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PHILOSOPHICAL TRANSACTIONS.

I. *Catalogue of Nebulæ and Clusters of Stars.*

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Received October 16,—Read November 19, 1863.

Introduction.

THE study of the Nebulæ has, within the last quarter of a century, attracted much more of the attention of observers than heretofore—as well on account of the singularity of the phenomena presented by many of these objects, as in consequence of the increased optical power of the telescopes which the skill and industry of modern inventors and artists have placed within their reach. The brighter nebulæ cannot be viewed to any advantage, and the fainter cannot be seen at all, except by the aid of telescopes of large aperture; and, thanks to the exertions of Lord ROSSE, Mr. LASSELL, Messrs. NASMYTH and DE LA RUE in England, and Messrs. STEINHEIL, FOUCAULT, and PORRO in Germany and France, as regards reflecting telescopes, and to those of FRAUNHOFER, MERZ, CAUCHOIX, CLARKE, COOK, SECRETAN, ROSS, and DALLMEYER as regards refractors; instruments of abundantly sufficient optical capacity not only to repeat and verify the earlier observations, but to disclose new and more interesting features in many cases, have now come into the hands of many observers, both professional astronomers and amateurs, and may be had by any one who is willing to incur a cost which may be considered moderate when it is remembered that instruments of similar dimensions and goodness could not be obtained fifty years ago at any price. In consequence we find a continually increasing attention directed to this department of astronomy. Not to insist on the observations of the Earl of ROSSE and Mr. LASSELL with their transcendent reflectors, we find a systematic examination and review of them undertaken by M. D'ARREST in the year 1855, by the aid of a refractor of 6-feet focal length and $4\frac{1}{2}$ inches aperture in the Leipzig Observatory, whose results, consisting in the carefully determined places, by repeated observations, of about 230 nebulæ, were published in 1856, in a work entitled "Resultate aus Beobachtungen der Nebelflecken und Sternhaufen" (Erste Reihe, Leipzig). This review has since been carried on by the same excellent astronomer, with the great refractor by MERZ of 11 inches in aperture and 16-feet focus, erected in the year 1861 at the Royal Observa-

tory of Copenhagen. Again, from the Observatory of the Collegio Romano, under the direction of Signor SECCHI, have emanated many valuable observations, and from that at Harvard College, Cambridge, U.S., under the late and present Professors BOND, some of the most striking pictorial representations of particular nebulæ which we possess. Neither ought a short but very valuable memoir by the late E. MASON, printed in the 7th volume of the Memoirs of the American Academy of Arts and Sciences, to be passed in silence; containing as it does a very elaborate and minute examination, and some excellent delineations of several highly interesting nebulæ, particularly those in the great nebulous region of Cygnus. To M. AUWERS also we owe many accurate and valuable observations, besides a Catalogue comprising the whole series of Sir WILLIAM HERSCHEL'S nebulæ arranged in order of right ascension and reduced to a common epoch, of which more hereafter. Should the efforts which are now making to procure for the University of Melbourne in Australia a reflector of the first magnitude prove, as is to be hoped, successful, it is understood that one of the principal uses to which it will be devoted will be the examination and exact delineation of the numerous and wonderful objects of this class which the southern hemisphere presents.

These circumstances, but more especially the last-mentioned, render it extremely desirable to have presented in one work, without the necessity of turning over many volumes, a general catalogue of all the nebulæ and clusters of stars actually known, both northern and southern, arranged in order of right ascension and reduced to a common and sufficiently advanced epoch which may serve as a general index to them, and enable an observer at once to turn his instrument on any one of them, as well as to put it in his power immediately to ascertain whether any object of this nature which he may encounter in his observations is new, or should be set down as one previously observed. For want of such a general catalogue, in fact, a great many nebulæ have been, from time to time, in the 'Astronomische Nachrichten' and elsewhere, introduced to the world as new discoveries, which have since been identified with nebulæ already described and well known. Many a supposed comet, too, would have been recognized at once as a nebula, had such a general catalogue been at hand, and much valuable time been thus saved to their observers in looking out for them again.

Besides these there are other considerations which have weighed with me in undertaking the task of compiling such a general catalogue. Having, in the course of my own observations, received the greatest possible assistance from the possession of a Manuscript Catalogue of all the nebulæ and clusters discovered by my Father, brought to the common epoch 1800·0, and arranged in zones of 1° in breadth in polar distance, by his sister the late Miss CAROLINA L. HERSCHEL, it seemed to me nothing less than a debt of gratitude, not merely to acknowledge that assistance, but to avail myself still further of it to complete the list of his nebulæ by supplying from that catalogue the places of all those nebulæ among them which had escaped my own observation (a very numerous list), and by inserting from it all those places of nebulæ observed by myself which were deficient in either element (of R.A. or P.D.), or in which I had reason to apprehend

greater errors than those which probably affected her results. This I have accordingly done. But to do it effectually, and at the same time to effect a thoroughly correct identification of the objects in my catalogues with those of the older series, involved, as a necessary preliminary step, the reduction to 1830·0 of the whole of her catalogue, an operation in which I received the assistance of my sons; the computations being executed for each nebula in duplicate and checked by myself, and which, taken leisurely, zone by zone, as time and circumstance permitted, proved less onerous and wearisome than might have been expected. The Catalogue thus reduced to the same epoch as my own, afforded the means of detecting and rectifying a great many errors of nomenclature in the latter. And it was in the course of this part of the inquiry, in which many cases of considerable intricacy and difficulty occurred (as will be evident on a perusal of the notes appended to this Catalogue), and in which it became necessary to recur both to the original sweeps and to a series of registered extracts from them (the nature of which will be more distinctly stated hereafter), that I learned fully to appretiate the skill, diligence, and accuracy which that indefatigable lady brought to bear on a task which only the most boundless devotion could have induced her to undertake or enabled her to accomplish.

Arrived at this stage—that is to say, the mean results of all the observations in my own Catalogues taken, and all the deficient or imperfectly observed nebulæ in my Father's list supplied, as above stated, and the whole arranged, not in zones, but in general order of right ascension,—it then became necessary, in order to produce a work available for future observation, to bring the whole up to a still more advanced epoch. The work required for this purpose, calling no longer for any discussion, or collation of the original observations or registers, but being one of simple arithmetical computation from a definite formula—the Royal Society, at my application, very liberally undertook to supply, from the funds at their annual disposal, the amount necessary to procure its execution by an experienced computer (Mr. KERSCHNER, one of the occasional computists for the Royal Observatory of Greenwich). This work the Astronomer Royal most obligingly offered to superintend, affording at the same time his advice as to the general principle on which the computation should be conducted. The plan suggested by him and adopted in effect was this. Each object in the Catalogue was first roughly brought up to the year 1880 by the application of approximate precessions in R.A. and P.D. The places so obtained were then employed to compute the exact precessions in both by the usual formulæ, with coefficients for the year 1880·0, viz.

$$\text{Precession in R.A.} = 3^{s}\cdot072 + 1^{s}\cdot337 \,.\, \sin \text{R.A.} \operatorname{cotan} \text{P.D.}$$

$$\text{Precession in P.D.} = -20''\cdot06 \cos \text{R.A.}$$

And the precessions, so calculated, were then used to bring up the places from 1830 to 1860, the epoch of the Catalogue; so that, the places being given for 1860 and the precessions for twenty years in advance, the application of those precessions to those places shall give dependable places for any year up to the year 1930, at which time the small error in excess or defect of the true precession consequent on using the fifty years'

antecedent place of the object will be exactly compensated by the further change of place in the same direction in the *subsequent* fifty. Two cases of excessive proximity to the poles, northern and southern, viz. those of the nebulæ Nos. 2043 and 1652 of the present Catalogue, are excepted, the precessions changing so rapidly, and with so much deviation from uniformity, that a rigorous computation, at least in R.A., will always be necessary. In the case of No. 2043, the effect of precession in the thirty years from 1830 to 1860 has been to change the R.A. from $2^h\ 32^m$ to $10^h\ 8^m$.

This computation was completed, and a fair copy of the resulting places, arranged *de novo* in their order of R.A. for 1860, forwarded to me on the 6th of February last (1863). The nomenclature of the objects having in the interim been settled satisfactorily by myself, and a description of each nebula, from a careful comparison of all the descriptions given, prepared, it remained only to fill in the columns left blank for these and the other necessary particulars, and to complete the Catalogue by the insertion in their proper places of the places and descriptions of all such other nebulæ, non-observed by either my Father or myself, similarly reduced, of which I could gather any accounts. These will be found enumerated further on in the "Explanation and arrangement of the Catalogue."

On the 23rd of February last, while engaged in this work, I received, by the kindness of the Astronomer Royal, a copy of the important work of M. AUWERS before alluded to, entitled "WILLIAM HERSCHEL'S Verzeichnissen von Nebelflecken und Sternhaufen, bearbeitet von ARTHUR AUWERS. Königsberg, 1862," of whose existence this was my first notice. It contains a complete and most elaborate reduction to 1830, from the observed differences in R.A. and P.D. with known stars, recorded in the Philosophical Transactions, of all the nebulæ and clusters in my Father's three Catalogues; together with a separate catalogue of all those collected by MESSIER from his own observations, or those of MECHAIN and others (101 in number), similarly reduced; another of LACAILLE'S southern nebulæ, and one of 50 "new nebulæ," comprising nearly all those observed by other astronomers (Lord ROSSE excepted) in this hemisphere—all brought up to the same epoch.

It may be readily supposed that I lost no time in comparing my own previous work with this of M. AUWERS; the places of which having been obtained by the aid of far better and more dependable catalogues of stars, to give the true positions of the zero-points or determining stars in the differential observations, as well as of more exact precessions, and doubtless, a much more systematic process of treatment, would be entitled, *observation for observation*, to be considered as representing the original sweeps more faithfully than could be expected from my own preparatory catalogue. On the other hand, however, the Zone Catalogue from which that was derived possessed the advantage of having been deduced, not from a single difference of R.A. and P.D. between each nebula and a single determining star, but from *all* the observations of each nebula; often in many different sweeps, and in the same sweep often from more than one star; thus eliminating, no doubt, a great deal of casual error. In that catalogue, too, as in my own catalogues of 1833 and that of the southern nebulæ, the individual results of each observation, or, to speak more exactly, of each differential comparison, is separately

recorded, so that any suspiciously large deviation from the mean of all may be at once noticed and traced to its origin in the sweeping books. My reduction was of course based on the means of all these (rejecting such as were obviously and grossly faulty), and might therefore, *pro tanto*, be regarded as of superior authority. This consideration, joined to that before adduced, decided me to retain those places in the present Catalogue which had been derived from this source, except in a few instances (specified in the notes) when it proved, by careful examination of the causes of discordance, that actual mistakes had been committed. And I must not omit to add that the comparison so instituted with M. AUWERS's results has led me to the detection of several grave errors in my own work which would certainly have otherwise escaped notice (and in some cases have caused the loss of future observations by missetting the telescope), and whose rectification has added materially to its value. On the other hand, as no human work is perfect, I have been led to notice some errors in M. AUWERS's work itself, which are set down in a list of *errata* and *corrigenda* at the end of this Catalogue; and besides, a good many cases in which, owing to mistakes in the printed catalogue in the volumes of the Philosophical Transactions (many of which stood corrected in MS. in the margin of the copy of those Transactions in my possession, and many more have been silently detected and rectified by Miss C. H. in her subsequent computations), his calculations have been founded on erroneous data, and have therefore led him to assign erroneous places to the objects so affected. Thus on every account the result has been what may be considered a complete expurgation of both our catalogues.

It remains for me to say a few words on the way in which the reduction to 1860 and the calculation of the precessions have been performed by Mr. KERSCHNER, the computist employed by the Astronomer Royal for that purpose. The whole work has been executed on printed forms, which being preserved may at any time be referred to. Since error in computation, however practised the computer, and however checked, is always possible, and occasional error of copying, especially when the order of the entries has to be rearranged, is absolutely unavoidable, I considered it incumbent on me to recalculate, *seriatim* from my original MS. Catalogue for 1830, and taking for granted the precessions set down in the fair copy, for 1880, the places both in R.A. and P.D. of every object included in the Catalogue; keeping an eye meanwhile to the precessions themselves, and their signs, to seize the least indication of error in that quarter. It would have been too laborious to recompute these. As for the precessions in P.D., their regular progression of itself ensures their correctness, as far at least as the integer seconds and the first decimal place. A pretty considerable number of errors (most of them of little moment) was thus detected and corrected—not more, however, than might reasonably be expected in the work of the most expert computist in so extensive a work, consisting of between nine and ten thousand computed entries (taking both elements), and traceable moreover in many instances to obvious misreading, and in some to actual misentry on my part, of figures in the original MS., which but for this further examination would also have escaped notice altogether.

The correction of these and the other errors already spoken of necessitated, in a great

many instances, a change in the order of R.A., and a consequent erasure and interlineation in the MS. The introduction, too, of the other nebulæ (those of M. AUWERS'S catalogue of "novæ," those communicated to me for insertion by M. D'ARREST, and those noticed by Lord ROSSE in his memoir of 1861, amounting altogether to 433 objects) necessitated many more interlineations, often occurring very inconveniently, two or three together, in a way to disfigure the MS. considerably. Unfortunately, too, in the MS. itself the column headed "No. in the Catalogue," which I had intended to have been left blank till all the rest of the work was completed, had been filled in by the transcriber with a series of numbers in regular progression, from 1 to 4629, the actual number of lines of which it then consisted. This made it necessary to renumber the whole *ab initio* in red ink, striking out the former numbers, and thus producing a still more unsightly appearance. Under these circumstances, I debated whether or not to recopy the whole. But, to say nothing of the sacrifice of time (since I could have entrusted it to no other hand), I believe it impossible to copy so voluminous a mass of figures and abbreviated writing without numerous errors. And being satisfied, from the repeated and careful revision it has undergone, of its present correctness, and equally so that with ordinary care on the part of the compositor (should the Council of the Royal Society decide on printing it) no *mistake* can arise from any of the alterations and interlineations it contains, I have decided in favour of presenting it as it stands, with the exception of two sheets which it was absolutely necessary to recopy owing to the extreme closeness of the interlineations, the smallness of the writing, and the transpositions needed. These have each been twice carefully read with the original.

In presenting to the Royal Society this Catalogue, it will be accompanied by the following series of records and documents which it may become desirable hereafter to refer to in elucidation of any point which may arise respecting the history or reduction of such of the objects as occur in my Father's classes and numbers printed in the Philosophical Transactions, viz.—

1st. A series of "*register sheets*," in which are entered up *all* the observations of *each* nebula or cluster copied verbatim from the sweeps, the nebulæ, &c. being arranged in the order of their dates of discovery. These are the "register sheets" referred to in the notes on this Catalogue, and cited by their *general* (*i. e.* current) *number*, as H, 1; H, 2; ... H, 2508.

2nd. A similar set of register sheets of all the observations of each of MESSIER'S nebulæ, arranged according to MESSIER'S numbers.

3rd. A general index of the 2508 nebulæ in classes and numbers, to find the "general number" of each to facilitate reference to the register sheets. (This index was drawn up by myself.)

4th. An index list of the same nebulæ, &c. arranged according to the "general number," to find the class and number of each.

5th. A more complete ditto ditto, containing also the rough approximate R.A. and P.D. of each object for 1800, and the determining stars as in the Philosophical Transactions.

6th. A catalogue in zones of P.D. of all the said nebulæ and clusters arranged in each

zone in order of R.A., and reduced to the year 1800 by Miss C. L. HERSCHEL, exhibiting the reduced result of each separate observation of each nebula; together with the determining star or stars in each case, and the differences of R.A. and P.D. from such star, with references to the current number of the sweep in which the observation is contained.

7th. The original sweeps with the 20-feet reflector at Slough in which the nebulæ were observed, contained in three small quarto and four folio volumes of MS.

All these manuscripts, with exception of the index No. 3, are in the original handwritings of my Father and his Sister, in most cases easily distinguishable, in some others not so readily. The Zone Catalogue No. 6 is entirely the autograph of the latter.

Explanation and arrangement of the Catalogue.

The Catalogue is arranged in twelve columns, of which the first contains the general or current number in order from 1 up to 5063, the total number of objects comprised, including ~~six~~ 22 supplementary ones, whose insertion in their proper order in R.A. would have involved altering all the numbering both of the catalogue and the annotations, &c., and would have proved a source of confusion and unavoidable error. Nevertheless, to prevent their being overlooked by any observer who may consult the catalogue for the purpose of a general review of the nebulæ, or for the verification of a new one, their numbers are interpolated into the general series so as to catch the eye, and a reference made to the supplementary catalogue in each case in the column of descriptions.

Column 2 contains the numbers of those nebulæ of which observations are given in my two former catalogues, and those of the two nubeculæ; the numbers from 1 to 2307 inclusive being from that in Philosophical Transactions 1833, and from 2308 to 4021 from my Cape observations. Where a number in this column is enclosed in hooks thus [ ], it is taken from the Catalogue of Objects in the Nubecula minor in pp. 153 to 155 of that work. Where in parentheses thus ( ), from those in the Nubecula major, pp. 156 to 163.

Column 3 contains the classes and numbers of nebulæ as given by my Father in his three Catalogues in the Philosophical Transactions for 1786, 1789, and 1802. One only is omitted, viz. V. 35. It is an immense diffused nebulosity, extending from $5^h\ 27^m$ to $5^h\ 42^m$ in R.A., and from 98° 6′ to 87° 43′ in P.D. A special list of these great diffusions of nebula is given by M. AUWERS in p. 42 of the work above cited.

Column 4 contains references to other authorities, and gives either the name of the first discoverer of the nebula, or a reference to the particular list or catalogue of nebulæ which has been taken as the authority for the place set down. The principal of these are —1st. The list of "new nebulæ" (Verzeichniss neuer Nebelflecke), in pp. 73 to 76 of the work of M. AUWERS already cited. These are referred to in the following form:—Auw. N. 1, Auw. N. 2, &c. 2ndly. Under the form D'Arr. 1, 2, &c., are given a series of objects contained in a MS. list of 125 nebulæ, kindly communicated to me by their discoverer, M. D'ARREST, Director of the Royal Observatory of Copenhagen, and reduced by him to the epoch (1860·0) of this Catalogue, with their precessions for 1880. 3rdly. A great number of nebulæ cited under the form "R. novæ," whose places have been approxi-

mately obtained from the diagrams accompanied by micrometrical measures of position and distance, or from more loose and general indications contained in Lord ROSSE's paper in the Philosophical Transactions for 1861, the comparisons being in all cases made with those nebulæ in my Catalogue of 1833 whose numbers stand annexed to them in column 2, with an italic letter appended, thus:—

322, *a* R. nova; 319, *a* R. 3 novæ.

In cases of which latter kind it is intended to express merely that nebulæ to the number indicated, not otherwise identifiable, will be found on due search in the immediate neighbourhood of the place approximately set down. Lastly. The names of Professor G. P. BOND, Mr. S. COOLIDGE, and Mr. J. T. SAFFORD in this column of the supplementary list of nebulæ refer to the places of nebulæ and clusters in a list of objects of that description discovered at the Observatory of Harvard College, obligingly communicated to me by Professor BOND, Director of that establishment, too late for their introduction into the body of the Catalogue.

Besides these references, in which the places set down have been adopted from the catalogues above mentioned, column 4 also contains synonyms or identifications of objects observed by myself with those contained in MESSIER's lists communicated to the French Academy, or to the Connoissance des Temps for 1783 and 1784. These are cited by the number they bear in MESSIER's own list, thus, M. 1, M. 2, &c. They have, with very few exceptions, been observed and described by myself or my Father, and their places here set down are given as results from our observations. In the few excepted cases they are taken from M. AUWERS's catalogue already spoken of. The nebulæ also whose identity has been (sometimes satisfactorily, but for the most part very doubtfully) made out with objects in Mr. DUNLOP's Catalogue of Southern Nebulæ, are indicated by the letter Δ, thus, Δ. 169, &c. In a few cases, chiefly those of nebulous stars, planetary nebulæ, or very star-like objects, which have been set down as stars in catalogues of authority; these are also referred to by name and number in column 4.

Many of Mr. DUNLOP's nebulæ are contained in LACAILLE'S catalogue, as also some of MESSIER'S, but of that catalogue two objects only, not so identifiable, viz. Nos. 38 and 40 of M. AUWERS'S catalogue of LACAILLE'S nebulæ, have been considered as definitely enough described (nébuleuses sans étoiles) by that astronomer to be inlcuded in the present Catalogue.

Column 5 contains the Right Ascension in time for 1860·0 of each object in the Catalogue. When this is given to decimals of seconds, it is to be understood as having been brought up from the mean of the observations given in my former Catalogues, or from the mean of those (where not observed by myself) in Miss C. HERSCHEL'S Zone Catalogue above mentioned *. When the R.A. is given only to the nearest minute or degree, it will of course be understood that the place is too loosely determined to render

* In some cases a careful subsequent revision of the catalogued observations *seriatim* has necessitated altering these R.A.'s by a few decimals of a second (seldom more) *after the process of reduction to* 1860. In all such cases the alteration has been applied *as a correction* to Mr. KERSCHNER's figures, so as not to disturb the amounts of precession allowed—a procedure perfectly legitimate and productive of no error. The same remark applies to col. 8.

further precision of statement other than illusory. This is the case with the greater part of those set down as "R. novæ."

Column 6 contains the precession, in seconds and decimals, in R.A. for 1880·0.

Column 7 contains the number of observations in R.A. which have been actually used in concluding the R.A. for 1830, from which that for 1860 has been computed. In all cases (unless where the contrary is especially indicated in a note, or otherwise as by the letters B.A.C. or A.S.C., Au., &c. inserted in place of a number in the column itself—which indicate that the R.A. is that of a star in one of those catalogues, or rests upon that other authority), the observations used for all objects included in my former catalogues are brought up from the data there registered, to the exclusion of all others; and in such cases (the vast majority) no parenthesis or other distinctive mark is applied. When, however, no satisfactory R.A. is there recorded, or when the R.A. is there expressly stated to have been set down from the "working list," the R.A. adopted is that brought up from the Zone Catalogue of C.H., and in such cases the number of observations used is enclosed in parentheses ( ). Dots attached (:) indicate some uncertainty in the R.A.; (::) a very considerable doubt, extending, perhaps, to a whole minute; ? and ?? express still wider limits of uncertainty. In those nebulæ of my Father's catalogues which have no number corresponding in column 2 (indicating the absence of any observations of my own), the places set down both in R.A. and Declination are those brought up from the Zone Catalogue of Miss C. H., and the numbers of observations on which they rely are set down in the appropriate column without any parenthesis or distinctive marks, the absence of any number in column 2 being a sufficient indication. In the case of M. D'Arrest's nebulæ, the numbers in column 6 enclosed thus [ ] indicate the number of his observations of the nebula employed by himself to give the place.

Columns 8, 9, and 10 contain, in like manner, the North Polar Distance for 1860, the precessions for 1880, and the numbers of observations used for P.D. in the case of each object; and the same remarks apply to these as to columns 5, 6, and 7.

In column 11 is given a short description of the nebula or cluster in abbreviated words, made out from an assemblage and comparison of *all* the descriptions of each object given in my Father's *and* my own observations. As regards the former, recourse was had, not to the printed account in the Philosophical Transactions (which gives only a single description), but to a series of manuscript sheets in the nature of a Register (and *as such cited* in the notes which follow this Catalogue), into which have been transcribed, *verbatim*, from the original sweeps, all the descriptive parts of each and every observation of each cluster or nebula in the order of their dates, and the data for computing their places, derived from the sweeps by applying the index and clock corrections pertaining to each. In this Register the nebulæ are entered, each with its class and number, and each on a separate sheet; the whole series being arranged, however, not in the order of their classes and numbers, but in the order of the dates of their discovery, from No. 1, corresponding to October 28, 1783, to No. 2508, corresponding to September 30, 1802. Of these, the first 2500 only are included in the catalogues com-

municated to the Royal Society; the other 8 are printed in the form of an Appendix to my Cape Catalogue, in p. 128 of the "Results of Observations," &c. A similar and separate Register in sheets has been kept for my Father's observations of MESSIER'S nebulæ, and these have in like manner been collated with my own observations of the same objects in framing the ultimate, or, as it may be termed, the average description of each.

In making out these descriptions, it was found to a certain degree practicable, in the particulars of brightness, size, and extension, to make a kind of arithmetical approximation to a mean conclusion, by arranging the degrees of brightness, &c. in a progressive upward scale from 1 to 10, and taking a mean of these numbers in each case, as indicating the designating words to be finally adopted. Thus, taking the extreme degree of faintness when a nebula was declared to be "excessively faint," or "barely visible," or "hardly more than suspected" for 1, and "extremely" or "excessively bright" for 10, the intermediate degrees, such as *very faint*, *faint*, *considerably faint*, *pretty faint*, *pretty bright*, *considerably bright*, *Bright*, *very bright*, were denoted by the intermediate numbers 2, 3, 4, 5, 6, 7, 8, 9; and similarly for the scale of sizes, exchanging the words Small and Large for Faint and Bright. In the case of extension, the scale 1 to 10 was supposed arranged in the order, *Round*, *very little extended*, *elliptic* or *oval*, *considerably extended*, *pretty much extended*, *much extended*, *very much extended*, *extremely extended*, or *a long ray*. It is obvious that the qualifying words, such as "pretty" and "considerably," admit of a good deal of latitude of interpretation, and that, in reference to brightness or faintness, greatness or smallness, their meaning is rather relative than absolute; and especially, that as between *bright* or *faint*, and "considerably bright" or "considerably faint," for instance, there is so little real distinction of an absolute kind, that it is impossible to say which is to be accepted as indicating the superior degree. In the case of extension there is the same indistinctness as to precedence between the qualifying phrases "considerably" and "pretty much." Nicety, however, in this respect would be misplaced, when it is considered that when several descriptions of the same nebula, observed at different times, come to be compared, they can hardly ever be reconciled except by allowing to each qualification a latitude of meaning extending over several degrees of our arbitrary scale. In many instances, indeed, the discordance, or rather contradiction is so great, as to authorize a strong suspicion of variability in the object itself. In a few cases where, from the low altitude of the object in England, coupled with corresponding discordances of description, it was evident that it must have been seen to much greater advantage from the Cape station (as, for example, in that of h. 3375 = H. III. 754), additional weight has been attributed to the Cape observations.

In the descriptions, I have found it absolutely necessary to abstain from any specification of the estimated sizes of nebulæ or clusters in angular measure. In comparing estimations of this kind I find the discordance so great, and (to speak only of my own practice) so little evidence of adherence to any definite standard of estimation, that nothing but confusion would have arisen from introducing such estimates. Nevertheless, as in the use of such a catalogue as the present some guide is necessary for the

observer, to advertise him of what sort of object he may expect to see, the following scale may be taken as conveying a general idea of the magnitudes intended by the conventional words used. Thus, a round nebula of 3″ or 4″ in diameter would be called *extremely small*;

one of 10″ or 12″, *very small*;
20″ or 30″, *small*, or *considerably small*;
50″ or 60″, *pretty small*, or *pretty large*;
3′ or 4′, *considerably large*, or *large*;
8′ or 10′, *very large*;
20′ and upwards, *extremely large*.

In estimating clusters of stars (that is to say, of well separated and scattered stars) a wider acceptation must be understood, so that, for instance, a cluster of only 1′ in extent would be considered *extremely* or *very small*; one of 15′ or 20′ *large*, and one of 30′ or 40′ *very large*. This amplification of scale, however, must not be held applicable to those resolved or resolvable clusters of a "globular" character marked in the descriptions as ⊕, which must be understood as belonging to "nebulæ" and not to "clusters," so far as the conventional terms used in the descriptions are concerned. I should observe also, that when in making out the average appropriate phrase in size I have found any extravagant discordance between the estimate in words and that in figures, as, for instance, where a nebula has been described in words as *very large*, and the diameter then set down as 2′, a compromise has usually been made, and the word modified, as, for instance, to *large* or *considerably large*.

The abbreviations employed in the column of descriptions and elsewhere, in the notes, &c., are as follows:—

ab.	about.
alm.	almost.
am.	among.
app.	appended.
att.	attached.
Auw.	Auwers.
A.S.C.	Astronomical Society's Catalogue.
b.	brighter.
bet.	between.
biN.	binuclear.
bn.	brightest towards the north side.
bs.	brightest towards the south side.
bp.	brightest towards the preceding side.
bf.	brightest towards the following side.
B.	Bright.
Br.	Brisbane (Sir T.'s) Catalogue of Stars.
Bo.	Bode.
B.A.C.	British Association Catalogue.
c.	considerably.
cq.	coarse, coarsely.
ch.	chevelure.
com.	cometic.
cont.	in contact.
C.	Compressed.
Cl.	cluster.
C.G.H.	"Results of observations, &c. at the Cape of Good Hope."
C.H.	Miss Carolina Herschel. When it occurs in column 4 it indicates that the object was discovered by her.
d.	diameter.
dist.	distance.
	distant.
dif.	diffused.
diffic.	difficult.
D.	double.
D'Arr.	D'Arrest.
Δ.	Dunlop.
def.	defined.
e.	extremely.

ee.	excessively.
er.	easily resolvable.
exc.	excentric.
E.	extended.
f.	following.
F.	faint.
g.	gradually.
gr.	group.
H.	Sir William Herschel.
h.	Sir John Herschel.
h.o.n.	list of omitted nebulæ in C.G.H.
i.	irregular.
inv.	involved.
	involving.
iF.	irregular figure.
l.	little (adv.).
	long (adj.).
L.	Large.
Lac.	Lacaille.
Lal.	Lalande.
Lass.	Lassell.
m.	much.
mm.	mixed magnitudes.
mn.	milky nebulosity.
mon.	monograph.
M.	Middle, or in the middle.
M.	(in col. 3) Messier.
Mess.	Messier.
n.	north.
neb.	nebula.
np.	north preceding.
nf.	north following.
nr.	near.
N.	nucleus, or to a nucleus.
o.	omitted.
ON.	omitted nebula.
p.	preceding.
p.	pretty (before F, B, L, S, &c.).
pg.	pretty gradually.
pm.	pretty much.
ps.	pretty suddenly.
P.	poor.
Pi.	Piazzi.
P.T.	Philosophical Transactions.
quad.	quadrilateral.
quar.	quartile.
r.	resolvable, barely (mottled as if with stars).
rr.	partially resolved—some stars visible.
rrr.	well resolved—clearly seen to consist of stars.
R.	round.
RR.	exactly round.
R. nova.	New nebula discovered by Lord Rosse.
R. MS.	Manuscript notes furnished by His Lordship.
Ri.	Rich.
R.	The Earl of Rosse.
s.	suddenly.
s.	south.
sp.	south preceding.
sf.	south following.
sc.	scattered.
st.	stars.
sev.	several
susp.	suspected.
sh.	shaped.
stell.	stellar.
S.	small.
sm.	smaller.
sw.	sweep.
Σ.	Struve.
tri-N.	tri-nuclear.
trap.	trapezium.
v.	very.
vv.	an intensive of v.
var.	variable.
W. H.	Sir W. Herschel.

Besides these abbreviations of words, the following arbitrary signs are used.

* a star; *10 a star of the 10th magnitude.

** a double star; *** a triple star.

! a remarkable object; !! very much so; !!! a magnificent or otherwise exceedingly interesting object.

? doubtful; ?? very doubtful, either as to accuracy of place or reality of existence, according to the column in which it occurs.

: , :: , see explanations already given.

△ a triangle. Forms a triangle with.

⊕ a globular cluster of stars.

○ a planetary nebula.

◎ an annular nebula.

st. 9 ..... Stars from the ninth (or other) magnitude downwards.

st. 9 .... 13 Stars from the ninth down to the 13th magnitude.

As examples of the interpretation and expansion of these abbreviations some examples are subjoined.

Ex. 1. pB; vL; vg, vsmbMN 15″; pmE 162°·3; "pretty Bright; very Large; at first very gradually, then very suddenly much brighter in the middle to a nucleus 15″ in diameter; pretty much extended—the position of the longer dimension micrometrically measured 162°·3 (*i. e.* reckoned from the north round to 162°·3 in the direction nfsp)."

The angles of position in all cases are to be understood as so reckoned. When decimals of degrees are annexed (or if integer, written decimally thus 151°·0), they have been micrometrically measured. If thus, E 0° or E 45°, E 90°, they mean only in or near the meridian, or parallel or oblique to the meridian from nf to sp, &c., as the case may be. If with a ± annexed, the position is from a more or less careful estimation.

Ex. 2. R; psbM ill def O; pB*10 125°·4, 70″; "Round, pretty suddenly brighter in the middle to an ill-defined planetary disc; has a pretty Bright star of the 10th magnitude, whose position measured *from* the centre of the nebula is 125°·4, and whose distance also from the centre is 70″ by estimation."

The relative situations of neighbouring stars or nebulæ are *invariably* to be understood as thus reckoned, *i. e.* taking the centre of the nebula or other object described as a starting-point or origin of angle or distance. Thus S*s will mean that a small star is south *of the nebula*, *np nr that a star is *near the nebula* in a north preceding direction from it; *$_*$4^{s}f, 3′n, that a double star follows the centre of the nebula 4 seconds of time, and is 3′ to the north of it.

Ex. 3. Cl; pRi; pmC; L; st6, 10 ... 15. "A cluster; pretty rich; pretty much compressed; Large; consisting of stars one of which is of the 6th, and the rest from the 10th to the 15th magnitudes."

Attached or vicinary stars or small nebulæ are always placed at the ends of the descriptions. Thus ⊕sf means that the nebula described "has a globular cluster following and to the southward of it." When, however, the description of a cluster ends abruptly thus, *$_*$, it is to be understood that "the place taken is that of a conspicuous double star."

The 12th column of the Catalogue contains the number of times that each nebula has been observed by both my Father and myself, whether its place were taken or not, comprising all the cases in which the object has been seen, and whether described or not. Since attention has been drawn to the real or supposed variability of nebulæ, and since it can hardly be doubted that comets have occasionally been observed as nebulæ, this enumeration is not without its importance. In this column the abbreviation "mon" occasionally occurs. In such cases the nebulæ have been so often and diligently observed for the purpose of exact delineation or "monographing," that a special enumeration of the observations would be impossible or useless.

Finally, at the end of the line allotted to each nebula occur occasionally one or both of the marks * and †. The former refers to the notes appended to the Catalogue, the latter to the list of figured nebulæ in which the publications wherein are contained figures of the nebulæ are referred to by plate and figure—those at least which seem entitled, in the present state of astronomical instrument-making and pictorial representation, to be pointed out to the observer as conveying any idea of their appearance.

Notes on the Catalogue.

No.

