | 75.93 | I | 1892 | W 876, R $10644, \mathrm{~L}_{4} 3202$, |
| 3079 | 80 Io $50 \cdot 2$ | $78 \cdot 18$ | 5 | $18 \cdot 94$ | Sp 9348 , L4 3207. |
| 3080 | 48 I $47 \%$ | $68 \cdot 60$ | 6 | $18 \cdot 96$ | W 1008. |
| 3081 |  | 69.56 | 5 | 18.97 |  |
| 3082 | $\begin{array}{llll}72 & 39 & 35 \cdot 1\end{array}$ | 72.00 | 8 | 18.98 | Wios3, R io684, $\mathrm{L}_{6}$, Gl |
| 3083 | $38 \quad 36 \quad 2$ | $78 \cdot 91$ | 1 | 19.00 | Oe 24756, Note. [5966. |
| 3084 | $64 \quad 16 \quad 18.4$ | 71.80 | 5 | 19.00 | W 1040. |
| 3085 | $47 \quad 25 \quad 26 \cdot 2$ | 74.5 I | 5 | 19.00 | $\text { RC } 5854 .$ |
| 3086 | $100 \quad 43 \quad 19.9$ | 73.73 | 2 | 19.02 | W 933, P Io706, $\mathrm{Si}_{29}, \mathrm{Si}_{3}$ |
| 3087 | $\begin{array}{llll}80 & 26 & 24.1\end{array}$ | 65.92 | 5 | 19.03 | See Notes. |
| 3088 | $37 \quad 33^{8} \quad 4.3$ | $75 \cdot 40$ | 5 | 19.03 | Ar 5039, Oe 2478 r , Bn. |
| 3089 | $52 \begin{array}{lrr} \\ 58 & 2 & 515\end{array}$ | $69 \cdot 03$ | 4 | 19.05 | W 1076, Note. |
| 3090 | $88 \quad 49$ I $8 \cdot$ I | $73 \cdot 69$ | 1 | 19.06 | $\begin{gathered} \text { W } 967, \mathrm{~T}_{2}, \mathrm{Sp} 9384, \mathrm{~L}_{1} \\ {[902 \mathrm{I}, \mathrm{Gl} 5987 .} \end{gathered}$ |
| 3091 | $62 \quad 38 \quad 5 \mathrm{I} 5$ | $76 \cdot 76$ | 5 | 19.08 | W ro95, R 10736. |
| 3092 | $89 \quad 36 \quad 40$ | 72.44 | 6 | 19.09 | See Notes. |
| 3093 | $47 \quad 8 \quad 105$ | 77.88 | 3 | 19.09 | W IIIO. [2060. |
| 3094 | $\begin{array}{llll}62 & 39 & 24.2\end{array}$ | 73.03 | 5 | 19.10 | W III5, R LO739, I2yr |
| 3095 | $53 \quad 35 \quad 2 \mathrm{I} \cdot 8$ | $74 \cdot 18$ | 5 | I9*II | W II2I. |
| 3096 | $\begin{array}{llll}54 & 18 & 55^{\circ}\end{array}$ | 68.97 | 6 | 19.12 | W Ir33, Y 10081. |
| 3097 | $\begin{array}{llll}93 & 54 & 48 \cdot 6\end{array}$ | $75 \cdot 25$ | 8 | 19.14 | W1033, PM $2768, \mathrm{Si}_{2}$, Gl |
| 3098 | $8651532 \cdot 4$ | 72.21 | 5 | 19•16 | See Notes. [6004. |
| 3099 | $\begin{array}{lll}92 & 4 & 43.7\end{array}$ | 72.80 | 4 | 19'18 | $\mathrm{L}_{1} 9040$. |
| 3100 | $8 \mathrm{I} \quad 18 \quad 25.4$ | $77 \cdot 13$ | 4 | 19'18 | See Notes. |
| 3101 | $\begin{array}{lll}86 & \mathbf{8} 8 & 30.4\end{array}$ | 70.16 | 6 | 19.20 |  |
| 3102 | $\begin{array}{llll}93 & 33 & 18 \cdot 2\end{array}$ | 72.55 | 5 | 19.20 | W 1083. |
| 3103 | 8964214.7 | 65.41 | 5 | 19.20 | See $N$ otes. |
| 3104 | $\begin{array}{lll}46 & 49 & 48 \cdot 4\end{array}$ | 72.93 | 7 | 19.20 -19.22 |  |
| 3105 | $85 \quad 30 \quad 37 \cdot 2$ | 72.50 | 5 | - 19.22 |  |


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| 3106 | 44969 | 7'5 | $22^{\text {h }}$ | $53^{\text {m }}$ | $47^{\circ} \cdot 88$ | 64.76 | I | +3'137 |
| 3107 | 44982 | $8 \cdot 0$ | 22 | 53 | 56.96 | 75.90 | I | 2.919 |
| 3108 | 45001 | $7 \cdot 7$ | 22 |  | 18.65 | $78 \cdot 78$ | 2 | 2.986 |
| 3109 | 45023 | $6 \cdot 0$ | 22 |  | 44.59 | 72.62 | 6 | $2 \cdot 851$ |
| 3110 | 45037 | $6 \cdot 7$ | 22 | 55 | $5 \cdot 84$ | 76.01 | 5 | 2.780 |
| 3 III | 45028 | 7.9 | 22 | 55 | 2101 | 83.93 | I | $3 \cdot 102$ |
| 3112 | 45044 | $6 \cdot 9$ | 22 | 55 | 29.38 | 60.69 | 1 | 2.919 |
| 3 II 3 | 45053 | $7 \cdot 1$ | 22 | 55 | 45.60 | $78 \cdot 65$ | 5 | 2.943 |
| 3II4 | 45063 | $6 \cdot 8$ | 22 | 55 | 56.75 | $73 \cdot 80$ | 5 | 2.824 |
| 3115 | 45072 | $6 \cdot 0$ | 22 | 56 | 15'14 | 72.76 | I | 2.918 |
| 3116 | 45133 | $6 \cdot 6$ | 22 | 56 | 5794 | 78.08 | 4 | 2.938 |
| 3117 | 45112 | $7 \cdot 3$ | 22 | 57 | 29.26 | 72.60 | 5 | $2 \cdot 921$ |
| 3178 | 45166 | $6 \cdot 7$ | 22 | 58 | 58.28 | 71.07 | 4 | 2.917 |
| 3119 | 45180 | $6 \cdot 9$ | 22 | 59 | 23.69 | 77.82 | 4 | $2 \cdot 917$ |
| 3120 | 45184 | $5 \cdot 5$ | 22 | 59 | $57^{\circ}$ |  |  | $3 \cdot 229$ |
| 3121 | 45203 | $6 \cdot 5$ | 23 | $\bigcirc$ | 18.24 | 71.60 | 4 | 2.821 |
| 3122 | 45199 | $6 \cdot 2$ | 23 | $\bigcirc$ | 19.68 | 73.38 | 5 | 2.952 |
| 3123 | 45200 | $7 \cdot 8$ | 23 | $\bigcirc$ | $25 \cdot 69$ | 83.93 | I | $3 \cdot 047$ |
| 3124 | 45218 | $7 \cdot 5$ | 23 | $\bigcirc$ | $38 \cdot 56$ | 74.40 | 5 | $2 \cdot 764$ |
| 3125 | 45241 | $6 \cdot 2$ | 23 | 1 | 18.80 | $74{ }^{\circ} \mathrm{I}$ | 5 | 2'945 |
| 3126 | 45233 | $7{ }^{\prime 2}$ | 23 | I | 21'II | 72.57 | 5 | 3.078 |
| 3127 | 45268 | $6 \cdot 5$ | 23 | 1 | 35.00 | 78.06 | 4 | 2.730 |
| 3128 | 45265 | $7 \cdot 5$ | 23 | 2 | 0.69 | 81.26 | 2 | $3 \cdot 079$ |
| 3129 | 45297 | $8 \cdot 5$ | 23 | 2 | 37.88 | 73.24 | 5 | 3.089 |
| 3130 | 45323 | $6 \cdot 9$ | 23 | 3 | 3.88 | $76 \cdot 81$ | 4 | $2 \cdot 813$ |
| 313I | 45311 | 7.5 | 23 | 3 | 14.83 | 79.84 | 3 | $3 \cdot 162$ |
| 3132 | 45334 | $7 \cdot 7$ | 23 | 3 | 43.70 | 76.06 | 4 | 2.992 |
| 3133 | 45333 | $7 \cdot 5$ | 23 | 3 | 47.07 | 72.55 | 4 | 3.034 |
| 3134 | 45350 | $6 \cdot 8$ | 23 | 4 | 9.54 | 73.40 | 5 | 2.862 |
| 3135 | 45362 | $7 \cdot 2$ | 23 | 4 | 36:24 | 68.46 | 5 | 2.918 |
| 3136 | 45394 | $6 \cdot 0$ | 23 | 4 | $40 \cdot 67$ | $75^{\circ} 07$ | 3 | 2.775 |
| 3137 | 45368 | $7{ }^{1}$ | 23 | 4 | 52.93 | 77.50 | 4 | 3.048 |
| 3138 | 45386 | $7 \cdot 5$ | 23 | 5 | 12.56 | $73 \cdot 8$ 1 | 4 | 2.777 |
| 3139 | 45380 | $8 \cdot 0$ | 23 | 5 | 27.19 | 75.75 | 3 | 3.143 |
| 3140 | 45409 | $8 \cdot 2$ | 23 | 6 | 15.48 | $75 \cdot 80$ | 2 | $3^{\prime 061}$ |
| 3141 | 45426 | 6.9 | 23 | 6 | 27.40 | 74.00 | 5 | $2 \cdot 845$ |
| 3142 | 45429 | $7 \cdot 7$ | 23 | 6 | $46 \cdot 26$ | 81.86 | 2 | 3.027 |
| 3143 | 45436 | $8 \cdot 2$ | 23 | 7 | I.04 | $75 \cdot 54$ | 4 | $3 \cdot 062$ |
| 3144 | 45469 | 74 | 23 | 7 | 33.30 | $70 \cdot 84$ | 5 | 2.993 |
| 3145 | 45490 | $7{ }^{\circ}$ | 23 | 8 | $9 \cdot 29$ | $72 \cdot 82$ | 5 | $3 \cdot 132$ |
| 3146 | 45496 | $7^{\circ} 0$ | 23 | 8 | 17.33 | 73.99 | 5 | 2.906 |
| 3147 | 45492 | 7.5 | 23 | 8 | 18.19 | 81.24 |  | 3'164 |
| 3148 | 45498 | 6.5 | 23 | 8 | 26.74 | 77.57 | 4 | 2.943 |
| 3149 | 45514 | 7.4 | 23 | 8 | $34^{\circ} \mathrm{I}$ I | 73.41 | 3 | 2.794 |
| 3150 | 45543 | $7{ }^{\circ}$ | 23 | 9 | 48'41 | 77.55 | 4 | +2.942 |