12 h. 5. D'Arrest says, "h. II. positio certe erronea," but gives no indication of the correction required in R.A. or P.D.

29 h. 13; II. 241=II. 243. In P.T. the determining * is omitted, and in the statement of the places of these nebulæ, as well as of II. 239, 240, 242, and III. 199, there is much confusion, for the correction of which see the list of errata subjoined. Auwers has threaded the intricacies of this maze with singular felicity, but has been misled in the case of II. 243 into assigning to it a totally erroneous place ($22^h\ 48^m$ R.A., 73° 37′ P.D. 1830), and, in consequence, has not perceived its identity with II. 241.

78 II. 3. Auwers makes the P.D. of this neb. (1830)=99° 32′, from P.T., which places it 2°± *n* of 17 Ceti. C.H. makes it 1° 51′ *n* of the same star, or for 1830, 99° 42′. In fact H. has two observations of it, neither of them more than eye-drafts with neighbouring stars, and the P.D. is concluded graphically by C.H. from these diagrams.

88 III. 876. The P.D. of Auwers (81° 16′) is 1° wrong. The place given in P.T. is 1° 43′ *n* of 51 Piscium; so also in Register (H. 2296).

119 Auw. N. 4=D'Arr. 6. The place given is that brought up from D'Arrest's observations, the R.A. being set down only roughly in Auw.

132 h. 57=V. 20. Once looked for by Lord Rosse and not seen. Having been observed both by H. and h., there can be no doubt of its existence.

138 h. 61=h. 2345=V. 1. In h.'s sweep 733 the position reading is set down as 324°·5. This is in contradiction with a diagram made at the time, and is an obvious mistake for 234°·5, which =180°+54°·5, agreeing well with the diagram and with 2 obs. of W.H., in both of which it is described as "*nf* to *sp*." There is also an erratum in the C.G.H. Catal., *for* 143°·8 *read* 144°·5, since 324·5−180=144·5.

145 h. 64=II. 621=II. 703. Auwers remarks that A Ceti, the determining star of W.H., does not exist; but C.H. has perceived this, and by using another determining star (13 Ceti, sw. 756, W.H.), has fixed the place of the nebula II. 703 for 1800 at R.A. $0^h\ 37^m\ 47^s$, P.D. 93° 53′ (=93° 43′, 1830), thereby identifying it with II. 621. Auwers, using a conjectural star, sets down the P.D. erroneously as 92° 52′ (1830).

165 h. 2356. This is the main body of the nubecula minor.

169 h. 2359. A complex object with several nuclei. There is an erratum in the R.A. set down in C.G.H. as resulting from sw. 488, *for* $46^m\ 12^s{\cdot}1$ *read* $47^m\ 12^s{\cdot}1$.

177 79, *a*, *b*. In Lord Rosse's diagram, α=h. 79, β=h. 78, γ=nova, accidentally omitted in the body of the Catalogue, but inserted as No. 5058 at the end. The whole Catalogue having been finally numbered before the omission was detected, it could not be inserted in its place. δ is a star; ε=h. 79, *a*.

No.

178, 179, 196 h. 4007, 4008, 4012. In the Catalogue of C.G.H. these nebulæ are placed erroneously in the 23^h of R.A., owing to a mistake of a whole hour in reducing.

202, 203, 205, 206, 207, 208, 209, 210 These constitute the group laid down by Lord Rosse as seen in and about the places of h. 84, 85, 86, viz. his α, β, γ, γ', δ, ε, ζ, θ. Of these, α is No. 202=h. 84; β=No. 203=h. 85; γ=No. 206=h. 86; γ'=No. 205=86, a; δ=No. 209=86, b; ε=No. 208=D'Arrest No. 10; ζ=No. 207=D'Arr. 9, and θ=86, c. In the MS. notes furnished me by Lord R. it is stated that α=h. 84, β=h. 85, and θ=h. 86. The latter identification, however, is incorrect.

214 h. 88=I. 54. This is *not* the I. 54 of the P.T., which proved to be one of Messier's nebulæ, but another subsequently inserted by W.H., so as not to break the order of the numbers, as appears from a MS. correction in P.T., and from Register (H. 570).

275, 276, 277, 280, 290 These constitute Lord Rosse's group seen in or near the place of h. 103, and marked in his diagram as A, β, δ, ε, and another unlettered (which call γ). These I identify as follows:—A=No. 276=h. 103; β=No. 277=103, b; γ=No. 275=103, a; δ=No. 280=103, c; and ε=No. 290=103, d.

297, 311, 317, 319, 325 In reference to M. Auwers's remark on the nebulæ 170, 171, as also 167, 168 (H. class III.), after very careful examination of all the data, I can arrive at no other conclusion than that embodied in the present Catalogue under these Nos.: h. 118 is certainly not III. 171, neither is h. 120. Both places and descriptions disagree.

313, 314 h. 119 was taken for III. 556, but no R.A. was obtained, that set down being the R.A. brought up from C.H. The descriptions differ so materially, especially in the particular of extension, that they are most probably distinct nebulæ.

330 h. 124=VII. 48. Auwers remarks in his 'Verbesserungen zu *h*,' that this cluster, h. 124, is not nova, but VII. 48. This is correct. Re-examining sweep 216, I find an error of 1° committed in reducing the P.D.

358 This is not in M. D'Arrest's final list, communicated to me in MS.; but being set down by M. Auwers as No. 15 in his 'Verzeichniss neuer Nebelflecke,' I felt bound to retain it.

418 h. 160=h. 2442=I. 62. This nebula, though set down by W.H. as of the 1st class (*i. e.* as a bright nebula), could not be seen by D'Arrest with the Leipzig Fraunhofer of 6-feet focus and $4\frac{1}{2}$ inches aperture. It is marked in this Catalogue, however, by a mean of 4 observations, only as "F."

428 55 Andromedæ. Although this star has been eight times examined by Lord Rosse without perceiving any nebulous atmosphere, yet as my observation is corrobo-

No.

rative of Piazzi's designation of it as "Nebulosa," it is retained for occasional future examination.

442, 444 } h. 169, II. 221. The places agree almost exactly, but the descriptions are irreconcileable. One makes the nebula round, the other much extended. They are therefore almost certainly distinct nebulæ, and there is therefore probably some error in the R.A. of II. 221. The neighbourhood is rich in nebulæ (see the next note, however).

442, 444, 445, 446, 447 } In Lord Rosse's diagram of the group about h. 169, assuming α to be h. 169 = No. 444, the others will be β = No. 445 = 169, a; γ = No. 446 = 169, b; δ = No. 447 = 169, c; and ε = II. 221.

462 h. 179 = 50 Cassiopeiæ. Retained in the Catalogue for future occasional observation. Nothing can be more difficult than to verify or disprove the nebulosity of a considerable star under ordinary atmospheric circumstances.

472 h. 184 = III. 583. Though Lord Rosse on one occasion did not find this nebula, its existence cannot be doubted, having been found by h. nearly in the place assigned by C.H.

487 h. 193 = I. 152. M. D'Arrest found this nebula too faint for observation with the Leipzig refractor, though placed by W.H. in Class I., and standing in this Catalogue (from a mean of 3 observations) as a "bright" nebula.

501 h. 204 = III. 604. C.H. and Auwers make the R.A. 1^m less. Both H. and h. rely on single observations. Sweep 188 h. examined and reduction found correct.

510 h. 206 = III. 457. Not found by Lord Rosse; once looked for. See notes on Nos. 472 and 132.

516 h. 210 = II. 246. Singularly enough, h. and H. are at issue about the two adjacent stars. h. makes the stars south of the nebula; H., on the contrary, places the nebula south of the stars, and says expressly that both this nebula and III. 201, observed just previously, were similarly situated with regard to their attendant stars. Now in h.'s obs. of III. 201 (No. 513) the attendant star *is* stated to be sf the nebula, and in that of II. 246 the larger of the two stars is south and only a very few degrees preceding. I believe the error to lie on the side of the older observations, as I have a diagram of the small star nearer to II. 246, sf, which shows that I made no mistake of n and s.

536 I. 153. Auwers makes the R.A. for 1830 $1^h\ 28^m\ 45^s$, whereas C.H. makes it $2^h\ 15^m\ 13^s$. The cause of the discordance lies in an erratum in P.T. (see list of errata). In C.H.'s reductions the error is corrected, and I find the correction verified on reference both to the Register (H. 1488) and the original sweep (sw. 596). The nebula *follows* (not precedes) the determining star.

549 h. 226 = I. 154. Auwers makes the R.A. of this for 1830, $2^h\ 23^m\ 8^s$; C.H.

No.

$2^h\ 20^m\ 57^s{\cdot}8$, by the observations in different sweeps differing only 18^s in R.A. The latter is the more correct; so that M. Auwers's remarks on this nebula are not confirmed. The cause of the disagreement lies in a misprint in P.T. (See List of Errata.)

557, 558, 559, 561, 563 In Lord Rosse's description of this group, α=No. 557=h. 231; β=No. 563=h. 234; γ=No. 558=231, a; δ=No. 559=231, b. The other nebula, "about 12′ south following," is probably No. 563=h. 234. No. 561=h. 233 seems to have escaped notice.

571 h. 240=II. 238=III. 198. C.H. has overlooked or omitted an obs. of W.H. of III. 198 in sw. 574, which, referred to, confirms Mr. Marth's surmise that the nebulæ are identical.

573 II. 6. This was probably really a comet, as indicated by its description, having been subsequently looked for and not found.

574 h. 244=I. 102. M. D'Arrest found this nebula, when observed with the Leipzig refractor of $4\frac{1}{2}$ inches aperture, inferior to a 1st class nebula. In this Catalogue, from a mean of 5 observations, it ranks as "considerably bright."

591 h. 258=I. 1. M. D'Arrest found this nebula, when examined with the Leipzig refractor, not entitled to rank above the 2nd class. With this our present Catalogue agrees, it being set down from a mean of 8 observations as "pretty faint."

614 This nebula of Bessel was also looked for and not found by D'Arrest, who therefore supposes it to have been a comet.

636 h. 280=II. 502. II. 502 is described by H. as eS; F; stellar. Either then the identity is doubtful, or some change must be suspected. The place, however, agrees well.

639 h. 281=IV. 43. Once looked for by Lord Rosse, but not found. (See notes on 134, 472, 510.)

646 h. 284=III. 578. The same remark. Twice looked for unsuccessfully by Lord Rosse. On one occasion clouds were passing.

654, 655 In Lord Rosse's diagram of this pair and the neighbouring stars γ and δ, the figure is in contradiction with the measures. The position of $\alpha\gamma$, instead of 2°, should, I presume, have been stated thus, $\gamma\alpha$=178°, or, which comes to the same thing, $\alpha\gamma$=−2°. This has been assumed in deducing the place of No. 655=289, a from No. 654=h. 289.

656 h. 291=III. 591. H. makes this nebula to be the nf of two, but both those of h. the sf.

674 h. 293=II. 603. H.'s description is pB; stellar; a pc* with eS, vF chevelure. The place, however, agrees well with that of h. 293.

684 III. 195. Auwers makes the R.A. (1830)=$3^h\ 11^m\ 50^s$ and C.H. $3^h\ 10^m\ 13^s$; but

No.

a misprint in P.T. (see List of Errata) accounts for the difference of the minute at least.

708, 709 III. 959; I. 60. The catalogued places contradict the described position sf and np; but this is owing to the error in R.A. of I. 60, which D'Arrest makes less by 40^s, which would place I. 60 at $3^h\ 19^m\ 35^s$ (1860).

710 Au. N. 17. The discovery of this nebula is attributed by Au. to Schönfeld in 1858, but it seems to be identical with that described by Tuttle (Astronom. Notices, xix. p. 224). Auwers's place is preferred, Tuttle's being only approximate.

768 Au. N. 18. The celebrated variable nebula of Tempel, discovered Oct. 19, 1859.

774 II. 594. Auwers considers this as identical with II. 548, with 1° mistaken in P.D.

778 h. 309=I. 155. Auwers makes the R.A. of I. 155 for 1830 = $3^h\ 53^m\ 33^s$, destroying the identity of these two nebulæ. But his place is deduced from an erroneous entry in P.T. (see List of Errata). C.H., by 2 observations in sweeps 608, 638 agreeing to 3^s in R.A. and 2′ in P.D., gives a place which, brought up to 1830, gives R.A. $3^h\ 37^m\ 58^s$; P.D. 94° 29′ 7″.

810. h. 311=IV. 69. M. D'Arrest found the nebulous atmosphere around the central star of this nebula very conspicuous with the Leipzig $4\frac{1}{2}$-inch refractor.

826 h. 2618=IV. 26. D'Arrest's R.A. is preferred, that of h. 2618 being clearly shown to be erroneous.

836 II. 464. The P.D. is given by W.H. as the same with that of 44 Eridani. C.H., using an erroneous place of this star, makes the P.D. 5′ too small. This is here corrected, and the result agrees with Auwers.

839 Auw. N. 20. This is the remarkable variable nebula discovered by Mr. Hind on Oct. 11, 1852. M. D'Arrest testifies to its complete disappearance on the 3rd and 4th of Oct. 1861, "Hujus nebulæ .... ne umbram quidem detegere valeo." —"Cœlo serenissimo regionem summâ curâ perlustravi adjuvante Dr. Schjellerup. *Nebula reverâ* deest." (In 1855 and 1856 it was found by M. D'Arrest within 2′ of Mr. Hind's original place.) On Dec. 29, 1861, it was seen by M. Otto Struve with the great Pulkowa refractor, but so excessively faint as to be barely within the power of that instrument. On March 22, 1862, with the same telescope, it was again seen, but considerably brighter, so as to bear a faint illumination of the wires.

851 h. 314=III. 587. Not seen by Lord Rosse, once looked for, clouds passing. See notes on Nos. 639, 646, &c.

880 h. 322. The bright star preceding is ν Eridani.

908 h. 333=II. 547. Not seen by Lord Rosse, once looked for. See notes 132, 472, &c.

926 h. 335. Erroneously identified in my Catalogue of 1833 with III. 453 (No. 981). See the note on that nebula.

No.

953 h. 341=D'Arrest 48. Observed by him as "nova," but since recognized as unquestionably =h. 341.

970 VIII. 43. Auwers makes the P.D. of this cluster for 1830 =66° 25′, which is incorrect. The determining star is 109, *n*, Tauri, the cluster being 1° 29′ north of the star. This would give 66° 39′ for the P.D. for 1800, agreeing with C.H., and 66° 36′ for 1830.

975 h. 343. A very large diffused nebulosity, distributed in zigzags. This has been looked for seven times by Lord Rosse and not found. Its existence is therefore very doubtful.

979 h. 2709. The place graphically determined by measurement of a diagram, as compared with h. 2710.

981 III. 453. This was erroneously identified with h. 335 in my Catalogue of 1833. By an unlucky coincidence, its place per working list, roughly brought up from C.H., agreed so well with the latter nebula as taken in sw. 322 (h.), that it was unhesitatingly assumed to be the same. It appears, however, that in C.H.'s reduction an error of 10^m in R.A. has been committed, the star of comparison being 10 Orionis, and the nebula *following* the star by $5^m\ 7^s$ (as ascertained by reference both to the register sheet (H.1160) and the original sweep (sw. 462, H.)). M. Auwers, misled by my erroneous identification, has assumed that the nebula must have *preceded* the star, which would (nearly) account for the difference, and in consequence, his R.A. of this nebula is 10^m too small. C.H.'s error probably arose from misapplying in like manner the sign of the Δ. R.A.

998 III. 268. Auwers's R.A. ($4^h\ 57^m\ 23^s$, 1830) is adopted in preference to $5^h\ 0^m\ 28^s$, that brought up from C.H. to the same epoch. In the sweep 367 (H.) three stars of comparison are given, 58 Eridani, α Leporis, and 19 Leporis. The Δ. R.A. of α and 19 comes out correct, but that of 58 from each is wrong by $3^m\ 5^s$, so that the star must have been mistaken. C.H. has used 58 and α, and has rightly brought out the place of the nebula by the former (the wrong star), and wrongly by the right one; and by an odd coincidence the two results agree well, though both wrong.

1030 h. 349=VII. 4. Described by D'Arrest as "Ein Ausserordentlich reicher Hauf," an extraordinarily rich cluster.

1133 h. 356. Looked for four times by Lord Rosse, in two of which the sky was fancied to have a milky appearance.

1138, 1139 h. 2841. Double nebula. In my Cape Catalogue, sweep 538, *for* "first" *and* "second" *read* "larger" *and* "smaller." The smaller is sp. The position 260° is right. It is very remarkable that in sweeps 508, 522, 658, and 761 the smaller of the two was not noticed. Is it variable?

1167 III. 747. Auwers makes the P.D. 8′ 20″ greater. It is difficult to identify the determining star used by C.H.

No.

1165 | 1168 | 1171 | 1174 h. 2866, 2867, 2868, 2869. $16^{s}\cdot2$ added to all the R.A.'s of these nebulæ in the Cape Catalogue to compensate an error detected in sw. 538. The correction is deduced from a comparison of the diagram fig. 20, Pl. VI. C.G.H. with the place of No. 1171.

1179 h. 360. $3^{s}\cdot3$ added to h.'s P.D. to bring it to the place in B.A.C.

1180 V. 30. The place of V. 30 corrected by $+3^{s}\cdot2$ in R.A. and $+25'\ 45''\cdot4$ in P.D. to bring it to the place of d 42 Orionis in the B.A.C.

1183 h. 361=V. 31. h.'s place corrected by $+0^{s}\cdot4$ in R.A. and $-0'\ 27''\cdot2$ in P.D. to bring it to that of ι 44 Orionis in B.A.C.

1185 III. 1. ?? There are two observations by H. of III. 1, but they differ enormously. One agrees with M. 43. The place of M. 43 is corrected to agree with its place in the Catalogue of Stars, &c. in the great nebula in Orion, C.G.H. p. 28.

1191 Chacornac's recently discovered nebula. Place from Moigno's "les Mondes," No. 9, p. 241.

1196 III. 269. Auwers gives as the R.A. of this nebula for 1830 $6^{h}\ 27^{m}\ 57^{s}$, which is mistaken by 1^{h}. The Philosophical Transactions says that it precedes 19 Leporis by $32^{m}\ 23^{s}$, and that this is no misprint appears from C.H.'s reductions.

1226 IV. 24. Annular according to Lord Rosse.

1287 III. 270. Auwers places this nebula in R.A. $6^{h}\ 40^{m}\ 20^{s}$, or an hour too late. Its place is very distinctly settled by two determining stars, α Leporis and 19 Leporis, the former of which it followed by $15^{m}\ 4^{s}$, and preceded the latter by $20^{m}\ 0^{s}$.

1425 h. 393=IV. 3. Lord Rosse's account of this nebula is extremely remarkable. "This h. 393," he says, "is an enormous nebulosity which I have traced f and n of it to a great distance—*some degrees*. It narrows at times to a band across the finding eyepiece about 6′ or 8′."

1440 h. 401=V. 27=VIII. 5. Retained as a cluster, though but a poor one. Nine times examined by Lord Rosse for nebulosity, but none seen.

1452 III. 271. Auwers places this nebula in R.A. $8^{h}\ 3^{m}\ 35^{s}$, P.D. 76° 21′ (1830). There has been some mistake. III. 271 is stated to follow 8 (ν3) Canis, $8^{m}\ 0^{s}$, and to be 4′ n of that star, which gives a place agreeing with C.H. and with the present Catalogue.

1454 h. 441=M. 41. This nebula was also observed by Flamsteed.

1455 | 1456 | 1457 | 1458 | 1460 In Lord Rosse's diagram of this group, α is No. 1457=h. 410; β=No. 1455=410, a; γ=No. 1456=410, b; δ=No. 1458=h. 409; and ε=No. 1460=410, c. But some suspicion seems to have arisen that the principal nebulæ observed were not really h. 409, 410, but h. 406, 407. In that case the identification will stand as follows:—

α=No. 1448=h. 406.

β=h. 406 $-5^{s}\cdot2$ in R.A., and $-1'\ 25''$ in P.D.

γ=No. 1449=h. 407.

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δ = h. 406 + 1^s·6 in R.A., and −5′ 6″ in P.D.
ε = h. 406 + 14^s·7 in R.A., and −5′ 2″ in P.D.

1480 h. 423. This nebula is entered by C.H. as VIII. 1. B, with a remark "not in print."

1508 h. 439 = VI. 6. The R.A. is nearly 2^m in excess of C.H. and of Auwers. Examined sweep (h.) 393 in which it was observed. Found all clear and correctly reduced.

1527, 1528, 1530, 1531 } Compared with Lord Rosse's two diagrams of the nebulæ composing this group. None of them are "novæ." α = h. 449; β = h. 448; γ = h. 447; $\delta = \beta$; $\varepsilon = \gamma$; ζ = h. 446.

1533 VIII. 44. Auwers's P.D. is 84°, instead of 82°, owing to an erratum in P.T. (See List of Errata.)

1578 h. 468 = III. 479. No nebulosity seen by Lord Rosse in 5 observations. In H.'s single observation the nebula is "suspected," and in those of h. it is not positively ascertained. The object seems therefore to be merely a small resolved cluster of vFst.

1594. M. 47. Auwers assigns a R.A. greater by 4^m. The cluster has not since been observed. It is probably a very loose and poor one.

1611 h. 480 = VI. 37. h.'s P.D. corrected by −10′ as the presumed error of reading in the single observation obtained. Harding in 1827 (it appears) observed its P.D. = 100° 10′ (for 1830), and W.H.'s place for that epoch is 100° 12′, that of h. being 100° 19′ 4″.

1615, 1616, 1617 } In Lord Rosse's diagram, α = No. 1617 = h. 483; β = No. 1616 = D'Arr. 51; γ = No. 1615 = 483, a. D'Arrest's place for β is preferred to that which results from comparison with the diagram. h. 284 could not have been in the field, being almost a degree distant.

1633 h. 493 = II. 719. h.'s R.A. in P.T. diminished by 1^m for an error of 1^m detected in the reduction of the observation. This brings it nearer to Auwers.

1652 h. 3176. *Polarissima Australis.* This nebula is so near the south pole that its precession in R.A. varies from year to year with great rapidity, so that its R.A. cannot be computed correctly by the ordinary approximate method.

1666, 1667, 1668 } The four nebulæ h. 508, 510; 510, a; 510, b evidently include among them that third nebula referred to by Lord Rosse as the accompanying "nova" "forming a triangle with h. 507, 508—of the last degree of faintness." h. 507, however, is 30° distant in P.D., so that in the observation of Feb. 9, 1850, the P.D. of h. 507 must doubtless have been read as 36° instead of 66°, giving rise to a mistaken identity with one of the *two* really new nebulæ at that time in view.

1696 III. 50. I find a memorandum to the effect that this nebula is lost, and was probably a comet; but I cannot recover my authority for the statement. It is described by H. as "of the last degree of faintness," and it is therefore no way

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surprising that it should not have been again perceived without some time and trouble bestowed, and in clear weather.

1707 h. 527=II. 48. M. Auwers, owing to an erratum in P.T. (see List of Errata), makes the R.A. of II. 48 two minutes too great, and is thus led to doubt its identity with h. 527. There still remains the rather considerable disagreement of 5′ in P.D. D'Arrest found neither of these nebulæ; but there can be no doubt of the existence of one at least, in or near the place here given. This is *not* the nebula seen by Lord Rosse "nearly in contact with h. 526." This latter (described already by h. as "bi-nuclear") was seen by R. as distinctly double.

1712 h. 531=M. 67. Discovered by Oriani.

1720 h. 535=II. 823. W.H. describes this nebula as "Round;" h. as "much extended," while Lord Rosse saw it as bi-nuclear, or a double nebula joined by faint nebulosity. Is it separating into two, like Biela's comet?

1735, 1736 h. 542 and II. 557. The descriptions are irreconcileable, and they must be two distinct nebulæ. The R.A. of h. 542 was *not* observed, and its P.D. is set down as "hardly more than conjectural," having been looked for by working list as II. 557 and set down as such.

1742 h. 545=II. 834. Misprinted II. 844 by Auwers in the Catalogue, but the number is correct in his general list of the nebulæ by numbers and classes.

1743 h. 546. Not seen by Lord Rosse in one observation. Examined sweep 21 (h.) and found all right.

1756 III. 291=D'Arr. 60. These are assuredly one and the same nebula. Auwers's declination of III. 291 (+27° 7′) should be +26° 7′.

1773 h. 565=III. 61. The P.D. according to H. is 70°.

1788 II. 708. Owing to an erratum in the determining star in Phil. Trans. (see List of Errata), Auwers has given the place of this nebula for 1830 R.A. $9^h\ 12^m\ 39^s$; P.D. 39° 17′, instead of $9^h\ 6^m\ 29^s$; 47° 20′.

1791, 1794 h. 577; h. 578. Not seen by Lord Rosse in one observation. (See next note.)

1792 D'Arrest 62. This nebula must surely be variable, as it is inconceivable else that it should not have been seen by h., when h. 578, to which it is almost close, was observed and its place taken. D'Arrest says, "Fugerat Herschelium necnon me anno 1862." Neither of the three (Nos. 1791, 1792, 1794) were seen by Lord Rosse. Sweep 59 (h.) and the reductions re-examined. Found all clearly written and all correct.

1804 to 1815, 1817, 1818, 1821 h. 581, 582; 581, *a*, *b*, *c*, *d*, 582, *a*, *b*, *c*, *d*, *e*, *f*, *g*; D'Arr. 63. Of this very complex group of 15 nebulæ or "knots" (as they are called by Lord Rosse), six have been determined from his diagram, and six more by the aid of notes subsequently furnished me from the records of the observatory at Birr Castle, containing differences of R.A. and P.D. from one or other of the former. These

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are indicated by the letters MS. attached in the column of descriptions. The others I identify as follows:—

α	(in Lord R.'s diagram)	is No.	1813=582, *c*.
β	,,	,,	1812=582, *b*.
γ	,,	,,	1811=h. 582.
δ	,,	,,	1806=h. 581.
ε	,,	,,	1815=582, *e*.
ζ	,,	,,	1821=582, *g*.

One of those for which no data are given must have been D'Arr. 63, and the two remaining ones are included under the entries Nos. 1817, 1818 as 582, *f*.

1832 h. 590. Not seen by Lord Rosse; once looked for. Re-examined the sweep and reductions. Found all correct.

1868 h. 3171. In the omitted observations of nebulæ in the last page of the C.G.H. observations, *for* h. 3170 *read* h. 3171; and this observation, combined with the two in the body of the work, gives the mean result for 1830 employed to deduce the place in the present Catalogue.

1911 h. 3185=III. 289. In consequence of a misprint in P.T. (see List of Errata), the P.D. of Auwers is 5′ too small. Corrected by this, his place agrees well with my observation.

1953 M. 81 ??— A nebula observed by W.H. as described, but differing most materially in place from M. 81. It would certainly be very extraordinary should *three* nebulæ so extremely remarkable as M. 81 and 82 and this be found to lie so near together.

1959 } h. 3198, 3202 are distinct nebulæ, and were observed consecutively in one and
1962 } the same sweep—sw. 561 (h.).

1960 } h. 3199 and 3201 are also distinct nebulæ, and were observed consecutively in
1961 } sweep 562 (h.).

1974 III. 293. M. Auwers makes the place of this nebula $9^h\ 24^m\ 4^s$; 66° 30′ (1830), instead of $9^h\ 48^m\ 48^s$; 60° 13′. The cause of the error is an erratum (see List) in P.T., where the determining star is set down as 23 Leonis instead of 23 Leonis Minoris, another of the instances of confusion arising from the use of this silly and barbarous nomenclature.

2014 h. 669=III. 65. Not seen by Lord Rosse in one observation. It was found by h. in its place *per* working list.

2019 h. 672. Not seen by Lord Rosse in one observation. Examined the sweep and reductions, and found all correct.

2043 h. 250. This nebula is so very close to the North Pole, that its place cannot be calculated by a precession proportional to the time in the usual approximate mode, the R.A. changing from year to year with extreme rapidity.

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2054, 2055, 2057, 2058, 2061 In Lord Rosse's diagram, α=No. 2058=h. 692=II. 44; β=No. 2061=h. 693 =II. 45; γ=No. 2055=692, *b*; δ=No. 2054=D'Arr. 61; ε=No. 2057=692, *c*, not lettered in the diagram.

2088, 2089 II. 28, 29. Both D'Arrest and Secchi agree in placing this double nebula more to the south than W.H. by 15′±, and D'Arrest supposes the P.D. to have been misread to that extent. As so great a proper motion is most improbable, and the identity is indisputable, I have adopted this supposition and made the necessary correction.

2094 h. 706. Not seen by Lord Rosse in 6 observations. Re-examined the record of the original obs. Sweep 115 (h.), No. 68, and the reductions. The entries are all clear and perfectly legible. Reduction in P.D. correct; reduction in R.A. erroneous by $-0^m\ 26^s{\cdot}6$. This, however, could not have caused its non-observation by R. This then was a comet, or is a lost nebula. The error of reduction is corrected in the present Catalogue.

2111 III. 316. C.H.'s reduction of this nebula being affected with a considerable error, Auwers's R.A. is adopted, after verification.

2144 h. 3276. Place approximate, by equatoreal zone review.

2189 h. 745=V. 52. Not seen by Lord Rosse when once looked for (see note on No. 132, &c.).

2192 h. 3294. The minute in R.A. doubtful.

2197 h. 3295. The great nebula about η Argus. According to a letter from Mr. Eyre B. Powell of Madras, a most extraordinary change has taken place in this nebula since my figure of it was delineated. He states that the southern end of the curious oval vacuity close to the great star, which was *decidedly closed* when I depicted it, is now *decidedly* open. Should this be established, it will be the most extraordinary fact that has yet appeared in the history of a nebula.

2201 h. 754=II. 99. M. D'Arrest found this nebula in the Leipzig refractor, bright enough to be ranked in the first class. And it is marked as "very bright" in this Catalogue by a mean of 5 observations. It must have been ill seen in the earlier observation when classed as II.

2231, 2234 IV. 6=II. 131 and h. 777=III. 88. I adopt, on due consideration, the opinion of Auwers, that III. 88 and II. 131 are not the same. Their having been successively observed in the same sweep is decisive. Also, that IV. 6 is not III. 88, but in reality identical with II. 131. The descriptions are made out in conformity with this.

2233, 2236 I. 118 and h. 779. The degree of P.D. is probably mistaken in I. 118. Marth, according to Auw., suggests that the determining star 46 Ursæ (which though

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not so called in B.A.C., is doubtless No. 3741 of that catalogue) was mistaken, and should have been called 46 Leonis minoris. Consulting the original sweep (sw. 487, H.), I find this surmise *not* corroborated; for the nebula, when reduced by the star next preceding it (37 Leonis minoris), gives the same Polar distance, and, within a few seconds, the same R.A. But there is some faint indication of the figure 6 in the reading of the Polar distance piece 56° 55′ having been written over a 7, which would have thrown the nebula somewhat below the southern limit of the sweep, and might have caused a suspicion of error at the time. I found no nebula in the catalogued place in my sweep No. 337 (h.), so that the probability of an erroneous degree is strengthened. At the same time, it is not impossible that this nebula may be identical with No. 2236=h. 779, the mistake in the degree lying the other way.

2238 h. 780=I. 172. h., in Ph.Tr., suggests that this nebula may have moved. There is, however, no ground for this supposition, as its place agrees quite remarkably with that brought up from C.H. But query if the double star have not moved, since one of the observations places it "in the middle," and a subsequent one makes the southern extremity of the nebula touch the large star of the double star.

2276 h. 806=II. 101. Found to rank as a first-class nebula by M. D'Arrest with the 4½-in. Leipzig refractor. In this Catalogue it stands described as "very Bright," by a mean of 4 observations. See remark in note 2201.

2310 h. 823=III. 111. There is a strange amount of discordance between the observed and reduced places of this nebula. Auwers makes the P.D. for 1830=84° 29′. C.H. has reduced the single observation of W.H. by two stars 84, τ Leonis and 349 Bode Leonis, and her results differ by 10′; τ, which gives the greater, being stated to be "too far distant in P.D." The several results stand thus:—

P.D. 1830, by Auwers	84°	29′
,, by τ Leonis (C.H.) . . .	84	20
,, by h. obs.	84	15
,, by 349 B. Leonis (C.H.) . .	84	9½

My observed P.D. is nearly a mean between those of C.H.

2315 h. 828=II. 42. Not seen by Lord Rosse when once looked for (see notes on No. 132, &c.).

2319 h. 829=III. 351. The observations of this nebula, which are numerous, disagree so very remarkably in the particular of brightness, that a considerable suspicion of variability exists.

2373 h. 854=M. 65. There is a misprint, 45° for 75° np to sf, in the position of extension in my Catalogue of 1833. The diagram in the original sweep also corroborates this, as does also the figure (fig. 53) accompanying that Catalogue.

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W.H. twice says mE in merid. (180°)—h.'s position 75° np to sf=165°; a mean of those of Winnecke and Auwers =172°.

2377 h. 857, h. 875; M. 66. No doubt these are the same. fig. 54 P.T. 1833 corroborates their identity. The accompanying stars and their positions agree entirely. The R.A. of h. 875, however, requires to be corrected by -3^m, allowing the seconds and the P.D. observed in that observation their weight.

2382 II. 30. Auwers deduces his R.A. for 1830 ($11^h\ 12^m\ 21^s$) from the statement in P.T. "following 68, δ Leonis, $6^m\ 30^s$." C.H. from the same data concludes R.A. $11^h\ 11^m\ 31^s$ (also for 1830). The latter is (within 2^s) the correct result.

2388 h. 867=h. 861? These are very probably the same. But as, after all, the difference of the observed R.A.'s is sufficient to have allowed one to escape while observing the other, so that they *may* be different, and as moreover one is described as "Round," and the other as "extended," both are retained.

2405 h. 882=I. 20. This nebula would seem to have decreased in brightness. The bright * is 1341. A.S.C.

2411 h. 886=I. 131. Ranked by M. D'Arrest in the second class with the $4\frac{1}{2}$-inch Leipzig telescope. In this Catalogue it stands as "pretty Bright" from a mean of three observations.

2417 III. 112. Auwers has reduced this nebula by the star given in P.T. φ, 74 Leonis. But I find a MS. note that this star was not dependable, and that Mayer's No. 510 is the proper determining star. The nebula was subsequently looked for and found, not in the place given by φ, but 8′ from the P.D. concluded from Mayer 510. A mean of these two determinations is therefore used in this Catalogue.

2440 h. 907=III. 353. Auwers doubts the identity of these nebulæ. But this is in consequence of a misprint in P.T. (see List of Errata), 53^m for 43^m. The error is found also in the Register Sheet (H. 937), but C.H. has avoided it and used 43^m in her reduction so as to give a R.A. agreeing within 35^s with that of h. 907.