| No. | Mean N.P.D. $1875^{\circ} \mathrm{O}$. | Epoch. | Obs. | Ann. Prec. | Authorities. |
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| 3106 | $99^{\circ} 32^{\prime} 57^{\prime \prime} 8$ | $65 \cdot 71$ | I | - $19^{\prime \prime} \cdot 22$ | See Notes |
| 3107 | $\begin{array}{llll}69 & 26 & 55 ' 9\end{array}$ | 73.51 | 3 | 19.23 | W Izr3. |
| 3108 | $\begin{array}{lll}77 & 12 & 59\end{array}$ | 78.78 | 2 | 19.24 | WIII7, RIO784, $\mathrm{L}_{4} 3272$. |
| 3109 | $\begin{array}{llll}59 & 35 & 16 \cdot 3\end{array}$ | $72 \cdot 62$ | 6 | 19.25 | W 123 I. |
| 3110 | 515746 | 74.30 | 6 | 19.26 | W 1243. |
| 3111 | $94 \quad 30 \quad 49.9$ | 83.93 | I | 19.26 | Y ior 26, Note. |
| 3 II 2 | 6735 5r'5 | 59.80 | 1 | 19.27 | $\mathrm{Ar}^{\text {5 }}$-72, $\mathrm{L}_{6}$. |
| 3113 | 70 50 1.1 | 75'10 | 7 | 19.27 | $L_{6}$. |
| 3114 | $\begin{array}{lll}56 & 3 & 28 \cdot 4\end{array}$ | 71.77 | 6 | 19.28 | W 1257. |
| 3115 | $\begin{array}{llll}67 & 19 & 55.8\end{array}$ | $68 \cdot 40$ | 3 | 19.28 | W I265, $\mathrm{L}_{6}$. |
| 3116 | $\begin{array}{lll}69 & 45 & 10 \cdot 3\end{array}$ | 78.08 | 4 | 19'30 | W 1279. |
| 3117 | 67 I7 41.3 | 69:70 | 8 | 19.31 | W $1295, \mathrm{~L}_{6}$. |
| 3118 | $\begin{array}{lll}66 & 9 & 8 \cdot 7\end{array}$ | $70 \cdot 45$ | 6 | 19.35 | W 1323 . |
| 3119 | $66 \quad 1 \quad 16 \cdot 2$ | $77 \cdot 82$ | 4 | 19.36 | W I334, Bn. |
| 3120 | $\begin{array}{lll}14 & 25 & 7.2\end{array}$ | $65 \cdot 73$ | 4 | 19.37 | T ro636, Ar 5092, Y [rorizo, St rior6. |
| 312 I | 53 51 5 5.4 | $70 \cdot 86$ | 5 | 19.38 | W 1362. |
| 3122 | 70 | $73 \cdot 38$ | 5 | 19.38 | See Notes. |
| 3123 | 85 | 83.93 | 1 | 19.38 | W I250, Slp 9492. |
| 3124 | $48 \quad 4 \quad 57^{\circ}$ | 74.44 | 5 | 19.38 |  |
| 3125 | $69 \quad 32 \quad 2309$ | 74.6 r | 5 | 19.41 | W 1378. |
| 3126 | 90588 | 72.00 | 6 | 19.41 | See Notes. |
| 3127 | $44 \quad 36 \quad 27.5$ | $75^{\circ} 95$ | 6 | 19.41 | See Notes. |
| 3128 | $911030 \cdot 1$ | 81.26 | 2 | 19.41 | See Notes. |
| 3129 | $\begin{array}{llll}93 & 7 & 47\end{array}$ | 73.24 | 5 | 19.43 | $\mathrm{W}^{\text {W }}$. |
| 3130 | $5 \mathrm{I} \quad 45 \quad 40 \cdot 8$ | 73'12 | 6 | 19.44 | Wi7, $\mathrm{RC}_{5973}, \mathrm{Y}_{\text {Ioigi. }}$ |
| 3131 | 105 II 16.9 | 74.80 | 5 | 19.44 | $\mathrm{L}_{6}{ }^{\circ} \quad\left[\mathrm{L}_{4} 3323, \mathrm{Gl} \text { 6og } \mathrm{I}\right. \text {. }$ |
| 3132 | $\begin{array}{lll}76 & 14 & 517\end{array}$ | 74.05 | 5 | 19.45 | W 26,PM 2795,R ro846, |
| 3 I 33 | $83 \quad 18 \quad 53.7$ | $70 \cdot 00$ | 6 | 19.45 | W $28, \mathrm{Si}_{1}$. |
| 3I34 | $565430 \cdot 9$ | 71.50 | 7 | 19.46 | W 36. |
| 3135 | $64 \quad 9 \quad 17 \cdot 3$ | 68.61 | 5 | 19.47 | W 48. |
| 3136 | $47 \quad 7 \quad 36 \cdot 6$ | 72.98 | 4 | 19.47 | See Notes. [G1 6096. |
| 3137 | 85 | $75 \cdot 65$ | 6 | 19.47 | $\mathrm{W}_{4} 8, \mathrm{R} \mathrm{ro8}{ }_{5} 8, \mathrm{Si}_{1} \mathrm{Bn}, \mathrm{Y}$ 10209, |
| 3138 | $47 \quad 1 \quad 18.8$ | 72.19 | 5 | 19.48 | W 63, RC 5986. |
| 3 r 39 | 1023642.7 | 72.55 | 5 | 19.49 | W $57, \mathrm{PM} 2798$. |
| 3140 | $87 \quad 59 \quad 16.4$ | $75 \cdot 80$ | 2 | I9.5 | $\mathrm{W}_{75, \mathrm{Riosin}_{1}, \mathrm{Sp} 9541, \mathrm{~L}_{2}}$ [9118, Gl6ro3. |
| 3141 | $53 \quad 42$ 4I'6 | $72 \cdot 12$ | 6 | 19.51 | W 83. [Gl 6ro5. |
| 3142 | 8183000 | 81.86 | 2 | 19.51 | W 82,R ro892, Sp 955 r , |
| 3143 | 88 ○ $\quad 18.4$ | 73.97 | 5 | 19.52 | See Notes. |
| 3144 | $75 \quad 18 \quad 36 \cdot 0$ | 69.99 | 6 | 19.53 | Rro905,Sp956r,Gl6ro9. |
| 3145 | $\begin{array}{lll}\text { IOI } & 22 & 6.4\end{array}$ | $72 \cdot 00$ | 6 | 19.54 | $\text { W } 123 .$ |
| 3146 | $6065430 \cdot 3$ | 73.99 | 5 | 19.54 | W 13r, R ro923. |
| 3147 | $10655 \quad 7 \cdot 1$ | $76 \cdot 08$ | 3 | 19.54 | Oe $22700, L_{6}$. |
| 3148 | $\begin{array}{llll}66 & 34 & 40 \cdot 8\end{array}$ | $77 \cdot 64$ | 5 | 19.55 | W 137, R rog25, $\mathrm{L}_{6}$. |
| 3149 | 46 | 69'75 | 6 | 19.55 | W $146, \mathrm{RC} 6007$. |
| 3150 | $65 \quad 54 \quad 37 \cdot 2$ | 77.55 | 4 | - I9.57 | W r69, R 10943. |



| No. | Mean N P.D. 1875.0. | Epoch. | Obs. | Ana. Prec. | Authorities. |
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| 3151 | 102 ${ }^{\circ} 23^{\prime} 45^{\prime \prime} \cdot 2$ | 69.45 | 3 | - $19^{\prime \prime} \cdot 60$ | W $\mathrm{I}_{85}, \mathrm{Si}_{3} 26 \mathrm{I} 8, \mathrm{Y}_{10262 .}$ |
| 3152 | $\begin{array}{llll}52 & 55 & 18.7\end{array}$ | 68.50 | 3 | 19.60 | W 208. |
| 3153 | $19 \quad 52 \quad 25.4$ | 64.58 | 6 | 19.60 | Ar 5134, Oc 25372. |
| 3154 | $60.13 \quad 23.9$ | 72.06 | 5 | 19.61 | $W^{217}$ \% |
| 3155 | $63 \quad 4 \quad 3909$ | $77 \cdot 80$ | I | 19.62 |  |
| 3556 | 1025116.2 | 75.45 | 3 | 19.62 | W 228, $\mathrm{Si}_{4} 2177$. |
| 3157 | $\begin{array}{llll}56 & 57 & 180\end{array}$ | $73 \cdot 60$ | 6 | 19.62 | W 235. |
| 3158 | $\begin{array}{llll}54 & 35 & 347\end{array}$ | 75.67 | 6 | 19.63 | W 237. |
| 3159 | $\begin{array}{llll}47 & 33 & 3 \cdot 6\end{array}$ | $7{ }^{1 \times 00}$ | 5 | 19.63 | W 245. |
| 3160 | $\begin{array}{llll}55 & 53 & 25.9\end{array}$ | 69.55 | 6 | 19.64 | W 250 , R rioig. <br> [6I42. |
| 3161 | $\begin{array}{llll}82 & 42 & 3.9\end{array}$ | 73.05 | 6 | 19.64 | W $245, \mathrm{R}_{\text {I }}$ O17 $7, \mathrm{Bn}, \mathrm{Gl}$ |
| 3162 | 63 III 22.8 | $79^{\circ} 2$ | 5 | 19.64 | W 25 I . |
| 3163 | $9435 \quad 59^{\circ} \mathrm{O}$ | 82.79 | 1 | 19.65 | See Notes. |
| 3164 | $70 \quad 5034^{\circ} \mathrm{I}$ | $67 \cdot 26$ | 2 | 19.66 | W 269, $\mathrm{L}_{6}$. [St 12 I I 3. |
| 3165 | $117 \quad 40 \quad 15.4$ | 66.23 | 2 | 19.66 | Tio726, Ar5151, Yio296, <br> [RC6043, Gl6I54. |
| 3166 | $\begin{array}{llll}46 & 34 & 1.2\end{array}$ | 71.99 | 5 | 19.67 |  |
| 3167 | $\begin{array}{llll}95 & 21 & 25 \%\end{array}$ | 7946 | 3 | 19.67 | See Notes. |
| 3168 | 54 II 177 | 72.25 | 4 | 19.67 | W 293. |
| 3169 | 702 |  |  | 19.68 | W 298, Ar 5160. |
| 3170 | $\begin{array}{llll}61 & 59 & 153\end{array}$ | 78.84 | 4 | 19.68 | W 308. |
| 3171 | $\begin{array}{llll}64 & 45 & 59.2\end{array}$ | 75.68 | 5 | 19.69 | W 315. [-0305, St 12121. |
| 3172 | $\begin{array}{llll}10 & 46 & 59 \\ \text { I }\end{array}$ | 66.41 | 3 | 19.69 | T 10736, Ar ${ }_{5163}$, 7 yr 1957, Y |
| 3173 | $\begin{array}{lllll}112 & 27 & 28.6\end{array}$ | $63 \cdot 56$ |  | 19.71 | Trio745, Ar5169, $\mathrm{Y}_{10316 \text {, }}$ |
| 3174 | $6 \mathrm{l} \quad 0 \quad 48.4$ | 69.50 | 8 | 19.72 | W 344. [St 12130. |
| 3175 | 69 16 17 | 72.05 | 6 | 19.72 | W 351, Ritizi. |
| 3176 | $\begin{array}{llll}66 & 55 & 32 \cdot 1\end{array}$ | 72.01 | 5 | 19.72 | RIII23, $\mathrm{L}_{6}$. |
| 3177 | $\begin{array}{llll}54 & 19 & 27 \%\end{array}$ | $71 \times 50$ | 7 | 19.73 | W $363, \mathrm{Y} 10325$. |
| 3178 | $\begin{array}{llll}58 & 13 & 1.2\end{array}$ | 62.93 | 5 | 19.74 | W 371, Ar 5176, $\mathrm{RC}_{2}$ |
| 3179 | 543150 | 73.78 | 5 | 19.74 | W 374. [2327. |
| 3180 | $\begin{array}{llll}8 \mathrm{I} & 45 & 28.2\end{array}$ | 75*79 | 6 | 19.75 | R ifi60. |
| 3181 | $\begin{array}{llll}51 & 20 & 478\end{array}$ | 72:17 | 5 | 19.75 | W 389. [9192, Gl 6r82. |
| 3182 | $\begin{array}{llll}88 & 12 & 34.6\end{array}$ | 6r19 | 3 | 19.75 | W 383, $\mathrm{Ar} 518 \mathrm{r}, \mathrm{Sp} 9658, \mathrm{~L}_{1}$ |
| 3183 | $\begin{array}{lll}105 & 56 & 6\end{array}$ | $66 \cdot 7 \mathrm{I}$ | 2 | 19.76 | $\mathrm{L}_{6}, \mathrm{Y}$ 10337. [6186. |
| 3184 | 82.3718 .4 | 73.69 | 3 | 19.76 | W $395, \mathrm{RIII} 86, \mathrm{Si}_{1}$, Gl |
| 3185 | $57434 \mathrm{r}^{\circ} \mathrm{O}$ | 68.85 |  | 19.77 | W 436. |
| 3186 | 99575749 | 70.82 | 4 | 19.79 | $\mathrm{W}_{42}{ }^{7}, \mathrm{Si}_{8}$. |
| 3187 | $\begin{array}{llll}48 & 16 & 36 \cdot 8\end{array}$ | $7 \mathrm{~T} \cdot 80$ | 5 | 19.79 |  |
| 3188 | $744034 \%$ | $76 \cdot 01$ | 5 | 19.79 | W 434, R II 224. |
| 3189 | 14 43 37 | 67•19 | 2 | 19.79 | R 11223 , Oe 22862. |
| 3190 | $481944^{\circ}$ | 69.95 | 8 | 19.80 |  |
| 3191 | $\begin{array}{llll}52 & 2 & 43 \%\end{array}$ | 77.01 | 5 | 19.80 |  |
| 3192 | 1123422.1 | 65.75 | 1 | 19.80 | Oe 22873, St 12169. |
| 3193 | $\begin{array}{llll}95 & 45 & \circ \\ \text { O. }\end{array}$ | 75.64 | 6 | 19.81 | W 466. |
| 3194 | $\begin{array}{llll}52 & 1 & 388\end{array}$ | 71.75 | 6 | 19.81 | W 503. |
| 3195 | $\begin{array}{llll}56 & 59 & 25 \cdot 1\end{array}$ | 69.81 | 5 | -19.83 | $\mathrm{W}_{52 \mathrm{I}}$. |