2461 h. 918=II. 784. Lord Rosse, in his observation of this nebula, mentions "another brush-like, 20′ np." This was no doubt II. 783=No. 2454.

2501 h. 945=I. 94. W.H. makes this nebula by one observation extended, n to s, by another nf to sp, while h. has two observations agreeing in making it extended in the parallel. Surely it does not rotate?

2540 h. 967. 1^m added to the R.A. It is evidently the first of the group of 4.

2577 III. 113. This nebula is reduced also in Auwers's catalogue by φ Leonis, the star set down in P.T. But C.H. remarks that φ was above the sweep, and otherwise observed under unfavourable circumstances, and Mayer's 510 zod. star. s. 0° 31 is preferred, which gives a result differing by +24′ in P.D. and -48^s in R.A. The place adopted in the present Catalogue is in conformity with this remark. (See note on No. 2417.)

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2591 h. 1000=III. 616. The star 6m, 5′ n only noticed by W.H. The other 7m, f in the parallel only by h. Are there really two stars? and are they both variable?

2597 h. 1002=I. 203. Auwers, in consequence of an erratum in P.T. (see List of Errata), makes the R.A. of this nebula 7^m too small. The error is corrected in the Register (H. 1889) and in C.H.'s reduction.

2604 h. 1009=I. 202. The same misprint in P.T. mentioned in the last note on h. 2597 has also vitiated M. Auwers's R.A. of this nebula. It is corrected in the Register Sheet (H. 1886) and in C.H.

2608 h. 1013=III. 381. I adopt Mr. Marth's identification of these nebulæ. The place of III. 381 in the catalogue of C.H., from which my working lists were made out, is vitiated by some great mistake. The P.D. is supposed to be derived from 1 Comæ, the neb. being 1° 12′ south of the star. This, however, would give 68° 9′ 29″ for 1830 instead of 65° 45′ 0″, that brought up from C.H.

2650 h. 1039. This cannot be identical with h. 1036, and its brightness precludes its being accepted as III. 354. But there is extreme uncertainty as to its P.D. The degree may even be wrong.

2652 h. 1041=II. 733. According to W.H. the position of extension is "near the meridian." If *meridian* be not a mistake for *parallel* it has changed. h. has a measure 62°·3, and an estimation 65° in another observation.

2653 h. 1042. This cannot be III. 3, as C.H. has reduced two obs. of this latter well agreeing, and giving a R.A. 2^m exceeding that of h. 1042, which also rests on 2 obs. of h.

2668 h. 1050=I. 253. The difference of descriptions is extraordinary, so that they seem hardly to pertain to the same object; but the places agree.

2683, 2684, 2685, 2686, 2689, 2690, 2693, 2694, 2697, 2699, 2701, 2702 h. 1062, 3, 4, 5, 7, 8, 1070, 1, 3, 5, III. 391, 2, 3, 4, 5, 6. The places set down for the nebulæ of this extensive group are made out by a most careful consideration of all the observations and records in the sweeping books which seem irreconcileable with a group of six nebulæ only. The group, however, needs a thorough re-examination.

2730 II. 14. Owing to an erratum in P.T. (see List of Errata) Auwers gives quite an erroneous place for this nebula (11^h 39^m 27^s R.A., 81° 9′ P.D. 1830).

2747 h. 1103=III. 814. Auwers suspects some error of the press, since his P.D. for 1830 comes out 36° 58′, while that of h. 1103 is 35° 56′. There is, however,

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no error, either of printing, registry, or reduction in any part of the older work. The determining star is rightly set down as 5 Canum, whose P.D. for 1800 (the epoch of C.H.'s catalogue) is 37° 19′ 42″, and III. 814 is declared to be 1° 32′ north of it, so that 35° 48′, the P.D. of C.H., is correct, and reduced to 1830 (=35° 58′) agrees with my place within 2′. Neither is there any error of the press or of reduction, or any apparent mistake of a clerical nature in all the process of h. 1103, and the nebula observed is set down *in* the sweeping book (of course from the working list) *as* III. 814. I consider their identity therefore as fully established.

2771, 2773 h. 1211=II. 372. H. says, the most northerly of the pair II. 372, III. 360 the largest: h., "by diagram," makes the following nebula, III. 360=No. 2773, the larger of the two.

2814 II. 109. The reductions of the sweep 187 (H.) in which this occurs are somewhat precarious, and in C.H.'s revision of the sweep the Δ. P.D. from 6 Comæ is set down at 1° 50′, that in the P.T. at 1° 54′ (these changes are never made without good reason), and this accounts for 4′ out of the 5′ difference between her P.D. and that of M. Auwers.

2846 III. 535. In a sweep two years subsequent to the obs. of this nebula by H. it was looked for again but not found. ? if a comet.

2849 D'Arr. 89. M. D'Arrest makes mention in a letter which he has done me the honour to address to me, of a nebula having the same R.A. as this, but a P.D. (1860)=83° 46′ 42″. He does not include it in his final list. It should, however, be looked for.

2852, 2856, 2857, 2862, 2865, 2869 h. 1183, 7, 9, 1190, 4; II. 568, 9, 570, 1, 2, 3. There cannot be a doubt that II. 568, 569, 570, 571, are in 82° P.D., and II. 572, 3, in 83°. It is equally certain that h. 1183, 1189, 1190, 1194 are in 83°. They were observed in two distinct sweeps (sw. 111 and 238); I observed also II. 572 in sw. 238, and III. 573 in sw. 250. There must be a set of nebulæ, at least 8 in number, hereabouts. N.B. W.H. makes II. 568, 569, 570, 571, 34′ n. of 11 Virginis. If n. be a mistake for s, these agree with h. 1187, 1189, 1190, 1194.

2855 h. 1186=I. 90=II. 322. Marth's conjecture is right (see Auwers's note on I. 90) as regards II. 322, but not so his conclusion that II. 322=II. 377.

2878 h. 1202=I. 139=M. 61. Discovered by Oriani. N.B. The first discoverers of the nebulæ in Messier's list, when not Messier himself, are mentioned by M. Auwers in his catalogue of those nebulæ (pp. 66–71), except in the cases of Oriani's nebulæ, M. 14?, 18?, 35?, 61, 67.

2884 1202, *a*. Under h. 1196 and 1202, two nebulæ, unidentifiable, are described as companions, but there must be some great error in Lord Rosse's account of them, as the place of one is referred to a scarlet star "10′ south of a scarlet star R.A. 12^h 25′." Now h. 1202 is in R.A. 12^h 14^m. To afford a fair chance

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of reobserving them, the companion 10′ nf h. 1202 is entered here as 1202, *a*, and that south of the scarlet star, under No. 3060 as 1196, *a*.

2892 D'Arr. 90. "Reperta a me Mart. 4, 1862. Eandem reperit Schönfeldus, April 1, 1862. Vide Comptes Rendus, &c."

2951 II. 87. This *may* be h. 1240, but 7′ in P.D. is a large error.

2961 h. 1253=M. 86. The nebula of Lord Rosse 14′ sp this is no doubt II. 168.

2976 h. 1261=III. 492. III. 492 was looked for April 11, 1787, by W.H. in the place assigned to it, but was not seen. Auwers, however, makes it identical with h. 1261. Yet the descriptions are radically different, and after all there may be another nebula, the real III. 492, in the neighbourhood.

2992} R. novæ. 1274, *a*; 1275, *a*. Of the eleven "knots" seen by Lord Rosse in this
2995} place these two are the only really "novæ." The other 9 were h. 1237, 1244, 1250 (1 & 2), 1253, 1259, 1274, 1275, and Auw. N. 30, numbered in this Catalogue 2931, 2949, 2955, 2956, 2961, 2965, 2974, 2991, 2994. h. 1203, numbered by Lord Rosse as one of the group, seems too far remote in R.A. to have been seen on that occasion.

2999 h. 1279=II. 156. H. says "F;" h. "vB." The latter preferred, since F might arise from fog or haze.

3003 h. 1282. II. 56 and II. 90. Both II. 56 and II. 90 were seen in one sweep, March 1, 1784, at 1^m interval of time (by the same star, 25 Comæ), II. 56 being 1′ more north, and II. 90 3′ more south than the star. This is a case of positive disappearance, for in sweep 334 (h.) the neighbourhood was carefully examined and only one nebula found.

3008 I. 23. By ϱ Virginis, sw. 174; n. 1° 31′; ∴ P.D. (1830) 77° 18′ 29″. By 34 Virginis in sw. 199, s. 0° 19′, whence P.D.=77° 25′ 33″, mean 77° 22′. Auwers makes it 77° 16′. This nebula is placed in the 2nd class by M. D'Arrest as seen with the Leipzig refractor. In this Catalogue it is set down from a mean of two observations, as "pretty bright."

3011 h. 1289=II. 212=II. 750. The two nebulæ so designated were not observed by H. in one sweep, and are, no doubt, identical.

3013 h. 1290=II. 122=II. 174. These two nebulæ of the 2nd class were also not observed by H. in the same sweep, and are presumed to be identical, as the places agree.

3021 h. 1294=M. 49. Discovered by Oriani in 1771.

3026 h. 1295=II. 117=II. 629. The same remark applies as in the notes on Nos. 3011, 3013.

3029 II. 116. Not seen by D'Arrest.

3043 h. 1307=I. 83. Not found by Lord Rosse when once looked for. There can be no doubt, however, of its existence in or near this place.

3060 1196, *a*=R. nova. See note on No. 2884.

No.

3075 h. 1329=I. 31=I. 38. H. describes I. 31 as "between two bright stars." The places differ 15′ in P.D.; h. describes I. 38 (the place well agreeing with that of H.) in one observation as having a large star f, and in two others as having a star 9m, p; that is, in effect, as lying between two bright stars. N.B. The star used for I. 31 is 31 *d* 1 Virginis, and for I. 38, 32 *d* 2 Virginis. The declination of 31 *d* 1 is 30′ wrong in A.S.C. (No. 1469). In B.A.C. it is right. The P.D.'s of the two nebulæ of H. differ, as already remarked, by 15′. The R.A.'s agree. They must be identical with a mistake of 15′ in I. 31. D'Arrest says he is sure there are not two nebulæ here.

3078 III. 26. Place as per C.H., $12^h\ 25^m\ 32^s$, 68° 32′ for 1830; as per Auwers, $12^h\ 25^m\ 40^s$, 68° 47′ (see List of Errata). The correction of the place in P.T. is not, properly speaking, an erratum, but the substitution of a good observation for a bad one. In the obs. sw. 177 (H.), where 20 Comæ was used as the determining star, the place is given only by description. In a sweep long subsequent (sw. 944) it was compared with 26 Comæ in the regular form of observation, and this is of course to be preferred. Auwers's place is deduced from the earlier, and that of C.H. from the later observation, rejecting the other.

3079 h. 1322=8 Canum. This very remarkable object occurs among the list of those observed by Lord Rosse in his paper in P.T. 1861, but without a word of remark or description; and it does *not* occur among his list of nebulosities looked for but not perceived. Surely it might be inferred from this that the nebulosity surrounding the star *was* seen, or its absence would have been noticed, as in the instance of 55 Andromedæ. Yet Mr. Lassell saw no nebulosity about 8 Canum.

3097 h. 1348=M. 89. Lord Rosse has h. 1343 and 1348, and in his account of them says, "two others, about 20′ s. of 1348;" one of these must have been h. 1343, and the other h. 1349.

3103 h. 1353=I. 119. This nebula was barely perceptible, with straining the attention, by M. D'Arrest with the 4½-inch Leipzig refractor. It is described in this Catalogue as "considerably bright" by two observations.

3108, 3109 h. 1358, 1359, 1363=IV. 8, 9. The obs. of 1363 in my Catalogue of 1833, in which the R.A. is uncertain, undoubtedly refers to the same very remarkable double nebula, IV. 8, 9. D'Arrest is sure that there is no other double nebula in this neighbourhood.

3111 M. 90. The place is from two observations by W.H., as also the description.

3127 h. 1374=I. 273. The descriptions of H. differ so much that it is not impossible there may be another bright nebula near this place.

3138 h. 1379=II. 577. Two diagrams by h. in sweeps 141, 143, agreeing, represent this nebula as making a considerably acute-angled, nearly isosceles triangle with

No.

two following stars. H. says, "Between two Bright stars, making a triangle with them." No one now, looking at those diagrams, would call the situation of the nebula between the stars. A suspicion of proper motion arises in such a case.

3148 h. 1384=II. 148. In my Catalogue of 1833 this nebula is identified with II. 20, and in the Register Sheets (H. 320), under the head of II. 148, there is a memorandum, "Probably the same as II. 20 (H. 47)." But on examining all the observations of both nebulæ, I arrive at the conclusion that they are different, II. 20 being nearly 2^m later in R.A.

3170 h. 1401. Query if not =II. 38, with one degree mistaken in P.D.

3174 See note on 3148, above.

3177 } 3179 } 3206 } 3216 } 3224 } h. 1406, 1407=II. 794 (1 & 2), III. 778; h. 1428, 1435=II. 795, 796. Auwers remarks, and justly, on the great apparent discordance of the observations of h. and his places of II. 794, 5, 6, and those of W.H. The fact is that the places of these in the P.T. all rest on comparisons with ε Ursæ in sweeps 921 and 1001 (H.); and the observation of that star has been erroneous or mistaken in sw. 921 by about 11′ in P.D., as appears from an obs. of 73 Ursæ in the same sweep. The nebulæ affected by this error are those here enumerated, and it requires very careful consideration to disentangle all the observations of each nebula by both stars, and to decide on their identities. My final conclusions are,—1st, that in these sweeps two distinct nebulæ, II. 794, 1 and II. 794, 2, were observed, and confounded together under one number (=H. 2079 register). These are my h. 1406, 1407. 2ndly, that h. 1407 and III. 778, II. 795, 796 are correctly determined in sw. 1001 (H.). 3rdly, that in sw. 921 (H.) the nebula set down as II. 794 was not the same as that called II. 794 in the reduction of sw. 1001; *i. e.* that it was in fact h. 1406, and that in this observation there is also an error of 6′ in P.D., or that, if not, there must be still another nebula in P.D. 33° 54′ (1860). Finally, that the place of III. 778 given in Phil. Tr., which is affected by the same *general* cause of error, requires a correction of +9′ in P.D.

3180 h. 1405=III. 44. This is the companion of M. 60, and is placed by M. D'Arrest in the first class, even with the $4\frac{1}{2}$-inch Leipzig refractor. Perhaps the very superior light of M. 60 may have led both H. and h. to under-estimate that of its, anyhow, much fainter companion.

3189 } 3190 } h. 1414, 1415=I. 176, 177. These two, according to Lord Rosse, are connected by faint nebulosity.

3206 III. 778. See note on 3174.

3214 h. 1426=II. 181. Auwers points out a discordance of 19′ in P.D. between my observation and that of II. 181. This is owing mainly, however, to a misprint in Phil. Trans. (See List of Errata.)

No.

3216
3224 } II. 795, 796. See note on 3174.

3228 I. 8=III. 6. The later of these nebulæ is expressly stated in the register (H. 38) to be of the 1st class, though set down (it does not appear why) in the 3rd.

3254 h. 1452=I. 41. The case of this nebula is a very odd one. H. has two observations of it. One on April 5, 1784, where it is described as a "L; B; r neb; sbM; iR Fig; Class I." Another on March 3, 1789, calls it "pB; cL; i Fig; er. Many of the st. visible." So that it may be called a cluster. Both the places of H. and that of h. agree so well, that the object in all must have been the same. Here seems evidence of change.

3256 h. 1453=II. 73. Contradictory descriptions, and possibly two nebulæ differing 1^m in R.A.

3311 h. 1480=I. 141. Query if not changed. h.'s observations are positive as to the clearness of the sky. But query as to the state of the speculum.

3319 h. 1485=II. 384. Not seen by Lord Rosse in two observations (hazy).

3337
3338
3358
3420
3483 } h. 1497=I. 68; II. 299; h. 1511=I. 69; h. 1536=II. 301; h. 1574=III. 382. Auwers finds 5′ Δ.P.D. between H. I. 68 and h. 1497. His place is from P.T. 53 Virginis n. 1° 4′, whereas C.H. in her reductions uses n. 1° 11′, and my observations of this and the other nebulæ in this list justify the departure. I subjoin her note on this nebula (in zone 103° C.H.):—

"I. 68, I. 69, III. 282 are each 7′ more north than they are given in the "printed Catalogue. The disagreement is the result of the recalculation, and "is probably owing to my attempting more accuracy in valuing the 'numbers "'to a degree,' &c. &c." (*i. e.* in the index reductions of the Polar distance readings which were parts of an arbitrary scale). And in the next zone (104° C.H.) occurs,

"II. 299 and II. 301 require the same memorandum." In point of fact, comparing my own observations with those reduced by M. Auwers, the differences, as stated by him, run thus:

I. 68 . . . Δ.P.D. H−h=	+5′
I. 69	+7′
III. 282	+7′
II. 299	——
II. 301	+6′

so that in each case, where I have observed the object, the alteration is justified. This is only one out of the innumerable instances of painstaking and laborious scrutiny bestowed by her upon these reductions which have occurred to me in the collation of her zone catalogue with the original observations and with my own results.

3356 h. 1509=I. 143. Auwers places this nebula 1° 13′ too much to the south in consequence of an erratum in P.T. (see List of Errata).

No.

3358 See note on 3337.

3363 V. 3. Auwers makes the R.A. of this neb. for 1830 $13^h\ 2^m\ 31^s$, which is 10^m too great. The P.T., which in this instance is correct, makes it follow 75 Leonis $1^h\ 44^m$.

3393 h. 1527. This is not impossibly III. 937, but as both R.A.'s and P.D.'s differ very much, they *may* be different, and are therefore separately stated.

3415 h. 1535. Not seen by Lord Rosse in one observation; clouds passing h. has two observations, both agreeing well.

3420 See note on No. 3337.

3421 II. 185. Auwers, misled by an error in P.T. (see List of Errata), makes the R.A. of this neb. too small by 10^m.

3426 Auw. N. 31. Not visible in the Königsberg Heliometer.

3483 See note on No. 3337.

3506 II. 22. P.D. extremely doubtful.

3512 II. 826. Place re-reduced by the star used by H. and A.S.C.

3527 h. 1597=II. 314. Auwers makes Δ.R.A. H.—h.=+107^s, and remarks that there is perhaps some error in P.T. This is the case (see List of Errata), and with the correction there indicated the agreement is satisfactory.

3550 D'Arr. 94. D'Arrest says "not found again, Feb. 19, 1863. Sky perfectly clear. Perhaps a comet."

3588 h. 1633=III. 926. H. says it is sp a considerable star. h. has "a *9m with a very dilute nebulous atmosphere." Has the star or the nebula moved?

3650 III. 946. Auwers makes the declination +89° 17′, a misprint for +80° 17′.

3662 h. 1674=I. 255. Evidently ill seen by h. The description of H. preferred.

3664, 3668 h. 1676, 1679=III. 422, 423. Auwers makes the P.D. 12′ too great by reason of an erratum in P.T. (see List of Errata).

3728 h. 1720=III. 666. Auwers finding Δ.R.A. H.—h.=+52^s, supposes a mistake of 1^m. Examined sweep 146 (h.), and found all clearly written and right reduced.

3750, 3751 h. 1734, 1735=II. 309, 310. H. says the second is the larger, h. the smaller of the two.

3760, 3762, 3763, 3764, 3766, 3767, 3770, 3771, 3773, 3774 h. 1744=M. 101, and its attendants in more or less intimate nebulous connexion. Of those in Lord Rosse's woodcut, P.T. 1861, p. 729, N, the principal nucleus, is No. 3770=h. 1774; n_1=No. 3774=1744, i; n_2 No. 3773=1744, h. The others are not lettered, and are made out from the joint evidence of this diagram and the measures of position and distance of the stars compared with the copper plate, fig. 35.—1744, *a* is not improbably=III. 787.

No.

3820 h. 1763=III. 804=III. 835. The identity of these nebulæ rests on a memorandum in MS. in my copy of Ph. Tr., supported by the reductions of all the obs. by C.H. in 3 sweeps, each with two determining stars. Auwers makes them differ by 14′ in P.D.

3836 III. 551. Place concluded from h. 1772=III. 552 from H.'s description, viz. that it precedes that nebula by 3′ or 4′ (3′ 30″)=14ˢ of time.

3844 h. 1777=III. 347. Auwers makes Δ.P.D.=−59′, but observes that there must be some misprint. Examining all, I find that such is the case (see List of Errata), which recognized, shows that 1° has been mistaken, and the identity is therefore proved.

3846 h. 1779=I. 144. Auwers makes the P.D. (1830)=86° 30′, and H.—h.=1° 14′. The cause of the discordance is a misprint in P.T. (see List of Errata), in consequence of which the nebula is 1° 13′ north of its printed place.

3858, 3859, 3860 h. 1789, 1788, 1791=III. 416, 417. Lord Rosse says that of these three only two were found. The obs. in sw. 28 re-examined—1789 and 1791 were both observed. Moreover, in sw. 337, III. 417=h. 1791 and h. 1788 were both observed, and 1791 is expressly stated to have been the sf of two seen in moonlight. Now the np of these could not be h. 1789, which is eF and not north, but south preceding, whereas h. 1788 by its place in sw. 338 is np. All three, therefore, really *existed* at the date of these observations. It was h. 1789 (eF) which escaped Lord Rosse's notice, though looked for with greater instrumental power. Perhaps it may have changed.

3863 III. 135. Auwers's P.D. for 1830 is 63° 0′. C.H. reduced to 1830 gives 62° 50′ 20″. Auwers has used (P.T.) 1° 5′ n. of *d*, 12 Bootis; C.H. 1° 16′ n. of the same ✱. C.H. is to be preferred on every account to P.T. Her Δ.P.D.'s are grounded on a most complete and searching re-examination and recomputation (*according to the then existing star catalogues*) of all the data (in the earlier sweeps most obscure—*foliis sibyllinis obscuriora*) for determining the degrees and minutes of P.D. from the index numbers. In almost every case I find her corrections (or rather interpretations) to be justified; and I have no doubt that in this particular instance such will prove the case, though *here* I confess myself, after consulting the original sweep, unable to perceive the reason for the deviation.

3888 III. 319. Auwers, following P.T., which places the nebula 2° 26′ north of β Ursæ min., makes the P.D. 1830 =12° 46′, and so it stands in the Register sheet (H. 864). But it should be 2° 26′ *south*. So C.H. has used it, and so it proves to be on reference to the original sweep, sw. 391 (H.), giving for the P.D. 17° 36′ 12″.

3920 h. 1832=II. 695. Not seen by Lord Rosse in one observation. See note on No. 132.

3922 h. 3573=Δ. 342. In Auwers's list of Lacaille's nebulæ, he sets down for the

No.

declination of this −55° 58′·8. *For* 58′·8 *read* 48′·8, if it be the same object, but of that some doubt remains.

3967 VI. 8. Auwers, using χ Virginis, the determining star in P.T., places this cluster in R.A. $14^h\ 53^m\ 37^s$ (1830), 99° 55′ P.D. This, however, is declared by a subsequent MS. note to be a mistake for Mayer's 577 zod. star, whence the place in this Catalogue is accordingly derived. But this star, too, must have been mistaken, and on consulting the original sweep (sw. 209, H.) I find no star in the sweep whose identity can be satisfactorily ascertained. All that can be certainly affirmed is that, within a degree one way or the other in P.D., and from 5 to 10 minutes of time in R.A. of the place set down, there exists a fine cluster of the 6th class which should be looked for. Fortunately it is the only nebula observed in the sweep, a very short one.

3977 h. 1866=I. 184. Some suspicion of variability, inasmuch as one description calls it R, another E, and another mE, besides other indications in respect of brightness.

3998 III. 373. C.H., by three distinct observations in three different sweeps (400, 730, 917, H.) from the same determining star 11 Libræ (s. 0° 13′, s. 0° 14′, and s. 0° 15′), deduces a P.D., which reduced to 1830=91° 49′ 39″. Auwers, using the same star, s. 0° 12′ as *per* P.T., places it in P.D. 91° 17′, which, however, is probably a misprint for 91° 47′. Two of H.'s observations place the small star *south*, and one *north* of the nebula.

3999 h. 1881=II. 576. The binuclear character verified by R, who says that it is a close double nebula.

4016 h. 1892=III. 131. Query if not variable in brightness. H. in two observations calls it F and cB; h., in two others, vF and eF.

4025, 4029 } II. 756=h. 1898?. In the two observations by H. of II. 756 it is described as

cF; pL; iF; r;
pB; s; E;

and no mention is made of a double star near it, so that though the places agree within the *possible* limits of discordance, they are most probably two distinct nebulæ.

4043, 4044 } 1901, *a*. Two of six seen by Lord Rosse. The others must have been h. 1901, h. 1902, II. 541 and III. 511.

4048, 4049 } III. 886, 887. Auwers has made an error of −12′ in the declination, or +12′ in the P.D. of this double nebula as determined from P.T. (20′ n. of 7 Serpentis). The P.D. here set down is that correctly reduced, C.H. having on her part committed an error of +2′ in P.D.

4051 h. 1905=II. 751. In Auwers's declination, *for* +20° 44′ *read* +20° 14′, an evident misprint.

4065 II. 818. Owing to an erroneous designation of the determining star in P.T. (see

No.

List of Errata), Auwers has given the place of this nebula (1830) as R.A. $14^h\ 41^m\ 3^s$; Decl. $+60°\ 5'$.

4124 h. 1934, &c. In Lord Rosse's diagram of the group h. 1934, A, the most conspicuous, would naturally be selected as identical with that nebula, but in that case II. 766 would not be included in the group. On the other hand, if B be taken for h. 1934, the identifications will stand as follows:—A=No. 4131 =II. 766; B=No. 4128=h. 1934; C=No. 4127=1934, *b*; D=No. 4124 =1934, *a*. This, however, supposes an error of 45^s of R.A. in H.'s place of II. 766, which is not probable, while on the other hand it is difficult to account otherwise for its not having been noticed at all. All things considered, I have thought it best to enter A as a new nebula, No. 4133=1934, *c*, leaving 766 untouched.

4127

4128

4131

4133

4167 h. 1948=III. 74. Not seen by Lord Rosse, once looked for (see note on No. 132).

4173 h. 3624=M. 80. This is Pogson's globular cluster, with a variable star in the centre, for whose most singular history see the Monthly Notices of the R. Ast. Soc. xxi. pp. 32, 33, by Mr. Pogson. Mr. P. in that statement says that Sir J. Herschel (among others mentioned) had described it as either "cometary" or "nebulous." This is incorrect. In both my observations of this object it stands described as a globular cluster, *all completely resolved into stars.* (See C.G.H. h. 3624.)

4234 h. 1970=Σ. 5. D'Arrest calls this planetary nebula *blue.* The place used is a mean of his observations, that of h. (Catal. of 1833) being only Struve's roughly brought up. M. D'Arrest makes the diameter $=14''{\cdot}6$.

4247 III. 727. The comparison of the place here set down with that of Auwers is curious for the great number of perfectly accidental errors which have heaped themselves together. The place (C.H.) is rightly reduced by her from σ Herculis, f $16^m\ 11^s$; n $0'\ 14''$, which is that given in P.T., and which, reduced to 1830, gives for the R.A. $16^h\ 44^m\ 46^s{\cdot}8$ and for the P.D. $47°\ 58'\ 16''$, differing $+8^s{\cdot}8$ and $+11''$ from the exact result. In M. Auwers's catalogue it is entered thus: III. 127; R.A. $16^h\ 14^m\ 47^s$; Decl. $+43°\ 1'$ (corresponding to P.D. $46°\ 59'$). That is to say, there is a misprint *in each of the three particulars.* This is not to be taken as a specimen of M. Auwers's work, which is an admirable example of painstaking devotion, and far beyond any eulogy in my power to offer. But it is a striking instance of the way in which, in the great run of chances, unlucky coincidences will happen.

4259 h. 1974. Doubtful whether a nebula or a very faint double or triple star.

4294 M. 92 (= also Lalande No. 31544). Not observed by h., but 8 times by H. Place from Wollaston's catalogue, which is almost identical with Auwers (ΔR.A.$=0^s{\cdot}1$, ΔP.D.$=0'\ 3''$).

4302 h. 1981=h. 3686=IV. 11. The annular form only perceived in the southern

No.

observations. Both H. and h., in their northern observations, describe it as of equable light throughout. It appears from Lord Rosse's observations that the annular form is much more common among these "planetary" nebulæ than H. or h. had any idea of.

4364 h. 3723=II. 200. On a ground astonishingly rich.

4368 V. 13. P.D. by Auwers =113° 36′ (1830), owing to an error in P.T. (see List of Errata).

4372 h. 3726=Δ. 473. There is a singular statement respecting this cluster by Cacciatore in No. 113 of the Astronomische Nachrichten. He observed it as a nebula, he says, on the 19th of March, 1826 (of course, therefore, Dunlop has the priority in point of date). But *where* he saw it Lacaille, he says, noted his star 1483 (Cœlum Australe). Also, Piazzi in 1794 and 1801 in the same place saw only a star. Cacciatore in 1809 and 1810 observed the same star, but saw no nebula, only a star 9m following it (P. xvii. 341, 346). In looking for the comet of 1826, however, "fui colpito," he says, "da questa bella nebulosa." Unfortunately for this curious history, the place of Piazzi's star referred to (and which he identifies with 1483 C.A.) differs by no less than 18′ in P.D. from that of the nebula in question, which was therefore out of the field of view, both of his own and of Piazzi's telescope, when observing the star.

4390 h. 2000. Σ. 6. Omitted by Auwers from his catalogue of new nebulæ, which contains many far less remarkable. Diameter, according to D'Arrest, =7″·05. Bessel's place =h. +0ˢ·8, −0′ 22″.

4397 h. 2004=M. 24. H.'s two observations hardly consist with this description, and their deviation in R.A. of nearly 4ᵐ from Messier's place makes it very doubtful whether he really saw this object.

4411 M. 69. Piazzi, in a note on xviii. 122 of his catalogue, says that both M. 69 and M. 70 are 1° more to the south. But he is wrong.

4415 Auwers, N. 40. This is the nebula discovered by Tuttle on Sept. 1, 1859, and it would appear to be variable, for M. D'Arrest says (in a letter of May 8, 1863), "La nébuleuse de M. Tuttle (Astron. Nachr. No. 1337. p. 272) était, le 24 Sept. 1862, si brillante et si remarquable dans le chercheur (*grandis et præclara, ovalis, 2′ longa, 80″ lata*), que je suis persuadé qu'elle n'a pas été telle du temps de Messier et de votre père, et de vos propres observations. Voici la position que j'ai obtenue. 1861·0 R.A. 275° 55′·6, N.P.D.=15° 30′·1." The place given in the present Catalogue is that of M. Auwers, and differs somewhat, though not considerably, from this determination.

4428 M. 70. See the note on No. 4411.

4462 III. 742. This agrees too well with M. D'Arrest's place of his No. 113 not to be the same. His description is F; S; R; *10p 12′·6, s 2′ 30″.

4473 Auwers, N. 44. This is the nebula discovered by Mr. Hind on March 30, 1845.

No.

It was observed in May 1852 as a nebula of the first class; subsequently as "pretty faint and diluted." M. Auwers found it "surprisingly faint," and of the 2nd class at the highest.

4487 h. 2037=III. 743. This was seen as a planetary nebula in the twilight by M. D'Arrest with the $4\frac{1}{2}$-inch refractor, and can therefore hardly be ranked so low as Class III.

4536 h. 2062=III. 144. Not seen by Lord Rosse; once looked for. (See note on No. 132, &c.)

4570 h. 2073. Not seen by Lord Rosse; twice looked for. h. has three observations agreeing well. The object is an equivocal one.

4585 } h. 2081=I. 103. According to an observation of Olbers, cited by Auwers, this
4586 } is identical with No. 4585=I. 103, the place of the latter nebula, as assigned by H., being 20′ wrong in P.D. This had escaped my notice until the nebulæ in this Catalogue had been finally numbered and much other work accumulated on them; and it was considered better to let No. 4585 stand, though erroneous, than to hazard confusion by striking it out and altering all the subsequent numbering.

4618 h. 2093. In conformity with Mr. Mason's remarks on my observations of this nebula, and with his elaborate and excellent monograph of the great nebulous system of which it forms a part, I have diminished the P.D. in my Catalogue of 1833 by 1°. It is evident that the index reading must have been mistaken, 1° for 0°. Sweep 8 examined; the writing is clear and the reduction correct, but the conclusion from Mr. Mason's observations is irresistible.

4628 h. 2098=IV. 1. According to Lassell this is annular, an elliptic ring with a star in the centre.

4654 h. 2113. Not seen by Lord Rosse; twice looked for. Examined sw. 86 (h.), in which it was observed. All found apparently correct, the observation clearly written and right reduced: and it is added, "the double star" (h. 934 in my "3rd series of observations, &c. &c.," Mem. Ast. Soc. vol. iii.) "is a good guide." A diagram accompanying the observations, by indicating lines points out the relative situation of the double star and nebula.

4710 h. 2133. Not seen by Lord Rosse in four observations.

4714 h. 3897. Not found by Mr. Lassell within 30′ all round the place.

4723 h. 2137=III. 920. Not seen by Lord Rosse in one observation.

4756 h. 2148. Not seen by Lord Rosse in three observations. In one a cloud passing.

4775 h. 2156=III. 932. H. says, "just sf a S* to which it seems almost to be attached, but is free from it." h. says, "has a * 13m at a distance from the edge = 1 diameter by diagram." Sw. 274 (h.). This sweep re-examined. The diagram makes the star north of the nebula. The description says, "Diagram certainly right."

4816 2172, *a*. In this group Lord Rosse has given only measures of relative position,

No.

and none of distance; so that it is impossible to assign specific places to the individuals of which it consists. He speaks of five *near* to h. 2172. The diagram exhibits only four. One may possibly be III. 166.

4848 2184, *a*. In Lord Rosse's diagram of the group to which this belongs, α is h. 2183 = No. 4845; β = D'Arr. 117 = No. 4844; γ = h. 2184 = III. 217 = No. 4846; δ = D'Arr. 118 = No. 4847. That marked as 2184, *a* is not lettered in the diagram, and is "nova."

4892 h. 2205 = I. 55. Placed in the second class only by M. D'Arrest with the $4\frac{1}{2}$-inch Leipzig refractor. In this Catalogue it is set down as only "pretty Bright," from a mean of seven observations.

4894 h. 3971 = h. 3972. These are assuredly identical; but the minute of R.A. being doubtful, that of the earlier 3971 is preferred. The mean of the seconds and the Polar distances is taken, blending the two, and also the descriptions.