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| 3196 | 46084 | $6 \cdot 3$ | $23^{\text {b }}$ | $25^{\text {m }}$ | $3 \mathrm{I}^{8 \cdot} 3^{\text {I }}$ | $77 \cdot 80$ | 3 | +2.967 |
| 3197 | 46085 | $7{ }^{\circ}$ | 23 | 25 | 43. |  |  | $3 \cdot 115$ |
| 3198 | 46090 | $7{ }^{\circ}$ | 23 | 25 | 57.29 | $73^{\prime 12}$ | 4 | $3 \cdot 113$ |
| 3199 | 46103 | $7 \cdot 2$ | 23 | 26 | 708 | 77.45 | 5 | 3.013 |
| 3200 | 46120 | 8.0 | 23 | 26 | 19.26 | 76.81 | 3 | 2.945 |
| 3201 | 46117 | $8 \cdot 0$ | 23 | 26 | 29.86 | 69.55 | 4 | 3.084 |
| 3202 | 46144 | $8 \cdot 0$ | 23 | 27 | $25^{\circ}$ |  |  | $3 \cdot 163$ |
| 3203 | 46168 | $7 \cdot 0$ | 23 | 27 | 47'13 | 72'10 | 4 | 2.878 |
| 3204 | 46182 | $7 \cdot 5$ | 23 | 28 | 23.26 | 73.80 | 4 | 2.950 |
| 3205 | 46195 | 6.2 | 23 | 28 | $38 \cdot 16$ | 68.99 | 5 | 2.933 |
| 3206 | 46203 | 7.5 | 23 | 28 | $44 \cdot 63$ | $75 \cdot 65$ | 4 | 2.905 |
| 3207 | 46194 | $8 \cdot 0$ | 23 | 28 | $48 \cdot 69$ | 82.79 | 1 | 3.087 |
| 3208 | 46200 | 77 | 23 | 28 | 5131 | $80 \cdot 58$ | 5 | 3.034 |
| 3209 | 46227 | $6 \cdot 8$ | 23 |  | 18.98 | $70 \cdot 87$ | 4 | 2.962 |
| 3210 | 46229 | 7.5 | 23 | 29 | 33.27 | 73.57 | 4 | 3'102 |
| 3211 | 46228 | 6.0 | 23 | 29 | $35^{\circ}$ |  |  | 3•164 |
| 3212 | 46240 | 73 | 23 | 29 | $4{ }^{1} 76$ | 77.41 | 4 | 2.982 |
| 3213 | 46255 | $6 \cdot 8$ | 23 | 30 | 18.59 | $73 \cdot 32$ | 4 | 2.963 |
| 3214 | 46274 | 77 | 23 | 31 | $3 \cdot 92$ | 74.72 | 1 | 3.005 |
| 3215 | 46294 | $9^{\circ}$ | 23 | 31 | $4 \times 78$ | $75 \cdot 60$ | 3 | 3.078 |
| 3216 | 46300 | $6 \cdot 8$ | 23 | 31 | $48 \cdot 65$ | 73.74 | 2 | 2.904 |
| 3217 | 46320 | 6.5 | 23 | 32 | 22.08 | $7 \mathrm{r} \cdot 86$ | 5 | $2 \cdot 962$ |
| 3218 | 46344 | $6 \cdot 8$ | 23 | 33 | 12.75 | 68.89 | I | 2.991 |
| 3219 | 46380 | $8 \cdot 0$ | 23 | 34 | 2179 | 72.83 | 1 | 3.095 |
| 3220 | 46396 | $6 \cdot 0$ | 23 | 34 | $24^{\circ}$ |  |  | $2 \cdot 953$ |
| 3221 | 46399 | $6 \cdot 5$ | 23 |  | $40 \cdot 57$ | 83.93 | I | 3.105 |
| 3222 | 46409 | $7 \cdot 8$ | 23 |  | 47.38 | $70 \cdot 30$ | 2 | $2 \cdot 968$ |
| 3223 | 46420 | 6.8 | 23 |  |  |  |  | 2947 |
| 3224 | 46398 | $7{ }^{\circ}$ | 23 | 35 |  |  |  | 2.924 |
| 3225 | 46423 | $7{ }^{\circ}$ | 23 | 35 | 3.21 | 70.83 | I | 2.990 |
| 3226 | 46412 | $5^{\circ}$ | 23 | 35 | $5 \cdot 20$ | 64.72 | 1 | 3. 122 |
| 3227 | 46442 | $6 \cdot 5$ | 23 | 35 | $34 \cdot 56$ | 75.50 | 3 | 3.056 |
| 3228 | 46451 | $5{ }^{\circ}$ | 23 | 35 | $59 \cdot 24$ | 82.79 | 1 | 3113 |
| 3229 | 46482 | $7{ }^{\circ}$ | 23 | 36 | 52.73 | 71.86 | 5 | 2.98 I |
| 3230 | 46487 | 6.5 | 23 | 36 | 58.79 | 78.10 | 4 | 2.905 |
| 3231 | 46491 | $7 \cdot 6$ | 23 | 37 | $7 \times 13$ | 74.79 | 4 | $2 \cdot 898$ |
| 3232 | 46518 | 8.0 | 23 | 38 | $7 \cdot 44$ | 70.61 | 5 | 3.081 |
| 3233 | 46532 | 73 | 23 | 38 | $35 \cdot 59$ | 74.74 | 4 | 3.075 |
| 3234 | 46524 | $6 \cdot 5$ | 23 | 38 | 43.02 | 73.29 | 2 | 2.889 |
| 3235 | 4654 I | $6 \cdot 5$ | 23 | 38 | $45^{\circ} 05$ | 71.25 | 5 | 3.026 |
| 3236 | 46553 | 73 | 23 |  | 16.24 | 76.47 | 5 | 3.045 |
| 3237 | 46567 | 75 | 23 |  | 3546 | $80 \cdot 37$ | 4 | 2.996 |
| 3238 | 46576 | 7.5 | 23 |  | $6 \cdot 65$ | 82.79 | 1 | $3 \times 092$ |
| 3239 | 46583 | $7 \cdot 1$ | 23 |  | $8 \cdot 05$ | $75^{\circ} 41$ | 5 | $3 \cdot 11$ |
| 3240 | 46586 | 7.5 |  | 40 | 24.08 | 64.73 | 1 | $+3.092$ |


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| 3196 | $62^{\circ} 17^{\prime}$ | 8"3 | 75*03 | 4 | - 19.183 | W 524, R 11292. |
| 3197 | 10214 | $2 \cdot 7$ | 65.73 | 5 | 19.83 | See Notes. [ $\mathrm{L}_{5} 4064$. |
| 3198 | 10141 | $21 \cdot 1$ | 72.55 | 6 | 19.83 | $\mathrm{W}_{497}, \mathrm{Rin}_{1302}, \mathrm{Si}_{3} 2643$, |
| 3199 | 7317 | $6 \cdot 6$ | 74.39 | 7 | 19.84 |  |
| 3200 | $56 \quad 56$ | $56 \cdot$ | 76.81 | 3 | 19.84 |  |
| 3201 | 9342 | 24.5 | 69.95 | 5 | 19.84 | $\mathrm{W}_{511}, \mathrm{Sp}_{9709, \mathrm{~L}_{3} 4756,}$ |
| 3202 | 11533 | $3 \cdot 1$ | $66 \cdot 75$ | I | 19.85 | Oe 22,07, Y 10404, St 12200. |
| 3203 | 44 - | $27 \cdot 8$ | 7 r 45 | 6 | 19.86 | $1 \mathrm{R11340} ,\mathrm{Oe} \mathrm{25747} RC 6112.$, |
| 3204 | 5620 | $7 \%$ | 72.50 | 6 | 19.86 | W 578. |
| 3205 | 5240 |  | 68.99 | 5 | 19.87 | W 590. |
| 3206 | 4729 | 20.1 | 73.65 | 6 | 19.87 | [4759, Gl 6237. |
| 3207 | 9432 | $45^{\circ} 8$ | 74.25 | 2 | 19.87 | W $566, \mathrm{R} \times 1360, \mathrm{Si}_{3}, \mathrm{~L}_{3}$ |
| 3208 | 78 r | $39^{\circ}$ | $80 \cdot 58$ | 5 | 19.87 | $\mathrm{W}_{568, \mathrm{R} 11364, \mathrm{~L}_{4} 3434,}$ |
| 3209 | 5829 | $36 \cdot 1$ | 70.67 | 5 | 19.87 | W 602. [Gl 62388 |
| 3210 | $99 \quad 27$ | 23.3 | 72.45 | 6 | 19.88 | $\begin{array}{r} \mathrm{W}_{5} 86, \mathrm{R}_{\mathrm{I}} \mathrm{I} 376, \mathrm{Si}_{2}, \mathrm{Sp} \\ {\left[9734, \mathrm{~L}_{5} 4072 .\right.} \end{array}$ |
| 3211 | 11734 | $3 \cdot 2$ | $66 \cdot 13$ | 5 | 19.88 | T 10819, Ar 52 L , St |
| 3212 | 6249 | $34 \cdot 6$ | $77 \cdot 4 \mathrm{r}$ | 5 | 19.88 | R in 38, Bn. [12210. |
| 3213 | 5747 | 116 | 71.31 | 6 | 19.88 | W 627. |
| $321+$ | 68 r 2 | 2.8 | 74.72 | 1 | 19.89 | $\mathrm{L}_{6 \cdot}{ }^{\text {c }}$ [9261. |
| 3215 | 92 | $40 \cdot 1$ | $72 \cdot 88$ | 4 | 19.90 | W 628, $\mathrm{Si}_{2}, \mathrm{Si}_{5}{ }^{\text {r }} 377, \mathrm{~L}_{1}$ |
| $32 \times 6$ | 4429 | 30'9 | $70^{\circ} 50$ | 4 | 19.90 | See Notes. |
| 3217 | 5539 | $28 \cdot 5$ | $71 \cdot 86$ | 5 | 19.9 r |  |
| 3218 | $62 \quad 27$ | $13^{\circ}$ | 67.80 | 2 | 19.91 | W 701, Notes. |
| 3219 | 9836 | 21.5 | 68.78 | 2 | 19.93 | $\mathrm{W}^{\mathrm{W}} 684, \mathrm{Si}_{2}, \mathrm{~L}_{3} 4763$. |
| 3220 | $53 \quad 58$ | $22^{\circ} \mathrm{O}$ | 66.72 | 2 | 19.93 | W 734. |
| 3221 | 10222 | 23.8 | 83.93 | I | 19.93 | See Notes. |
| 3222 | 5443 | 13.6 | 68.80 | 3 | 19.93 | W 740. |
| 3223 | 4850 | $3{ }^{\circ} \circ$ | 67.09 | 3 | 19.93 | $\mathrm{W}_{743}, \mathrm{RII}_{1469}$, RC6154. |
| 3224 | 4428 | 22.3 | 67.75 | 2 | 19.93 | Oe 25904. |
| 3225 | 587 | $55^{\circ}$ | 70'12 | 3 | 19.93 | W 744. |
| 3226 | 10843 | $7 \cdot 2$ | 65.73 | 3 | 19.93 | Tro850, $\mathrm{Ar}_{5} \mathbf{2 3 3}, \mathrm{Y} 10452$. |
| 3227 | 8326 | 29.7 | 73.32 | 4 | 19.94 | See Notes. |
| 3228 | 1068 | 29.6 | 71.43 | 3 | 19.94 | Oe 23004. |
| 3229 | $55 \quad 56$ | 38.9 | 70.65 | 6 | 19.95 | W 791. |
| 3230 | 3845 | 153 | 75.45 | 5 | 19.95 | Oe 25954. |
| 3231 | $3^{8} 26$ | $45^{\prime} 7$ | 70.43 | 5 | 19.95 | Oe 25956. |
| 3232 | $93 \quad 52$ | 53 | 69.80 | 6 | 19.96 | W 755, $\mathrm{Si}_{2}$, Gl 6281. |
| 3233 | 9 I 21 | $16 \cdot 9$ | 72.52 | 7 | 19.96 | See Notes. [6170. |
| 3234 | 3453 | $39^{\text {I }}$ | 68.28 | 6 | 19.96 | T 1087I, Ar 5246, RC |
| 3235 | 6918 | 12.0 | $70 \cdot 50$ | 7 | 19.97 | $\begin{aligned} & \mathrm{W} 82 \mathrm{r} . \\ & {\left[\mathrm{L}_{4} 3482, \mathrm{G} 16292 .\right.} \end{aligned}$ |
| 3236 | $77 \quad 32$ | 27.8 | 73.69 | 7 | 19.97 |  |
| 3237 | 5724 | 12.1 | $77 \cdot 60$ | 5 | 1907 |  |
| 3238 | 9941 | $20 \cdot 7$ | 70.25 | 4 | 19.98 | W 794, Si ${ }_{2}$, Sp 9829. |
| 3239 | 6159 | 25.5 | 73.80 | 6 | 19.98 | W 842, Ar 5250. |
| 3240 | 9935 | 304 | 64.73 | 1 | $-19.98$ | W 8or, $\mathrm{Si}_{2}$. |


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| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3241 | 46607 | 6.0 | $23^{\text {h }}$ |  | $55^{8 \cdot 64}$ | 64.76 | I | $+2^{8 .} 903$ |
| 3242 | 46606 | 7.5 | 23 | 4 I | $4 \cdot 84$ | 70.84 | I | 3.032 |
| 3243 | 46611 | $7{ }^{\circ}$ | 23 | 41 | 10.66 | $77 \cdot 31$ | 2 | 3.021 |
| 3244 | 46616 | 7.5 | 23 | 41 | 19.03 | $70 \cdot 58$ | 4 | 2.999 |
| 3245 | 46640 | $6 \cdot 8$ | 23 | 42 | ${ }^{1} 3.32$ | 70.01 | 5 | $3 \cdot 024$ |
| 3246 | 46642 | 775 | 23 | 42 | 16.42 | 74.08 | 4 | 3.018 |
| 3247 | 46645 | $7{ }^{\circ}$ | 23 | 42 | $18 \cdot 85$ | 71.68 | 4 | 2.998 |
| 3248 | 46680 | $7{ }^{\circ}$ | 23 | 43 | $40 \cdot 84$ | $77 \cdot 67$ | 5 | 3.092 |
| 3249 |  | $8 \cdot 2$ | 23 | 43 | $47^{\circ}$ |  |  | $2 \cdot 896$ |
| $325^{\circ}$ | 46684 | 7.0 | 23 |  | $47 \cdot 67$ | 83.92 | I | 3.091 |
| 3251 | 46688 | $6 \cdot 8$ | 23 | 43 | $5 \mathrm{x} 3{ }^{2}$ | 73.40 | 5 | 3.029 |
| 3252 | 46689 | $7 \%$ | 23 | 43 | $53 \cdot 62$ | $78 \cdot 80$ | 2 | 3.044 |
| 3253 | 46698 | 7.3 | 23 | 44 | $8 \cdot 90$ | 76.65 | 5 | 3.044 |
| 3254 | 46742 | 7.7 | 23 | 45 | 29.80 | 7 x 82 | 4 | 3.066 |
| 3255 | 46746 | $6 \cdot 7$ | 23 | 45 | $35^{\circ} 20$ | 70.40 | 5 | $3 \cdot 008$ |
| 3256 | 46757 | $7 \times 5$ | 23 | 45 | 5197 | 72.15 | 4 | 2.975 |
| 3257 | 46761 | $6 \cdot 0$ | 23 | 46 | $4 \cdot 65$ | 79.65 | 5 | 3.094 |
| 3258 | 46769 | $6 \cdot 5$ | 23 | 46 | 12.72 | 66.71 | I | $3 \cdot 101$ |
| 3259 | 46772 | $6 \cdot 0$ | 23 | 46 | $14^{\circ}$ |  |  | $3 \cdot 058$ |
| 3260 | 46791 | 7.5 | 23 |  | 33.89 | 69.15 | 6 | 2.986 |
| 326 r | 46803 | $7 \times 5$ | 23 | 46 | $45 \cdot 76$ | 74.63 | 4 | 3.036 |
| 3262 | 46808 | 73 | 23 | 46 | 5101 | $73 \cdot 54$ | 4 | 3.025 |
| 3263 | 46828 | $7{ }^{\circ}$ | 23 | 47 | $32 \cdot 15$ | 79.84 | 3 | $3 \cdot 049$ |
| 3264 | 4683.2 | $7{ }^{\circ}$ | 23 | 47 | 34.73 | 75.51 | 3 | 3.002 |
| 3265 | 46861 | 76 | 23 | 48 | $25^{\circ} \mathrm{I}$ | $76 \cdot 77$ | 4 | 3.051 |
| 3266 | 46867 | $7^{\circ}$ | 23 | 48 | $37 \cdot 32$ | $70 \cdot 44$ | 5 | 3.037 |
| 3267 | 46883 | 7.5 | 23 | 49 | $\begin{array}{r}2.14 \\ \hline 6.08\end{array}$ | $77 \cdot 78$ | 2 | 3.032 |
| 3268 | 46906 | $7{ }^{\circ}$ | 23 | 49 | $36 \cdot 08$ | $68 \cdot 82$ | 6 | 3.050 |
| 3269 | 46909 | $7^{\circ}$ | 23 | 49 | $43 \cdot 63$ | $72 \cdot 48$ | 5 | $3 \cdot 037$ |
| 3270 | 46911 | $7^{\circ}$ | 23 | 49 | $46 \cdot 48$ | 7378 | 5 | 3'033 |
| 3271 | 46924 | 6.0 | 23 | 50 | 19.39 | $76 \cdot 25$ | 3 | 3.051 |
| 3272 | 46937 | $7 \cdot 2$ | 23 | 50 | $39 \cdot 85$ | $78 \cdot 11$ | 4 | 3.044 |
| 3273 | 46939 | 6.5 | 23 | 50 | 44.53 | 65.75 | $x$ | 3.094 |
| 3274 | 46981 | 6.6 | 23 | 51 | $59^{\circ} \mathrm{C} 9$ | $73 \cdot 20$ | 5 | 3.040 |
| 3275 | 47002 | $7 \cdot 8$ | 23 | 52 | $25^{\circ 2}$ | $71 \cdot 82$ | 4 | $3 \cdot 043$ |
| 3276 | 47020 | $7 \cdot 2$ | 23 | 5.2 | $54^{*}$ |  |  | 3.015 |
| 3277 | 47026 | 77 | 23 | 53 | 1. |  |  | 3.016 |
| 3278 | 47034 | $5 \cdot 8$ | 23 | 53 | $7 \cdot 13$ | 73.70 | 5 | 3.046 |
| 3279 | 47041 | $7^{\circ}$ | 23 | 53 | 22.50 | 73.95 | 2 | $3 \cdot 073$ |
| 3280 | 47099 | $6 \cdot 5$ | 23 | 54 | $56 \cdot 47$ | $71 \times 05$ | 4 | 3.036 |
| 3281 | 47098 | 8.0 | 23 | 54 | $59 \cdot 26$ | $76 \cdot 61$ | 5 | 3.069 |
| 3282 | 47105 | $7{ }^{\circ} 0$ | 23 | 55 | 1.78 | 80.05 | 5 | 3'057 |
| 3283 | 47094 | $6 \cdot 6$ | 23 | 55 | 18.92 | 70.22 | 5 | 3.059 |
| 3284 | 47115 | $5 \cdot 5$ | 23 | 55 | $33 \cdot 12$ | 83.92 | 1 | 3.075 |
| 3285 | 47123 | $7^{\circ}$ | 23 | 55 | $50 \cdot 16$ | $78 \cdot 12$ | 3 | $+3.078$ |

| No. | Mean N.P.D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Autlorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3241 | $33^{\circ} 14^{\prime} 35^{\prime \prime \prime} 8$ | 64.76 | I | - I $9^{\prime \prime} \cdot 98$ | Oe 26023. |
| 3242 | $64 \quad 33 \quad 45^{\circ} 4$ | $68 \cdot 78$ | 2 | 19.99 | W 863. |
| 3243 | $\begin{array}{lll}65 & 6 & 54.6\end{array}$ | 73.79 | 3 | 1999 | W 866. |
| 3244 | 56 Io 21.4 | 69.60 | 5 | 19.99 |  |
| 3245 | $65 \quad 2 \quad 24.9$ | $68 \cdot 89$ | 7 | 19.99 | W 88ı. |
| 3246 | $\begin{array}{llll}62 & 19 & 251\end{array}$ | 74.03 | 5 | 19`99 | W 886. |
| 3247 | $\begin{array}{lll}54 & 25 & \text { II\% }\end{array}$ | $69 \cdot 88$ | 7 | 19.99 | $[\mathrm{G}] 6319 .$ |
| 3248 | IOI $475^{2 \cdot 1}$ | 75.68 | 6 | 20.00 | W868,6yr $1547, \mathrm{Si}_{3} 2674$, |
| 3249 | $\begin{array}{llll}28 & 28 & 49^{\circ} 1\end{array}$ | 65.45 | 3 | 20.00 | Ar 5268 , Oe 26068 , RC |
| 3250 | $100 \quad 40 \quad 21.9$ | 83.92 | I | 20.00 | See Notes. [6r94. |
| 3251 | $65 \quad 50 \quad 144$ | $72 \cdot 35$ | 6 | 20.00 | R if650. |
| 3252 | $\begin{array}{lll}73 & 2 & 55\end{array}$ | $78 \cdot 80$ | 2 | $20^{\circ} 00$ | W873, R $11651, \mathrm{Gl} 632 \mathrm{~L}$. |
| 3253 | $73 \quad 5 \quad 2.6$ | $76 \cdot 65$ | 5 | 20.00 | R 11655. |
| 3254 | 85 | $70 \cdot 70$ | 6 | 20.01 | W898,Sp 9878, G1 6330. |
| 3255 | $\begin{array}{llll}52 & 48 & 48\end{array}$ | $69 \cdot 25$ | 7 | 20.01 |  |
| 3256 | 40 | 70.50 | 6 | 20.01 | Oe 26106. |
| 3257 | 104 $56 \quad 49 \% 9$ | 77.49 | 6 | 20.02 | Tiogi 2, Al $^{\text {2 }}$ 75, $\mathrm{L}_{6}$. |
| 3258 | 109 I5 26.9 | 66.71 | 1 | 20.02 | Y 10525. |
| 3259 | $\begin{array}{llll}79 & 44 & 52 \cdot 2\end{array}$ | 65.41 | 5 | 20.02 | See Notes. |
| 3260 | $\begin{array}{llll}42 & 12 & 49\end{array}$ | 69.15 | 6 | 20.02 |  |
| 326 I | $644144^{1.2}$ | 74.46 | 5 | 20.02 | W 97x. |
| 3262 | $58.47 \quad 7 \times$ | 73.54 | 4 | 20.02 | W 975. |
| 3263 | $\begin{array}{llll}72 & 42 & 8 \cdot 6\end{array}$ | 79.84 | 3 | 20.02 | W 982, R 11723. |
| 3264 | $46 \quad 8 \quad 24^{\prime} \mathrm{I}$ | 70.64 | 6 | 20.02 | W 985, RC6209. |
| 3265 | 7156560 | $76 \cdot 77$ | 4 | 20.03 | R II 739. |
| 3266 | $\begin{array}{lll}62 & 3 & 47 \cdot 6\end{array}$ | 69.45 | 6 | 20.03 |  |
| 3267 | $57 \quad 48 \quad$ I2.2 | 77.78 | 2 | 20.03 |  |
| 3268 | 6931490 | $68 \cdot 82$ | 6 | 20.03 |  |
| 3269 | $\begin{array}{llll}59 & 36 & 57.4\end{array}$ | 71.55 | 6 | 20.03 | W IOI9. |
| 3270 | $57 \quad 1228.9$ | $73 \cdot 78$ | 5 | 20.03 | W 1020. |
| 3271 | $68254^{\circ} \mathrm{O}$ | 72.84 | 6 | 20.04 |  |
| 3272 | $63 \quad 7 \quad 20 \cdot 5$ | $78 \cdot 11$ | 4 | 20.04 | W 1034, R II782. |
| 3273 | III 3 I 48.4 | $65^{\prime} 75$ | I | 20.04 |  |
| 3274 | $55 \quad 40 \quad 59.4$ | 73.20 | 5 | 20.04 | Bn. |
| 3275 | 56 | $70^{\circ} 90$ | 5 | 20.04 | [ $239, \mathrm{RC} 6249$. |
| 3276 | $40 \quad 9 \quad 57.9$ | $65 \cdot 41$ | 8 | 20.04 | Ar 530 t , Oe $26254, \mathrm{I} 2 \mathrm{yr}$ |
| 3277 | 40 II 16.8 | $65 \cdot 22$ | 2 | 20.04 | Ar 5302, Oe 26258 , I 2 yr |
| 3278 | $56 \quad 58 \quad 5 \cdot 5$ | 73.70 | 5 | 20.05 | [2140, RO6250. |
| 3279 | $\begin{array}{llll}90 & 58 & 33.5\end{array}$ | 73.95 | 2 | 20.05 | Wio69,Sp9947,G16376. |
| 3280 | $\begin{array}{llll}40 & 4^{2} & 50\end{array}$ | 69.80 | 6 | 20.05 | Oe 26289 . |
| 3281 | $83 \quad 5416 \cdot 2$ | 74*13 | 6 | 20.05 | W rio6, Gl 6385. |
| 3282 | $62 \quad 16 \quad 16.4$ | $76 \cdot 14$ | 7 | 20.05 | W 1152. |
| 3283 | $\begin{array}{llll}66 & 26 & 307\end{array}$ | 69.25 | 6 | 20.05 | W ri53, R ri884. |
| 3284 | $964231 \cdot 8$ | 83.92 | I | 20.05 | See Notes: |
| 3285 | $104 \quad 6 \quad 184$ | 77.05 | 4 | $-20.05$ |  |

| No. | Lalande. | Mag. | Mean R.A. $1875 \cdot 0$. |  |  | Epocl. | Obs. | Ann. Prec. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3286 | 47142 | $7{ }^{\circ}$ | $23^{\text {h }}$ | $56^{\text {m }}$ | 8.45 | 71.66 | 5 | $+3^{1.065}$ |
| 3287 | 47145 | $8 \cdot 0$ | 23 | 56 | 16.54 | 75.78 | 1 | 3.058 |
| 3288 | 47150 | $7 \cdot$ | 23 | 56 | 21.92 | 73.76 | 3 | 3.057 |
| 3289 | 47148 | $7 \cdot 7$ | 23 | 56 | 22.56 | $75 \cdot 35$ | 6 | 3.071 |
| 3290 | 47152 | 8.1 | 23 | 56 | 26.03 | $77 \times 9$ | 1 | $3^{\circ} 061$ |
| 3291 | 4717 I | $7 \cdot 5$ | 23 | 57 | $\bigcirc$ |  |  | 3.066 |
| 3292 | 47180 | 77 | 23 | 57 | 18.86 | $70 \cdot 85$ | I | 3.058 |
| 3293 | 47202 | 6.0 | 23 | 58 | 11.50 | $70 \cdot 88$ | 3 | 3.058 |
| 3294 | 47206 | $7{ }^{\circ}$ | 23 | 58 | 15.34 | 73.44 | 5 | 3.065 |
| 3295 | 47215 | $7 \cdot 2$ | 23 | 58 | $3{ }^{1} 90$ | $73 \cdot 84$ | 4 | 3.059 |
| 3296 | 47216 | $6 \cdot 8$ | 23 | 58 | 35.49 | 71.06 | 5 | 3.068 |
| 3297 | 47229 | 77 | 23 | 58 | $58 \cdot 10$ | $76 \cdot 62$ | 3 | 3.072 |
| 3298 | 47245 | $6 \cdot 3$ | 23 | 59 | 31.24 | $72 \cdot 15$ | 6 | 3.071 |
| 3299 | 47250 | $6 \cdot 8$ | 23 | 59 | 37.43 | 79.39 | 5 | $3 \cdot 07 \mathrm{I}$ |
| 3300 | 47251 | 67 | 23 |  | 38.24 | $73 \cdot 8 \mathbf{I}$ | 3 | $+3.070$ |

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| No. | Mean N.P.D. 1875.0. | Epoch. | Obs. | Ann. Prec. | Authorities. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 3286 | $74^{\circ} 26624^{\prime \prime \prime} 9$ | 72.86 | 6 | $-20^{\prime \prime} \cdot 05$ | $\mathrm{W}_{1173}, \mathrm{R}_{\text {II }} \mathrm{g} 08$. |
| 3287 | $\begin{array}{lll}62 & 9 & 13.3\end{array}$ | $75 \cdot 78$ | 1 | 20.05 | R iligio. |
| 3288 | $54 \quad 52 \begin{array}{lll}51 & \text { I }\end{array}$ | 70.75 | 5 | 20.05 | Wir $80 .[9383, \mathrm{Gl6} 396$. |
| 3289 | $88 \quad 33 \quad 48 \cdot 5$ | 75.35 | 5 | 20.05 | W $1143, \mathrm{Bn}, \mathrm{Sp} 9967$, L |
| 3290 | 622642.0 | 7779 | I | 20.05 | W II84, RII915. |
| 3291 | $\begin{array}{llll}70 & 1 & 273\end{array}$ | 66.90 | 2 | 20.05 | $\mathrm{W}_{1209} \mathrm{H}_{11922 .}$ |
| 3292 | $48 \quad 40 \quad 2 \mathrm{I} 5$ | $68 \cdot 88$ | $\stackrel{2}{2}$ | 20.05 | W $1213, \mathrm{RC} 6284$. |
| 3293 | 486361193 | $70 \cdot 10$ | 4 | 20.05 | W i236, RC 6292. |
| 3294 | $\begin{array}{lllll}56 & 25 & 47 \%\end{array}$ | 73.44 | 5 | 20.05 | W 1240. |
| 3295 | 45 I 12.0 | $74^{\circ} 02$ | 5 | 20.05 |  |
| 3296 | 63 I 17 1 1 | 71.06 | 5 | 20.05 | W 1256, Bn. |
| 3297 | $87 \quad 5 \quad 23.9$ | 75.56 | 4 | 20.05 | Sp 9988. |
| 3298 | $\begin{array}{llll}66 & 7 & 36 \cdot 6\end{array}$ | 71.20 | 6 | 20.05 | W 1284. |
| 3299 | $\begin{array}{llllllllllllll}65 & 46 & 43 \cdot 6\end{array}$ | 79.39 | 5 | 20.05 | W 1289 . |
| 3300 | $\begin{array}{llll}50 & 16 & 39\end{array}$ | 72.75 | 5 | $-20.05$ | W 1291. |