4922 h. 2223 = III. 222. Three times called by h. "pretty Bright," and three times by h. and H., eF; vF; eF. Is this a case of variability?

4933 h. 2228 = h. 3982 = I. 104. Placed in the second class by M. D'Arrest. With this the present Catalogue agrees; making it "pretty Faint" by a mean of three observations.

4941 D'Arr. Not included by M. D'Arrest in his final list; but there are four observations of it recorded in his "Resultate," all agreeing well.

4964 h. 2241 = IV. 18. According to Mr. Lassell this superb "planetary nebula" is *bi-annular*, consisting of a nucleus and *two oval rings*.

4966 h. 2242 = III. 226. Called by h. in four observations, pB; pB; pB; pB, and in two by H. eF; vF.

4980 h. 2250 = III. 213. Not seen by Lord Rosse in 4 observations. In my observations of sweep 103, a very short sweep, using the quadrant instead of the index arc, and with no good zero star, both R.A. and P.D. may be a good deal wrong. My place, however, agrees pretty well with that of H. (Δ.R.A. = 5^s, Δ.P.D. = $4'$), and the existence of a nebula as described, *hereabouts*, is certain, but it should be looked for within somewhat wider limits.

4998 h. 2261 = I. 110. H. has two observations in which this nebula is called cB; h. has one where it is called eF; adding "sky quite clear."

5003, 5004 h. 2263 = II. 208. These can hardly be the same. The R.A.'s differ by nearly 2^m and the P.D.'s by $6'$. The descriptions also disagree. 255°, the position of the star 14m in h. 2263, is not np but sp, and the estimates of their magnitudes differ materially.

5015 h. 2271 = III. 854. A very problematic object, and in which there is great difficulty in making out its nature. Stars and nebula oddly mixed.

5020, 5021, 5022 h. 2274 = II. 230; 2274, *a*; h. 2275 = II. 231. In Lord Rosse's diagram of this group, α = h. 2274; β = h. 2275; γ = nova = 2274, *a*. h. sweep 91 makes II. 230 the np of two, and II. 231 "to have II. 230, 45° sp." This is contradicted

No.

by the diagram. There is some confusion among the observations as to whether the two nebulæ II. 230, 231 really lie np or sp from each other, and it might be suspected that the P.D.'s had been read crossways, the R.A.'s being rightly set down; but Lord Rosse's diagram and measures decide the point in favour of the relative situation being here correctly given.

5051 h. 2302. Not seen by Lord Rosse in two observations. Examined the original observation, all clear and apparently correct. The nebula certainly exists in or very near the place here set down.

5061 2849, *a*. A nebula mentioned by M. D'Arrest, but not included in his MS. list of well-determined nebulæ. Should, however, be looked for.

References to Figures of Nebulæ in various works.

In the following list of figured nebulæ, the first column contains the current number of the nebula or cluster in the present Catalogue; the second the number attached to it in my Catalogues in P.T. 1833 and C.G.H.; or if not found in either of these, the class and number in my Father's Catalogues or other sufficient designation. The third contains an abbreviated reference to the publication in which the figure will be found, viz.—

P.T. 33. The volume of the Philosophical Transactions of the Royal Society for A.D. 1833.

P.T. 44. Ditto, Ditto, for 1844
P.T. 50. Ditto, Ditto, for 1850 } Lord Rosse's papers.
P.T. 61. Ditto, Ditto, for 1861

C.G.H. Results of astronomical observations at the Cape of Good Hope by J.F.W.H.

R. di. The woodcut diagrams in Lord Rosse's paper, Philosophical Transactions, 1861; such only being referred to as express some distinct peculiarity not elsewhere figured.

B.A.A. Professor Bond's Memoirs in vol. iii. N.S. of the Transactions of the American Academy of Arts and Sciences.

M.A.A. Mr. Mason's Memoirs in vol. vii. of the Transactions of the American Academy.

D'Arr. M. D'Arrest's Inaugural dissertation and description of the Copenhagen Equatoreal, 1861.

Lam. Dr. Lamont's "Oeffentliche Vorlesung über die Nebelflecken." München 1837.

Lass. Mr. Lassell's Memoirs in vol. xxiii. of the Transactions of the Royal Astronomical Society.

Column 4 contains the number of the Plate in the volume referred to where the figure will be found, and column 5 the number of the figure in that Plate.

The figures annexed to Mr. Dunlop's catalogue are not included, as for the main part they offer no resemblance to the objects figured (when identifiable), and would serve only

to mislead. The same remark applies to most of the older figures of nebulæ scattered through the volumes of the Histoire de l'Académie Française, and other collections. Of the older figures of the nebula in Orion, however, for curiosity's sake, a list is subjoined. The figures accompanying my Father's memoir in Philosophical Transactions, 1811, are also omitted. They do not profess to be resemblances, and are given rather as types of certain classes of objects into which he there considers the nebulæ to be distributable. At least they are made from very rude diagrams.

References to published figures of Nebulæ.

No. in Catalogue.	h. &c.	Work cited.	No. of plate.	No. of fig.
27	2315	C.G.H.	iv.	8
31	15	P.T. 61	xxv.	1
52	2322	C.G.H.	iii.	1
67	2327	C.G.H.	vi.	19
105	44	B.A.A.	opp. p. 86	
106	45	B.A.A.	Ditto.	
116	50	B.A.A.	Ditto.	
117	51	B.A.A.	Ditto.	
138	61	P.T. 33	vi.	52
169	2359	C.G.H.	v.	10
187	2370	C.G.H.	iv.	6
298	112	P.T. 33	v.	38
303	116	R. di.		
352	131	P.T. 50	xxxvi.	5
		P.T. 61	xxvi.	10
372	142	R. di.		
400	151	P.T. 33	vi.	58
412	156	P.T. 61	xxv.	2
527	218	P.T. 33	ii.	28
		R. di.		
544	223	D'Arr.	ii.	7
560	232	P.T. 61	xxv.	3
567	2487	C.G.H.	vi.	14
572	241	P.T. 61	xxv.	4
575	242	P.T. 33	vi.	56
		P.T. 61	xxv.	5
600	262	P.T. 61	xxv.	6
705	2534	C.G.H.	vi.	7
731	2552	C.G.H.	iv.	1
810	311	P.T. 33	ii.	31
		P.T. 61	xxv.	17
822	2620	C.G.H.	v.	11
823	2621	C.G.H.	v.	11
826	2618	D'Arr.	ii.	9
		Lass.	ii.	4
853	315	P.T. 61	xxv.	8
888	327	P.T. 61	xxv.	9
979	2709	C.G.H.	iii.	3
980	2710	C.G.H.	iii.	3
981	2711	C.G.H.	iii.	3
987	2716	C.G.H.	iii.	3
1057	2775	C.G.H.	vi.	1
1082	2802	C.G.H.	iii.	6
1084	2803	C.G.H.	iii.	6
1085	2804	C.G.H.	iii.	6
1086	2805	C.G.H.	iii.	6
1089	2808	C.G.H.	iii.	6
1090	2810	C.G.H.	iii.	6
1135	2840	C.G.H.	iii.	2
1137	255	P.T. 33	v.	49
1140	2842	C.G.H.	iii.	2
1141	2843	C.G.H.	iii.	2
1142	2844	C.G.H.	iii.	2
1143	2845	C.G.H.	iii.	2
1156	2859	C.G.H.	iv.	7
1157	357	P.T. 33	viii.	81
		P.T. 44	xix.	81
		R. di.		
		D'Arr.	ii.	4
		Lass.	ii.	1
1163	2864	C.G.H.	iv.	7
1164	2865	C.G.H.	iv.	7
1165	2866	C.G.H.	vi.	20
1168	2867	C.G.H.	vi.	20
1171	Δ. 136	C.G.H.	vi.	20
1171	2868	C.G.H.	vi.	20
1174	2872	C.G.H.	iv.	7
1175	2869	C.G.H.	vi.	20
1176	2875	C.G.H.	iv.	7
1177	2876	C.G.H.	iv.	7
1179	360	C.G.H.	viii.	1
		B.A.A.	opp. p. 96	
		Lass.	i.	1
		*	see note	
1180	V. 30	C.G.H.	ii.	3
1183	361	C.G.H.	ii.	3
		P.T. 50	xxxviii.	6
		Lass.	ii.	3
1185	M. 43	C.G.H.	viii.	1
		B.A.A.	opp. p. 96	
		Lass.	i.	1
		*	see note	
1225	365	D'Arr.	ii.	2
		Lass.	ii.	2
1226	iv. 24	D'Arr.	ii.	10
1233	2910	C.G.H.	iii.	5
1235	2913	C.G.H.	iii.	5
1238	2916	C.G.H.	iii.	5
1243	2918	C.G.H.	iii.	5
1248	2923	C.G.H.	iv.	9
1249	2925	C.G.H.	iv.	9
1258	2935	C.G.H.	iv.	9
1259	2933	C.G.H.	iv.	9
1260	2936	C.G.H.	iv.	9
1265	2938	C.G.H.	iv.	9
1266	2939	C.G.H.	iv.	9
1267	368	P.T. 33	iv.	36
		R. di.		
1269	2941	C.G.H.	ii.	4
1276	2948	C.G.H.	iii.	4
1277	2949	C.G.H.	iii.	4
1278	2950	C.G.H.	iii.	4
1279	2951	C.G.H.	iii.	4
1281	2952	C.G.H.	iii.	4
1282	2953	C.G.H.	iii.	4
1283	2954	C.G.H.	iii.	4
1419	390	R. di.		
1425	393	P.T. 61	xxvii.	11
1437	399	P.T. 33	vi.	64
		P.T. 50	xxxvii.	10
		Lass.	ii.	8

TABLE (continued).

No. in Catalogue.	h. &c.	Work cited.	No. of plate.	No. of fig.	
1467	415	P.T. 33	viii.	91	
1477	421	P.T. 61	xxvii.	12	
1511	3075	C.G.H.	iv.	4	
1519	444	P.T. 33	vii.	72	
		P.T. 50	xxxvii.	6	
1520	445	Lass.	ii.	9	
1521					
1532	450	P.T. 50	xxxviii.	15	
		Lass.	ii.	6	
1565	464	P.T. 50	xxxviii.	12	
	3093				
		Lass.	ii.	5	
1567	3095	Lass.	ii.	7	
1677	3131	C.G.H.	vi.	12	
1721	536	P.T. 33	vi.	61	
		Lam.	i.	8	
1728	537	P.T. 33	vi.	65	
1745	3145	C.G.H.	v.	12	
1801	3154	C.G.H.	v.	8	
1861	604	P.T. 33	vii.	70	
1863					
		P.T. 50	xxxvi.	3	
1911	639	P.T. 61	xxvii.	13	
2003	3221	C.G.H.	v.	9	
2017	3228	C.G.H.	vi.	9	
		Lass.	ii.	10	
2058	692	P.T. 61	xxvii.	14	
2063	3241	C.G.H.	vi.	2	
2067	3239	C.G.H.	iv.	3	
2102	3248	C.G.H.	vi.	5	
		Lass.	ii.	11	
2158	731	P.T. 33	v.	40	
2197	3295	C.G.H.	ix.	1	„ Argûs.
2216	765	P.T. 61	xxvii.	15	
2217	766	P.T. 61	xxvii.	15	
2333	3324	C.G.H.	iv.	10	
2336	3325	C.G.H.	iv.	10	
2337	3326	C.G.H.	iv.	10	
2338	3327	C.G.H.	iv.	10	
2340	3329	C.G.H.	iv.	10	
2342	3330	C.G.H.	iv.	10	
2343	838	P.T. 33	ii.	32	
		P.T. 50	xxxvii.	11	
2373	854	P.T. 33	vi.	53	
		P.T. 50	xxxvii.	7	
		Lam.	i.	6	
2377	857	P.T. 33	vi.	54	
	875				
		P.T. 61	xxvi.	16	
2378	859	P.T. 33	vi.	51	
2379	858	R. di.			
2445	910	R. di.			
2486	934	P.T. 33	vii.	79	
	3355				
2488	936	P.T. 33	vii.	79	
	3356				
2559	982	R. di.			
2597	1002	R. di.			
2606	1011	P.T. 61	xxvi.	17	
2652	1041	P.T. 50	xxxvii.	7	
2670	1052	P.T. 61	xxvi.	16	
2671	1053	P.T. 61	xxvi.	16	
2680	1061	P.T. 61	xxvii.	19	
2733	1092	R. di.			
2756	1111	P.T. 61	xxvii.	20	
2760	1113	P.T. 61	xxvii.	20	
2804	1146	P.T. 33	vii.	71	
2806	1148	P.T. 33	vi.	59	
2807	1149	P.T. 50	xxxvii.	8	
2838	1173	P.T. 50	xxxv.	2	

No. in Catalogue.	h. &c.	Work cited.	No. of plate.	No. of fig.
2841	1175	P.T. 33	vi.	55
2870	1196	P.T. 61	xxvii.	21
2878	1202	P.T. 33	vii.	69
2884	1196, *a*	P.T. 61	xxvii.	21
2910	1225	P.T. 33	vi.	57
2950	1245	P.T. 61	xxvii.	22
2958	1252	P.T. 33	vii.	68
2962	1252	P.T. 33	vii.	68
2972	1258	R. di.		
3041	1306	P.T. 61	xxvii.	23
3042	1308	P.T. 61	xxvii.	23
3085	1337	P.T. 33	iv.	37
		P.T. 61	xxviii.	24
3101	1352	P.T. 33	viii.	83
3106	1357	P.T. 50	xxxvii.	9
3108	1358	P.T. 33	vii.	78
	1363			
3109	1359	P.T. 33	vii.	78
	1365			
3113	1362	P.T. 33	vi.	66
3132	1376	P.T. 33	vi.	50
3151	1385	P.T. 61	xxviii.	25
3152				
3165	1397	P.T. 33	vii.	76
		P.T. 50	xxxvii.	9
3180	1405	P.T. 33	vii.	74
3182	1408	P.T. 33	vii.	74
3189	1414	P.T. 33	vii.	75
3190	1415	P.T. 61	xxviii.	26
3240	1441	P.T. 61	xxviii.	27
3249	1451	R. di.		
3258	1456	P.T. 33	v.	41
3275	3435	C.G.H.	i.	2
3278	1466	P.T. 33	viii.	84
3321	1486	P.T. 33	ii.	27
3340	1499	P.T. 33	vi.	62
3356	1509	P.T. 33	vi.	67
3511	1589	P.T. 61	xxviii.	28
3525	3501	C.G.H.	iv.	2
3531	3504	C.G.H.	v.	7
3570	3514	C.G.H.	vi.	1
3572	1622	P.T. 33	ii.	25
		P.T. 50	xxxv.	1
		R. di.		
3606	3523	C.G.H.	iv.	5
3614	1649	P.T. 33	v.	39
3615	1650	P.T. 61	xxviii.	29
3651	3541	C.G.H.	vi.	15
3706	3548	C.G.H.	vi.	10
3717	1713	P.T. 61	xxviii.	30
3750	1734	R. di.		
3766	III. 787	P.T. 61	xxix.	35
3770	1744	P.T. 61	xxix.	35
3778	III. 788	P.T. 61	xxix.	35
3779	III. 789	P.T. 61	xxix.	35
4051	1905	P.T. 33	vii.	77
4052				
		P.T. 61	xxviii.	31
4058	1909	P.T. 50	xxxvii.	8
4066	3594	C.G.H.	vi.	8
4083	1916	P.T. 33	viii.	87
4087	1917	R. di.		
4118	1929	P.T. 33	viii.	89
4125	3610	C.G.H.	vi.	7
4160	1946	P.T. 61	xxviii.	32
4224	3641	C.G.H.	v.	4
4229	3644	C.G.H.	v.	6
4230	1968	P.T. 33	viii.	86
		P.T. 61	xxviii.	33
4234	1970	Lam.	i.	1

TABLE (continued).

No. in Catalogue.	h. &c.	Work cited.	No. of plate.	No. of fig.		No. in Catalogue.	h. &c.	Work cited.	No. of plate.	No. of fig.	
4261	3661	C.G.H.	vi.	13		4572	2075	P.T. 33	v.	47	
4284	3675	C.G.H.	vi.	6				P.T. 61	xxviii.	34	
4290	3680	C.G.H.	vi.	3				Lam.	i.	5	
	3680, 2	C.G.H.	v.	3	Milky Way.	4594	2084	P.T. 61	xxx.	36	
4302	{1891 3686}	C.G.H.	vi.	4		4600	2088	P.T. 33	iii.	33	
						4616	2092	P.T. 33	iii.	34	
4305	3688	C.G.H.	vi.	18				M.A.A.	vii.	1	
	3702, 2	C.G.H.	v.	1	Milky Way.	4618	2093	P.T. 33	viii.	82	
4335	3707	C.G.H.	v.	5				M.A.A.	vii.	1	
4342	3713, 2	C.G.H.	v.	2		4627	2099	P.T. 61	xxx.	37	
4343	1989	P.T. 33	v.	42		4628	2098	P.T. 33	v.	44	
4355	{1991 3718}	P.T. 33	viii.	80				P.T. 50	xxxviii.	14	
								D'Arr.	ii.	1	
		C.G.H.	ii.	2				Lam.	i.	4	
		M.A.A.	iv.	1		4678	2125	P.T. 33	viii.	88	
4361	3722	C.G.H.	i.	1				P.T. 44	xviii.	88	
4375	3727	C.G.H.	vi.	16		4687	{2128 3878}	P.T. 33	viii.	90	
4395	2002	P.T. 33	ii.	30							
4403	2008	P.T. 33	iv.	35		4729	3908	C.G.H.	iv.	11	
		C.G.H.	ii.	1		4730	3909	C.G.H.	iv.	11	
		Lam.	i.	10		4731	3910	C.G.H.	iv.	11	
		M.A.A.	vi.	1		4733	3911	C.G.H.	iv.	11	
4437	2019	Lam.	i.	9		4734	2139	P.T. 61	xxx.	38	
4447	2023	P.T. 33	ii.	29		4815	2172	P.T. 61	xxx.	39	
		P.T. 44	xix.	29	†	4876	2197	P.T. 33	vii.	73	
		D'Arr.	ii.	5		4877	2198	P.T. 33	vii.	73	
4487	2037	Lam.	i.	7		4892	2205	P.T. 33	vi.	63	
4510	2047	P.T. 33	v.	46				P.T. 50	xxxvi.	4	
		D'Arr.	ii.	3				D'Arr.	ii.	6	
		Lam.	i.	2		4950	2236	P.T. 33	vi.	60	
4514	2050	P.T. 33	v.	43		4964	2241	P.T. 33	v.	45	
4532	2060	P.T. 33	ii.	26				P.T. 50	xxxviii.	13	
		P.T. 44	xix.	26				P.T. 61	xxx.	40	
		P.T. 50	xxxviii.	17				Lam.	i.	3	
		P.T. 61	xxxi.	43		4971	2245	P.T. 33	viii.	85	
		D'Arr.	ii.	8				P.T. 61	xxx.	41	
4565	2072	P.T. 33	v.	48		5046	2297	P.T. 61	xxx.	42	

* No. 1179=h. 360. Other figures of the great nebula in Orion will be found in Huyghens's Systema Saturnium, 1659; ditto, copied by Le Gentil in Mém. Acad. Sci. Par. 1759, pl. 21. fig. 1; Le Gentil's own figure in do. do. fig. 2; by Picard, do. do. fig. 5; another by Le Gentil, do. do. fig. 6. See also:—

Mairan, "Sur la Lumière Zodiacale," copied in Lalande's 'Astronomy.' These older representations, however, are mere curiosities, and present no points of exact resemblance.

Messier, Hist. de l'Acad. Sci. Par. 1771, p. 435...461. Plate 8 is a careful and (for the time) elaborate figure.

J. F. W. Herschel, Mem. Astron. Soc. ii. 1826.

De Vico, Memoria intorno ad alcune osservazioni fatte nel Collegio Romano nel corrente anno 1838, nebulosa d'Orione osservata al Telescopio di Cauchoix. 1839.

Bond. A very fine engraving—not yet published.

† No. 4447. P.T. 44. xix. fig. 29. There is an erratum in this figure. *For* Decl. 32° 49′ n *read* 22° 49′ n.

The following nebulæ have been indicated by Lord Rosse as being either "of spiral structure (S), having in them dark spaces (D), as knotted (K), or as in the form of rays (*i. e.* much elongated forms) with splits or clefts (R).

No. in Catalogue.	h. &c.		No. in Catalogue.	h. &c.		No. in Catalogue.	h. &c.		No. in Catalogue.	h. &c.	
202	84	K	2158	731	D	2717	1085	S	3249	1451	S
372	142	S	2194	749	S	2733	1092	S	3258	1456	S
594	257	K	2248	788	D	2749	1107	D	3474	1570	S
600	262	S	2373	854	S	2807	1149	R	3572	1622	S
604	264	D	2377	857	D	2870	1196	S	3750	1734	S
888	327	S	2379	858	S	2878	1202	S	3843	1776	S
895	329	K	2413	887	D	2890	1211	S	4045	1901	K
1267	368	D	2445	910	S	2910	1225	D	4058	1909	D
1458	409	K	2499	943	S	2991	1274	K	4087	1917	R
1527	446	K	2559	982	S	3049 }	1312	S	4572	2075	S
1676	514	D	2597	1002	S	3050 }			4815	2172	S
1806	581	K	2652	1041	R	3106	1357	R	4964	2241	D
2058	692	D	2670	1052	S	3121	1368	S	4971	2245	S
2066	695	S	2680	1061	S						

List of Errata and Corrigenda in Sir William Herschel's Catalogue of 2500 *Nebulæ in the Philosophical Transactions.*

Class.	No.	No. in Catalogue.	Error and Correction.
I.	6	3702	*for* f. $3^m\ 56^s$ *read* f. $33^m\ 56^s$
	54	214	*for* f. $12^m\ 44^s$; s. 2° 50′ *read* f. $18^m\cdot 36^s$; s. 1° 26′
	87	2274	*for* f. $9^m\ 30^s$ *read* f. $10^m\ 30^s$
	137	1837	*for* 42 Lyncis *read* 41 Lyncis
	143	3356	*for* s. 2° 7′ *read* s. 0° 54′
	144	3846	*for* n. 0° 24′ *read* n. 2° 7′
	153	536	*for* p. $23^m\ 16^s$ *read* f. $23^m\ 16^s$
	154	549	*for* f. $1^m\ 23^s$ *read* p. $1^m\ 23^s$
	155	778	*for* f. $7^m\ 49^s$ *read* p. $7^m\ 49^s$
	202	2604	*for* f. $0^m\ 47^s$ *read* f. $7^m\ 47^s$
	203	2597	*for* f. $7^m\ 42^s$ *read* f. $14^m\ 42^s$
II.	1	4738	*for* p. 15^m::, s. ½°:: *read* p. $11^m\ 45^s$, n. 0° 17′
	11	2824	*for* f. $1^m\ 24^s$, n. 0° 24′ *read* f. $1^m\ 13^s$, n. 0° 30′
	14	2730	*for* 3 (ν) Virginis f. $2^m\ 20^s$, n. 1° 22′ *read* 59 *e* Virginis p. $69^m\ 0^s$, n. 0° 11′
	48	1707	*for* f. $56^m\ 45^s$ *read* f. $54^m\ 45^s$
	181	3214	*for* s. 0° 48′ *read* s. 1° 15′
	185	3421	*for* p. $11^m\ 0^s$ *read* p. $1^m\ 0^s$
	239	634	*for* 27 (κ) Persei p. $8^m\ 20^s$, n. 0° 2′ *read* 30 Persei p. $14^m\ 41^s$, n. 0° 51′
	240	5046	*for* ..... *read* 39 Pisc. p. $2^m\ 24^s$, n. 1° 0′
	241	29	*for* ..... *read* 39 Pisc. p. $14^m\ 24^s$, s. 0° 11′
	242	4973	*for* 48 (μ) Pegasi *read* 87 (ν) Pegasi
	264	1335	*for* 47 (δ) Cancri *read* 25 (δ) Canis
	265	1384	*for* 1 χ Can. *read* ξ 1 Can.
	286	654	*for* ..... p. *read* 13 (ζ) Eridani p.
	314	3528	*for* f. $17^m\ 57^s$ *read* f. $15^m\ 57^s$
	372	2771	*for* p. $74^m\ 24^s$ *read* p. $14^m\ 24^s$
	658	1718	*for* 44 Lyncis *read* 43 Lyncis
	708	1788	*for* 37 Lyncis *read* 36 Lyncis
	794	3177 } 3179 }	*for* s. 0° 49′ *read* s. 1° 0′ (see note on this No. in Catal.)
	795	3216	*for* s. 1° 13′ *read* s. 1° 24′ (see note on this No. in Catal.)
	796	3224	*for* s. 1° 25′ *read* s. 1° 36′ (see note on this No. in Catal.)
	818	4056	*for* 12 Draconis *read* 12 Draconis Hevelii
	853	14	*for* p. $25^m\ 38^s$ *read* p. $25^m\ 48^s$
II.	6	3228	*for* 59 (*e*) Virginis p. $28^m\ 11^s$ *read d* Virginis f. $2^m\ 42^s$, n. 0° 57′. The obs. belongs to I. 8
	26	3078	*for* 20 Comæ f. $4^m\ 30^s$, s. 0° 37′ *read* 26 Comæ p. $5^m\ 5^s$, s. 0° 32′
	112	2417	*for* 74 φ Leonis f. $10^m\ 6^s$, s. 1° 52′ *read* Mayer 510. z. p. $61^m\ 48^s$, s. 1° 10′
	113	2577	*for* φ Leonis f. $34^m\ 18^s$, s. 1° 3′ *read* Mayer 510. z. p. $37^m\ 36^s$, s. 0° 31′
	178	631	*for* 17 (γ) Persei f. $9^m\ 6^s$ *read* 17 (*r*) Persei f. $10^m\ 0^s$
	192	419	*for* 72 Ceti *read* 62 Ceti

TABLE (continued).

Class.	No.	No. in Catalogue.	Error and Correction.
III.	195	684	*for* f. $42^m\ 42^s$ *read* f. $41^m\ 6^s$
	199	628	*for* 27 (κ) Persei p. $8^m\ 27^s$, n. 0° 2′ *read* 30 Persei p. $14^m\ 44^s$, n. 0° 55′
	256	1641	*for* s. 0° 48′ *read* s. 0° 58′
	289	1911	*for* s. 0° 25′ *read* s. 0° 31′
	293	1974	*for* 23 Leonis *read* 23 Leonis minoris
	319	3888	*for* n. 2° 26′ *read* s. 2° 26′
	347	3844	*for* s. 1° 17′ *read* s. 0° 17′
	353	2440	*for* f. $53^m\ 4^s$ *read* f. $43^m\ 4^s$
	369	3618	*for* —— $25^m\ 41^s$ *read* f. $25^m\ 41^s$
	422	3664	*for* n. 0° 44′ *read* n. 0° 36′
	423	3668	
	511	4042	*for* f. $3^m\ 5^s$ *read* f. $3^m\ 11^s$
	607	1645	*for* p. $12^m\ 33^s$ *read* p. $12^m\ 23^s$
	627	1820	*for* 43 Lyncis *read* 42 Lyncis
	739	4149	*for* p. $32^m\ 30^s$ *read* p. $32^m\ 47^s$
	751	1897	*for* 39 Lyncis *read* 38 Lyncis
	778	3206	*for* s. 1° 4′ *read* s. 1° 15′ (see note on this No. in Catal.)
IV.	29	2255	*for* f. $3^m\ 36^s$ *read* f. $3^m\ 46^s$
	31	4802	*for* —— 0° 37′ *read* s. 0° 37′
V.	13	4368	*for* n. 0° 39′ *read* s. 0° 38′ ::
VI.	8	3967	*for* 26 χ Virginis f. $23^m\ 44^s$, s. 0° 6′ *read* Mayer 577. z. f. $1^m\ 48^s$, n. 1° 26′
VII.	6	1509	*for* 50 Geminorum *read* 51 Geminorum
VIII.	11	1534	*for* 50 Geminorum *read* 51 Geminorum
	28	1229	*for* (1 λ) Orionis *read* (1st χ) Orionis
	44	1533	*for* 5 (η) Can. min. *read* 4 (γ) Can. min.

The following nebulæ are declared in MS. notes to be identical.

II. 6=I. 1; II. 119=II. 94; II. 148=II. 20; II. 176=II. 70; II. 243=II. 241; II. 703=II. 621; III. 6=I. 8; III. 198=II. 238; III. 835=III. 804.

Errata and Corrigenda in M. Auwers's Catalogue.

Page.		For	Read	Page.		For	Read
19	.....	II. 844	II. 834	37	III. 946 in Decl.	89°	80°
20	III. 291 in Decl.	27°	26°	39	III. 347 in Decl.	24°	25°
24	II. 30 in R.A.	$11^h\ 12^m\ 21^s$	$11^h\ 11^m\ 33^s$	40	II. 751 in Decl.	20° 44′	20° 14′
25	IV. 59 under $\Delta\alpha$	−5	−31	40	.....	I. 282	I. 182
26	III. 385 in R.A.	16^h	11^h	42	III. 127.....	III. 127	III. 727
26	III. 388 in R.A.	10^h	11^h	42	Do. in R.A.	14^m	44^m
26	II. 342 in R.A.	10^h	11^h	42	Do. in Decl.	43°	42°
28	III. 814 in Decl.	53°	54°	72	No. 27 Decl.	58′·8	48′·8
32	.....	III. 858	III. 850	77	List of Errata, II. 341...	16^m & 11^m	16^u & 11^u
33	III. 778 in R.A.	$13^h\ 37^m$	$12^h\ 37^m$	77	Ditto, III. 680...	26^m & 16^m	26^u & 16^u

M. Auwers has given a list of errata and corrigenda required in my two previous Catalogues. They are very numerous, but relate almost exclusively to errors of identification with my Father's classes and numbers. They had been, with hardly an exception, detected and rectified during the process of preparing and arranging the present Catalogue, which being therefore expurgated of them, it is unnecessary to annex a list of them here.

One very important erratum, however, must be noticed, not having been set down by M. Auwers. In p. 494, explanation of plates, Phil. Trans. 1833, figs. 13...18, *for* pmbM; vbM; vmbM *read* psbM; sbM; vsbM.

No. of Catalogue.	References to: Sir J. H.'s Catalogues of Nebulæ.	References to: Sir W. H.'s Classes and Nos.	References to: Other Authorities.	Right Ascension for 1860, Jan. 0.	Annual Precession in Right Ascension for 1880.	No. of Obs. used.	North Polar Distance for 1860, Jan. 0.	Annual Precession in N.P.D. for 1880.	No. of Obs. used.	Summary Description from a Comparison of all the Observations, Remarks, &c.	Total No. of times of Obs. by h. and H.
	h.	H.		h m s	s		° ′ ″	″			
1	.....	.....	D'Arrest, 1	0 0 5	+3·07	[4]	63 4 0	−20·05	[4]	F; S; R; bet*11 and *14 ...	0
2	4014	.....	.....	0 1 13·8	3·065	3	120 41 11·5	20·05	3	eF; cL; mE; vgvlbM.....	3
3	4015	.....	.....	0 1 28·3	3·062	2	124 38 54·5	20·05	2	F; cL; vlE; glbM	2
4	1	III. 868	.....	0 1 34·2	3·073	2	86 7 38·5	20·05	2	eF; plL; vglbM	3
5	2	III. 866	.....	0 1 35·7	3·084	2	57 20 43·5	20·05	2	vF; vS; Sst+neb	3
6	2, *a*	.....	R. nova	0 1	.....	...	57 20	.....	...	.....	0
7	3	II. 591	.....	0 1 37·0	3·076	3	74 57 52·5	20·05	3	vF; pS; R; glbM	4
8	4	.....	.....	0 1 52·1	3·083	1	63 3 27·5	20·05	1	pB; S; R; bM.....	1
9	.....	III. 147	.....	0 2 33·4	3·081	1	64 49 57·5	20·05	1	3Sst+neb	1
10	2308	III. 461	.....	0 2 47·2	3·061	1	115 44 58·5	20·05	1	vF; cL; mE; gbM	2
11	2309	.....	.....	0 2 57·1	3·053	2	147 48 14·5	20·05	2	vF; S; R	2
12	5	IV. 15	.....	0 3 14·6	3·085	(1)	63 4 58·5	20·05	1	vF; vS; stell	2*
13	2310	.....	.....	0 3 25·2	3·033	1	147 46 24·5	20·05	1	eF; p of 2.....	1
14	6	II. 853	.....	0 3 31·8	3·089	2	57 25 28·5	20·05	2	pB; pL; E 0°±	3
15	2311	.....	.....	0 3 39·0	3·020	2	147 46 21·5	20·05	2	eeF; S; R; f of 2.....	2
16	.....	.....	Auw. N. 1	0 3 41·7	3·078	...	71 59 0·7	20·05	...	F (Schmidt 1861, Oct. 10) ...	0
17	2312	.....	.....	0 4 22·0	3·023	1	147 43 45·5	20·05	1	eF; S; R	1
18	7	III. 861	.....	0 5 7·5	3·093	2	59 44 3·5	20·05	3	v F; pS; R	4
19	.....	III. 456	.....	0 5 11·3	3·076	1	84 21 57·5	20·05	1	vF; pS; iF	1
20	8	IV. 58	.....	0 5 31·4	3·188	3	18 15 26·5	20·05	3	vF; vS; R; vsmbM*10; *12 241°·4; 25ˢ.	4
21	9	.....	.....	0 5 45·3	3·095	1	59 51 46·5	20·05	1	eF; *12, 45″, 325°	1
22	10	.....	.....	0 5 59·4	3·096	1	59 29 20·5	20·05	1	eF; vS	1
23	2313	.....	.....	0 6 47·8	3·052	1	113 57 14·8	20·04	1	eF; L; vgvlbM; L*cont, f ...	1
24	.....	.....	Auw. N. 2	0 6 59·2	3·074	...	84 47 28·8	20·04	...	A nebula (Markree Cat. 1852, Oct. 22).	0
25	11	III. 183	.....	0 7 47·8	3·089	1	72 14 19·8	20·04	1	vF; S; E	2
26	2314	.....	.....	0 7 53·1	2·978	1	151 6 13·8	20·04	1	eF; S; R; bM.....	1
27	2315	.....	Δ. 507	0 8 0·4	3·028	3	129 59 33·8	20·04	3	vB; vL; vmiE; tri-N	3†
28	12	.....	.....	0 8 8·9	3·083	1	78 19 58·8	20·04	1::	eL; eF; diff.....	1
29	13	II. 241 = II. 243	.....	0 8 18·0	3·088	1	73 26 48·8	20·04	1	F; S; R; sbM	4*
30	14	III. 248	.....	0 9 14·6	3·065	1	97 5 46·8	20·04	1	vF; S; iR; psvlbM	3
31	15	V. 16	.....	0 11 6·2	3·112	1	60 42 9·1	20·03	1	eF; L; 3 or 4st+neb	2†
32	15, *a*	.....	R. 6 novæ	0 11	.....	...	60 42	.....	...	Nos. 32...37 incl.....	0
38	16	.....	.....	0 13 54·8	3·106	1	68 24 45·7	20·01	1	F; S; R; psbM	1
39	17	.....	.....	0 14 5·3	3·107	1	68 19 15·7	20·01	1	E; bi-N; 3Bst near	1
40, 41, 42	17, *a*	.....	R. 3? novæ	0 14±	.....	...	68 19±	.....	...	Several F, S (3 novæ at least presumed).	0
43	2316	.....	.....	0 14 18·5	2·968	2	139 24 41·7	20·01	2	eF; S; R; gbM; 1st of 4	2
44	2317	.....	.....	0 14 28·2	2·967	2	139 25 13·7	20·01	2	eF; vS; R; 2nd of 4	2
45	2318	.....	.....	0 14 30·0	2·967	2	139 26 36·7	20·01	2	vF; S; R; gbM; 3rd of 4 ...	2
46	2319	.....	.....	0 14 36·9	2·966	2	139 24 21·7	20·01	2	F; S; R; gbM; 4th of 4	2
47	19	II. 257	.....	0 15 9·8	3·088	1	80 17 48·7	20·01	1	F; pL; R; gbM	3
48	18	.....	.....	0 15 10·5	3·124	1	61 1 29·7	20·01	1	F; vS; R; gbM	1
49	2320	.....	.....	0 15 55·7	2·970	1	136 3 13·0	20·00	1	vF; pS; R; bM; r	1
50	2321	.....	.....	0 16 56·0	3·004	2	123 19 22·3	19·99	2	pB; pL; lE; *14, f.....	2
51	20	.....	.....	0 17 38·2	3·266	1	29 26 39·3	19·99	1	Cl; pS; pC; st11...18.....	1
52	2322	.....	Δ. 18 = 47 Toucani	0 17 47·4	2·721	4	162 51 33·3	19·99	4	⊕; !!; vB; vL; vmCM	4†
53	21	III. 148	.....	0 18 39·6	3·134	2	61 33 49·6	19·98	2	pF; pL; R; pslbM	3
54	.....	.....	D'Arrest, 2	0 18 49	3·117	[1]	68 53 20	19·98	[1]	vF; S; 3 st near, making quadr.	0
55	22	.....	.....	0 19 18·9	3·411	1	19 23 2·6	19·98	1	Cl; pR; lC; st9...12	1
56	2323	.....	.....	0 19 51·3	2·989	2	124 27 21·9	19·97	2	vF; pL; lE; D*2′, np.....	2
57	2324	.....	.....	0 20 17·3	2·877	2	147 45 22·9	19·97	2	pB; S; R; mbM.....	2
58	2325	.....	.....	0 20 25·1	2·685	1	162 18 23·9	19·97	1	pB; pS; lE; vgbM	1
59	23	III. 869	.....	0 21 41·4	3·123	2	87 56 3·2	19·96	2	vF; S; bM; D*vnr; p of 2 ...	3
60	23, *a*	.....	R. nova	0 22 0·7	+3·123	...	87 57 38·5	−19·96	...	No descr (MS)	0

No. of Cata-logue.	References to			Right Ascension for 1860, Jan. 0.	Annual Precession in Right Ascension for 1880.	No. of Obs. used.	North Polar Distance for 1860, Jan. 0.	Annual Precession in N.P.D. for 1880.	No. of Obs. used.	Summary Description from a Comparison of all the Observations, Remarks, &c.	Total No. of times of Obs. by h. and H.
	Sir J. H.'s Catalogues of Nebulæ.	Sir W. H.'s Classes and Nos.	Other Authorities.								
	h.	H.		h m s	s		° ′ ″	″			
61	23, *b*	.....	R. nova	0 22 0·7	+3·123	...	87 54 8·5	−19·95	...	No descr (MS)	0
62	25	II. 854	.....	0 22 4·7	3·077	2	87 54 38·5	19·95	2	pB; vS; lE, 0°±; bM; f of 2	3
63	24	VIII. 79	.....	0 22 6·2	3·302	1	30 33 4·5	19·95	1	Cl; vL; pR; lC; st 9...13 ...	2
64	23, *c*	.....	R. nova	0 22 8·7	3·123	...	87 54 8·5	19·95	...	No descr (MS)	0
65	2326	.....	.....	0 22 42·6	2·979	2	124 2 2·5	19·95	2	F; pL; pmE; vgbm; p of 2...	2
66	26	II. 855	.....	0 23 0·2	3·076	3	88 41 12·5	19·95	3	pF; eL; R; vglbm; r	6
67	2327	.....	.....	0 23 27·6	2·976	2	124 1 45·8	19·94	2	vB; L; vmE, 47°·5; psbM; f of 2; *10 327°·9 45″.	2†
68	.....	VI. 35	.....	0 23 48·3	3·232	1	29 16 1·8	19·94	1	⊕; vF; S; eC	1
69	.....	II. 471	.....	0 24 3·5	3·096	1	80 34 1·8	19·94	1	F; iF; lbM	1
70	27= 2328	.....	.....	0 24 38·0	3·057	2	95 55 33·1	19·93	2	F; pL; vlE; vgbM; *8·9, 75°±; 5′.	2
71	28	.....	.....	0 25 12·7	3·367	1	27 29 19·4	19·92	1	Cl; pL; lC; st11...12; D*...	1
72	29	.....	.....	0 25 30·6	3·243	1	42 16 32·4	19·92	1	vF; vL; iR; g, smbM*11 ...	1
73	2329	.....	.....	0 26 22·3	2·971	1	122 33 57·7	19·91	1	vB; S; lE 90°; smbM*11 ...	2
74	30= 2330	II. 478	.....	0 26 57·8	3·042	2	100 28 30·7	19·91	2	pF; pL; lE 90°; vglbM	4
75	2331	.....	.....	0 27 3·7	2·513	1	163 53 11·0	19·90	1	vF; L; R; vglbM	1
76	31	III. 467	.....	0 27 14·0	3·033	1	103 25 59·0	19·90	1	eF; vS; R	2
77	2332	.....	.....	0 28 2·9	2·818	2	146 33 23·3	19·89	2	vF; pS; R; glbM; 3stf	2
78	.....	II. 3	.....	0 28 32·5	3·044	2	99 32 4·3	19·89	2	F; L; mE; bet 2cBst	2*
79	32	III. 476	.....	0 28 43·0	3·147	1	66 48 49·3	19·89	1	vF; vS; stellar; *7, 15°, 5′ ...	2
80	32, *a*	.....	R. nova	0 28	.....	...	66 48	... ..	...	Makes Dneb with h. 32	0
81	.....	III. 954	.....	0 29 20·1	3·039	1	100 51 4·6	19·88	1	eeF; S	1
82	.....	.....	D'Arrest, 3	0 29 33	3·15	[1]	66 46 18	19·87	[1]	F; pL; R; *6, 3½ dist	0
83	.....	III. 223??	.....	0 29 41·2	3·008	1	109 44 5·6	19·88	1	vF; pL; lE; 2pBst sf	1
84	33	III. 871	.....	0 30 1·5	3·076	2	88 48 44·9	19·87	2	vF; S; R; vgbM; *11, 225°±; 80″.	3
85	2333	.....	.....	0 30 2·4	2·968	3	120 14 30·9	19·87	3	eF; S; vlE; amBst	3
86	2334	III. 223	.....	0 30 20·6	3·004	1	110 42 9·9	19·87	1	pB; pL; E; gbM; r	1
87	2335	.....	.....	0 30 21·5	2·446	2	163 56 28·9	19·87	2	eF; S; vlE; r; *8 near	2
88	.....	III. 876	.....	0 30 46·6	3·098	1	82 6 6·2	19·86	1	vF; pL; iR; *np inv	1*
89	.....	III. 870	.....	0 31 0·5	3·079	1	88 1 7·2	19·86	1	vF; S; iR; vgbM	1
90	35	II. 707	.....	0 31 11·4	3·278	1	42 26 0·2	19·86	1	pB; vL; iR; vgmbM; r	2
91	.....	.....	D'Arrest, 4	0 31 15	3·08	[2]	87 36 6	19·85	[2]	F; S; R; lbM	0
92	34	.....	.....	0 31 40·6	5·151	1	5 26 27·6	19·84	1	Cl; vL; R; 150...200st 10 ... 18.	1
93	36	.....	.....	0 31 40·7	3·407	1	29 42 31·5	19·85	1	Cl; pL; R; st 11...15	1
94	37	.....	.....	0 31 49·4	3·081	1::	87 25 4·5	19·85	1	vF; L; p of 2; st 15 close ...	1
95	38	II. 479	.....	0 31 53·4	3·039	1	99 46 25·5	19·85	1	pB; pL; iE 0°+	3
96	39	III. 872	.....	0 32 2·3	3·072	5	89 54 28·5	19·85	5	F; pS; pmE; bM; 1st of 3...	6
97	.....	II. 857	.....	0 32 4·5	3·079	1	87 57 7·5	19·85	1	F; S; vgbM	1
98	40	II. 856	.....	0 32 5·6	3·080	1	87 42 54·8	19·84	1	pB; S; R; vgbM.....	2
99	40, *a*	.....	R. nova	0 32	.....	...	87 42	.....	...	(?=h. 37 or II. 857)	0
100	41	III. 595	.....	0 32 6·8	3·072	1	89 51 23·8	19·84	1	F; pS; R; psmbM; f of 2 ...	2
101	42	II. 860	.....	0 32 14·4	3·081	1::	87 27 4·8	19·84	1::	pB; pS; R; vgbM; 2nd of 3	5
102	43	III. 873	.....	0 32 21·4	3·072	2	89 55 7·8	19·84	2	vF; cL; E; vglbM; f of 3 ...	3
103	.....	.....	D'Arrest, 5	0 32 22	3·08	[1]	87 37 24	19·84	[1]	F; vS; *8, p 27°·7, ls	0
104	.....	II. 858	.....	0 32 22·5	3·079	1	87 52 7·8	19·84	1	pB; S; vgbM	1
105	44	V. 18	C.H.	0 32 45·4	3·243	1	49 4 49·8	19·84	1	vB; vL; mE 165°; vgvmbM	6†
106	45	V. 36	.....	0 32 47·8	3·237	1	50 1 34·8	19·84	1	vF; vL; mE 0°	4†
107	46	II. 452	.....	0 33 32·4	3·020	3	104 38 20·1	19·83	3	B; pS; R; psbM; r; *90 ±	4
108	46, *a*	.....	R. nova	0 33 32	.....	...	104 38	.....	...	E 0°±	0
109	.....	III. 200	.....	0 33 48·8	3·129	2	74 17 8·4	19·82	2	F; S; bet 2 Sst	2
110	2336	.....	.....	0 33 49·9	2·763	2	146 56 14·4	19·82	2	vF; S; R; p of 2.....	2
111	47	II. 209	.....	0 34 5·4	3·166	1	65 16 6·4	19·82	2	pF; pS; gvlbM; r	4
112	2337	.....	.....	0 34 25·7	2·757	2	146 58 27·7	19·81	2	F; S; R; amst; f of 2.....	2
113	49	III. 244	.....	0 34 28·9	2·990	1	111 48 59·7	19·81	1	eF; vS; lE 0°...90°.....	2
114	48	II. 480	.....	0 34 30·2	3·033	1	100 47 1·7	19·81	1	F; S; lE 90°±; glbM	3
5058	.....	.....	.....	0 35 1·0	.....	...	89 50 6·6	.....	...	See No. 5058.	
115	2338	.....	.....	0 35 2·1	+2·344	3	164 9 52·7	−19·81	3	F; iR; vgbM; 1st of several	3

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	h.	H.		h m s	s		° ′ ″	″			
116	50	.....	M. 31	0 35 3·9	+3·252	1	49 29 45·7	−19·81	1	!!!eeB; eL; vmE; (*Androm. Gt. Neb.*) Bifid (Bond)	13†
117	51	.....	M. 32	0 35 5·3	3·250	1	49 54 12·7	19·81	1	! vvB; L; R; psmbMN	8†
118	2339	.....	.....	0 35 5·4	2·338	1	164 14 1·7	19·81	1	vF; R; 2nd of several.....	1
119	.....	.....	D'Arrest, 6= Auw. N. 4	0 35 6	3·07	[3]	89 55 0	19·81	[3]	vF; pL; R (Bond, Jan. 1853)	0*
120	52	VIII. 78	C.H.	0 35 19·2	3·457	1	28 58 43·0	19·80	1	Cl; L; lC; st 9...10	3
121	53	.....	.....	0 35 24·0	3·204	1	58 10 55·0	19·80	1	eF; S; R; *13, 20″ 180° ...	1
122	.....	II. 444	.....	0 35 33·8	3·064	1	92 18 11·0	19·80	1	F; pL; lbM.....	1
123	2340	.....	Δ. 2??	0 35 50·6	2·329	1	164 7 16·6	19·78	1	i train of st and neb	1
124	54	III. 149	.....	0 36 5·2	3·196	2	60 10 58·3	19·79	2	F; vS; R; lbM	3
125	.....	II. 245	.....	0 36 10·9	3·124	4	76 27 54·3	19·79	4	F; pS; ilE; bM	4
126	2341	.....	.....	0 36 53·3	2·803	1	140 56 42·6	19·78	1	eF; pl; R; gvlbM	1
127	2342	.....	.....	0 38 13·4	2·278	1	164 11 39·2	19·76	1	vF; R	1
128	2343	.....	.....	0 38 18·6	2·275	3	164 12 17·2	19·76	3	vF; S; bi-N.....	3
129	55	III. 485	.....	0 38 45·1	3·005	1	106 20 58·5	19·75	1	vF; S; iR; r; *10, 5′ s	3
130	.....	II. 445	.....	0 39 3·7	3·063	1	92 29 13·5	19·75	1	F; pS; iF; er	1
131	56	V. 25	.....	0 40 1·4	3·019	2	102 38 24·1	19·73	2	vF; L; 4st in diff n.....	3
132	57	V. 20	.....	0 40 4·2	2·979	1	111 30 57·1	19·73	1	F; vL; vmE 172°	2*
133	2344	.....	.....	0 40 13·4	2·240	2	164 8 36·1	19·73	2	F; S; E or bi-N; vglbM.....	2
134	2346	.....	Δ. 19? 21?	0 40 17·9	2·255	3	163 51 1·1	19·73	3	F; pL; vlE; r	3
135	58	III. 204?	.....	0 40 22·9	3·154	(2)	71 9 48·1	19·73	1	vF; S; R; lbM; 2vSstf; *inv	3
136	59	II. 609	.....	0 40 32·9	3·195	5	63 8 35·1	19·73	5	pB; S; R; pmbM; r; * p ...	6
137	59, *a*	.....	R. nova	0 40	.....	...	63 8	.....	...	One of R.'s novæ; the other =h. 60.	0
138	61= 2345	V. 1	C.H.	0 40 37·6	2·954	3	116 3 40·4	19·72	3	!!; vvB; vvL; vmE 54°·5 gbM; 4st.	9*†
139	60	.....	.....	0 40 39·3	3·195	1	63 8 14·4	19·72	1	pF; R; bM	1
140	2347	.....	.....	0 40 40·7	2·920	3	122 11 28·4	19·72	3	vB; pS; lE; smbM; *8, 5′nf	3
141	62	II. 472	.....	0 40 43·5	3·020	1	102 14 39·4	19·72	1	F; pS; R; gbM	2
142	2348	.....	.....	0 40 44·3	2·223	4	164 16 44·4	19·72	4	F; S; R; gbM; *9, 40″nf ...	4
143	.....	II. 863	.....	0 40 47·1	3·105	1	82 27 14·4	19·72	1	pL; lE; gbM; r	1
144	63	.....	.....	0 40 55·7	3·057	1	93 37 22·4	19·72	1	vF; Δ 2st & neb	1
145	64	II. 703 = II. 621	.....	0 40 56·1	3·058	1	93 32 40·4	19·72	1	F; S; E 135°±; lbM	3*
146	2349	.....	Δ. 3, 4, 21?	0 41 23·8	2·233	3	163 52 6·7	19·71	3	F; pL; R; gbM*13	3
147	2350	.....	.....	0 41 41·6	2·872	1	129 0 20·7	19·71	1	F; S; R; vsvmbM*13	1
148	2351	.....	.....	0 42 3·8	2·198	4	164 15 4·0	19·70	4	F; pS; R.....	4
149	65	III. 153	.....	0 42 13·6	3·226	4	58 29 23·0	19·70	4	pB; pS; lE; psbM; r; *8sf4′,	5
150	2352	.....	.....	0 42 49·8	2·195	1	164 2 37·3	19·69	1	Cl; F; pL; stvS	1
151	66	III. 463	.....	0 43 1·3	3·046	2	95 57 59·3	19·69	2	vF; pS: ilE; r.....	4
152	2353	.....	.....	0 43 20·8	2·169	1	164 18 1·6	19·68	1	vF; S; R.....	1
153	68	III. 955	.....	0 43 28·7	3·030	(1)	99 25 39·6	19·68	2	pF; vS; iR; pgbM	3
154	67	II. 446	.....	0 43 34·3	3·061	1	92 39 59·6	19·68	1	pF; S; lE; psbM; *8 f5″·5...	3
155	.....	III. 430	.....	0 43 47·0	3·038	1	97 39 17·9	19·67	1	vF; vS.....	1
156	69	III. 429	.....	0 43 56·8	3·037	1	97 49 22·9	19·67	1	pB; pS; smbM; sp of Dneb .	3
157	70	.....	.....	0 43 59·1	3·037	1	97 49 2·9	19·67	1	vF; S; R; nf of Dneb	2
158	71	I. 159	.....	0 44 10·2	3·352	1	43 12 15·9	19·67	1	cB; pL; R; 2st10nr	4
159	73	III. 439	.....	0 44 59·5	3·059	2	92 59 10·5	19·65	2	vF; S; iR; bM; stellar	4
160	72	III. 477	.....	0 45 0·3	3·189	1	66 25 23·5	19·65	1	eF; S; R; *15, f30″	3
161	75	.....	.....	0 45 52·1	3·241	1	58 16 59·8	19·64	1	eF; S; R	1
162	74= 2354	VI. 20	.....	0 45 52·1	2·932	2	117 20 41·8	19·64	2	⊕; B; L; lE; st 12...16.....	3
163	2355	.....	.....	0 45 57·6	2·903	3	121 57 53·1	19·63	3	vB; L; pmE; glbM; *11np	4
164	2357	.....	.....	0 46 16·9	2·135	1	163 54 48·1	19·63	1	eF	1
165	2356	.....	.....	0 46 33·5	2·115	2	164 6 33·1	19·63	2	Cl; F; eeL; R; st 12...18 ...	2*
166	2358	.....	Δ. 5, 6?	0 47 14·8	2·102	1	164 8 28·7	19·61	1	vF; pL; R; vglbM; r.....	2
167	.....	II. 214	.....	0 47 51·9	+3·242	1	59 11 21·0	−19·60	1	F; E; aB*f, vnr	1

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	h.	H.		h m s	s		° ′ ″	″			
168	2360	.....	.....	0 48 23·0	+ 2·151	4	162 57 22·3	— 19·59	4	pB; vS; R; gvlbM; r	4
169	2359	.....	.....	0 48 24·5	2·844	3	128 27 8·3	19·59	4	pB; vL; vmiE; vgpmbM	5*†
170	76	.....	.....	0 48 59·6	3·131	1	78 40 51·6	19·58	1	Cl; S; sest	1
171	2361	.....	.....	0 49 15·8	2·132	1	163 0 0·9	19·57	1	F; vS	1
172	77	.....	.....	0 49 25·0	3·060	1	92 31 27·9	19·57	1	pF; S; E	1
173	78	.....	.....	0 49 55·7	3·240	2	60 28 21·2	19·56	2	pF; vS; R; gbM	2
174	2363	.....	.....	0 50 3·5	2·675	2	143 32 6·2	19·56	2	F; S; R; *12 f 90°	2
175	2362	.....	.....	0 50 10·7	2·883	2	122 43 13·2	19·56	2	eF; vS; R; pB* f 2′	2
176	79	II. 210	.....	0 50 11·5	3·241	3	60 24 25·2	19·56	3	pB; pL; R; gbM; *9, 3′ 135°	4
177 / 5059	79, *a*, *b*	.....	R. 2 novæ	0 50 22·3	3·241	...	60 21 31·2	19·56	...	F; S; R (ε of Lord R.). For *b*, see No. 5059.	0*
178	4007	.....	.....	0 50 29·3	2·780	1	134 35 56·5	19·55	1	eF; vS; R; lbM	1*
179	4008	.....	.....	0 50 36·2	2·780	1	134 30 1·5	19·55	1	vF; vS; R; lbM; 3stp	1*
180	2365	.....	.....	0 50 36·7	2·668	2	143 43 58·5	19·55	2	pF; S; R; bM; p of 2	2
181	2364	.....	.....	0 50 40·4	2·810	1	131 12 36·5	19·55	1	(?)F; S; stellar	1
182	2366	.....	.....	0 50 51·5	2·667	1	143 39 58·8	19·54	1	vF; lE; vgbM; f of 2	1
183	2367	.....	Δ. 23	0 51 27·2	2·078	5	163 13 35·1	19·53	5	⊕; vB; S; lE; st 13...15	5
184	2368	.....	.....	0 52 10·5	2·850	2	125 53 21·4	19·52	2	vF; S; R; glbM; 2st11s	2
185	80	II. 433	.....	0 52 46·1	3·027	...	98 19 51·0	19·50	...	pF; L; E 0°±; glbM; *10, f 20ˢ·5.	2
186	2369	.....	.....	0 53 13·3	1·902	1	165 12 27·0	19·50	1	F; L; R; vgbM	1
187	2370	.....	Δ. 25	0 54 19·9	2·043	5	162 56 9·3	19·49	5	B; L; viF; mbMD*; r	5†
188	2371	.....	.....	0 54 45·4	2·632	2	143 59 49·6	19·48	2	eF; S; R	2
189	81	III. 191	.....	0 55 5·2	3·044	2	94 59 49·5	19·45	2	pF; S; iE; *8f97ˢ	4
190	82	II. 434	.....	0 56 16·4	3·032	1	97 5 49·1	19·43	3	F; S; iR; sbM; *14 nf 20″	4
191	2372	.....	.....	0 57 26·8	2·308	1	156 21 30·0	19·40	1	eF; vmE 145°·4; vlbM	1
192	2374	.....	Δ. 55 ??	0 57 28·7	2·022	2	162 22 33·0	19·40	2	vvF; pL; vlE; vgbM	2
193	2375	.....	Δ. 62	0 57 28·8	2·069	3	161 35 59·0	19·40	3	⊕; vB; vL; vC; vmbM; st 13...14.	4
194	2373	.....	.....	0 57 44·3	2·828	2	125 53 46·0	19·40	2	F; S; R; glbM	2
195	83	.....	.....	0 57 45·8	3·700	1	28 34 5·0	19·40	1	Cl; S	1
196	4012	.....	.....	0 57 57·6	2·745	1	134 1 50·3	19·39	1	eF; vS; *7·8 sp 3′	1*
197	.....	.....	D'Arrest, 7	0 58 53	3·28	[1]	58 20 18	19·37	[1]	vF; *13, s 15″; m diff	0
198	2376	.....	Δ. 31 ??	0 58 56·4	1·969	5	162 48 27·9	19·37	5	Cl; F; L; R; pC; st 14...16.	5
199	.....	.....	D'Arrest, 8	0 59 21	3·29	[1]	57 57 18	19·36	...	F; S; bet 2 st 15	0
200	2378	.....	Δ. 36 ??	0 59 27·3	1·904	2	163 34 23·2	19·36	2	⊕; B; S; R	2
201	2377	.....	.....	0 59 31·7	2·864	1	120 55 53·2	19·36	1	vF; S; R; gbM	1
202	84	II. 215	.....	0 59 32·3	3·289	3	58 14 9·2	19·36	3	pF; S; R; bM; 1st of 3	4*
203	85	II. 216	.....	0 59 34·3	3·289	3	58 16 41·2	19·36	3	pF; S; R; sbM; 2nd of 3	4*
204	.....	VIII. 64	C.H.	0 59 37·4	3·703	1	29 9 36·2	19·36	1	Cl; pC	1
205	86, *a*	.....	R. nova	0 59 39·6	3·289	...	58 20 48·2	19·36	...	γ′ in Lord R.'s diagram	0*
206	86	II. 217	.....	0 59 40·5	3·289	3	58 20 16·2	19·36	3	pF; pL; R; gbM; 3rd of 3	4*
207	.....	.....	D'Arrest, 9	0 59 42	3·29	[3]	58 26 0	19·36	[3]	p of Dneb; vF; pS; Δ.R.A.=0 Δ.P.D.=93″	0*
208	.....	.....	D'Arrest, 10	0 59 42	3·29	[3]	58 25 18	19·36	[3]	vF; R; pS; f of D neb	0*
209	86, *b*	.....	R. nova	0 59 46·3	3·288	...	58 23 20·2	19·35	...	δ in Lord R.'s diagram	0*
210	86, *c*	.....	R. nova	1 0 2·3	3·288	...	58 27 16·2	19·34	...	θ in Lord R.'s diagram	0*
211	.....	.....	Auw. N. 9	1 0 15·1	3·071	...	89 48 55·8	19·34	...	F nebula (Bond, Jan. 1853)	0*
212	87	II. 218	.....	1 0 39·6	3·299	1	57 37 10·1	19·33	1	F; vS; R; mbM; bet 2 st	2
213	87, *a*	.....	R. nova	1 0	.....	...	59 37	.....	...	makes a D neb with h. 87	0
214	88	I. 54	.....	1 0 43·4	3·361	2	51 5 25·1	19·33	2	F; vS; vlE; gbM; 4Sstnr	4*
215	.....	.....	D'Arrest, 11	1 0 45	3·30	[1]	57 36 18	19·33	[1]	F; S; pos from h. 87=40°; dist 47″.	0
216	2379	.....	.....	1 0 45·8	1·940	1	162 44 38·1	19·33	1	vF; pL; R; glbM	1
217	.....	.....	D'Arrest, 12	1 1 29	3·30	[1]	57 59 48	19·31	[1]	vF; S; R; *10f 1ˢ·8, s 80″	0
218	89	II. 224	.....	1 1 39·0	3·326	2	55 2 13·7	19·31	2	pB; cL; R; gbM; *β Androm.* nr	3
219	2380	.....	.....	1 2 5·5	2·679	1	137 25 34·0	19·30	1	eS; stellar; =*7m	1
220	2381	.....	.....	1 2 39·6	2·041	1	160 37 28·3	19·29	1	F; vL; R; vglbM	1
221	.....	II. 219	.....	1 2 44·2	3·306	(1)	57 34 0·3	19·29	(1)	eS; F; p of D neb	1
222	.....	II. 220	.....	1 2 44·2	+3·306	(1)	57 34 0·3	—19·29	(1)	pL; f of D neb	1

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	h.	H.		h m s	s		° ′ ″	″			
223	2382	.....	.....	1 3 9·2	+2·800	1	126 31 25·9	− 19·27	1	eF; S; R; vS∗ nr	1
224	2384	.....	.....	1 3 27·6	1·908	1	162 30 42·9	19·27	1	eF; pL; R; gvlbM	2
225	2383	.....	.....	1 3 37·2	2·801	2	126 14 35·2	19·26	2	vF; S; R; glbM	2
226	2386	.....	.....	1 3 39·2	1·861	4	163 6 23·2	19·26	4	F; pS; R; gbM	4
227	2385	.....	.....	1 3 57·5	2·849	3	120 57 48·5	19·25	3	F; pL; R; vglbM; p of 2 ...	3
228	2387	.....	Δ. 36?	1 4 4·2	1·814	1	163 37 59·5	19·25	1	.....	4
229	90	III. 15	.....	1 4 25·7	3·303	1	58 37 12·8	19·24	1	F; pS; R; bM.....	2
230	.....	III. 15⁴	.....	1 4 26·1	3·303	1::	58 36 22·8	19·24	1::	eF; vS	1
231	[162]	.....	.....	1 4 28·3	1·890	1	162 30 54·8	19·24	1	vF	1
232	2388	.....	.....	1 4 41·6	2·855	2	119 58 44·8	19·24	2	eF; S; E; glbM; f of 2	2
233	2389	.....	.....	1 4 57·6	2·768	1	128 49 39·1	19·23	1	vF; S; R; glbM	1
234	91	III. 592	.....	1 5 41·2	3·066	1	91 3 7·7	19·21	1	vF; vS; R	2
235	91, *a*	.....	R. nova	1 5	.....	...	91 3	.....	...	Forms a Δ with h. 91 & 92...	0
236	2390	.....	.....	1 5 43·8	2·826	2	122 49 44·7	19·21	2	2 vSst+F neb	2
237	92	III. 593	.....	1 5 46·4	3·065	1	91 4 22·7	19·21	1	eF; eS	2
238	.....	II. 622	.....	1 5 49·2	3·074	1	89 45 44·0	19·20	1	F; L; R; bM; er.....	1
239	93	II. 447	.....	1 5 51·7	3·066	1	90 59 22·7	19·21	1	F; vS; R; vsbM∗	3
240	95	.....	.....	1 6 16·1	3·324	1	57 1 50·0	19·20	1	F; S; vsbM	1
241	2391	.....	.....	1 6 16·3	2·340	1	152 20 39·0	19·20	1	F; S; R; gbM; ∗12 f	2
242	94	.....	.....	1 6 27·6	3·732	1	30 36 52·3	19·19	1	Cl; S; lC	1
243	2392	.....	.....	1 6 36·9	2·430	2	148 59 52·3	19·19	2	B; S; R; psbM	2
244	.....	VII. 45	.....	1 6 53·4	3·703	2	31 56 6·6	19·18	2	Cl; S; iF; pC	2
245	2393	.....	.....	1 7 7·0	2·761	2	128 38 59·9	19·17	2	pF; S; R; glbM	2
246	2394	.....	.....	1 7 12·4	2·823	2	122 29 25·9	19·17	2	pB; S; R; gbM	2
247	2396	.....	.....	1 7 13·1	2·423	2	149 1 44·9	19·17	2	F; vS; R	2
248	2395	.....	.....	1 7 16·6	2·823	2	122 32 55·9	19·17	2	pF; S; R; gbM	2
249	.....	.....	D'Arrest, 13	1 7 21	3·32	[1]	57 31 18	19·16	[1]	F; S; R; ∗15 p, 8ˢ·3, 270° ...	0
250	.....	.....	D'Arrest, 14	1 7 51	3·32	[2]	57 40 42	19·15	[2]	F; pL; bM; ∗11 nr.....	0
251	96, *a*	.....	R. nova	1 8	.....	...	59 43	.....	...	vF; mE 135°±; lbM; np h.96	0
252	96	.....	.....	1 8 29·3	3·306	1	59 42 41·8	19·14	1	vF; E; ∗9np; S∗nf, vnr	1
253	2397	.....	.....	1 8 35·1	2·480	1	146 8 37·8	19·14	1	vF; S; R; bM.....	1
254	.....	III. 440	.....	1 8 48·8	3·061	1	91 35 19·1	19·13	1	vF; vL.....	1
255	2399	.....	Δ. 7, 10?	1 9 50·6	1·668	3	164 2 15·0	19·10	4	pF; pL; iR; r; 1st of sev, neb and st.	3
256	97	VII. 42	.....	1 10 24·8	3·722	1	32 24 35·3	19·09	1	Cl; B; L; pR; st 7, 8, 10 ...	3
257	2401	.....	Δ. 60?	1 10 40·8	1·799	2	162 17 13·6	19·08	2	pF; L; R; vgbM	2
258	.....	III. 205	.....	1 10 41·4	3·198	1	73 4 51·6	19·08	1	eF	1
259	2402	.....	Δ. 8, 10?	1 10 48·6	1·650	4	164 2 41·6	19·08	4	F; pL; iR; gbM; r; 2nd of sev.	4
260	2400	.....	.....	1 10 54·4	2·794	1	124 6 11·6	19·08	1	pB; R; glbM; ? 1° in P.D....	1
261	2404	.....	Δ. 9?	1 11 42·3	1·629	1	164 4 36·5	19·05	1	pB; pL; iF; 3rd of sev.	1
262	2403	.....	.....	1 11 43·3	2·365	1	149 38 46·5	19·05	1	vF; R; gbM; 30	1
263	99	III. 250	.....	1 11 56·6	3·091	1	87 25 16·5	19·05	1	pB; pL; R; gmbM; p of 2...	4
264	.....	I. 108	.....	1 12 1·0	3·091	1	87 30 53·5	19·05	1	cB; vL; iR; pB∗f	1
265	98	.....	.....	1 12 2·9	3·335	1	58 1 55·5	19·05	1	vF; eS; stellar.....	1
266	.....	.....	D'Arrest, 15	1 12 41	3·33	[2]	58 2 0	19·03	[2]	eF; vS; ∗9p14ˢ; v diffic.....	0
267	.....	III. 206	.....	1 12 41·2	3·192	1	74 14 55·1	19·03	1	eF; S	1
268	100	III. 577	.....	1 13 19·9	3·428	1	50 14 18·7	19·01	1	vF; pS; vlE; vglbM	2
269	.....	III. 251	.....	1 13 21·4	3·092	3:	87 22 9·7	19·01	3:	pB; S; smbM; f of 2	3
270	101	.....	.....	1 13 47·2	3·119	1::	83 43 2	19·00	1	cF; pL; R; red ∗7·8, 225°...	1
271	2405	.....	.....	1 14 3·5	2·691	1	131 42 52·3	18·99	1	eF; lE	1
272	102	III. 156	.....	1 14 6·0	3·350	1	57 17 30·3	18·99	1::	vF; eS; 1st of 3	3
273	2406	.....	.....	1 14 7·3	2·353	2	149 15 33·3	18·99	2	vB; S; lE; psmbM	2
274	.....	.....	D'Arrest, 16	1 14 29	3·14	[1]	81 31 48	18·97	[1]	pB; S; E	0
275	103, *a*	.....	R. nova	1 14 29	3·107	...	85 24 26·6	18·98	...	γ in Lord R.'s diagram	0
276	103	III. 252	.....	1 14 31·2	3·107	2	85 28 25·6	18·98	2	pB; L; R; svmbM; ∗7 f 1ᵐ...	3
277	103, *b*	.....	R. nova	1 14 46·4	3·107	...	85 21 47·6	18·98	...	β in Lord R.'s diagram	0
278	.....	III 157	.....	1 14 51·3	3·351	2	57 15 28·9	18·97	2	vF; S; 2nd of 3	2
279	2407	.....	.....	1 14 53·5	2·772	2	124 48 15·9	18·97	2	B; S; vlE; bM; vS∗nr	2
280	103, *c*	.....	R. nova	1 14 57·1	3·107	...	85 18 37·6	18·97	...	δ in Lord R.'s diagram	0
281	105	III. 594	.....	1 14 59·5	3·075	1	89 47 7·2	18·96	1	vF; L; mE 60°±; lbM	2
282	104	.....	.....	1 15 4·4	+3·352	1	57 33 18·2	−18·96	1	vF; E; ⁂s	1