## NOTES.

The following pages contain a number of references to other Star Catalogucs for which there was not space enough in the body of the Catalogue. I also give references to the lists of 480 stars with Proper Motion contained in Vol. VII. of the Bonn Observations (Arg.), and in an unpublished paper by Argelander, " Untersuchungen über neue Sterne mit Eigenbewegungen." The results of the latter are found in an inaugural dissertation by Dr J. Bischof: "Untersuchungen über die Eigenbewegung des Sonnensystems auf Grund von 480 Argelander'schen teleskopischen Fixsternen " (Bonn, 1884, 8vo.). Where no authority is given for the Proper Motion, it has been detected during the compilation of the present Catalogue, and has been deduced from all the materials available, Lalande's observations having been reduced anew by von Asten's tables.

| No. in Cat. | Lalande. | - |
| :---: | :---: | :---: |
| 47 | 427 | W $26 \mathrm{I}, \mathrm{CA}_{7}, \mathrm{Ar}_{5}{ }^{2}, \mathrm{RC}_{2} 24, \mathrm{Si}_{4} 20, \mathrm{Sp} 12 \mathrm{I}, \mathrm{Y} 162$. |
| 85 | 865 | ${ }_{3} 3$ Ceti. W 472, T ${ }_{15 \mathrm{~s}}$, Ar 106, $\mathrm{Si}_{2}$, $12 \mathrm{yr} 32,6 \mathrm{yr} 32$, $7 \mathrm{yr} 38, \mathrm{~N} 7 \mathrm{yr} 56, \mathrm{Sp} 197,9 \mathrm{yr} 38$, Gl 156. |
| 87 | 880 | $\mathrm{W}_{479}, \mathrm{~T}_{1} 54, \mathrm{~N} 7 \mathrm{yr}_{57}, \mathrm{RC}_{2} 53, \mathrm{Si}_{37}, \mathrm{~L}_{1} \mathrm{IO}_{3}, \mathrm{Y}_{273},$ Gl 158 , St 215 . |
| 90 | 892 | $\begin{aligned} & \mathrm{W}_{484}, \text { Ar }_{110} \mathrm{~T}_{2}, \mathrm{R}_{2} 233,7 \mathrm{yr} 40, \mathrm{~N}_{7} \mathrm{yr} 58, \mathrm{RC}_{2} 54, \\ & \mathrm{Y}_{275}, \mathrm{St}_{1} \mathrm{I}, \mathrm{Gl}_{5} 9 . \end{aligned}$ |
| 163 | 1992 |  Y 583 , Gl 274. |
| 192 | 2539 | W $267, \operatorname{Ar} 303, \mathrm{Si}_{2}, 12 \mathrm{yr} 108,6 \mathrm{yr} 76, \mathrm{Y} 673^{\prime}$, St 542, B 21. |
| 217 | 2999 | $W_{522}, \mathrm{~T}_{529}, \mathrm{R}_{3} 64, \mathrm{Ar} 36 \mathrm{I}, \mathrm{Si}_{2}, \mathrm{R}_{4} 79 \mathrm{I}, \mathrm{RC}_{2}$ 591, $\mathrm{Si}_{3}$ 121, Sp 487, Y 760, St 640; the Proper Motion in RA does not exceed $+0^{8.020}$, as already remarked in the Edinburgh Cat. |
| 233 | 3244 |  |
| 254 | 3618 | T640, Oe II82, $7 \mathrm{yr}^{1} 75, \mathrm{Y} 901,9 \mathrm{yr}$ 181, $\mathrm{St}_{1}$ 66, St 763 , B 36. |
| 277 | $39^{22}$ | $\mathrm{W}_{1075}, \mathrm{Si}_{1}, \mathrm{Si}_{2}, \mathrm{Bn}, \mathrm{Si}_{5} \mathrm{I}_{7} 8, \mathrm{~L}_{1} 316, \mathrm{Y} 965$, Arg. 23 <br> (Pr. Mot. - $0^{4} \cdot 185$ and $+o^{\prime \prime} \cdot 374$ ). |
| 296 | 4254 | $\mathrm{T}_{763}, \mathrm{R}_{5} 83$, 12 yr 204, 7 yr 148 , $\mathrm{N}_{7} \mathrm{yr} 308, \mathrm{RC}_{8} 282$, 9 yr 210. |
| 300 | 4321 |  |
| 307 | $43^{81}$ | W 347. There seems to be negative Pr. Mot. in RA, but unfortunately we have only one obs. in RA, though there are four in PD. |


| No.in Cat. | Lalande. |  |
| :---: | :---: | :---: |
| 310 | 4449 | W 268, $\mathrm{Ar}_{5} 25, \mathrm{Si}_{1}, 7 \mathrm{gr} \mathrm{r}_{53}, \mathrm{~N} 7 \mathrm{yr} 32 \mathrm{r}, \mathrm{Y}$ 1о70, $\mathrm{St}_{1} 82$, $9 \mathrm{yr}^{216, ~ G l} 537$. |
| 338 | 4818 | 30 Arietis (foll.) W 693, PM 253, T 867 , Ar 564 , R 667 , <br>  B 59. Arg. 32, Pr. Mor. $=+0^{9} \cdot 0130+0^{\prime \prime} \cdot{ }^{\prime}$ or 7 . |
| 342 | $49^{27}$ | W 547 , T 886 , R 680 , Ar 577 , 6 yr 162,7 yr 169, N 7 yr $349, \mathrm{RC}_{3} 323, \mathrm{Sp} 745, \mathrm{~L}_{1} 387, \mathrm{Y}_{1169} 9 \mathrm{yr} 242, \mathrm{Gl} 600$, St 1057. |
| 347 | 4975 |  9 yr 247. |
| 384 | 5490 | Arg. 37, Prop. Mot. $+0^{8.0998}+0^{\prime \prime} \cdot 688$. |
| 388 | 5672 | Ar 657, T 1032, Oe 1987, 6 yr 194, RC 867, 7 yr 200, $\mathrm{RC}_{2} 366, \mathrm{Y}_{1307}$ |
| $4^{1} 3$ | 6072 | LL is $0^{\circ} .59$ and $\mathrm{I}^{\prime \prime} .4$ less (only one wire), but W and $\mathrm{Sp}_{\mathrm{p}}$ ) agree with $\mathrm{Ar}_{2}$. |
| 418 | 6 r 06 | Has probably a slight positive Proper Motion in NPD. |
| 419 | $6 \times 58$ | T ri28, Ar 7ir, Oe 2186, 6 yr 212, Y i383, St 1371, B 80. |
| 425 | 6275 | \} Very slight Pr. Mot. in NPD possible. |
| 448 | 6638 | Proper Motion $=+0^{8.019} 9$ and $+0^{\prime \prime} \cdot 22$. |
| 460 | 6912 | W 698, T 1266 , Ar $787, \mathrm{Si}_{2}, 12$ yr 317,6 yr 243, 7 yr $259, \mathrm{~N} 7 \mathrm{yr} 466, \mathrm{Si}_{4} 300,9 \mathrm{yr} 346$, St $\mathrm{x} 55^{2}$. |
| 462 | 6938 | Proper Motion in RA $=+0^{8.024}$ (Asten's tables make the RA $0^{s} .69$ greater than Baily). |
| 475 | 7097 | Arg. 47, Pr. Mot. $=-0^{8.0420-0 ' 167 .}$ |
| 478 | 7146 | W 987, PM 386, R xo16, Ar 825, Rex 990 , 12 yr 334, 6 yr 250, N 7 yr 486. |
| 483 | 7253 |  135, St 1649 . |
| 495 | 7456 | T 1373 , Ar 849, $\mathrm{RC}{ }_{1127}$, $\mathrm{N}_{7} \mathrm{yr} 506, \mathrm{RC}_{2} 447$, $\mathrm{Y}_{1746}$, St 1693. |
|  | 7892 | Pr. Mot. $=+0^{8 \cdot 027}+0^{\prime \prime} \cdot 080$. |
| 538 | 8178 | T 509 , $\mathrm{Rex}_{168}$, $\mathrm{Ar}_{9}{ }^{2} 3, \mathrm{R}_{2} 2247,12 \mathrm{yr} 364,6 \mathrm{yr} 278$, RC 1213, $7 \mathrm{yr} 3 \mathrm{r} 4, \mathrm{~N} 7 \mathrm{yr}_{544, \mathrm{Y}} \mathrm{x} 869,9 \mathrm{yr} 403$. |
| 565 | 8618 | Very slight positive Pr. Mot. in NPD possible. |
| 575 | 8775 | W 694, T 1633, R 1242, Ar 1000, 6 yr 305, 7 yr 332, Y 1971, Gl 1124. |
| 583 |  | Observed for Ar roog, but the latter is $=\mathrm{DM}+44^{\circ}$, ror3=LL 88ı4, the rough PD being erroneous, it should be $45^{\circ} 32^{\prime}$. |
| 624 | 949 I | Proper Motion in RA $=+0^{9} \cdot 007$. There does not seem to be Pr. Mot. in PD. |
| 634 | 9647 | Tr825, Ar ifin, 12 yr 422 , RC 1408 , 7 yr 370 , N 7 yr 643, $\mathrm{RC}_{2} 574, \mathrm{Y}_{2157}, \mathrm{St}_{1} \mathrm{I} 86,9 \mathrm{yr} 473$, St 2225. |
| 664 | ror 45 | W 391, T 1957, Si ${ }_{1}$, Ar $1 \mathrm{r} 83, \mathrm{~N} 7 \mathrm{yr} 687,9$ yr 505, Gl 1320. |
| 677 | 10394 | Proper Motion $=+0^{8 \cdot} \cdot 008+0^{\prime \prime} \cdot 35$. The NPD was also observed twice in r859-60, $100^{\circ} 9^{\prime} 55^{\prime \prime} .4$, Epoch $1860^{\circ} 00$. The PM in RA is somewhat doubtful. RA is misprinted, for $5^{8 .} \cdot 14$ read $4^{8 .} \times 4$. |
| 689 | 10548 | T 2058 , Ar 1247, 12 yr 474, 6 yr 400, RC $\mathrm{R}_{521}$, N 7 yr $725, \mathrm{RC}_{2} 627, \mathrm{Y}_{2} 326,9 \mathrm{yr} 530$. |