No. of Cata-logue.	References to: Sir J. H.'s Catalogues of Nebulæ.	Sir W. H.'s Classes and Nos.	Other Authorities.	Right Ascension for 1860, Jan. 0.	Annual Precession in Right Ascension for 1880.	No. of Obs. used.	North Polar Distance for 1860, Jan. 0.	Annual Precession in N.P.D. for 1880.	No. of Obs. used.	Summary Description from a Comparison of all the Observations, Remarks, &c.	Total No. of times of Obs. by h. and H.
	h.	H.		h m s	s		° ′ ″	″			
.....	104, *a*	.....	R. 5 novæ	1 15	+.....	...	57 33	−18·95	...	No descr Nos. 283...287 incl	0
288	106, *a*	.....	R. nova	1 15	.....	...	57 16	18·95	...	No description	0
289	106	III. 158	.....	1 15 19·6	3·354	2	57 16 46·5	18·95	2	pB; pL; R; 3rd of 3	4
290	103, *d*	.....	R. nova	1 15 23·2	3·107	...	85 20 17·6	18·95	...	ε in Lord R.'s diagram	0
291	.....	.....	D'Arrest, 17	1 15 35	3·35	[3]	57 31 18	18·94	[3]	vF; S; obs. with H. 157, 158, 159, 160.	0
292	107	.....	.....	1 15 36·6	3·352	1:	57 36 31·8	18·94	1::	No description	1
293	.....	.....	D'Arrest, 18	1 15 38	3·13	[2]	81 41 6	18·94	[2]	cB; S; R; bMN	0
294	108	III. 159	.....	1 15 48·0	3·354	2	57 28 37·8	18·94	2	vF; pL; R; bM; p of 2	3
295	109	III. 160	.....	1 15 49·0	3·354	1	57 26 52·8	18·94	1	vF; S; f of 2	2
296	110	.....	.....	1 16 7·8	3·362	1	56 49 53·1	18·93	1	vF; vS	1
297	111	III. 169	.....	1 16 34·4	3·362	1	56 56 28·4	18·92	1	F; S; stellar	2
298	112	II. 252	.....	1 16 35·8	3·169	2	77 49 10·7	18·91	2	F; L; lE; vglbM; ✱f	3†
299	113	III. 167	.....	1 16 45·3	3·360	1	57 16 37·7	18·91	1	Stellar; p of 2	2
300	.....	.....	D'Arrest, 19	1 16 48	3·14	[2]	81 10 6	18·91	[2]	eF; S; v diffic; I 151 f41^s ...	0
301	114	III. 168	.....	1 16 48·8	3·360	1	57 18 37·7	18·91	1	pB; R; stellar; f of 2	2
302	114, *a*	.....	R. nova	1 16	.....	...	57 18	.....	...	S; R; bM	0
303	116	III. 253	.....	1 17 19·4	3·097	1	86 55 16·3	18·89	1	F; cL; E 135°±	3†
304	115	II. 461	.....	1 17 19·8	3·078	2	89 0 21·3	18·89	2	F; pL; R; gbM	5
305	.....	.....	D'Arrest, 20	1 17 22	3·14	[2]	80 44 24	18·89	[2]	eF; pL; iF; ?Cl+neb	0
306	.....	.....	D'Arrest, 21	1 17 25	3·37	[1]	56 42 18	18·89	[1]	D neb; vF; 90° pos	0
307	117	I. 151	.....	1 17 26·8	3·142	1	81 11 50·3	18·89	1	vB; pL; mbM; 4S st nr	2
308	.....	.....	D'Arrest, 22	1 17 31	3·14	[2]	81 1 12	18·88	[2]	vF; vS; ✱ 11·12 p 5^s	0
309	2408	.....	.....	1 17 35·1	2·750	3	125 48 8·3	18·89	3	F; S; lE; p of 2	3
310	2409	.....	.....	1 17 37·5	2·748	3	125 51 0·3	18·89	3	F; S; lE; bM; f of 2	3
311	118	.....	.....	1 17 44·5	3·377	1	56 1 31·3	18·89	1	pB; vS; sbM; p of 2	1*
312	118, *a*	.....	R. nova	1 17	.....	...	56 1	.....	...	One of 4 neb nr h. 120	0
313	.....	III. 556	.....	1 17 51·6	3·140	1	81 28 43·6	18·88	1	vF; pL; mE 15°±	1*
314	119	.....	.....	1 17 51·6	3·140	(1)?	81 29 30·6	18·88	1	Not vF; L; R; bM	2*
315	121	II. 462	.....	1 18 19·5	3·081	2	88 58 4·9	18·87	2	pB; pL; R; gmbM	3
316	2410	.....	.....	1 18 22·9	2·708	2	128 52 11·9	18·87	2	eeF; S; R; vgbM; 1st of 4...	2
317	120	.....	.....	1 18 24·6	3·379	1	56 2 19	18·87	1	pB; pL; gbM; f of 2	1*
318	120, *a*	.....	R. nova	1 18	.....	...	56 2	.....	...	One of 4, see h. 118, 120 ...	0
319	.....	III. 170	.....	1 18 26·6	3·373	1	56 39 5·2	18·86	1	Stellar	1*
320	2411	.....	.....	1 18 51·2	2·707	2	128 48 57·5	18·85	2	eeF; S; R; vgbM; 2nd of 4...	2
321	2412	.....	.....	1 18 52·4	2·707	2	128 47 17·5	18·85	2	eeF; S; R; vgbM; 3rd of 4...	2
322	.....	II. 448	.....	1 18 55·2	3·056	1	92 3 54·5	18·85	1	Stellar; p of D neb	1
323	.....	II. 449	.....	1 18 55·2	3·056	1	92 3 54·5	18·85	1	Stellar; f of D neb	1
324	2413	.....	.....	1 19 6·8	2·707	1	128 44 40·8	18·84	1	eeF; S; R; vgbM; 4th of 4...	1
325	.....	III. 171	.....	1 19 27·2	3·383	1	56 4 7·1	18·83	1	Stellar	1*
326	122	II. 463	.....	1 19 33·1	3·083	2	88 42 53·1	18·83	2	F; S; E 90°; bM; r	5
327	123	III. 560	.....	1 19 42·9	3·415	1	53 32 28·1	18·83	1	vF; S; E; vglbM; ✱13 nr ...	2
328	.....	III. 172	.....	1 19 56·5	3·371	1	57 16 7·4	18·82	1	vS; stellar; p of 2	1
329	.....	III. 173	.....	1 19 56·5	3·371	1	57 16 7·4	18·82	1	vS; stellar; f of 2	1
330	124	VII. 48	.....	1 20 10·3	3·969	1	27 25 54·7	18·81	1	Cl; B; pL; pRi; st mm	2*
331	.....	.....	D'Arrest, 23	1 20 21	3·38	[1]	56 25 18	18·80	[1]	eF; pL; R	0
332	.....	III. 441	.....	1 20 34·8	3·051	1	92 40 8·0	18·80	1	vF; vS; iE; p of 2	1
333	.....	III. 442	.....	1 20 39·9	3·052	1	92 37 8·0	18·80	1	vF; vS; iF; f of 2	1
334	125	.....	.....	1 21 10·0	3·362	1	58 23 57·6	18·78	1	vF; S; R	1
335	2414	.....	.....	1 21 37·4	2·726	1	126 27 1·2	18·76	1	vF; S; R	1
336	2415	.....	.....	1 22 20·5	2·675	1	130 2 23·8	18·74	1	eF; S; att to S✱; B✱nr	1
337	2416	.....	.....	1 22 43·5	2·723	1	126 19 27·1	18·73	2	vS; ✱pos 225° inv	3
338	2417	.....	.....	1 23 15·2	2·453	1	142 18 52·7	18·71	1	F; S; R; bM; am st 11	1
339	2418	.....	.....	1 23 43·9	2·864	1	113 23 44·0	18·70	1	B; L; pmE; gpmbM	1
340	127	.....	.....	1 23 47·8	3·390	1	57 6 32·0	18·70	1	vF; pL; gbM	1
341	126	.....	Σ.131=M.103	1 23 59·8	3·916	2	30 2 9·3	18·69	2	Cl; B; R; Ri; pL; st 10...11	5
342	128	I. 100	.....	1 24 18·7	3·008	3	97 35 25·6	18·68	3	vB; pL; R; mbM; p of 2 ...	4
343	128, *a*	.....	R. nova	1 24	.....	...	97 35	.....	...	No description	0
344	.....	III. 431	.....	1 24 22·2	3·008	(1)	97 36 39·6	18·68	(1)	eF; S; f of 2	1
345	129	.....	.....	1 24 33·4	3·059	1	91 38 46·6	18·68	1	vF; S; R; bM	1
346	130	.....	.....	1 24 35·7	+ 3·008	1	97 36 47·9	− 18·67	1	vF; vS; R	1

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	h.	H.		h m s	s		° ′ ″	″			
347	.....	.....	D'Arrest, 24	1 24 40	+3·41	[1]	55 26 18	−18·66	[1]	vvF; S; ?rr	0
348	.....	.....	D'Arrest, 25	1 25 0	3·35	[2]	60 5 0	18·65	[2]	F; M. 33, f65ˢ; another f28ˢ	0
349	.....	.....	D'Arrest, 26	1 25 28	3·35	[2]	60 5 0	18·64	[2]	F; pL, f of 2	0
350	2419	.....	.....	1 25 53·4	2·737	2	124 13 32·1	18·63	2	F; S; R; bM	2
351	132	II. 4	.....	1 25 54·1	3·006	1	97 44 13·1	18·63	1	pB; R; bM; r; *6, f47ˢ·5	7
352	131	V. 17	M. 33	1 25 56·3	3·358	1	60 3 50·1	18·63	1	!; eB; eL; R; vRi; vgbMN; rr.	14†
353	.....	II. 473	.....	1 26 1·4	2·960	1	102 53 18·1	18·63	1	F; S; iF; er	1
354	.....	III. 432	.....	1 26 15·0	3·003	1	98 2 38·4	18·62	1	eeF	1
355	133	III. 150	.....	1 26 17·0	3·361	1	59 57 47·4	18·62	1	vS; R; vvlbM	5
356	2421	.....	Δ. 17?	1 26 24·6	1·327	2	164 16 37·4	18·62	2	B; S; R; psbM*; r	2
357	.....	.....	R. nova	1 26 33·5	3·355	::	60 31 53·9	18·61	::	S, a neb or Cl with 3stinv	0
358	.....	.....	D'Arr. = Auw.N.15	1 27 18·1	3·002	...	98 5 42·6	18·58	...	Nebulous *11, m (D'Arr. Resultate).	0*
359	134	.....	.....	1 27 23·6	3·399	1	57 4 11·6	18·58	1	vF; psbM; stellar	1
360	2423	.....	.....	1 27 44·5	2·690	1	127 13 26·9	18·57	1	F; vS; R; *12, p	1
361	139 = 2422	I. 281	.....	1 27 47·4	2·780	3	120 7 37·9	18·57	3	vB; vL; vmE, 118°·3; sbM; *34°·5, 6ˢ·5.	5
362	135	III. 174	.....	1 27 53·1	3·401	1	57 2 16·9	18·57	1	pF; psbM; stellar	2
363	137	II. 282	.....	1 28 18·0	3·001	1:	98 2 43·5	18·55	1	pB; pL; ilE; gmbM; r; *8, np10′.	4
364	136	.....	.....	1 28 19·5	3·399	1	57 19 26·5	18·55	1	pB; pL; bM; *f, 2ᵐ 51ˢ	1
365	2424	.....	.....	1 28 37·9	2·687	1	127 12 19·8	18·54	1	eeeF; vS; R; p of 2	1
366	138	III. 454	.....	1 28 48·9	3·072	1	90 2 25·1	18·53	2	eF; pL; not bM	2
367	2425	.....	.....	1 28 50·4	2·686	1	127 12 40·1	18·53	1	F; S; R; f of 2	1
368	140	III. 471	.....	1 28 55·4	2·976	1	100 43 34·1	18·53	1	eF; S; am vSst	2
369	2426	.....	Δ. 479	1 28 57·2	2·612	1	132 9 23·1	18·53	2	B; pL; mE; gpmbM	3
370	2427	.....	.....	1 29 2·6	2·647	1	129 51 50·1	18·53	1	pF; S; R; bM	1
371	141	.....	.....	1 29 9·2	3·405	1?	57 7 44·4	18·52	1::	vF; R; f of 2	1
372	142	.....	M. 74	1 29 11·1	3·211	2	74 55 46·4	18·52	2	⊕; F; vL; R; vg, psmbM; rr	11†
373	.....	.....	Auw. N. 16	1 29 14·4	4·681	...	17 49 45·0	18·50	...	iF; 3st + neb (Struve, Σ. 2)	0
374	2428	.....	.....	1 29 27·8	2·642	1	130 3 42·7	18·51	1	pF; S; R; bM	1
375	143	.....	.....	1 29 59·6	3·119	1	84 50 14·0	18·50	1	pB; S; R; psbM	1
376	2429	.....	.....	1 30 9·9	2·669	2	128 2 13·0	18·50	2	pB; S; R; gbM; *np	2
377	144	II. 283	.....	1 32 7·6	2·997	2	98 13 12·4	18·42	2	pB; vS; R; mbM; r	4
378	.....	VII. 49	.....	1 32 8·2	4·132	1	26 40 32·4	18·42	1	Cl; pS; L & vSst	1
379	2430	.....	.....	1 32 32·0	2·759	3	120 38 10·7	18·41	3	vF; vS; p of 2	3
380	2432	.....	.....	1 32 38·7	2·575	2	133 14 25·0	18·40	3	F; S; R; gpmbM; p of 2	3
381	2431	.....	.....	1 32 39·3	2·759	3	120 37 15·0	18·40	3	vF; pS; R; gbM; *f, nr	3
382	2435	.....	.....	1 32 40·7	0·929	2	166 16 4·0	18·40	2	vF; pS; R; vglbM	2
383	2433	.....	.....	1 32 50·9	2·573	2	133 18 22·0	18·40	2	F; S; vlE; glbM; f of 2	2
384	2434	.....	.....	1 32 55·1	1·907	1	155 36 37·3	18·39	1	vF; iR; vglbM	1
385	.....	.....	M. 76	1 33 28·5	3·334	1	39 8 52·4	18·37	1	vB; p of D neb	2
386	.....	I. 193	.....	1 33 37·5	3·734	1	39 7 27·4	18·37	1	vB; f of D neb	1
387	145	VII. 46	.....	1 34 28·0	4·062	2	28 49 19·8	18·34	2	Cl; iF; Ri; one * 6·7; st 11 ...14.	4
388	146	.....	.....	1 34 41·6	3·856	1	34 49 52·1	18·33	1	Cl; pRi; st 12, m	1
389	.....	VIII. 65	C.H.	1 34 45·0	4·018	1	30 0 37·1	18·33	1	Cl; S; lRi; stL	1
390	.....	II. 253	.....	1 35 35·6	3·199	1	77 4 36·0	18·30	1	pB; pL; E; bM; r	1
391	147	II. 610	.....	1 36 23·8	3·366	1	62 0 24·9	18·27	1	F; S; R; bM; r	3
392	.....	VI. 31	.....	1 36 29·2	4·055	1	29 27 40·9	18·27	1	Cl; B; L; eR; st pL	1
393	148	.....	.....	1 36 30·8	3·107	1	86 28 36·9	18·27	1	vF; S; R	1
394	.....	II. 588	.....	1 37 15·0	3·165	2	80 17 10·8	18·24	2	F; S; lE; bM; r	2
395	149	II. 611	.....	1 39 33·1	3·365	2	62 48 58·2	18·16	2	F; S; lE 0° +	3
396	150	I. 157	.....	1 40 0·8	3·360	2	63 16 25·8	18·14	3	F; E 0°...90°; bet 2 st	4
397	.....	II. 589	.....	1 40 35·6	3·183	2	79 10 46·7	18·11	2	F; pL; E; lbM; *nf, 2′	2
398	.....	.....	D'Arrest, 27	1 41 29	3·30	[1]	68 21 3	18·08	[1]	pB; vmE; *14, f8ˢ	0
399	.....	II. 228	.....	1 41 34·5	3·299	2	68 42 50·6	18·08	2	pB; S; iR; mbM; 1st of 2	2
400	151	IV. 42	.....	1 41 37·9	3·126	2	84 47 12·6	18·08	2	vF; vmE, 165° ±; sbM *9	3†
401	.....	III. 175	.....	1 41 51·1	+3·482	1	54 53 51·9	−18·07	1	F; stellar	1

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	h.	H.		h m s	s		° ′ ″	″			
402	.....	II. 229	.....	1 41 57·7	+3·299	2	68 44 49·2	−18·06	2	pB; S; iR: mbM; 2nd of 2...	2
403	152	II. 612	.....	1 42 3·5	3·369	(1)	63 3 33·2	18·06	1	F; vlE, 90°; *15, nr	2
404	2436	II. 481	.....	1 42 17·0	2·959	1	101 7 2·5	18·05	1	pF; cL; R; glbM; S*p, 90″..	2
405	153	.....	.....	1 42 17·6	3·186	1::	79 0 17·5	18·05	1	eF	1
406	154	II. 501	.....	1 42 18·3	2·910	1	105 39 54·5	18·05	1	cF; S; R; gvlbMN.....	2
407	2438	.....	.....	1 42 20·7	2·290	1	143 29 3·5	18·05	1	F; vL; R; vgvlbM	1
408	155 = 2437	III. 459	.....	1 42 21·3	2·808	1	114 29 31·5	18·05	1	vF; vS; R; gbM; er; 2stnr ..	4
409	.....	III. 561	.....	1 42 25·7	3·492	1	54 21 52·8	18·04	1	vF; stellar	1
410	.....	II. 617	.....	1 42 55·7	3·299	1	68 56 54·1	18·03	1	F; cL; vglbM.....	1
411	2439	.....	.....	1 43 2·1	2·393	2	139 19 59·1	18·03	2	B; S; R; gbM	2
412	156	II. 859	.....	1 43 10·9	3·129	1	84 33 6·4	18·02	1	pF; S; E90°; vglbM; *10, nf	2†
413	.....	.....	D'Arrest, 28	1 43 13	3·30	[1]	68 42 18	18·01	[1]	F; S; R; bet 2 st 15.....	0
414	.....	II. 618	.....	1 43 29·0	3·309	1	68 7 54·7	18·01	1	vS; stellar	1
415	2440	.....	.....	1 43 32·7	2·652	1	125 38 52·7	18·01	1	F; S; R	1
416	.....	III. 179	.....	1 43 39·3	3·307	2	68 20 25·0	18·00	2	F; cL; E; mbM	2
417	2441	.....	.....	1 43 42·0	2·653	1	125 34 5·0	18·00	1	eF; S	1
418	160 = 2442	I. 62	.....	1 44 8·0	2·964	1	100 23 45·6	17·98	2	F; pL; E; vgvlbM; r.....	4*
419	158	III. 192	.....	1 44 17·0	3·024	2	94 44 57·9	17·97	3	eF; vlE 0°±, *13, s, 90″.....	4
420	.....	III. 564	.....	1 44 25·9	3·496	1	54 35 56·9	17·97	1	Stellar; 3rd of 4	1
421	.....	III. 565	.....	1 44 25·9	3·496	1	54 35 56·9	17·97	1	Stellar; last of 4	1
422	157	III. 562	.....	1 44 27·3	3·497	1	54 31 58·9	17·97	1	vF; stellar; 1st of 4.....	2
423											
424	157, *a*	.....	R. 3 novæ	1 44	.....	...	54 32	.....	...	Near h. 157, 159	0
425											
426	161	II. 596	.....	1 44 30·7	3·131	1	84 24 17·9	17·97	1	F; S; bM; *13 1′, n	3
427	159	III. 563	.....	1 44 34·3	3·497	1	54 33 1·9	17·97	1	F; pL; bM; 2nd of 4	2
428	162	.....	55 Androm.	1 44 55·9	3·575	1	49 57 41·5	17·95	1	Fine nebulous * with strong atm.	1*
429	163	.....	.....	1 44 56·2	3·509	1	53 52 9·5	17·95	1	vF; R; am pBst	1
430	164	II. 270	.....	1 45 56·9	3·110	2	86 29 23·7	17·91	2	pB; S; iR; psmbM.....	3
431	165 = 2443	I. 105	.....	1 46 12·4	2·918	2	104 25 39·0	17·90	2	cB; pL; lE; psmbM	3
432	.....	.....	D'Arrest, 29	1 46 19	3·28	[1]	70 50 18	17·89	[1]	eF; R; *19, f	0
433	.....	.....	D'Arrest, 30	1 46 32	3·56	[1]	51 18 3	17·88	[1]	eF; pL.....	0
434	.....	.....	D'Arrest, 31	1 47 5	3·29	[3]	69 59 18	17·86	[3]	vF; vS; R; β Arietis in field	0
435	166 = 2444	III. 460	.....	1 47 13·9	2·797	2	114 26 46·2	17·86	2	pF; vS; R; vgbM	3
436	167	.....	.....	1 47 14·6	2·795	1	114 33 21·2	17·86	1	vF; pL; R; gbM; S*195° ...	1
437	2445	.....	.....	1 47 43·1	2·621	1	126 34 24·8	17·84	1	F; S; R; bM	1
438	168	.....	.....	1 47 47·9	3·110	1	86 29 14·8	17·84	1	Suspected neb.....	1
439	2446	.....	.....	1 47 50·1	2·621	1	126 32 0·8	17·84	1	eeeF; S; R	1
440	.....	III. 266	.....	1 48 6·0	2·969	1	99 38 5·4	17·82	1	eF; stellar	1
441	177 = 2447	III. 265	.....	1 48 17·0	2·968	1	99 44 29·4	17·82	1	vF; pS; vlE	3
442	.....	II. 221	.....	1 48 26·0	3·463	1	57 38 16·7	17·81	1	F; pL; mE; r	1*
443	.....	III. 176	.....	1 48 33·4	3·483	1	56 23 6·7	17·81	1	eeeF; stellar	1
444	169	.....	.....	1 48 33·9	3·463	3	57 38 53·7	17·81	3	pB; R; bM; *13, np	3*
445	169, *a*	.....	R. nova	1 48 34·5	3·463	...	57 38 25·7	17·81			
446	169, *b*	.....	R. nova	1 48 38·4	3·463	...	57 38 0·7	17·81		β, γ, δ of Lord R.'s diag. ε=II. 221 H.	0* 0* 0*
447	169, *c*	.....	R. nova	1 48 47·9	3·463	...	57 40 30·7	17·81			
448	172	II. 271	.....	1 49 2·8	3·126	1	85 3 29·3	17·79	1	pF; S; R; p of 2; pos=102°·4	1
449	173	II. 272	.....	1 49 3·2	3·126	1	85 3 41·3	17·79	1	vF; vS; R; sbM; f of 2	4
450	170	.....	.....	1 49 6·3	4·127	1	30 30 49·6	17·78	1	Cl; not Ri; *	1
451	171	.....	.....	1 49 7·6	+3·953	1	35 13 13·6	−17·78	1	Cl; pL; pRi; iF; st 11...13..	1

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	h.	H.		h m s	s		° ′ ″	″			
452	2449	.....	.....	1 49 12·4	+2·112	1	147 22 44·6	−17·78	1	pB; S; R; gbM	1
453	176	III. 193	.....	1 49 20·4	3·017	2	95 9 13·6	17·78	2	eF; *9, 315°±	3
454	2448	.....	.....	1 49 21·5	2·707	3	120 36 23·6	17·78	3	pB; S; E; lM.....	3
455	175	II. 222	.....	1 49 23·6	3·468	1	57 29 41·6	17·78	1	F; pL; mE; r; f of 2	3
456	175, *a*	.....	R. nova	1 49	.....	...	57 29	.....	...	nf h. 175	0
457	174	VII. 32	.....	1 49 25·8	3·541	1	53 1 14·9	17·77	1	Cl; vvL; Ri; st L and sc ...	5
458	2450	.....	.....	1 49 27·7	2·107	1	147 26 49·9	17·77	1	vF; S; R; bM	1
459	178 = 2451	III. 464	.....	1 49 57·4	3·006	3	96 5 19·5	17·75	3	vF; S; lE; vglbM	4
460	180	.....	.....	1 51 17·8	3·158	1	82 20 13·3	17·69	1	vF; S; R; *10, 2′ 285°	1
461	.....	.....	D'Arrest, 32	1 51 35	3·28	[2]	71 42 48	17·68	[2]	vF; S; R; nr I. 112 H.	0
462	179	.....	50 Cassiop.	1 51 36·4	5·005	1	18 15 36·6	17·68	1	Suspected nebulous *.....	1*
463	181	112	.....	1 51 39·0	3·283	2	71 40 12·6	17·68	2	B; cL; R; gbM; r	3
464	181, *a*	.....	R. nova	1 51 39	3·283	::	71 45±	.....	::	5 or 6′ s of h. 181	0
465	2452	III. 468	.....	1 52 0·8	2·936	1	102 10 50·9	17·67	1	cF; pL; E 0°±; glbM	2
466	.....	III. 214	.....	1 52 2·0	3·223	1	76 41 15·9	17·67	1	vF; stellar	1
467	2453	.....	.....	1 52 3·7	2·751	2	116 58 27·9	17·67	2	pF; S; R; glbM.....	1
468	.....	.....	D'Arrest, 33	1 52 5	3·34	[1]	67 2 18	17·66	[1]	F; pL	0
469	182	II. 223	.....	1 52 10·0	3·451	1	59 15 3·2	17·66	1	pB; pL; R; glbM	2
470	183	I. 101	.....	1 52 40·6	2·999	3	96 38 24·8	17·64	3	cB; L; mE 163°·0; mbM ...	6
471	.....	III. 215	.....	1 52 43·3	3·209	1	77 59 17·8	17·64	1	eF; stellar	1
472	184	III. 583	.....	1 52 52·3	3·406	1	62 26 29·1	17·63	1	vF; vS; E; 3 stp; *250° ...	2*
473	2454	.....	.....	1 52 57·3	2·039	1	148 28 9·1	17·63	1	pB; pL; lE; *12 att	1
474	185	II. 435	.....	1 54 2·1	2·989	(1)	97 30 22·6	17·58	1	pF; pS; R; bM	2
475	186	III. 433	.....	1 54 20·6	3·005	1	96 3 38·9	17·57	1	cF; cS; R; bM	3
476	.....	.....	D'Arrest, 34	1 54 25	3·16	[1]	82 10 18	17·56	[1]	vF; S; * 14 f 90°; 11ˢ·65 ...	0
477	187	.....	.....	1 54 39·4	3·247	1	74 57 35·2	17·56	1	eF; S; R; * 11 75°	1
478	188	III. 207	.....	1 54 49·2	3·280	1	72 17 54·5	17·55	1	vF; cS; R; stellar	2
479	2455	.....	.....	1 54 55·4	2·100	1	146 30 26·8	17·54	1	pF; S; R; 2 st 11, nr	1
480	2456	.....	.....	1 55 1·3	0·699	3	164 54 18·8	17·54	3	eF; vS; R; *12, 25″ 315°....	3
481	189	III. 566	.....	1 55 8·5	3·571	1	52 33 52·1	17·53	1	vF; S; iR; sbM; * nr	3
482	2457	.....	.....	1 55 46·1	1·428	1	158 32 40·7	17·51	1	eeF; vS; R; *13 p 100″ ...	1
483	190	III. 208	.....	1 56 8·7	3·253	1	74 38 1·3	17·49	1	vF; S; iR; glbM; *10 p 3ˢ·5	2
484	191	III. 151	.....	1 56 54·9	3·428	1	61 40 47·2	17·46	1	vF; vS; iR; bet2stn and sp...	3
485	192 = 2458	.....	.....	1 57 28·5	2·780	2	113 58 18·1	17·43	2	vF; pS; vlE	2
486	2459	.....	.....	1 58 26·4	1·343	1	159 7 19·3	17·39	1	pF; S; R; gbM	1
487	193	I. 152	.....	1 59 51·2	3·196	1	79 40 47·1	17·33	1	B; vS; vlE; svmbM; *10, 55″ 320°.	3*
488	194	II. 604	.....	2 0 19·0	3·604	1	51 54 21·7	17·31	1	pB; cL; lE; mbM	2
489	195	.....	.....	2 0 49·6	3·238	1	76 18 58·6	17·28	1	F; R; vS; bM	1
490	2461	.....	.....	2 0 55·4	2·468	2	131 49 14·6	17·28	2	cF; vS; R; sbM; r.....	2
491	196 = 2640	.....	.....	2 0 56·9	2·741	2	116 7 18·6	17·28	2	vF; vF ** inv	2
492	2462	.....	.....	2 0 58·2	2·561	1	127 9 11·6	17·28	2	F; S; R; vsvmbM*13	2
493	198	III. 227	.....	2 1 34·0	3·161	1	82 41 44·2	17·26	1	vF; S; R; bM; am st.....	2
494	197	II. 605	.....	2 1 40·3	3·617	1	51 28 53·5	17·25	1	pB; S; iR; ** f 15ˢ	2
495	199 = 2463	II. 482	.....	2 2 30·1	2·942	3	100 47 38·7	17·21	3	F; S; R; 1st of 4	4
496	.....	III. 567	.....	2 2 32·5	3·591	1	53 0 41·7	17·21	1	vF; S; lE	1
497	200 = 2464	II. 483	.....	2 2 32·8	2·942	3	100 47 50·7	17·21	3	F; S; R; 2nd of 4	4
498	201 = 2465	II. 484	.....	2 2 47·1	+2·942	3	100 48 31·0	−17·20	3	vF; vS; R; 3rd of 4	4

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	h.	H.		h m s	s		° ′ ″	″			
499	202 = 2466	II. 485	.....	2 2 51·4	+2·941	2	100 51 11·0	−17·20	3	vF; pS; R; 4th of 4	4
500	203	.....	.....	2 2 55·0	2·971	1	98 25 7·3	17·19	1	vF; vS; R; psbM	1
501	204	III. 604	.....	2 3 56·7	3·593	1	53 10 55·5	17·15	1	vF; iF; stellar.....	2*
502	2467	.....	.....	2 4 15·8	1·992	1	147 23 34·1	17·13	1	pF; pS; R; glbM; r	1
503	.....	III. 259	.....	2 4 27·5	3·047	1	92 9 47·4	17·12	1	eF; eS; iF	1
504	.....	II. 486	.....	2 4 45·7	2·951	1	99 58 5·7	17·11	1	F; S; E	1
505	2468	.....	.....	2 5 36·7	2·555	3	126 30 33·9	17·07	4	cF; pS; lE 0°; gbM	4
506	.....	II. 613	.....	2 5 51·5	3·435	1	62 46 51·2	17·06	1	F; S; lE 90°; bM	1
507	2469	.....	.....	2 6 30·8	2·623	2	122 36 11·1	17·03	2	cB; S; E; psmbM	2
508	2470	.....	.....	2 7 24·0	2·420	2	132 41 12·3	16·99	2	F; vS; svmbM	2
509	205	III. 260	.....	2 7 24·4	3·056	1	91 24 41·3	16·99	1	vF; R; bM; stellar	2
510	206	III. 457	.....	2 8 6·4	3·140	1	84 39 32·5	16·95	1	eF; cL; R; gbM; *12 sf att.	2*
511	.....	III. 2	.....	2 8 41·3	3·078	1	89 36 2·1	16·93	1::	eF; vS; R; bM	1
512	207	VI. 33	.....	2 9 15·3	4·166	2	33 29 55·0	16·90	2	!; Cl; vvL; vRi; st7...14 ...	5
513	208	III. 201	.....	2 9 33·1	3·252	1	76 5 52·3	16·89	1	vF; vS; E; *10 sf 4′	2
514	208, *a*	.....	R. nova	2 9	.....	...	76 5+	.....	...	neb s of h. 208	0
515	209 = 2471	II. 474	.....	2 9 43·2	2·920	5	101 59 58·6	16·88	5	F; pL; R; vglbM	7
516	210	II. 246	.....	2 10 22·6	3·253	1	76 6 11·5	16·85	1	pF; pL; lE; pgbM; { *9, 185° ± 5′ ; S* sf 1′	2*
517	210, *a*	.....	R. nova	2 10	.....	...	76 6	.....	...	neb s of h. 210	0
518	211	II. 436	.....	2 11 14·5	2·980	1	97 17 24·7	16·81	1	F; pS; E; bM; 2 or 3 st nr...	2
519	213	.....	.....	2 11 59·3	3·272	1	74 48 57·9	16·77	1	eF; R; gbM; * 16 nr.....	1
520	215	II. 437	.....	2 12 8·7	2·978	2	97 25 44·2	16·75	2	pF; pS; vlE; bM; * nr	3
521	212	VI. 34	.....	2 12 34·2	4·188	2	33 32 49·5	16·75	2	!; Cl; vL; vRi; ruby * M ...	5
522	214	.....	.....	2 12 46·6	4·536	1	26 52 20·1	16·73	1	Cl; L; lC; sc st 9...13	1
523	216	III. 486	.....	2 12 54·3	2·852	1	106 42 4·1	16·73	1	F; S; iR; pgbM.....	2
524	2473	.....	.....	2 13 20·1	1·774	1	150 30 8·7	16·71	1	eF; S; R; 2 or 3 vSst nr ...	1
525	2472	.....	.....	2 13 30·8	2·400	2	132 23 1·0	16·70	2	vF; vS; R; bM; *7 sf and 6 more.	2
526	217	II. 225	.....	2 13 41·2	3·548	4	57 22 48·3	16·69	4	B; S; R; bM; 3S st sp	5
527	218	V. 19	.....	2 13 50·4	3·737	1	48 16 47·6	16·68	1	!; B; vL; vmE 22°·3	5†
528	2474	.....	.....	2 14 21·4	2·404	2	132 2 58·2	16·66	2	pF; pS; R; lbM; *8 90°, 4′	2
529	219	II. 438	.....	2 14 35·7	2·993	1	96 10 8·8	16·64	2	F; vL; iR; gbM.....	4
530	219, *a*	.....	R. nova	2 14	.....	...	96 10	.....	...	E; F; bM; makes D neb with h. 219; both E.	0
531	.....	III. 695	.....	2 15 1·0	4·448	1	28 40 47·1	16·63	1	eF; pL; iF	1
532	2475	.....	.....	2 15 9·4	2·563	1	124 21 30·4	16·62	1	pB; S; R; psbM; *10 f 90°·0 35″.	1
533	.....	III. 570	.....	2 15 14·0	3·732	2	48 42 17·4	16·62	1	eF; vS; lE	1
534	2476	.....	.....	2 15 26·4	2·779	1	111 27 12·0	16·60	1	pB; S; gbM; r; *p	1
535	2477	III. 224	.....	2 16 34·0	2·778	1	111 20 33·5	16·55	1	F; S; E 90°; gbM	3
536	.....	I. 153	.....	2 16 36·1	2·770	1	111 52 23·5	16·55	1	cB; vL; E 0°...90°.....	1*
537	.....	III. 571	.....	2 16 44·2	3·736	1	48 49 21·5	16·55	1	eF; stellar	1
538	221	.....	.....	2 17 49·4	3·319	1	72 7 46·3	16·49	1	pF; L; R; *10 sf 3′	1
539	220	.....	.....	2 17 50·6	3·543	1	58 23 33·3	16·49	1	vF; S; R; 4 st nr	1
540	2478	III. 239	.....	2 18 44·7	2·710	1	115 26 13·5	16·45	1	cF; pL; R; gpmbM	2
541	.....	III. 474	.....	2 18 50·8	3·350	1	70 7 27·8	16·44	1	eF; vS; iR	1
542	222	III. 177	.....	2 18 55·7	3·571	2	57 3 25·1	16·43	2	cF; cL; E; vgbM; 2st13np..	3
543	.....	II. 489	.....	2 19 58·5	3·350	1	70 15 30·6	16·38	1	F; S; lE; 3 st inv	1
544	223	IV. 23	.....	2 20 29·1	3·049	1	91 46 18·5	16·35	1	vB; vL; R; mbMN	2†
545	2479	.....	.....	2 20 59·9	2·295	2	135 4 17·1	16·33	2	vvF; S; R; gvlbM.....	2
546	224	III. 261	.....	2 21 21·5	3·049	1	91 47 36·7	16·31	1	vF; cL; R; f of 2	2
547	225 = 2480	II. 487	.....	2 21 48·4	2·919	2	101 10 10·3	16·29	2	vF; L; iR; glbM	3
548	2481	.....	.....	2 22 1·5	+2·795	1	109 40 3·6	−16·28	1	pB; E; gbM	1