| No.in Cat. | Lalande. |  |
| :---: | :---: | :---: |
| 708 | 10895 | $\begin{aligned} & \mathrm{W}_{12} 73, \mathrm{~T}_{21} \mathrm{I}_{30}, \mathrm{~K}_{1555}, \operatorname{Ar}_{1283}, \mathrm{R}_{2} 2723, \mathrm{I} 2 \mathrm{yr}_{48}, \\ & 6 \mathrm{yr} 409, \mathrm{Y}_{23} 8 \mathrm{o} . \end{aligned}$ |
| 729 | 11196 | Proper Motion $=+0^{8 \cdot} \cdot 035+0^{\prime \prime} \cdot 53$. |
| 741 | I 1374 | Has probably Pr. Mot. in NPD. |
| 743 | II 447 | $\begin{aligned} & \mathrm{W}_{1820}, \mathrm{R}_{168} \text {, Ar }{ }^{5} 36 \text {. } \end{aligned}$ |
| 751 | 11637 |  ${ }_{510}$, $\mathrm{L}_{5}$ 199, St 2780. |
| 753 | 11700 |  |
| 772 | 12018 | W 265, T 2404, Ar 1426, Si, $\mathrm{Sp}_{\mathrm{p}} 2128$. Arg. 301, Pr. Mot. $=-0^{9} \cdot 0162-0^{\prime \prime} \cdot 162$. |
| 788 | 12296 | Pr. Mot. $=-0^{\circ} \cdot 031+0^{\prime \prime} \cdot 2 \mathrm{I}$. Lalande has two obs. |
| 812 |  | PM 758, T 2593 , Ar 1518 , Oe 7 126, $\mathrm{RC}_{1789} \mathrm{RO}_{2} 719$, B 179 . |
| 848 |  | T 2812 , Ar 1600 , De 6085, 12 yr 627, 6 yr 530, RC 1878 , $\mathrm{Bn}, 7 \mathrm{yr} 538, \mathrm{RC}_{2} 754, \mathrm{Y} 2845$, $\mathrm{St}_{1}$ 261, St 3370. |
| 857 | 13849 | Pr. Mot. $=-0^{8} \cdot 01 \mathrm{I}+\mathrm{O}^{\prime \prime} \cdot 5^{2}$ (Frisby, Astr. Nachr., No. 2583). |
| 873 | 14264 | Very slight Pr. Mot. in NPD possible. |
| 918 |  | Observed for LL 15060 . Minute of NPD possibly uncertain. Magnitude from the Berlin maps. |
| 977 | 16304 | Arg. 74, Pr. Mot. $=+0^{\text {s.01 }} 0187+0^{\prime \prime} .975$. |
| 985 | 16494 | Proper Motion $=+0^{8} \cdot 010+0^{\prime \prime} \cdot 23$. |
| 995 | 166ı6 | Pr. Mot. $=-0^{\circ} \cdot 0092+0^{\prime \prime} \cdot 362$ (Frisby, Astr. Naehr., No, 2683). |
| 010 | 16964 | Pr. Mot. $=-0^{\text {a }} \cdot 003$ and $+0^{\prime \prime} \cdot 18$ is probable. |
| 1051 | 17802 | W ${ }_{13} 85, \mathrm{~T}_{3928}$, Ar $1996, \mathrm{Si}_{1}, 7 \mathrm{yr} 686, \mathrm{RC}_{2} 914, \mathrm{Sp}$ 3315, Y 3803, Gl 2318. |
| 1055 | 17853 |  firmed. |
| 1080 | 18315 | W i86, T 4060, Ar 2043, $\mathrm{Si}_{2}$, N 7 yr if $39, \mathrm{Sp} 34 \mathrm{I} 4, \mathrm{~L}_{3}$ 564, $\mathrm{St}_{1} 369$. |
| 1107 | 18832 | W $597, \mathrm{Si}_{2}, \mathrm{Si}_{5} 42 \mathrm{I}, \mathrm{Sp} 3518, \mathrm{~L}_{1} 2542, \mathrm{Gl} 2480$. |
| 1115 | 18984 | T $4260, \operatorname{Ar} 2120,7 \mathrm{yr} 744, \mathrm{RC}_{2} 974, \mathrm{Sp} 355 \mathrm{I}, \mathrm{L}_{1} 2588$, Gl 25 II , St 2516. |
| 1194 | 19991 | $W_{165}, T_{45} 82$, Ar $_{2} 236, \mathrm{Si}_{2}, 12 \mathrm{yr} 87 \mathrm{o}, \mathrm{J}_{4} 850,9 \mathrm{yr} 974$, St 5607. |
| 1210 | 20191 | W 295, T 4649, R 3178, Ar 2260, Si 12 yr 885, N 7 yr $1263, L_{4} 345, Y_{433}$, (ll $2710, \mathrm{St}_{1} 414$. |
| 1237 | 20554 | W613, CA 229, Ar 2311 , 12 yr 903, RC 2531, 7 yr 825 , N 7 yri291, $\mathrm{RC}_{2}$ 1046, Y 4434. |
| 1266 | 20961 | W 844, $\mathrm{Si}_{1}, \mathrm{Si}_{2}, \mathrm{~T}_{2}, \mathrm{~L}_{1}{ }^{\text {I2 } 27}, \mathrm{Y} 4545, \mathrm{Gl} 2822, \mathrm{St} 6019$. |
| 1270 | 21006 | W 876, T 4938 , R 3401, Ar 2375, 7 yr 847, N 7 yr 1329, $\mathrm{RC}_{2} 1065, \mathrm{~L}_{1} 3 \mathrm{I} 37, \mathrm{Y} 4568$, Cl 2833. |
| 1284 | 21164 | W 979, T 4993, Ar 2390, $\mathrm{Si}_{2}, 7 \mathrm{yr} 855$, N 7 yr $\mathbf{1 3 3 9}, \mathrm{L}_{1}$ 3169, Y 4608, St 6095. |
| 1294 | 21358 | Proper Motion in RA $=-0^{\text {s.01 }} 7$. There seems to be none in PD. |
| 1324 | 21828 | W 358, Ar $2488, \mathrm{Sp} 4150, \mathrm{~L}_{1} 3342, \mathrm{Y} 4780$, Gl 2957. |
| 1347 | 22148 | W 606, T ${ }_{5372}, \mathrm{R}_{3702}$ Ar $2527,7 \mathrm{yr} 923, \mathrm{RC}_{2} 1125, \mathrm{~L}_{2}$ $67 \mathrm{I}, 9 \mathrm{yr} 1083$, Gl 3013. |
| 1383 | 22585 | $\begin{aligned} & \text { W914, } \mathrm{Si}_{2}, \mathrm{Bn}, \mathrm{Sp} 43^{28,} \mathrm{~L}_{4_{5}} 1089, \mathrm{Y}_{5019} \text {, Arg. I13. } \\ & \text { Pr. Mot. }=+0^{9.0070+0^{\prime \prime} \cdot 468 .} \end{aligned}$ |


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| 1387 | 22632 | IV io86, T 5322, R 3790, Ar 2586, 12 yr 988 , Bn, RC $\mathrm{RC}_{2}$ <br>  $+0^{\prime \prime} \cdot 571$. |
| 1394 |  | $\begin{aligned} & \text { Ar } 2596, \text { Oe } 12318, \mathrm{~T}_{2}, \text { I } 2 \mathrm{yr} 990, \mathrm{AC} 2799,7 \mathrm{yr} 953, \mathrm{~N} \\ & 7 \mathrm{yr}^{\prime} 443,9 \text { yr inir. } \end{aligned}$ |
| ${ }^{1} 399$ | 22798 |  $N_{1} 0^{t}=+0^{8.0223}+0^{\prime \prime} \cdot 182$. |
| $1+32$ |  |  |
| 1440 | 23396 | Wr 497, Ri 4002 , Ar 2695, N 7 yr 1486, 9 yr 1158 , Gl 3190. |
| 1462 | 23640 | Pr. Mot. $=-0^{9}$ or 7. No PM in NPD. |
| 1477 | 23808 | W 659, CA 286, T 5869, R 41 18, Ar 2742, Si, 7 yr 1005 , $\mathrm{RC}_{2} \mathrm{I} 228, \mathrm{I}_{4} 559$, Gl 325 I . |
| 5484 | 23913 | T 5808 , Ar 2755, 12 yr 1026, 7 yr 1010, N 7 yr 1520, 9 yr 1182 , Gl 3260 , St 7080. |
| 149.4 | 23989 | W 922, T' 5923, Ar 2766 , $\mathrm{N}_{7} \mathrm{yr} 1525$, Gl 3269. |
| 1517 | 24294 | W967, $\mathrm{Si}_{2}, \mathrm{Si}_{5} 512, \mathrm{SP} 47{ }^{1} 3, \mathrm{~L}_{1} 3959, \mathrm{Gl} 3309$. |
| 1527 | 24414 | Ary. I29, Pr. Mot. $=+0^{8.0054}+0^{\prime \prime} \cdot 715$. |
| 1554 | 24760 | Not in any other Catalngue. Seems to have Pr. Mot. in RA = -0"031. LL lans two observations. |
| 1580 | 25049 | $\begin{aligned} & \mathrm{W}+26, \mathrm{~T} ~ 6269, \mathrm{R}+34 \mathrm{~S}, \mathrm{Ar} 2890, \mathrm{Sp} 4845, \mathrm{Y}_{559 \mathrm{I}, 9 \mathrm{yr}}^{\mathrm{I} 243 \text {. }} \text {. } \end{aligned}$ |
| 1602 | 25380 | W 670, PM 1558, i2 yr io92, 6 yr 865, Sp 49 I3, L2 1293 , G1 3435. |
| 1636 | 25862 |  $\mathrm{RC}_{2}$ I352, St 7718. |
| $\begin{aligned} & 1651 \\ & 1654 \end{aligned}$ | 26056 | W 90, R ${ }_{46}{ }_{40}, \mathrm{Si}_{1}, \mathrm{Si}_{5}$ I $_{594}, \mathrm{Sp} 5066, \mathrm{~L}_{1} 43 \mathrm{I} 3, \mathrm{Gl}_{3526}$. Companion to $\kappa$ Bootis. T 6649, Ar 3029,12 yr if 36 , $\mathrm{RC}_{3164} \mathrm{RC}_{2} 1376,6$ yr 889. |
| 1670 | 26247 | T 6703, Ar $3050, \mathrm{Bn}, \mathrm{N}^{2} 7 \mathrm{yr} 1656, \mathrm{RC}_{2}$ I $390, \mathrm{Y} 5934$, St 7846. |
| 1681 | 26375 | $\text { T 6747, Ar } 3062, \mathrm{Oe}_{\mathrm{I}} 3643,7 \text { y1 1149, N } 7 \mathrm{yr} 1660, \mathrm{Y}$ $5966, \mathrm{St}_{1} 575, \mathrm{St} 7884 .$ |
| 1682 | 26422 |  ${ }^{1319}$, St 7891. |
| 1688 | 26464 | W 407 , T $677 \mathrm{I}, \mathrm{R}_{4720}$, Ar $3070, \mathrm{Si}_{1}, \mathrm{~L}_{1} 4402, \mathrm{Y}_{5983}$, Gl 3588. |
| 1706 | 26731 |  Y 6040, 413620 . |
| $1712$ |  | T6874, Ar 3 100, Oe $138_{64}$, N 7 yr 1674 , Y 6054, St 8007. T 6016, Ar 3ila, Oe 13962, í yr itigo, 6 yr $925, \mathrm{RC}_{3}$ |
| r724 |  | T 69i6, Ar 3II9, Oe 13962, i2 yr tigo, 6 yr 925, RC r.424, Y 6098, St 8074. |
| 1726 | 26995 |  $926, \mathrm{RO}_{2} 1425$, Y $6102,9 \mathrm{yr}_{133} 8$. |
| 1727 | 27055 | Pr. Mot. in $\mathrm{RA}=+0^{6}$ or 8 . Great weight cannot be given to the Armay place, as one of the screws binding the telescope to the circle was loose. |
| 1733 | 27177 | T 6967, R 4865 , Ar 3 136, Bn, Y 6140 , St 8141. |
| 1755 | 27572 | W i322, CA 345, R 4949, Ar 3i72, $\mathrm{RC}_{2} 1458,7$ yr 1202 , Gl 3726. Pr. Mot. $=+0^{9} \cdot 1010+0^{\prime \prime} \cdot 18$ (Stone). |
| $1757$ | 27563 |  |
| $1768$ | 27744 | W 99, Bn, $\mathrm{RC}_{2} 1463, \mathrm{Si}_{5} 682, \mathrm{~L}_{1} 465 \mathrm{I}$, G1 3752 ; Arg. 161 , Pr. Mot. $=-0^{n} \cdot 0804+0^{\prime \prime} \cdot 502$. |


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| 1772 | 27781 | T $7119, \operatorname{Ar} 3186$, Oe 14408, 7 yr 1213, 9 yr 1366 , St 8301. |
| ${ }^{1} 776$ | 27904 | W 237, R ${ }_{5013}, 12 \mathrm{yr} 1235,6 \mathrm{yr} 964, \mathrm{~N}_{7} \mathrm{yr} 172 \mathrm{I}, \mathrm{Y}$ 6284. |
| 1783 | 27957 | Pr. Mot. $=-0.022+0^{\prime \prime} \cdot 265$. |
| 1813 |  | T $7253, \operatorname{Ar} 3236$, Oe 14658, 6 yr 98r, Y 6398, St $_{1} 624$, St 8467, B 323. |
| 1824 | 28498 | T 7298, R 5 143, Ar 3259, Oe 14750, 12 yl 1276 , 7 yr 1241, RC, 1500 , Y 6450, $\mathrm{St}_{1} 632,9$ yr 1395 , St 8516. |
| 1832 | 28607 | Pr. Mot. $=-\mathrm{o}^{\text {s.0 }} \cdot 080+0^{\prime \prime} \cdot 35$ (Weiss, V.J.S. XIII., p. 174). |
| 1835 | 28673 | $\begin{aligned} & \mathrm{W}_{707}, \mathrm{~T}_{733 \mathrm{I}}, \mathrm{R}_{5163}, \mathrm{Ar}_{3273}, \mathrm{Si}_{1}, \mathrm{~N}_{7} \text { yr } \mathrm{I}_{7} 6_{3} \text {, Gl } \\ & 3869 . \end{aligned}$ |
| 1847 | 28804 | T 7360 , Ar 3290 , Ue 14933, 12 yr $1291, \operatorname{RC} 3450, \mathrm{RC}_{2}$ ${ }_{1517}, \mathrm{Y} 6525, \mathrm{St}_{1} 644,9 \mathrm{yi}^{1} 4 \mathrm{I} 2, \mathrm{St} 8608$. |
| 1852 | 28878 | $\begin{aligned} & \mathrm{T} 7376, \mathrm{Ar} 3299, \mathrm{Oe} 14974,7 \text { yr 1264, N } 7 \text { yr } 1780, \mathrm{RC}_{2} \\ & \text { I521, Y } 6544, \mathrm{St}_{1} 647,9 \text { yr 14r6, St } 8628 \text {. } \end{aligned}$ |
| 1855 | 28891 | $\text { T } 7382, \text { Ar } 3304 \text {, Oe I4983, } 6 \text { yr 1007, Y 6549, } 9 \text { yr } 1417 \text {, }$ |
| 1859 | 28975 | W 908, T $7400, \mathrm{Ar} 3314, \mathrm{Si}_{1}, \mathrm{~L}_{4} 595, \mathrm{Gl} 3913$. |
| 1861 | 28987 | South comp. of Double. PM ${ }_{1756}, \mathrm{~W}_{91} 7, \mathrm{Si}_{2}, \mathrm{Bn}, \mathrm{Si}_{5}$ $759, \mathrm{Sp} 5637, \mathrm{~L}_{1} 4910$, Xl 3918. |
| 1865 |  | T 7413 , Ar $3319, \mathrm{Oe}_{15077}$, 12 yr 1307, RC 3470, 7 yr <br>  St 8676 . |
| 1867 | 29070 | W 972, R $5246, \mathrm{Si}_{5} 765, \mathrm{Sp} 5652, \mathrm{~L}_{1} 4932$, Arg. 377, Pr. Mot. $=-0^{\text {b.01 }} 84-0^{\prime \prime} \cdot 087$. |
| 1870 | 29110 | W 1000, T 8334, R 5253 , Ar 3329, $\mathrm{Si}_{2}, \mathrm{~N}_{7} \mathrm{yr}$ 1803, $\mathrm{L}_{3}$ 2083, Gl 3938. |
| 1872 |  | The "new star" T Coronce, Bu, N 7 yr 1804, Y 6609, 9 yr 1434. |
| 1873 | 29138 |  1435, Gl 3940. |
| 1874 |  | T 7443, Ar 3333, Oe $15154, \mathrm{Y} 6620,9 \mathrm{yr}$ 1437, St 8721. |
| 1880 1885 | 29259 | Pr. Mot. $=-0^{\prime \prime} 014$ and $+0^{\prime \prime} \cdot 14$. |
| 1885 |  | T 7484 , Ar 3347, Oe 15252, Bn, 7 yr 129 I , Y 6662, $\mathrm{St}_{1}$ $664,9 \mathrm{yr}$ I450, St 8760. |
| 1891 | 29440 | W 19, $\mathrm{Si}_{2}, \mathrm{Si}_{5} 779, \mathrm{~L}_{3} 2129, \mathrm{Gl} 3980$. |
| 1908 | 29693 | W 304, 'T $7572, \mathrm{R} 5362$, $\operatorname{Ar} 3388,9 \mathrm{yr} 1466$, В 347. |
| 1912 1935 | 29752 30044 |  |
| 1935 | 30044 | W 439, R $5427, \mathrm{Si}_{1}, \mathrm{~L}_{2} 2083$, Y 6814, Gl 4066 ; Arg. $177=-0^{5} \cdot 0292+I^{\prime \prime} \cdot 364$. |
| 1949 | 30271 | Pr. Mot. in $\mathrm{PD}=+\mathrm{o}^{\prime \prime} \cdot 48$. |
| 1965 | 30483 | W 734, T 7762, R 5532, R, Ar 3456, Si ${ }_{1}$, N 7 yr 1894 , $L_{1} 5303$. |
| 1968 | 30535 |  |
| 1974 | 30583 |  $1900, \mathrm{Si}_{3} \mathrm{I} 868, \mathrm{~L}_{5} 202 \mathrm{I}, \mathrm{Y} 6950$. |
| 1981 | 30671 | $\mathrm{W} 859, \mathrm{Si}_{2}, \mathrm{Sp} 6000, \mathrm{~L}_{8} 2292, \mathrm{Y} 6977, \mathrm{Cl}_{4158 .}$ |
| 1984 | 30694 | W 873, $\mathrm{Si}_{1}, \mathrm{Bn}, \mathrm{Sp} 6007, \mathrm{~L}_{1} 537 \mathrm{I}, \mathrm{Y} 6988$, Gl 4162 ; Arg. 181, Pr. Mot. $=-0^{\circ} \cdot 0470+I^{\prime \prime} \cdot 443$. |
| 1988 | 30750 | T 7842 , Ar 3481, Oe $16123, \mathrm{~N} 7 \mathrm{yr} 1909, \mathrm{Y} 7008$. |
| 2001 | 30930 | W 1008, R ${ }_{5625}$, Ar 3500, $\mathrm{Si}_{1}, \mathrm{~T}_{3}, 6 \mathrm{yr}$ I375, $\mathrm{L}_{2} 2297$, Gl 4185. |
| 2013 | 31068 |  |