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	h.	H.		h m s	s		° ′ ″	″			
549	226	I. 154	.....	2 22 18·6	+3·654	1	53 29 51·2	−16·26	1	cB; L; E; vgbM	3*
550	2482	.....	.....	2 23 20·3	2·366	4	132 1 30·7	16·21	4	vF; pL; lE; gbM; *8 sf 3'...	4
551	229	II. 278	.....	2 23 24·6	3·050	1	91 43 1·7	16·21	1	pB; S; E; psbM.....	3
552	228	.....	.....	2 23 27·5	3·837	1	45 59 37·0	16·20	1	Cl; pRi; st 9...15	1
553	227	.....	.....	2 23 28·9	4·288	1	33 5 46·0	16·20	1	Cl; pL; pRi; st 13...15	1
554	230	II. 237?	.....	2 23 38·8	3·024	1	93 33 56·3	16·19	1	pF; ilE 0°±; bM	2
555	2483	.....	.....	2 25 21·5	2·482	2	126 39 0·0	16·10	4	pB; pS; mE 215°·7	4
556	2484	.....	.....	2 25 38·1	2·817	2	107 49 36·8	16·09	2	F; S; iR; gbM	2
557	231	.....	.....	2 25 44·2	3·580	1	57 40 44·3	16·09	1	S; R; psbM; 1st of 3	1*
558	231. *a*	.....	R. nova	2 25 47·7	3·580	...	57 38 59·3	16·09	...	} γ and δ of Lord R.'s diag.	{ 0*
559	231. *b*	.....	R. nova	2 25 52·0	3·580	...	57 38 50·3	16·09	...		{ 0*
560	232	II. 211	.....	2 25 52·4	3·512	(2)	61 17 57·6	16·08	(2)	pB; cL; lE 0...90°; gmbM; 3st s.	3†
561	233	.....	.....	2 26 0·7	3·580	1	57 40 14·9	16·07	1:	vF; R; bM; 2nd of 3	1*
562	2485	III. 472	.....	2 26 16·8	2·912	1	101 22 37·5	16·05	1	eF; pS; R; vlbM; am sc st...	2
563	234	.....	.....	2 26 21·2	3·580	1	57 46 23·5	16·05	1	pB; R; 3rd of 3	1*
564	2486	.....	.....	2 26 26·9	2·270	2	135 8 21·8	16·04	2	F; S; R; bet 2 st in par.....	2
565	235	III. 572	.....	2 26 33·1	3·753	1:	49 47 23·8	16·04	1:	vF; pS; p of 2; 210″; 157°...	2
566	236	III. 573	.....	2 26 37·4	3·754	1	49 44 28·1	16·03	1	F; S; f of 2; 210″; 337° ...	2
567	2487	.....	Δ. 519??	2 28 0·1	2·404	2	129 39 17·2	15·96	2	pB; L; pmE; smbM; bi-N...	2†
568	237	III. 161	.....	2 28 23·1	3·595	2	57 17 16·5	15·95	2	F; S; vlE; bM; r; 2 st 14 np	4
569	238	III. 557	.....	2 28 43·8	3·232	1	78 58 34·1	15·93	1	F; S; vlE; psbM; r	2
570	239	III. 434	.....	2 28 46·2	2·963	1	97 46 30·4	15·92	1	vF; cL; iF; vlbM	2
571	240 =	II. 238 = III. 198	.....	2 30 24·9	3·761	1	49 43 53·8	15·84	1	pF; L; E 90°±; mbM; r ...	4*
572	241	III. 152	.....	2 30 56·6	3·540	1:	60 27 46·0	15·80	1	F; pS; iR; bM; st inv	3†
573	.....	II. 6	.....	2 31 35·3	3·077	1	89 44 6·9	15·77	1	S; cometic	1*
574	244	I. 102	.....	2 31 36·0	2·968	3	97 17 18·9	15·77	3	cB; pL; vR; mbM.....	5*
575	242	I. 156	.....	2 31 38·3	3·731	1	51 32 45·9	15·77	1	vB; vL; vmE; vvmbM	3†
576	243	II. 592	.....	2 31 38·5	3·222	1	79 45 46·9	15·77	1	pF; S; lE; bM; *11, 25″ 50°	2
577	2488	.....	.....	2 31 43·4	1·877	1	145 28 45·9	15·77	1	eF; S; R; p of 2.....	1
578	.....	VIII. 66	.....	2 32 1·1	4·572	2	29 3 23·5	15·75	2	Cl; L; sc st, one 10.....	2
579	245	III. 581	.....	2 32 2·2	3·333	1:	72 34 8·5	15·75	1::	vF; iE.....	2
580	2490	.....	.....	2 32 8·3	1·874	1	145 28 16·8	15·74	1	F; S; R; gbM; *11, s 2′ ...	1
581	246	II. 5	.....	2 32 11·6	3·080	2	89 30 24·8	15·74	2	pB; S; vlE 0...90°; bm; 3st trap.	10
582	249 = 2489	II. 284	.....	2 32 36·5	2·945	2	98 44 27·7	15·71	2	pF; L; mE; r; *17, att sf ...	4
583	247	III. 475	.....	2 32 42·1	3·354	(1)	71 19 38·7	15·71	1	F; S; R; lbM.....	2
584	248	.....	M. 34	2 33 2·3	3·829	2	47 49 25·0	15·70	2	Cl; B; vL; lC; sc st 9	8
585	251	III. 228	.....	2 33 36·3	3·193	1	81 52 7·2	15·66	1	vF; vS; p of 2; *10 p	2
586	253 = 2491	II 488	.....	2 33 42·9	2·898	2	101 53 28·2	15·66	2	F; S; R; bM	3
587	252	III. 229	.....	2 33 43·8	3·192	1	81 53 22·2	15·66	1	eF; vS; f of 2.....	2
588	2492	.....	.....	2 33 57·9	2·491	1	124 52 20·8	15·64	1	pB; S; R; stellar	1
589	254 = 2493	I. 63	.....	2 34 12·1	2·943	3	98 51 19·1	15·63	3	B; pL; R; mbM*12	4
590	256	III. 584	.....	2 34 35·0	3·520	1:	62 1 17·0	15·60	1	F; S; R; psbM	2
591	258	I. 1	.....	2 34 35·1	3·072	2	90 9 14·0	15·60	2	pF; cL; iE 80°; bM; pB*nr	8*
592	255	II. 633	.....	2 34 39·9	3·701	1	53 16 21·0	15·60	1	pF; cL; R; glbM	3
593	259	.....	.....	2 34 44·5	3·337	1	72 35 27·0	15·60	1	eF;?	1
594	257	III. 162	.....	2 34 49·1	3·596	2	58 10 18·3	15·59	2	F; pL; R; lbM; *7·8 p 43°·5	4
595 596 597	257. *c*	.....	R. 3 novæ	2 34	.....	...	58 10	.....	...	{ 6 seen (including ∴ h. 257, 260, 261). }	0
598	260	III. 163	.....	2 35 23·6	3·598	1	58 7 34·9	15·57	1	vF; pL; R; lbM; sp of 2 ...	2
599	261	.....	.....	2 35 26·2	+3·599	1	58 4 35·2	−15·56	1	eF; S; nf of 2.....	1

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	h.	H.		h m s	s		° ′ ″	″			
600	262	.....	M. 77	2 35 30·2	+3·065	1	90 35 56·2	−15·56	1	vB; pL; iR; sbMrrN; ∗130°, 2′.	13†
601	263	II. 273	.....	2 36 0·3	3·138	1	85 37 19·1	15·53	1	pF; S; iR; gbM	2
602	.....	III. 455	.....	2 36 33·3	3·085	2	89 13 22·0	15·50	2	vF; L; lbM; er	2
603	2494	.....	.....	2 37 43·7	2·589	1	119 35 49·8	15·44	1	B; pL; pmE; sbM	1
604	264	I. 64	.....	2 39 6·9	2·950	1	98 9 52·5	15·35	1	vB; pL; E; gpmbM	3
605	265	II. 466	.....	2 39 15·4	3·057	1	91 5 53·8	15·34	1	pB; cL; lE; mbM	4
606	266	II. 465	.....	2 39 21·1	3·061	1	90 49 5·8	15·34	1	vF; pL; iR; bM.....	4
607	.....	III. 582	.....	2 39 22·7	3·313	1	74 25 31·8	15·34	1	vF; S; iF.....	1
608	267	III. 462	.....	2 40 18·4	3·061	1	90 50 57·3	15·29	1	vF; S; R; 2Sst p	2
609	2496	.....	.....	2 40 20·8	1·552	1	150 30 14·3	15·29	1	F; pS; R; glbM.....	1
610	2495	V. 48	.....	2 40 21·5	2·557	2	120 51 30·3	15·29	2	vB; L; vmE 151°·1; vbMN	3
611	269 = 2497	III. 449	.....	2 42 35·2	2·796	2	107 34 23·5	15·15	2	pF; pL; pmE; glbM	3
612	268	.....	.....	2 42 39·0	3·839	1	48 55 4·5	15·15	1	neb or vSCl of vSst	1
613	270	II. 601	.....	2 43 44·5	3·858	1	48 22 21·3	15·09	1	cF; S; iR; vgbM; r	2
614	.....	.....	Bessel	2 44 6·5	3·738	...	53 4 14·9	15·07	...	? a comet	0*
615	272	III. 450	.....	2 45 8·9	2·799	1	107 12 50·7	15·01	1	vF; S; lE; gbM	3
616	271	II. 602	.....	2 45 25·7	3·847	1	49 0 2·3	14·99	1	cF; pS; iR; vglbM	2
617	271, *a*	.....	R. 2 novæ	2 45	.....	...	49	.....	...	h. 271 is D; another near ...	0
618											
619	273	.....	.....	2 45 44·4	3·044	1	91 51 24·6	14·98	1	eF; pL; gbM; ∗8f.....	1
620	.....	II. 254	.....	2 46 0·9	3·269	1	77 34 54·2	14·96	1	F; S; iR; r	1
621	2498	.....	.....	2 46 35·8	1·778	1	145 32 30·4	14·92	1	F; R; gbM.....	1
622	2499	.....	.....	2 46 44·5	1·772	1	145 38 31·4	14·92	1	F; R; gbM	1
623	274	III. 580	.....	2 47 29·7	3·897	1	47 31 21·6	14·88	1	vF; vS; R; gbM; 2Sst Δ ...	2
624	275 = 2500	II. 470	.....	2 47 46·2	2·905	2	100 36 9·2	14·86	2	vF; S; R; stellar	4
625	2501	.....	.....	2 48 7·7	2·760	1	109 13 6·8	14·84	1	F; pL; vmE; 2Sst f	1
626	276	II. 274	.....	2 50 52·8	3·118	1	87 11 7·6	14·68	1	F; vS; ilE; sbM; er	2
627	.....	II. 619	.....	2 51 35·0	3·493	1	65 21 16·1	14·63	1	pB; cL; pmE 0°; r; ∗n 1′...	1
628	277	III. 199	.....	2 51 54·7	3·949	1	45 40 24·7	14·61	1	F; pS; lE; SbM; ∗p 6ᵐ·5 ...	4
629	277, *a*	.....	R. nova	2 52 ±	.....	...	45 40 ±	.....	...	R (nisi=H. II. 239)	0
630	2502	III. 469	.....	2 52 16·6	2·863	1	102 57 33·3	14·59	1	F; R; glbM; stellar	2
631	.....	III. 178	.....	2 52 47·8	3·711	1	55 18 19·2	14·56	1	vF; pL; R; spmbM	1
632	278	.....	.....	2 52 51·3	3·908	1	47 58 42·2	14·56	1	eF; vS.....	1
633	2503	.....	.....	2 52 56·7	2·484	2	122 39 22·5	14·55	2	vF; pL; E; vlbM	2
634	.....	II. 239?	.....	2 53 0·1	3·977	2	45 35 20·5	14·55	2	pB; pL; iR; mbM	3
635	279	II. 620	.....	2 53 28·9	4·025	(2)	44 10 52·4	14·52	(2)	pF; pS; iF; sbM	2
636	280	II. 502	.....	2 55 0·2	2·818	1	105 23 8·1	14·43	1	pF; pL; R; psbM	2*
637	.....	II. 607	.....	2 55 21·2	3·906	1	48 13 26·7	14·41	1	F; cL; E.....	1
638	.....	II. 704	.....	2 55 44·9	8·608	1	9 42 40·3	14·39	1	F; pL; mE 90°...180°	2
639	281	IV. 43	.....	2 56 20·1	3·925	1	47 43 32·5	14·35	1	F; mE; smbMS∗	3*
640	2504	III. 245	.....	2 56 25·0	2·669	1	113 25 4·8	14·34	1	pF; cL; pmE; gbM∗16; r...	2
641	.....	II 608	.....	2 56 32·2	3·975	1	46 10 29·0	14·40	1	F; cL; er.....	1
642	2505	.....	.....	2 56 55·1	2·864	1	102 38 19·0	14·30	1	vF; sp of 2	2
643	282	II. 503	.....	2 57 5·8	2·802	1	106 8 59·3	14·29	1	cB; pS; iR; smbM.....	2
644	2506	II. 475	.....	2 57 14·1	2·865	1	102 33 6·3	14·29	1	pF; cL; iR; bM; nf of 2 ...	3
645	283	I. 109	.....	2 58 3·7	2·603	1	116 35 45·8	14·24	1	cB; pS; vlE 0°; r; S∗nr ...	4
646	284	III. 578	.....	2 59 19·7	3·810	1	52 9 24·2	14·16	1	cF; vS; R; psbM	2*
647	285 = 2507	II. 285	.....	2 59 25·2	2·905	3	100 5 8·5	14·15	3	pB; S; lE 80°±; lbM	7
648	286	II. 504	.....	2 59 30·2	2·799	1	106 8 39·5	14·15	1	B; S; cE; psbM.....	2
649	2508	.....	.....	3 0 48·0	2·288	1	129 34 26·9	14·07	1	pF; S; R; psbM.....	2
650	287	.....	.....	3 1 29·2	4·337	1	37 11 56·1	14·03	1	Cl; vS of Sst	1
651	2509	II. 258	.....	3 3 27·9	2·702	3	111 7 0·0	13·90	3	pB; cL; R; gbM; r	7
652	288	III. 262	.....	3 4 20·1	3·022	(1)	93 3 4·5	13·85	1::	stellar; difficult	2
653	.....	III. 164	.....	3 4 23·3	+3·634	1	59 57 41·8	−13·84	1	eF; vS; ? vSst.....	1

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	h.	H.		h m s	s		° ′ ″	″			
654	289 = 2510	II. 286	.....	3 4 26·8	+2·912	3	99 27 28·8	−13·84	3	F; pL; R; vglbM; *9np ...	5
655	289, *a*	.....	R. nova	3 4 31·4	2·912	...	99 26 25·8	13·84	...	No description.....	0*
656	291 = 2511	III. 591	.....	3 4 36·2	2·912	2	99 29 11·6	13·78	2	eF; vS; R; stell; sf of 2.....	3*
657	2512	.....	Δ. 205??	3 4 41·9	0·771	2	157 18 47·1	13·83	2	F; S; pmE; gbM	3
658	290	VI. 25	.....	3 5 6·3	4·106	1	43 17 22·3	13·79	1	Cl; pL; Ri; C; iR; st 12...15	3
659	2513	.....	.....	3 5 18·2	0·747	2	157 29 13·6	13·78	2	pF; S; R; glbM.....	2
660	.....	II. 900	.....	3 5 38·6	2·884	1	101 0 7·2	13·76	1	F; pL; E 80°±	1
661	292	III. 443	.....	3 5 49·8	2·975	3	95 45 4·5	13·75	3	cF; S; lE; bM; *9, n 5′ ...	4
662	2514	.....	.....	3 5 57·7	1·775	1	143 52 15·8	13·74	1	B; L; vmE 80°; vgbM	2
5060	.....	.....	.....	3 6 55·2	.....	...	89 4 27·5	.....	...	See No. 5060.	
663	2515	.....	.....	3 7 7·5	1·474	1	148 40 18·9	13·67	1	Cl of 18 or 20 st.....	1
664	.....	IV. 17	.....	3 7 7·6	3·016	1	93 27 10·9	13·67	1	* with neb att 90″ l	1
665	2516	.....	.....	3 7 46·9	2·667	1	112 30 46·1	13·63	1	F; S; E; alm stell; *8, np...	1
666	2517	.....	Δ. 337	3 8 25·7	1·635	2	145 44 50·6	13·58	2	⊕; B; L; R; rr	2
667	.....	III. 194	.....	3 8 43·9	3·020	1	93 8 18·9	13·57	1	eF; eS	1
668	.....	.....	D'Arrest, 35	3 9 31	3·93	[2]	49 2 30	13·49	[2]	F; vS; R; stellar; 1st of 7...	0
669	.....	.....	D'Arrest, 36	3 9 31	3·93	[2]	49 1 42	13·49	[2]	eF; S; lE; cometary; 2d of 7	0
670	2518	.....	.....	3 9 41·5	2·198	1	131 36 25·7	13·51	1	vB; R; gmbM	1
671	.....	.....	D'Arrest, 37	3 9 45	3·93	[2]	49 1 54	13·48	[2]	vF; S; R; 3rd of 7.....	0
672	.....	.....	D'Arrest, 38	3 10 8	3·93	[2]	49 1 36	13·46	[2]	F; S; R; 4th of 7	0
673	.....	.....	D'Arrest, 39	3 10 11	3·94	[2]	48 58 30	13·45	[2]	vF; vS; 5th of 7.....	0
674	293	II. 603	.....	3 10 32·7	3·937	1	49 0 5·5	13·45	1	pB; pS; R; bM; 6th of 7 ...	2*
675	.....	.....	D'Arrest, 40	3 10 35	3·97	[2]	49 0 3	13·42	[2]	F; S; *17; 7th of 7	0
676	2519	III. 956	.....	3 11 2·0	2·884	1	100 48 41·4	13·42	1	eF; vS; 2 st 2′ or 3′ s.....	2
677											
678											
679											
680	293, *a*	.....	R. 6 novæ	3 11 ±	.....	...	49 ±	.....	...	6 of 15 (including probably h. 294, 295)	0
681											
682											
683	2520	.....	.....	3 11 34·2	2·425	1	123 5 43·3	13·39	1	vF; L; R; vglbM	1
684	.....	III. 195	.....	3 11 43·7	3·017	1	93 14 30·6	13·38	1	eeF; eeS	1*
685	2521	.....	Δ. 487	3 12 15·0	2·189	2	131 36 47·1	13·33	2	⊕; vB; pL; R; mbM; er ...	2
686	294	III. 574	.....	3 12 23·9	3·938	1	49 11 42·1	13·33	1	vF; R; bM; p & sm of 2 ...	2
687	295	III. 575	.....	3 12 25·0	3·938	1	49 10 4·4	13·32	1	vF; R; bM; f of 2; 100″, 352°·4.	2
688	296	II. 287	.....	3 13 15·0	2·954	4	96 45 57·9	13·27	4	vF; S; vlE; gbM; er.....	7
689	2522	.....	.....	3 13 22·5	2·710	2	110 55 8·9	13·27	2	cB; vL; vmE; psvmbM.....	2
690	.....	III. 444	.....	3 14 7·5	2·983	1	95 8 11·7	13·21	1	eF; vS.....	1
691	.....	III. 568	.....	3 15 25·7	3·016	I	93 15 44·1	13·13	1	eF; S; iF; am 3 or 4 st	1
692	2523	I. 106	.....	3 15 36·2	2·786	1	105 53 51·7	13·11	1	pB; cL; iR; gbM; *7, f 7′·5. 211°·0.	3
693	2524	.....	.....	3 15 41·5	2·295	3	127 38 38·7	13·11	3	⊕; vF; pL; R; vgvlbM.....	3
694	2525	.....	.....	3 16 0·3	1·749	1	142 41 0·3	13·09	1	F; pL; mE 37°·3; gbm	1
5061	.....	.....	.....	3 16 29·0	.....	...	89 19 3·0	.....	...	See No. 5061.	
695	2525	.....	Δ. 206	3 16 34·1	0·698	1	156 59 37·2	13·06	1	pB; L; lE; vgbM; r	1
696	2526	.....	.....	3 16 54·8	2·666	1	111 52 19·1	13·03	1	pB; S; R; gbM	1
697	2527	.....	Δ. 548	3 17 20·4	2·288	2	127 43 40·0	13·00	2	vB; cL; vlE; vsvmbMN ...	2
698	2529	.....	Δ. 547	3 17 23·1	2·291	2	127 36 24·0	13·00	2	pB; pS; psbM.....	2
699	2533	.....	.....	3 17 45·6	2·662	1	112 1 0·9	12·97	1	F; S; R; bM; p of 2	1
700	295 = 2530	III. 197	.....	3 17 48·3	3·011	1	93 31 34·9	12·97	1	vF; S; R; bM; 1st of 3	3
701	297 = 2531	III. 196	.....	3 17 48·8	3·011	1	93 30 34·9	12·97	1	vF; vS; E; ? neb **; 2nd of 3	3
702	2532	.....	.....	3 17 50·9	+3·012	1	93 25 54·9	−12·97	1	F; vS; R; bM; 3rd of 3.....	1

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	h.	H.		h m s	s		° ′ ″	″			
703	297, *a*	.....	R. nova	3 17 53·6	+ 3·011	...	93 16 41·9	−12·97	...	.....	0
704	299	III. 445	.....	3 18 4·9	2·962	2	96 14 11·2	12·96	2	vF; pS; pmE	3
705	2534	IV. 77	.....	3 18 18·0	2·661	2	112 1 49·8	12·94	2	F; mE; 239°·1; com; *9, 10 att.	3†
706	2535	.....	.....	3 18 37·6	2·305	1	126 58 12·7	12·91	1	O? pS; vsvmbMN	1
707	2536	.....	.....	3 19 39·5	2·739	1	108 4 59·5	12·85	1	F; pS; R; glbM	1
708	.....	III. 959	.....	3 19 53·5	2·662	2	111 51 1·8	12·84	2	vF; vS; sf of 2	1*
709	.....	I. 60	.....	3 20 15·0	2·662	2	111 50 36·0	12·80	2	vB; S; E 90°...180°; smbMN; np of 2.	2*
710	.....	.....	Auw. N. 17	3 20 41·7	3·690	...	59 6 31·2	12·76	...	F; L; *10f 4′; n 2′·5 (Schönfeld, 1858).	0*
711	.....	.....	D'Arrest, 41	3 20 47	3·98	[1]	48 39 6	12·72	[1]	eF; pL; lbM	0
712	2537	.....	.....	3 21 10·0	2·319	3	126 12 33·5	12·75	3	vF; S; vlE; gbM	3
713	2538	.....	.....	3 22 29·8	2·407	2	122 46 15·5	12·65	2	cB; pS; R; psbM; ** p	2
714	2542	I. 257	.....	3 22 38·1	2·437	(1)	121 34 40·8	12·64	1::	cB; pL; iR; vgbM.....	2
715	2539	.....	.....	3 22 38·5	2·441	1	121 23 12·8	12·64	1	vB; pS; lE; psbM	1
716	2540	.....	.....	3 22 39·6	2·275	1	127 38 11·8	12·64	1	F; S; R; *12, sf.....	1
717	301	VIII. 88	.....	3 22 41·0	3·852	1	53 9 36·8	12·64	1	Cl; vL; ab 60 st	3
718	300	III. 694	.....	3 22 54·4	6·312	2	17 54 18·1	12·63	2	F; vS; iR; gbM; ** vnr	3
719	2541	.....	.....	3 23 10·3	2·732	1	108 16 10·7	12·61	1	vF; S; R; pslbM	1
720	.....	VIII. 84	.....	3 23 42·3	4·361	1	39 3 16·6	12·58	1	Cl; lRi; stL.....	1
721	2545	.....	Δ. 591	3 24 11·0	2·365	1?	124 12 43·8	12·54	1::	B; L; mE; vmbMRN	1
722	2544	.....	.....	3 25 8·3	2·332	1	125 20 9·9	12·47	1	pB; pS; R; psbM	1
723	2543	.....	.....	3 25 16·8	2·698	1	109 45 38·2	12·46	1	eF; pslbM; v diff *8, sf	1
724	2546	III. 246	.....	3 25 52·1	2·665	2	111 17 46·1	12·43	2	pB; cL; iE; mbM	5
725	2547	III. 487	.....	3 26 2·0	2·778	1	105 41 32·4	12·42	1	vF; S; lE; glbM.....	2
726	2548	II. 290	.....	3 26 44·0	2·808	2	104 9 24·9	12·37	2	pF; pL; R; lbM; pL*nf 5′...	5
727	302	III. 446	.....	3 26 44·3	2·971	2	95 33 27·9	12·37	2	vF; S; bet 2st.....	3
728	2549	.....	.....	3 26 30·7	1·789	2	140 45 56·6	12·38	2	vF; pL; iR; gbM; *nr	2
729	2550	.....	.....	3 27 28·6	2·690	1	109 58 38·4	12·32	1	F; L; R; vglbM.....	1
730	2551	III. 960	.....	3 27 38·5	2·674	2	110 46 3·7	12·31	2	vF; S; R.....	3
731	2552	.....	.. ..	3 28 18·0	2·289	2	126 36 31·9	12·27	2	!! vB; vL; mE; rN in vLE Halo.	2†
732	2553	III. 857	.....	3 28 18·2	2·421	(1)	121 40 37·9	12·27	(1)	vF; S; iF; lbM	2
733	2554	III. 559	.....	3 29 0·5	2·670	3	110 50 45·4	12·22	3	vF; S; R; bet 2st 14	4
734	2555	II. 262	.....	3 29 1·6	2·570	1	115 24 21·4	12·22	1	pB; pL; vlE; psbM	2
735	2556	.....	.....	3 29 50·6	2·310	1	125 42 24·2	12·16	1	eF; vS; p of 3.....	1
736	2557	.....	.....	3 30 0·6	2·311	1	125 41 4·5	12·15	1	vB; pL; lE; gmbM; 2nd of 3	1
737	2558	.....	.....	3 30 0·6	2·309	1	125 43 44·5	12·15	1	B; S; lE; pmbM; 3rd of 3...	1
738	303	II. 288	.....	3 30 7·0	2·971	2	95 30 0·1	12·13	2	eF; pL; iR; bM; r.....	5
739	2559	.....	Δ. 574	3 30 9·5	2·316	1?	125 28 56·8	12·14	1::	vB; L; R; psbM.....	1
740	2560	III. 961	.....	3 30 28·7	2·657	2	111 21 44·4	12·12	2	F; S; R; gbM.....	3
741	2561	.....	.....	3 30 42·7	2·307	1	125 55 1·7	12·11	1	⊕; B; pL; R; gpmbM	2
742	2562	.....	.....	3 31 19·8	2·710	1	108 48 18·5	12·05	1	pF; S; R; psmbM	1
743	2563	II. 263	.....	3 31 26·9	2·576	1	114 58 4·5	12·05	1	pB; pS; R; gpmbM	2
744	2564	.....	.....	3 31 34·7	2·298	1	125 58 33·5	12·05	1	⊕; vB; pL; R; gmbM	2
745	2565	III. 451	.....	3 32 19·8	2·706	1	108 53 34·6	11·98	1	F; S; R; glbM	2
746	2566	I. 58	.....	3 32 24·1	2·608	2	113 28 55·6	11·98	2	B; pS; E; psmbM	4
747	2567	II. 593	.....	3 33 11·0	2·700	1	109 9 29·4	11·92	1	cB; pS; R; psmbM	2
748	2569	.....	.....	3 33 11·6	2·296	2	125 54 53·1	11·93	2	⊕; vB; pL; psbM; rr	3
749	2568	III. 247	.....	3 33 14·1	2·613	1	113 10 47·4	11·92	1	vF; vS; R	2
750	2571	.....	.....	3 33 43·1	2·291	1	126 2 48·0	11·90	1	vB; pL; R; psmbM	2
751	2572	.....	.....	3 33 49·8	2·407	1	121 46 25·6	11·88	1	F; cL; vmE; vglbM; *7np	1
752	2570	I. 107	.....	3 33 55·4	2·702	1	109 2 21·9	11·87	1	vB; L; R; svmbMN	3
753	304	III. 263	.....	3 34 4·2	3·040	(2)	91 45 34·5	11·85	(2)	eF; stellar or lE	2
754	304, *a*	.....	R. nova	3 34	.....	...	91 45	.....	...	makes D neb with h. 304 ...	0
755	2573	.....	.....	3 34 5·2	2·014	2	134 33 18·9	11·87	2	B; pS; R; smbM	2
756	305	III. 569	.....	3 34 32·3	2·977	1	95 7 5·4	11·82	1::	eF; lE; er; 1st of 3	2
757	2574	.....	.....	3 34 36·5	2·531	1	116 40 8·4	11·82	1	F; S; E; gbMbM; *sf 2′ ...	1
758	306	II. 455	.....	3 34 41·5	2·976	1	95 8 51·7	11·81	1	pF; pL; lE; lbM; *sf; 2d of 3	3
759	2575	II. 267	.....	3 34 51·1	+ 2·615	3	113 0 43·7	−11·81	3	pB; S; lE; pglbM; *sf 2′ ...	4