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| 2021 | 31188 | $\mathrm{W}_{3}, \mathrm{Si}_{2}, \mathrm{RC}_{3} 658, \mathrm{Si}_{4} 1899, \mathrm{I}_{5} 2067$; Pr. Mot. in NPD $=+0^{\prime \prime} \cdot 108$ (Tupman, M.N., XLV., 1. 482 ), but it secms doubtful. Possibly LL is merely $10^{\prime \prime}$ wrong in PD. |
| 2063 | 31804 | W 376, T 8087, R 5856 , Ar 3578, 6 yr 1127, Sp 6245, $\mathrm{L}_{1} 5633$. |
| 2082 | 32255 | T 8174, R 5943, Ar 3604, Oe 17323 , RC 3730, Y 7349, G1 4350. |
| 2106 | 32568 | R 6034. Lalinde's PD is $5^{\prime}$ too small ; in H.C. p. 295, the Z.D. should evidently be $12^{\circ} 38^{\prime} 39^{\prime \prime}$ instead of $12^{\circ} 33^{\prime} 39^{\prime \prime}$. This correction is not given in Bonner Beob. VII. |
| 2124 | 32762 | $\begin{aligned} & \text { W } 962, \mathrm{~L}_{4} 844, \mathrm{Gl}_{4423} \text {. Arg. 394, Pr. Mot. }=-0^{\mathrm{s} \cdot 0002} \\ & +\mathrm{o}^{\prime \prime} \cdot 159 . \end{aligned}$ |
| 2141 | 33060 | W 1154, T 8347, Ar 3667, 6 yr $1451, \mathrm{~L}_{3} 2546, \mathrm{St}_{1} 793$. |
| 2155 | 33241 | T 8385 . Arg. 395, Pr. Mot. $=+\mathrm{o}^{\prime \prime} \cdot 0040+\mathrm{o}^{\prime \prime} 159$. |
| 2160 | 33341 | W $22, \mathrm{Ar} 3689, \mathrm{~N} 7 \mathrm{yr} 2004, \mathrm{RC}_{2} 1726, \mathrm{~B} 376$. |
| 2170 2186 | 33449 | T 8422 , Ar 3700 , Oe 17871, $\mathrm{L}_{6}$, Y 7698, В 379. <br> R 6386, A1 $3720, \mathrm{~T}_{2}, \mathrm{Bn}, \mathrm{RC}_{2} 1739, \mathrm{~L}_{3} 3103, \mathrm{Gl} 451 \mathrm{I}$. |
| 2219 | 34218 | W 550, PM $2100, \mathrm{Si}_{2}, \mathrm{Si}_{3} 2032, \mathrm{Sp} 678 \mathrm{I}, \mathrm{L}_{5} 242 \mathrm{c}$. |
| 2232 | 34418 | W 794, R 6597 , Bn. Arg. LXIII., but there is no Pr. Mot. |
| 2251 | 34632 | W 822, $\mathrm{Si}_{1}, \mathrm{~S} 1,6884, \mathrm{~L}_{2} 3468, \mathrm{Gl} 4575$. |
| 2283 | 34981 | W 1054, R $6738, \mathrm{Si}_{5} 1057, \mathrm{Sp} 6969, \mathrm{~L}_{1} 6387$. |
| 2306 | 35284 | W 1244, Tn, $\mathrm{L}_{2} 3707$, Gl 4643 . Arg. LXVII., no Pr. Mot. |
| 2353 | 35817 | W 1923, T 8795. Pl. Mot.? |
| 2355 | 3585 I | $\mathrm{R} 7099 . \mathrm{Pr}$. Mot. $=+0^{8.005}$ ( $\%$ ) and $+0^{\prime \prime} \cdot 34$. |
| 2362 | 35872 | W $2 \mathrm{I}, \mathrm{Si}_{2}, \mathrm{Si}_{\mathrm{s}_{3}} \mathrm{I} 099, \mathrm{~L}_{1} 6628$, Gl 4716. |
| 2368 | 35972 | W 69, T 7 145, Sp $7187, \mathrm{~L}_{4} 1282, \mathrm{Gl} 4724$. |
| 2396 | 36447 | W 309, PM 2272, 12 yi $171 \mathrm{II}, 9$ yri763, Gl 4759. |
| 2400 | 36376 | $\begin{aligned} & \text { T 8880, } \\ & 8261 . \end{aligned}$ |
| 2414 | 36532 | $\mathrm{W} 377, \mathrm{Si}_{1}, \mathrm{~S}_{1}, 7302, \mathrm{~L}_{2} 4 \mathrm{I} 5 \mathrm{I}$, G11 4770 . |
| 2430 | 36781 | $\mathrm{W}_{51 \mathrm{I}}$, R 7466, $\mathrm{L}_{4}$ [426, Gl 4792. |
| 2434 | 36800 | W 534, $\mathrm{Si}_{1}, \mathrm{Bn}, \mathrm{L}_{2} 426 \mathrm{I}, \mathrm{Gl} 4798$. |
| 2504 | 37686 | PM 2359, T 9 rog, $\operatorname{Ar~}_{4171} 7$ yr 1604, N 7 yr 2181, 9 yr 1812, PM in NPD $=+0^{\prime \prime} \cdot 44$ (Stone). |
| 2513 | 37766 | Slight Pr. Mot. in NPD possible. |
| 2528 | 37861 | T 9150 , Ar 4i93, Oe 20071, 12 yr 1780, N 7 yr 2206, $\mathrm{IiC}_{2}$ I913, $\mathrm{L}_{8}$, Y 8562, $\mathrm{St}_{1} 913$, 9 yr 1825 , St 10707. |
| 2543 | 38100 | $\mathrm{W}_{1300}, \mathrm{Si}_{2}, \mathrm{Si}_{\mathrm{a}} 2206, \mathrm{Sp} 7724, \mathrm{~L}_{5} 3055$. Arg. 422, Pr. Mot. $=-0^{8.0213}+0^{\prime \prime} .374$. |
| 2565 | 38380 | W 1910, Bn ; Arg. $203=+0^{\circ} \cdot 0549+0^{\prime \prime} \cdot 553$. |
| 2586 | 38612 |  |
| 2608 2613 | 38995 39035 | W 272, Si 1 , SP 7953, L $\mathrm{L}_{1} 7429$, Gl 5078. <br> T 9362, R 8192, Ar 4345, Oe 20428, i2 yr 1822, 6 yr |
| 2613 | 39035 |  1886, St 10888. |
| 2648 | 39502 | W 817, T 9451, Mr 4395, 7 yr 1685, Y 8896, 9 y' 1906. |
| 2652 | 3959 I | Li 8389, Oe $20625, \mathrm{~T}_{2}$, RC 4824, Bn, G1 5155 : Ary. 209, Pr. Mot. $=+0^{5}, 0096-0^{\prime \prime} 183$. |
| 2682 | 39833 | $\begin{aligned} & \mathrm{T} 9523, \mathrm{R} 849 \mathrm{G}, \mathrm{Ar} 4433, \mathrm{Oe} 207 \mathrm{IO}, \mathrm{I} 2 \text { yr } 1848, \mathrm{~L}_{6}, \\ & \mathrm{Y} 8976, \mathrm{St}_{1} 974,9 \mathrm{yr}^{\prime} \mathrm{I} 920 . \end{aligned}$ |


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| 2684 | 39934 | Pr. Mot. in $\mathrm{PD}=+0^{\prime \prime} \cdot I_{7}$. LL has only one wire and no fraotion of seoond, but there may be a slight positive Pr. Mot. in RA. |
| 2704 | 40164 | W ${ }_{1057}$, Sii, L. $5567, \mathrm{Y} 9074$, Gl 5252. |
| 2729 | 40405 | W $1211, \mathrm{Si}_{2}, \mathrm{Bn}, \mathrm{Sp} 8372, \mathrm{~L}_{1} 7904$, Gl 5286. |
| 2732 | 40484 | W i264, T 9683, L $\mathrm{L}_{1} 7927$; Pr. Mot. $=-0^{4.004}+0^{\prime \prime} 26$. |
| 2741 | 40604 | W 1640, Pr. Mot. $=+0^{8 \cdot 1} 18-0^{\prime \prime} \cdot 23$. |
| 2751 | 40720 | PM $2536, \mathrm{~T} 9725, \mathrm{Oe} 21436, \mathrm{RC} 5056,9 \mathrm{yr}$ 1963, Gl 5313. |
| 2771 | 40866 | T9770, Oe 21123 ; Arg.44 1 , Pi. Mot. $=-0^{8.01688}+0^{\prime \prime} \cdot 075 \cdot$ |
| 2798 | 41287 | W I84, R, $\mathrm{Si}_{3} 2388, \mathrm{Sp} 8592, \mathrm{~L}_{6} 357$ |
| 2806 | 41386 | $\begin{aligned} & \text { W } 251, \mathrm{~L}_{1} 2560, \mathrm{Gl} 54^{1} 5 \text {; Arg. } 446, \text { Pr. Mot. }=+0^{8.0006} \\ & +\mathrm{O}^{\prime \prime} \cdot 105 . \end{aligned}$ |
| 2835 | 41700 | W 446, $\mathrm{L}_{2} 5969$; Pr. Mot. in $\mathrm{PD}=+0^{\prime \prime} \cdot 30$, probably none in RA (LL I ${ }^{8}$ too sinall). |
| 2853 | $4 \times 870$ | W 561, $\mathrm{Bn}^{\text {W }}$, Si $1996, \mathrm{~L}_{5} 3669, \mathrm{Y} 9404$. |
| 2870 2873 |  | W 707, ${ }^{\text {Wr }} 4704, \mathrm{Si}_{2}, \mathrm{~T}_{2}, \mathrm{Bn}, \mathrm{Y} 9446, \mathrm{Gl} 5523$. |
| 2873 2883 | $42156$ | W 743, T roo48, Ar $4708, \mathrm{Si}_{1}, 7 \mathrm{yr} 1789$, Gl 5533,Sti 1437. <br> W 856, Pr. Mot. in $\mathrm{RA}=+0^{8.026 .}$ |
| 2888 | 42295 | W 847, Ar 4726 , Si ${ }_{1}$, L ${ }_{2} 6106$, Cl 5557. |
| 2908 | 42569 | W roz3, R $9531, \mathrm{Si}_{3} 2462, \mathrm{Sp} 8875, \mathrm{~L}_{5} 3770$. |
| 2919 | 42687 | W ilion, PM 2640 , R $9605, \mathrm{Sp}, 89 \mathrm{II}, \mathrm{L}_{3} 4423$, Cll 5621. |
| 2933 | 42843 |  |
| 2936 | 42883 | W 1278 , R $9716, \mathrm{Bn}, 7 \mathrm{yr}$ 1830, Arg. 224, Pr. Mot. $=-0^{8 .} \cdot 0289+0^{9.407}$. |
| 2939 | 42898 | $W_{\text {I240, }}$ R 9736, Ar 4801, RC 549r, $\mathrm{Si}_{4}$ 2059, Sp 8969, $\mathrm{L}_{5} 3814$. |
| 2941 | 42929 | W 1259, T 10213, R 9754, Ar 4803, $\mathrm{Si}_{1}, \mathrm{~N} 7$ yr 2507 , $L_{2} 6212, \mathrm{Gl} 566 \mathrm{t}$. |
| 2972 | 43286 | W 72, T 10298, R 9908, Ar 4857, N 7 yr 2543, $\mathrm{RC}_{2}$ 2181, $\mathrm{Si}_{3} 2493, \mathrm{Si} 9061, \mathrm{~L}_{5} 3853, \mathrm{Y} 9736$, Gl 5724. |
| 2988 | 43493 | W 234, T 10340, R 10027,7 yr r861, Y 9778, 9 yr 2090, Gl 5766. |
| 2990 | 43518 | W 205, R $10050, \mathrm{Si}_{1}, \mathrm{Bn}, \mathrm{Si}_{6}$ 1259, Sp 9105, $\mathrm{L}_{1} 8756$, Gl 5772 . |
| 3008 | 43672 | RA's cliffer $0^{8 .} 54$ inter se; both olservations made in 1878. |
| 3014 | 43751 | Arg. 229 , Pr. Mot. $=+0^{8.0289--0.08115 . ~}$ |
| 3035 | 43974 | W 493, R ro301, $\mathrm{Si}_{2}, 6 \mathrm{yr} 1469, \mathrm{Bn}, \mathrm{Sp} 9210, \mathrm{~L}_{3} 4586$. |
| 3042 | 44073 | CA ${ }^{220}, \mathrm{~T}$ ro450, Ar 4958, 7 yr 1891, $\mathrm{RC}_{2} 2234$, St 11793. |
| 3044 | 44154 | R io396, Ar 4964, Sp 9235, $\mathrm{L}_{4} 3118$. |
| 3064 | 44459 | W 772, Y 9989, Sp 9301, Gl 5922, Pr. Mot. $=+0^{8 .}$ oro - 0 "' 33 . |
| 3072 | 44605 | T 10540, Ar 5019, Oe 24635, RC 5826, RO2 2256, Y $10015, \mathrm{Gl}_{5945}$. |
| 3074 | 44568 | W 835, T ro539, Ar 5018, Si $_{4} 2133, S p 9332, \mathrm{~L}_{5} 3967$, Y 10017. |
| 3083 | 44738 | Oe 24756, LL's RA is $\mathrm{I}^{\text {s }}$ I4 less, but he has only one wire and no fraction of second. In PD there may be a very slight negative Pr. Mot. |
| 3087 |  | W 947, Ar $5037, \mathrm{Si}_{1}, \mathrm{Sp} 9378, \mathrm{~L}_{4} 322 \mathrm{I}$, Gl 5981. |
| 3089 | 44786 | should be $43^{\mathrm{min}} \mathrm{II}^{\mathrm{b}}$. This correction is not given in Bonner Leol). VII. |


| No. in Cat. | Lalande. |  |
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| 3092 | 44824 | W 988, T $10576, \mathrm{Ar}_{5050}, \mathrm{Si}_{1}, 12 \mathrm{yr} 2058,7 \mathrm{yr}$ 1918, N $7 \mathrm{yr} 2619, \mathrm{RC}_{2} 2273, \mathrm{Sp} 9393, \mathrm{~L}_{1} 9026$, Y 10068, Gl |
|  |  |  |
| 3098 | 44888 | 1042, Ar 5057, $\mathrm{I}_{8}$, Bn, Sp 9414, Gl 60Io. Arg. LXXXII., but there seems to be no Pr. Mot. |
| 3100 | 44920 | CA 533, W 1064, $\mathrm{Si}_{1}, \mathrm{~T}_{2}$, Gl 6019. Pr. Mot. $=+0^{8.025}$ $0^{\prime \prime} \cdot 17$ (CA has $+0^{4.029}+0^{\prime \prime} \cdot 24$ ). The Pr. Mot. is omitted in BAC. |
| 3103 | 44946 | W 1084, T $10595, \mathrm{R}_{1077 \mathrm{I}, \mathrm{Ar}_{5} 065, \mathrm{Si}_{1}, \mathrm{~N} 7 \mathrm{yr} 2626, ~}^{\text {2 }}$ $\mathrm{HC}_{2} 2279, \mathrm{Sp} 9436, \mathrm{~L}_{1} 9043$, G1 6026. |
| 3106 | 44972 | W 1099 , 'T 10604, $\mathrm{Si}_{2}$, Sp 9441, $\mathrm{L}_{5} 4004$, Gl 6029. |
| 3111 | 45028 | Y ioiz6. Pr. Mot. $=+0^{8.031}$ and $+0^{\prime \prime} \cdot 28$. |
| 3122 | 45199 | $\begin{aligned} & \text { W i3, } \\ & -\mathrm{o}^{\prime \prime} \cdot 032 \text {, T } 10638, \mathrm{~L}_{6} \text {, Arg. } 466 \text {, Pr. Mot. }=+0^{8.0224} \end{aligned}$ |
| 3126 | $45^{2} 34$ | W 1269, R ro824, $\mathrm{Si}_{2}, \mathrm{Bn}, \mathrm{Si}_{6} \mathrm{I}_{323}, \mathrm{Sp} 950 \mathrm{I}, \mathrm{L}_{1} 9093$, Gl 6073. |
| 3127 | 45268 | Ar 5098, Oe 25 149, $\mathrm{T}_{2}, \mathrm{RC}_{5961}$, $\mathrm{N}_{7} \mathrm{yr} 2644, \mathrm{Y}_{\text {IOI }} 80$, G1 6076. |
| 3128 | $45^{265}$ | Wi281, $\mathrm{Si}_{2}, \mathrm{Bn}^{2}, \mathrm{Si}_{5} \mathbf{1 3 2}_{3} 4, \mathrm{~L}_{1} 9096$, Gl 6079, Arg. 467 , Pr. Mot. $=+0^{8 .}$.ori $6+0^{\prime \prime} \cdot 026$. |
| 3136 | 45394 | W 52, CA $538, \operatorname{Ar}_{5111}, \operatorname{RC} 5984, \mathrm{RC}_{2} 2299, \mathrm{~N} 7 \mathrm{yr}$ 2652, Y 10206. Pr. Mat. $=-0^{6 \cdot 020}+0^{\prime \prime} \cdot 178$ according to CA. |
| 3143 | 45436 | W 89, R 10896, Sp 9556, Li 9125 , Gl 6106. |
| 3163 | 45680 | W 249, Ar 5144, Sion, Sp 9604, Y 10287 , Gl 6144, Pr: Mot. $=+0^{9.016} 6+0^{\prime \prime} \cdot 14$. |
| 3167 |  |  |
| 3197 | 46085 | T 10795, R $11295, \mathrm{Ar}_{5202}$, St 12188. |
| 3216 | 46300 | Oe 25838 , Bn, Arg. 245, Pr. Mot. $=+0^{8 \cdot} \cdot 367+0^{\prime \prime} \cdot 018$. |
| 3218 | 46344 | W 701, Pr. Mot. $=+0^{\text {s. }}$. $020-0^{\prime \prime} \cdot 24$. |
| 3221 | 46399 | W 692, T 10848, Ar ${ }_{5232}$, RC 6152, $\mathrm{RC}_{2}$ 2345, $\mathrm{Si}_{3} 2661$, Sp 9780, 9 yr 2219, Cul 6293, St 12242. |
| 3227 | 46442 |  |
| 3233 | 46532 |  |
| 3250 | 46684 | W 871, T 10898, R i1646, Ar 5267, 6 yr 1549, N 7 yr 2730, $\mathrm{Si}_{3}{ }_{2} 675$, Sp 2675, Sp 9887, Gl 6320, St 12306. |
| 3259 | 46772 | $\mathrm{W}_{914}, \mathrm{~T}_{10915}, \mathrm{R}_{11593}, \mathrm{Ar}_{5278}$, $\mathrm{N}_{7} \mathrm{yr} 2736, \mathrm{~L}_{4} 3514$, Y 10527 , Gl 6333. |
| 3284 | 47115 |  2009, $\mathrm{RC}_{2} 2380$, Sp 9962, Y 10610, 9 yr 2251, St 12409. |

Corrections to the Armagh Catalogue for 1840.

| No. |  | No. |  |
| :---: | :---: | :---: | :---: |
| 382 | Seconds of PD should be $45^{\prime \prime} \cdot 03$. | 2733 | Degrees of PD are $55^{\circ}$ (not $5^{2}$ ), |
| 386 | " 29 ", 36. |  | f'rec. in RA $2^{\text {s. }} 933^{2}$, sec. var. |
| 485 | 39"'35. |  | -os.or 4 . |
| 690 | 19"'47. | 2826 | Seconds of RA should be $24^{\text {s. }} 26$. |
| 703 | " $\quad$ I"'96. | 2846 | PD " $\quad 24$ ".06. |
| 784 | 34"'90. | 2858 | $=\mathrm{BW} 286, \mathrm{RA}=13^{\mathrm{h}} \times 4^{\mathrm{m}}$ I $8^{\mathrm{n}}$. |
| 815 | 44"'06. | 2873 | Seconds of PD should be $49^{\prime \prime} 3^{2}$. |
| 823 | RA $\quad \# \quad x^{9} 43$. | 3075 | PD should be $39^{\circ} 0^{\prime}$. |
| 851 |  | 3377 | Seconds of PD should be $24^{\prime \prime} \cdot 65$ |
| 860. 1009 | = LL" $88 \times 4$, "PD should be $45^{\prime \prime}$ | 3727 | $=$ LL 33792, Baily's RA being wrong. |
|  | $3^{2 \prime} .$ | 3755 |  |
| 1035 | PD belongs to $P$. 55 and should be $31^{\circ} 29^{\prime} 54^{\prime \prime} \cdot 87$. | 3835 | $\begin{aligned} & \text { (see Astr. Nachr: No. 1924). } \\ & =383 \mathrm{I} . \end{aligned}$ |
| 1437 | PD should be $3 \mathrm{I}^{\circ} 30^{\prime} 20^{\prime \prime} \cdot 53$. | 3908 | $=3909$. |
| 1512 | $=1507$. | 3999 | Seconds of PD should be $27^{\prime \prime} \cdot 63$. |
| 1724 | Seconds of PD should be 9 "'19. | 4058 | PD " |
| 2027 2076 | $\begin{array}{llll} ", & \text { RA } & , & 3 \mathrm{I}^{\mathrm{B}} \cdot 96 . \\ ", & \mathrm{PD} & " & 3^{1 "} \cdot 86 . \end{array}$ | 4138 | PD should be $4 \mathrm{I}^{\circ} 2^{\prime}\left(\mathrm{DM} 49^{\circ}\right.$, 3069). |
| 2257 | $=28$ Leonis min. The rough PD | 4307 | $=\mathrm{BW}$ II6, PD $86^{\circ}{ }^{\circ} 9^{\prime}$. |
|  | is not in the original. ${ }^{\text {PW }}$ - ${ }^{\text {a }}$, PD should be $62^{\circ}$ | 4361 |  |
| 2364 | ```= BW 927, PD should be 62 }\mp@subsup{}{}{\circ 57'.``` | 4385 | $\begin{aligned} & \mathrm{PD} 80^{\circ} \text { I } 2^{\prime} . \\ = & \text { Rümker } 8317, \\ \text { PD } 70^{\circ} & 46^{\prime} . \end{aligned}$ |
| 2395 |  | 4409 | $=\text { Oe } 20647, \text { PD } 41^{\circ} 29^{\prime} .$ |
| 2398 | To be struck out. | 4456 | $=\text { Oe } 20909 \text {, PD } 33^{\circ} 8^{\prime}$ |
| 2520 , |  | 4604 | Seconds of PD should be $4^{\prime \prime \prime} \cdot 6 \pi$ r. |
| 2549 |  | 4836 | $=B \ddot{W}_{047}, \quad " \quad{ }_{P D} 80^{\circ} " 37^{\prime} \cdot 59^{\prime \prime} \cdot 84$ |
| 2552 2674 | Epoch of PD is $1850^{\circ} 50$. $=2676$. | $5037$ $5313$ | $=\mathrm{BW}, 947, \mathrm{PD} 80^{\circ} 37^{\prime \prime} \cdot 5$ <br> Seconds of PD should be $57 \% \cdot 08$. |

## Errata in the Present Catalogue.

| No. | - |
| :---: | :---: |
| 677 | Seconds of RA, for $5^{5} 14$ reaul $4^{8.1} 4$. |
| 1324 | In column "Obs." (p.60) dele the figure 2. |
| 1579 | is $=$ T 6270 . |
| ${ }_{1} 783$ | Epoch of PD should be 79.63 . |
| 2044 | Seconds of RA, for $49^{8.15} 5$ read $48^{8.5} 58$. |
| 2116 | Seconds of NPD, for $12^{\prime \prime} \cdot 7$ read $2^{\prime \prime} \cdot 7$. |
| $\begin{aligned} & 2544 \\ & 2836 \end{aligned}$ | Seconds of RA, for $59^{8.87 ~ r e a d ~} 59^{8 .} 97$. Seconds of RA, for $37^{9.89}$ rend $3^{8.09}$. |

In the column "Authorities," the words " Sec Notes" should be added at the following Numbers: $-425,788,985,995$ 1010, 1294, 1949, 3064.
 The Queen's l'rinting Office.
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[^0]:    * Whenever it was afterwards found that Baily's places were considerably in error, the constants were re-computed. Reduction tables (similar to Mr. Stone's) prepared by Dr. Rolinson many jears ago, were employerl.

[^1]:    * The object in attaching them to the instrument is stated in the Armagh Catalogue, pp. xxiv-xxvii. The results found with them seem to throw light on the strange parallaxes found by Brinkley with the great Ramsden Circle at Dansink.

[^2]:    * This is not the clock to which Dr. Robinson applied the barometric compensation (Mem. R.A.S. Vol. v., and Armagh Cat., p. xviii.) It has a gridiron pendulum, and its rate is very regular.

[^3]:    Armagh Observatory, April 27, 1886.