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	h.	H.		h m s	s		° ′ ″	″			
760	307	II. 456	.....	3 35 2·3	+ 2·976	3	95 9 45·6	−11·78	2	vF; S; E; B* 135°, 1′; 3d of 3	4
761	2576	.....	.....	3 35 29·9	2·229	2	127 58 34·9	11·77	2	pF; pS; R; psbM	2
762	2577	II. 291	.....	3 35 56·9	2·804	2	103 56 56·1	11·73	2	F; cL; mE 0°±; r.....	4
763	307. a	.....	R. nova	3 35 58·6	2·976	::	95 9 45·6	11·73	::	No description	0
764	.....	II. 852	.....	3 36 30·1	2·438	1	120 21 11·3	11·69	1	F; pL; iR; gbM.....	1
765	2578	III. 248	.....	3 36 42·1	2·622	2	112 33 21·6	11·68	2	pF; S; lE; bM	3
766	2579	.....	.....	3 37 0·0	2·288	1	125 50 50·2	11·66	1	pF; S; R; psmbM	1
767	2580	.....	Δ. 426	3 37 37·8	1·879	2	137 40 33·4	11·62	2	vB; L; pmE; vsvmbM*10 ...	2
768	.....	.....	Auw. N. 18	3 37 52·3	3·542	...	66 40 12·9	11·57	...	!!! B; vL; iF; VAR. (Tempel)	0*
769	2581	.....	Δ. 562	3 38 7·9	2·264	1?	126 34 12·6	11·58	1?	⊕; vB; pmE; pgbM	2
770	2582	.....	.....	3 38 20·0	2·272	1	126 18 1·9	11·57	1	F; vL; R; glbM.....	1
771	2584	III. 249	.....	3 38 43·4	2·623	3	112 21 40·1	11·53	3	F; pS; gpmbM	5
772	.....	II. 597	.....	3 38 44·4	2·986	2	94 31 51·1	11·53	2	vF; S; iE; *nr	1
773	2583	II. 458	.....	3 38 44·4	2·703	2	108 43 32·1	11·53	2	pB; pS; R; smbM*13	3
774	.....	II. 594	.....	3 38 46·3	2·682	2	109 41 52·1	11·53	2	pB; vS; bM	1*
775	308	VIII. 80	.....	3 38 52·0	4·490	2	37 46 18·6	11·48	2	Cl of ab 30st 12...14	3
776	2585	.....	.....	3 39 4·9	1·977	1	135 5 20·4	11·52	1	pB; L; vmE 221°·6.....	1
777	.....	II. 459	.....	3 39 12·4	2·696	1	109 0 25·3	11·49	1	F; R; lbM	1
778	309	I. 155	.....	3 39 32·4	2·989	1	94 24 37·9	11·47	1	pB; S; R; *17M	3*
779	2586	.....	.....	3 39 56·6	1·974	3	135 5 22·2	11·46	3	pF; pL; eE 42°·3; vgpmbM	3
780	2587	.....	.....	3 40 59·9	2·241	1	127 7 51·9	11·37	1	F; S; R; *att.....	1
781	2588	II. 460	.....	3 42 24·8	2·739	1	106 49 22·2	11·26	1	pB; S; lE; mbMN.....	2
782	2589	.....	.....	3 43 32·5	+1·139	2	150 14 27·4	11·22	2	cF; S; R; glbM; am 7Bst ...	2
783	2590	.....	.....	3 45 15·1	−0·360	1	162 6 36·1	11·13	1	pF; pS; iR; glbM; *7f	2
784	2592	.....	.....	3 46 48·5	+0·224	2	158 38 24·7	11·01	2	cF; pL; R; gvlbM	2
785	2591	.....	.....	3 47 34·5	1·955	2	134 56 47·0	10·90	2	cF; S; E 90°; gbM.....	2
786	2593	.....	.....	3 48 18·8	2·644	1	110 52 29·8	10·84	1	eF; S; R; 2Bstf; p of 2.....	1
787	2594	III. 962	.....	3 48 28·0	2·643	3	110 54 59·4	10·82	2	F; S; vlE; 2st 10nr; f of 2...	4
788	2595	.....	Δ. 427? 428?	3 48 31·1	1·830	2	137 53 54·8	10·84	2	cF; pL; R; vglbM	2
789	2596	.....	.....	3 49 9·1	2·212	1	127 24 18·6	10·78	1	vF; L; E; vgvlbM	1
790	2597	.....	Δ. 480	3 51 4·2	2·029	3	132 46 40·8	10·64	3	pb; pL; R; gbM; 2st Δ	3
791	.....	.....	Auw. N. 19	3 52 1·3	3·444	...	71 49 55·8	10·54	...	*12 inv in neb (Markree Cat. Nov. 24, 1854).	0
792	2599	.....	.....	3 52 22·9	0·478	2	156 25 42·3	10·59	2	pB; S; vlE; pmbM.....	2
793	.....	I. 258	.....	3 52 32·8	4·482	1	39 1 19·4	10·52	1	vB; S; iF; bM; r; *inv.....	1
794	2598	.....	.....	3 52 59·7	2·251	1	125 51 46·3	10·49	1	vF; vS; R	1
795	2600	.....	Δ. 438	3 53 5·8	1·870	2	136 36 53·0	10·50	2	F; cL; R; vglbM	2
796	2601	.....	.....	3 53 36·3	1·748	2	139 18 42·9	10·47	2	F; L; R; vgvlbM; 3st n ...	2
797	2602	.....	.....	3 53 47·2	1·721	3	134 52 57·5	10·45	3	eF; S; lE 90°; vgvlbM	3
798	310	.....	.....	3 53 47·4	4·551	1	37 45 45·6	10·38	1	Cl; segment of a ring.....	1
799	.....	VII. 3	.....	3 53 52·2	2·821	1	102 25 27·4	10·42	1	Cl; S; C	1
800	2603	.....	Δ. 369?	3 54 33·6	1·573	1	142 43 35·3	10·39	1	F; vS; R; pmbM; *8 np ...	1
801	.....	IV. 53	.....	3 54 57·0	5·109	2	29 27 30·6	10·28	2	O; pB; pS; vlE; 1′ diam ...	2
802	.....	VII. 47	.....	3 55 9·9	5·232	2	28 3 51·2	10·26	2	Cl; pRi; cC; iF	2
803	2604	.....	.....	3 55 25·3	0·456	1	156 25 44·2	10·36	1	eF; pS; R; *10 np.....	1
804	2605	.....	.....	3 56 44·9	1·552	1	142 58 5·1	10·23	2	eeeF; S; R; bet 2st 12 & 13..	2
805	.....	II. 279	.....	3 57 19·5	3·021	2	92 35 1·5	10·15	2	vF; pL; mE; vlbM; er	2
806	2606	.....	.....	3 59 0·1	1·965	2	133 47 35·5	10·05	2	F; pL; R; vgmbM.....	2
807	2608	.....	.....	3 59 3·1	0·218	3	158 1 23·7	10·09	3	pB; pS; mE 121°·5; gbM ...	3
808	2607	.....	Δ. 466	3 59 20·3	1·966	3	133 44 23·1	10·03	3	⊕; B; cL; R; bM; rr	3
809	.....	VII. 60	.....	3 59 35·9	4·416	1	40 51 49·5	9·95	1	Cl; L; vRi; pC; st vL	1
810	311	IV. 69	.....	4 0 28·6	3·755	2	59 35 29·2	9·96	2	*8m in neb 3′ diam.....	3*†
811	2609	.....	Δ. 348	4 0 39·4	1·448	2	144 29 25·8	9·94	2	B; L; vmE 10°; bM	2
812	2610	III. 499	.....	4 1 24·0	2·884	2	99 12 21·5	9·85	2	eeF; S; E; psmbM; er	3
813	2611	.....	.....	4 1 44·0	+2·613	1	111 33 0·1	9·83	1	B; L; pmE; gbM; *8 sp ...	1
814	2615	.....	.....	4 2 8·1	−2·026	1	167 13 0·4	9·92	1	Cl; pL; lRi; st 9...10.....	1
815	2612	.....	.....	4 2 10·3	+2·616	1	111 25 36·0	9·80	1	pB; R; bM.....	1
816	2613	.....	.....	4 2 35·2	1·525	2	143 2 40·3	9·79	2	eF; vS; R; vlbM	2
817	2614	.....	.....	4 2 48·1	1·440	1	144 28 35·9	9·77	1	vF; R	1
818	2617	.....	.....	4 4 8·8	0·425	2	156 12 37·0	9·70	2	eF; vS; R; glbM	2
819	2616	.....	.....	4 4 17·7	+1·761	2	138 15 52·5	− 9·65	2	pB; pS; E 77°; vsmbMRN...	3

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	h.	H.		h m s	s		° ′ ″	″			
820	.....	VII. 61	.....	4 4 37·1	+4·520	1	39 7 14·2	−9·56	1	Cl; B; vRi; cC	1
821	2619	.....	.....	4 5 33·4	0·746	1	153 16 3·3	9·59	1	vF; S; R; gbM	1
822	2620	.....	.....	4 6 34·6	2·302	3	123 12 36·2	9·46	3	pB; pL; R; bM; np of 2 ...	3†
823	2621	.....	Δ. 600	4 6 39·6	2·301	3	123 14 8·2	9·46	3	B; vL; vmE 32°·2; psmbM...	3†
824	2622	.....	.....	4 6 51·0	1·297	2	146 29 15·9	9·47	2	vB; vL; R; smbM; 2st *10nf	2
825	2623	.....	.....	4 6 59·8	0·749	2	153 9 21·9	9·47	2	F; S; R; vS*¾d sf	2
826	2618	IV. 26	.....	4 7 50·8	2·792	A	103 5 32·2	9·36	1	⊕; vB; S; R; ps, vsbM; r...	5*†
827	2625	.....	.....	4 8 4·3	1·267	1	146 50 24·6	9·38	1	vF; R; pL; vlbM	1
828	2624	.....	.....	4 8 17·9	2·337	1	121 54 41·8	9·34	1	vB; pS; lE; psvmbM	1
829	2626	.....	.....	4 9 32·7	2·420	2	118 50 16·1	9·23	2	vF; vS; E; gvlbM; r	2
830	2627	.....	.....	4 9 58·6	1·170	1	148 5 33·1	9·23	1	B; pL; E; smbMN=*11 ...	1
831	.....	VIII. 85	.....	4 10 25·3	4·489	1	40 5 39·7	9·11	1	Cl; pRi; lC; stL	1
832	2628	.....	.....	4 11 37·5	1·282	2	146 24 57·7	9·11	2	pB; lE; gbMEN; *p.....	2
833	312	.....	.....	4 11 45·8	3·959	1	53 25 50·1	9·03	1	Cl; vL; lRi; lC; st10...12...	1
834	2629	.....	.....	4 12 9·4	1·313	1::	145 55 46·2	9·06	1	B; pS; R	1
835	.....	.....	D'Arrest, 42	4 12 21	3·11	[1]	87 56 12	8·99	[1]	vF; S; R; *13nr.....	0
836	.....	II. 464	.....	4 12 22·5	3·097	1	88 55 34·0	9·00	1	F; vS; R	1*
837	313	III. 490	.....	4 13 10·4	3·052	2	91 2 17·1	8·93	2	cF; pS; lE; vgbM; *11sf ...	3
838	2630	.....	.....	4 13 11·1	1·295	1	146 7 50·6	8·98	2	vB; pS; R; gmbM; am 3st...	2
839	.....	.....	Auw. N. 20	4 13 47·7	3·488	...	70 48 46·0	8·87	...	!!!; vF; S; *variable* (Hind)...	0*
840	2631	.....	.....	4 13 56·5	+1·622	2	140 30 9·7	8·91	2	cF; S; R; vglbM	2
841	2633	.....	.....	4 14 0·8	−0·349	1	160 46 26·2	8·96	1	Cl; vlC; ab 20 sc st	1
842	2632	.....	.....	4 14 56·3	+1·858	1	135 21 58·1	8·83	1	pF; S; E; gbM	2
843	2634	.....	.....	4 15 56·3	0·704	2	153 7 47·6	8·78	2	vB; vL; mE; vgpmbM; *14 att n.	2
844	2635	.....	Δ. 338 ??	4 16 52·1	1·337	2	145 16 34·3	8·69	2	B; vL; vg, svmbM; 15ˢ d in R.A.	2
845	2636	.....	.....	4 17 9·1	1·707	1	138 35 23·2	8·66	1	F; S; R; bM	2
846	2637	.....	.....	4 17 42·3	1·916	1	133 47 30·7	8·61	1	F; S; R; gbM.....	1
847	.....	II. 768	.....	4 17 43·5	5·621	1	25 27 13·7	8·51	1	pB; S; lE; bNM; pB*n ...	1
848	2638	.....	.....	4 17 45·5	1·910	1	133 57 0·7	8·61	1	vF; S; R; gbM; *nf	1
849	2639	.....	.....	4 17 59·3	2·026	1	130 55 4·6	8·58	1	pF; S; R; *13 nf 1′	1
850	2640	.....	.....	4 19 13·4	1·190	1	147 17 51·7	8·51	1	pB; S; R; pgbM; 2S st sf ...	1
851	314	III. 587	.....	4 19 24·3	2·989	1	93 56 58·5	8·45	1	eF; bM; bet 2 st	2*
852	2641	.....	.....	4 20 12·4	1·526	3	141 55 9·4	8·42	3	pF; S; R; bM	3
853	315	I. 217	.....	4 21 2·8	3·925	3	55 2 25·3	8·29	3	pB; vL; iR; mbM; *8, 350°, 2′.	6†
854	2642	.....	.....	4 21 37·2	1·321	2	145 15 47·7	8·31	2	F; S; E; glbM	2
855	.....	VIII. 70	.....	4 22 9·3	4·233	1	46 27 35·0	8·20	1	Cl; vL; pRi; lC; stL	1
856	2643	.....	.....	4 22 58·1	1·957	1	132 27 41·3	8·19	1	pF; S; R; gbm; *12, 287°·8	1
857	.....	.....	D'Arrest, 43	4 23 5	3·05	[1]	90 50 6	8·15	[1]	vF; iF; vlbM; bet * & *14..	0
858	316	II. 8	.....	4 23 29·1	3·081	1	89 39 14·4	8·12	1	F; pS; R; r; p of D neb	5
859	317	II. 9	.....	4 23 32·6	3·081	1	89 38 36·7	8·11	1	F; vS; R; r; f of D neb	5
860	318	II. 7	.....	4 23 33·5	3·085	1	89 26 33·7	8·11	1	F; pL; lE 132°; *42°, 80″ ...	5
861	2644	.....	.....	4 23 48·7	2·450	3	117 0 49·0	8·10	3	pF; pS; R; gbM	3
862	2645	.....	.....	4 23 52·7	2·443	1	117 15 57·0	8·10	1::	vF; vS.....	1
863	2646	.....	.....	4 24 24·8	1·710	1	138 7 6·6	8·08	1	vF; S; R; bM	1
864	2648	.....	.....	4 24 35·0	1·305	2	145 20 17·6	8·08	2	B; pL; mE15°·0; smbM; p of 2.	2
865	2647	.....	.....	4 24 36·3	1·711	1	138 5 22·2	8·06	1	F; S; R; bM	1
866	319	I. 158	.....	4 24 45·0	2·958	4	95 23 3·4	8·02	4	pB; pL; R; gmbM.....	6
867 868 869	319, *a*	.....	R. 3 novæ	4 24 ±	.....	...	95 23 ±	.....	...	.....	0
870	2649	.....	.....	4 24 48·1	1·303	2	145 22 1·2	8·06	2	eF; pL; lE; f of 2	2
871	.....	VI. 26	.....	4 24 59·0	4·298	1	45 3 48·9	7·97	1	Cl; vF; pS; C; steS	1
872	.....	III. 585	.....	4 25 45·2	2·973	1	94 38 56·8	7·94	1	Susp in hazy weather	1
873	.....	III. 586	.....	4 26 10·8	2·975	2	94 33 58·0	7·90	2	eF; S; E90°+	2
874	2650	.....	.....	4 28 20·2	1·883	3	134 0 32·2	7·76	3	F; S; E; vglbM	3
875	2651	.....	Δ. 339 ??	4 28 33·6	+1·321	2	144 54 14·2	−7·76	2	B; L; mE 105°·8; vg, vsmbMN5″.	2

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	h.	H.		h m s	s		° ′ ″	″			
876	320	II. 524	.....	4 29 6·8	+2·999	1	93 26 37·9	−7·67	1	F; S; iF; lbM; 2st sf	2
877	321	II. 514	.....	4 29 26·0	3·064	2	90 25 50·1	7·63	2	vF; pL; mE0°...90°; B *nf..	3
878	320. *a*	.....	D'Arrest, 44	4 29 34	3·00	[2]	93 28 48	7·63	[2]	vF; S; *20, 270°, 5ˢ; II. 524 p (R).	0
879	.....	V. 49	.....	4 29 47·5	4·558	1	39 50 13·9	7·57	1	F; cL; iF; 6 or 7 st+neb ...	1
880	322	.....	.....	4 30 7·9	2·995	1	93 35 45·6	7·58	1	vF; E90°...180°; sbM; B*p 40ˢ.	1*
881	322, *a*	.....	R. nova	4 30 19·9	+2·995	::	90 30 45·6	7·58	::	MS	0
882	2653	.....	.....	4 31 14·0	−0·756	1	162 8 7·3	7·59	1	vF; pL; R; glbM	1
883	2652	.....	.....	4 32 20·0	+2·598	1	119 55 34·4	7·42	1	Neb. No description	1
884	323	III. 952	.....	4 32 36·3	3·227	2	82 56 7·6	7·38	2	eF; S; R; *8 sp; p of D neb	3
885	324	III. 953	.....	4 32 36·5	3·226	1	82 57 2·6	7·38	1	eF; vS; f of D neb	2
886	325	II. 515	.....	4 33 1·4	3·055	1	90 49 38·5	7·35	1	F; S; R; bM; *9 nf 12ˢ·5 ...	2
887	326 = 2654	II. 522	.....	4 33 57·4	2·878	2	98 52 48·9	7·27	2	vF; pS; R; vgbM; r; *nf 1′.	4
888	327	I. 122	.....	4 34 26·6	3·005	2	93 8 53·1	7·23	2	cB; L; R; vgbM; er	3†
889	2655	.....	.....	4 34 36·9	2·686	1	107 16 3·1	7·23	1	eF; vS; R; bet 2 st	1
890	.....	II. 525	.....	4 35 29·3	3·028	1	92 2 39·5	7·15	1	F; pL; lE	1
891	2656	.....	.....	4 35 30·1	0·266	1	156 4 46·4	7·22	1	Cl; pL; pRi; pmC; st11...16	1
892	.....	.....	D'Arrest, 45	4 35 45	3·08	[1]	89 39 1	7·12	[1]	F; R; cometary; Δ with 2 st 18, f.	0
893	328	III. 588	.....	4 36 51·6	2·950	1	95 35 42·8	7·04	1	eF; vS; iR; bM	2
894	2657	.....	.....	4 37 7·2	0·206	3	156 27 51·3	7·09	3	F; S; R; gbM	3
895	329	II. 523	.....	4 37 41·4	2·879	1	98 47 13·9	6·97	1	F; vS; iR; bM; *7 np	2
896	.....	VIII. 8	.....	4 37 54·5	+3·500	2	71 11 21·8	6·94	2	Cl; vL; stL, se	2
897	2660	.....	.....	4 38 37.3	−0·201	1	159 5 7·6	6·98	1	F; pS; R; gbM	1
898	2662	.....	.....	4 38 42·3	−0·531	3	160 51 32·6	6·98	3	pF; L; vlE; vglbM	3
899	2661	.....	.....	4 38 43·9	−0·177	3	158 56 26·9	6·97	3	vF; S; R; glbM.....	3
900	.....	II. 526	.....	4 38 49·7	+3·015	1	92 38 59·9	6·87	1	F; cS; R; lbM	1
901	330	.....	.....	4 39 0·9	2·954	1	95 24 18·2	6·86	1	eF; iF; ?	1
902	2658	.....	.....	4 39 28·8	1·952	1	131 45 5·5	6·85	1	F; pS; pmE; glbM.....	1
903	331	III. 589	.....	4 39 36·7	2·962	1	95 2 37·7	6·81	1	pF; pS; iE90°±; bM	2
904	2659	.....	.....	4 39 37·6	1·950	1	131 46 55·1	6·83	1	vF; S; lE; glbM	1
905	332	VII. 1	.....	4 40 44·9	3·310	1	79 19 18·7	6·71	1	Cl of L & S sc st	3
906	.....	VIII. 7	.....	4 40 45·1	3·361	2	77 6 7·7	6·71	2	Cl; lRi; st L & S.....	3
907	.....	VIII. 59	.....	4 41 2·4	4·268	1	46 33 17·5	6·65	1	Cl; lRi; lC; pL	1
908	333	II. 547	.....	4 41 23·7	2·947	1	95 41 12·2	6·66	1	eF; pL; R; lbM.....	3*
909	2663	.....	.....	4 41 59·7	1·811	1	135 2 6·8	6·64	1	eF; R; att to *14	1
910	2664	.....	.....	4 42 20·4	0·236	1	156 4 5·2	6·66	1	eF; S; R.....	1
911	.....	III. 501	.....	4 42 46·2	3·007	1	93 0 18·8	6·54	1	vF; vS.....	1
912	2665	.....	Δ. 296 ??	4 43 32·0	+0·930	2	149 30 3·8	6·54	2	B; L; smbMN	2
913	2667	.....	.....	4 43 34·7	−0·404	1	160 4 2·6	6·58	1	vF; S; att to *10	1
914	2669	.....	.....	4 44 19·2	−0·228	1	159 4 32·7	6·51	1	vF; pL; iR; r.....	1
915	.....	III. 502	.....	4 44 35·4	+3·010	1	92 51 28·0	6·40	1	vF; S	1
916	2666	.....	.....	4 44 39·1	2·276	2	122 12 45·4	6·42	2	vB; L; iR; 4st inv	2
917	2668	.....	.....	4 44 41·5	1·665	3	138 3 31·4	6·42	3	vF; S; R; r or st inv	3
918	334. *a*	.....	R. nova	4 45 16·3	2·999	::	93 14 46·4	6·32	::	R, MS.....	0
919	.....	.....	D'Arrest, 46	4 45 22	3·00	[2]	93 21 0	6·33	[2]	vF; vS; II. 527, f12ˢ±	0
920	334	II. 527	.....	4 45 32·3	2·999	2	93 20 46·4	6·32	2	pF; S; R; bM; *7, 225°±...	4
921	334. *b*	.....	R. nova	4 45 44·3	2·999	::	93 20 46·4	6·32	::	MS } No description	0
922	334. *c*	.....	R. nova	4 45 44·3	2·999	::	93 8 46·4	6·32	::	MS }	0
923	2670	.....	.....	4 46 9·1	2·212	2	124 10 25·0	6·30	2	vF; S; R; vglbM	2
924	.....	II. 528	.....	4 46 12·6	2·999	1	93 18 35·2	6·26	1	F; S; lbM	1
925	2671	.....	.....	4 46 18·6	0·875	3	150 2 6·7	6·31	3	pB; pL; iR; pgmbM.....	3
926	335	.....	.....	4 47 6·7	+3·104	1	88 35 49·3	6·19	1	vF; vS; am vSst; L*sp	1*
927	2672	.....	.....	4 48 23·2	−0·339	2	159 35 14·9	6·17	2	F; S; R	2
928	2673	.....	.....	4 48 30·2	0·345	2	159 37 5·2	6·16	2	F; S; R	2
929	2674	.....	.....	4 48 47·0	0·146	1	158 27 26·8	6·14	1	vF; E; vlbM	1
930	2675	.....	.....	4 49 1·9	0·203	5	158 47 31·4	6·12	5	⊕; pB; L; R; rr	5
931	2677	.....	.....	4 49 42·0	−0·302	1	159 20 44·2	−6·06	1	pB; pS; R; glbM	1

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	h.	H.		h m s	s		° ′ ″	″			
932	336	IV. 32	.....	4 50 1·9	+2·959	1	95 5 43·5	−5·95	1	cB; S; mbM*.....	3
933	2676	.....	.....	4 50 25·3	+2·333	3	120 6 11·1	5·93	3	F; S; vlE; glbM; *10, 75″..	3
934	2680	.....	Δ. 73?	4 50 27·0	−0·443	1	160 5 32·0	6·00	1	Cl; vF; S	1
935	2678	.....	.....	4 50 48·7	+0·866	2	149 58 0·1	5·93	2	F; L; R; vglbM; ⁂ att.....	2
936	2683	.....	.....	4 50 53·7	−0·427	2	159 59 14·9	5·97	2	F; pS; lE; r	2
937	2679	.....	.....	4 51 8·5	+1·342	3	143 35 14·3	5·89	3	pF; S; R; pmbM	3
938	2682	.....	.....	4 51 15·3	0·544	1	153 13 27·7	5·91	1	F; pS; R; vglbM	1
939	338	.....	.....	4 51 15·6	3·253	1	81 58 39·1	5·83	1	S; R; rrr.....	1
940	337	.....	.....	4 51 32·4	+4·753	1	37 19 51·9	5·77	1	Cl; vL; pRi; lC; stL and S.	1
941	2684	.....	Δ. 76?	4 51 44·5	−0·473	2	160 13 0·0	5·90	2	⊕; B; S; iR; rrr; st14	2
942	2685	.....	.....	4 51 46·1	−0·370	1	159 39 49·3	5·89	1	Cl; pB; S	1
943	339	II. 516	.....	4 51 47·1	+3·057	2	90 42 45·3	5·79	2	F; S; R; bM; p of 2	2
944	339, *a*	.....	R. nova	4 51±	.....	...	90 42±	.....	...	No description	0
945	2686	.....	.....	4 52 0·4	0·043	5	157 8 55·2	5·86	5	vB; S; E or bi-N; bM; sp of 2	5
946	2687	.....	.....	4 52 2·6	0·046	3	157 7 48·2	5·86	3	vF; S; R; sbM; 2stnr; nf of 2	3
947	2681	.....	.....	4 52 16·4	2·592	1	110 34 42·9	5·77	1	pF; pL; R; glbM	1
948	340	.....	.....	4 52 18·9	+3·063	1::	90 28 7·5	5·75	1::	pF; S; iR; pslbM	2
949	340, *a*	.....	R. nova	4 52±	.....	...	90 28±	.....	...	No description	1
950	2688	.....	.....	4 52 20·4	+0·022	3	157 16 42·8	5·84	3	F; pS; R; vglbM	3
951	.....	.....	D'Arrest, 47	4 52 39	+2·89	[2]	98 4 0	5·73	[2]	pF; pL; lbM; h. 341 nr.....	0
952	2689	.....	.....	4 52 41·7	−0·366	3	159 37 11·4	5·82	3	Cl; pF; S; R; 2nd of 3	3
953	341	.....	.....	4 52 57·2	+2·893	1	97 58 11·7	5·71	1	F; R; *13, s	1*
954	2690	.....	.....	4 53 0·9	−0·358	3	159 34 7·3	5·79	3	Cl; pB; pS; pmE; st12	3
955	.....	III. 503	.....	4 53 21·2	+2·994	1	93 32 9·9	5·67	1	vF; pL; 2B st v nr.....	1
956	2691	.....	.....	4 53 22·6	+0·038	3	157 8 36·5	5·75	3	Cl; pL; lRi; lC; st10...15...	3
957	2694	.....	.....	4 53 43·2	−0·238	2	158 52 23·4	5·72	2	S; R; close ⁂ in M	2
958	2693	.....	.....	4 53 49·2	+0·073	1	156 53 44·7	5·71	1	eF; pS; R; gbM.....	1
959	2695	.....	.....	4 54 8·4	−0·259	1	158 59 17·0	5·70	1	pB; L; R; gmbM	1
960	2696	.....	.....	4 54 18·5	+0·009	1	157 18 56·9	5·67	2	pF; pS; R; 2st att	2
961	2697	.....	.....	4 54 19·0	−0·143	1	158 17 20·9	5·67	1	B; R; r	1
962	2698	.....	.....	4 54 31·9	−0·335	1::	159 24 10·2	5·66	1::	vF; S; 1st of 4	1
963	2699	.....	Δ. 114	4 54 49·4	−0·339	2	159 25 17·8	5·64	2	B; pL; R; gbM; r; 2nd of 4	2
964	2692	.....	.....	4 54 51·1	+2·440	1	116 14 38·2	5·56	1	F; vL; vmE; vgvlbM	1
965	342	.....	.....	4 54 58·2	+2·994	1	93 30 26·1	5·53	1	eF; vS; *12, sf	1
966	2702	.....	.....	4 55 7·9	−0·335	1::	159 23 11·7	5·61	1::	F; S; 3rd of 4.....	1
967	2701	.....	.....	4 55 12·5	−0·006	2	157 23 32·0	5·60	2	Cl; pS; lRi; stvS	2
968	2704	.....	.....	4 55 13·8	−0·340	1	159 25 6·0	5·60	1	pB; vS; R; 4th of 4	1
969	2703	.....	.....	4 55 16·5	−0·166	1	158 24 26·3	5·59	1	vF; R; p of 2	1
970	.....	VIII. 43	.....	4 55 18·9	+3·630	1	66 33 18·3	5·49	1	Cl; stL, vcsc	1*
971	2705	.....	.....	4 55 19·4	−0·456	1	160 1 59·0	5·60	1	eF; pL; iR	1
972	.....	.....	D'Arrest, 49	4 55 26	+2·88	[2]	98 26 48	5·49	2	F; pL; pmE; 2 or 3st11nf...	0
973	2708	.....	.....	4 55 36·9	−0·581	1	160 39 49·9	5·57	1	F; S; R; *13att, 135°	1
974	2707	.....	.....	4 55 37·8	−0·350	1	159 27 21·9	5·57	1	vF; S; R.....	1
975	343	.....	.....	4 55 45·0	+2·962	1	94 55 35·9	5·47	1	vLdiff neb in zigzags??	1*
976	2706	.....	Δ. 167	4 55 49·5	0·266	1	155 25 43·1	5·53	1	vB; pL; R; gbM; f of 2 ...	1
977	.....	VII. 21	.....	4 55 55·7	3·634	1	66 25 21·1	5·43	1	Cl; pC; stL and S	1
978	2700	.....	.....	4 56 5·5	2·037	1	128 55 2·2	5·46	1	vF; pL; vglbM	1
979	2709	.....	.....	4 56 15·6	0·087	1::	156 43 53·0	5·50	1::	vF; S; 3vSst inv.....	1*†
980	2710	.....	.....	4 56 19·0	0·093	3	156 41 5·0	5·50	3	Cl; L; mC; ⁂ 9	3†
981	.....	III. 453	.....	4 56 24·5	3·104	1	88 34 31·3	5·39	1	vS; vF.....	1*
982	2711	.....	.....	4 56 31·9	+0·102	5	156 37 13·3	5·49	5	vB; vL; vimE.....	5†
983	2713	.....	.....	4 56 42·0	−0·092	1	157 54 38·9	5·47	1	vF; S; R.....	1
984	2712	.....	.....	4 56 51·7	+0·631	2	152 14 11·8	5·44	2	eF; S; R; glbM	2
985	2717	.....	.....	4 57 15·1	−0·543	2	160 26 16·8	5·44	2	eF; S; gbM	2
5062	.....	.....	.....	4 57 18·4	.....	...	159 36 32·1	.....	...	See No. 5062	1
986	2718	.....	.....	4 57 22·2	−0·185	1	158 28 4·4	5·42	1	F; S; R; gbM	1
987	2716	.....	.....	4 57 29·6	+0·091	5	156 39 56·0	5·40	5	B; L; iR; vsmbM ⁂ 10.....	5†
988	2715	.....	Δ. 169	4 57 39·7	−0·213	2	158 37 42·3	5·39	2	Cl+neb; pL; pRi; st11...18	2
989	2720	.....	.....	4 57 48·0	+0·509	1	153 20 44·2	5·36	1	vF; mE; glbM; *7, 8np ...	1
990	2722	.....	.....	4 57 48·9	−0·416	3	159 46 2·3	5·39	3	pB; pS; iR; rr	3
991	2721	.....	.....	4 57 50·3	+0·105	1	156 33 59·9	−5·37	1	pF; pL; iR; 2 or 3Bst nr ...	1

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	h.	H.		h m s	s		° ′ ″	″			
992	2723	.....	.....	4 58 11·0	−0·027	3	157 27 6·5	−5·35	3	B; S; R; smbM; ⁂+neb ...	3
993	2725	.....	.....	4 58 18·6	−0·590	1	160 38 26·5	5·35	1	eF; pL; iR	3
994	2724	.....	.....	4 58 23·2	+0·093	1	156 38 1·4	5·32	1	vF; S; R; gbM	1
995	2728	.....	.....	4 58 28·2	−1·562	1	164 29 44·2	5·36	1	eF; E; ⁂ 9att, f	2
996	344	VIII. 61	.....	4 58 35·7	+4·041	1	53 8 20·3	5·19	1	Cl; pC; lRi; iF; stL	2
997	345 = 2714	III. 500	.....	4 58 37·6	+2·860	3	99 20 30·1	5·23	3	pB; S; R; gpmbM.....	4
998	.....	III. 268	.....	4 58 42·9	+2·643	1	108 22 53·0	5·31	1	eF; vS; stellar.....	1*
999	2727	.....	.....	4 58 43·5	−0·390	2	159 36 16·7	5·31	2	⊕; pB; S; R; pmbM; rr ...	2
1000	2726	.....	.....	4 58 44·0	+0·153	2	156 11 37·6	5·28	2	cB; L; R; vgpmbM; r	2
1001	2719	.....	.....	4 58 56·6	+2·797	1	102 4 3·7	5·21	1	pB; pL; vlE; vgbM; am st ..	1
1002	(147)	.....	.....	4 59 12·2	−0·294	1	159 3 36·9	5·27	1	No description	1
1003	2729	.....	.....	4 59 20·7	−0·109	3	157 57 2·5	5·25	3	vB; pS; lE; vsvmbM⁂9 ...	3
1004	2731	.....	.....	4 59 52·1	+0·170	1	156 2 39·3	5·19	1	Cl; vL; pRi	1
1005	.....	V. 32	.....	4 59 55·9	+2·993	2	93 32 59·7	5·11	2	B; cL; R; bM ⁂ 15; ⁎10, 318°.	4
1006	2733	.....	.....	4 59 57·5	−0·926	1	162 5 37·4	5·22	1	vF; pS; R; vglbM	1
1007	346	.....	.....	5 0 12·6	+4·723	1	38 7 8·8	5·04	1	Cl group of 8 or 9 st10	1
1008	2734	.....	.....	5 0 20·2	−0·542	1	160 21 49·6	5·18	1	eF; S; R	1
1009	2730	.....	Δ. 531?	5 0 23·9	+2·056	2	128 11 33·0	5·10	3	vB; vL; mE314°; glbM; rr .	3
1010	2736	.....	.....	5 0 36·4	−0·426	2	159 45 22·5	5·15	2	F; S; R; glbM	2
1011	2738	.....	Δ. 81	5 0 58·7	−0·472	1	159 59 38·4	5·12	1	F; pL; lE	1
1012	2735	.....	.....	5 1 1·0	+0·710	2	151 19 31·6	5·08	2	pF; pS; pmE; vglbM.....	2
1013	2732	.....	.....	5 1 10·9	+2·260	1	122 8 40·1	5·03	1	pB; pmE; gpmbM; ⁎13f ...	1
1014	2739	.....	.....	5 1 34·1	−0·440	4	159 48 27·9	5·07	4	F; pL; R; vglbM; p of 2 ...	4
1015	.....	VIII. 41	.....	5 1 44·4	+3·647	1	66 4 49·8	4·94	1	Cl; st c sc	1
1016	2737	.....	.....	5 1 51·5	+1·544	1	139 45 48·3	4·99	1	F; S; R; vglbM; ⁎11sf; ? neb	1
1017	2742	.....	.....	5 1 51·9	−0·344	2	159 16 55·8	5·04	2	F; S; R; bM	2
1018	2741	.....	Δ. 233?	5 2 1·9	+0·128	5	156 18 4·4	5·02	5	B; vS; vsmbM; st+neb.....	5
1019	2745	.....	.....	5 2 31·5	−0·159	1	158 11 17·6	4·98	1	pB; L; gbM	1
1020	348	.....	.....	5 2 37·5	+3·453	1	73 39 38·9	4·87	1	Cl; pRi; stL and S.....	1
1021	2740	.....	Δ. 549	5 2 50·1	+2·071	2	127 41 47·0	4·90	2	B; L; E; psbM	2
1022	2747	.....	.....	5 3 4·7	−0·448	1	159 49 11·8	4·94	1	pF; S; R; gbM; 2nd of 2 ...	1
1023	2746	.....	Δ. 235	5 3 9·1	+0·086	5	156 34 15·4	4·92	5	cF; S; R; lbM; ⊕f	5
1024	2743	.....	.....	5 3 16·9	+2·340	2	119 27 56·5	4·85	2	cF; S; lE; p of 2	2
1025	2744	.....	.....	5 3 27·3	+2·341	2	119 26 7·1	4·83	2	F; S; R; glbM; f of 2	2
1026	2752	.....	.....	5 3 54·8	−0·586	1	160 30 43·6	4·88	1	vF; S; R; r.....	1
1027	2748	.....	.....	5 3 55·4	−0·054	2	157 29 41·2	4·86	2	vF; R; s of 2 in Cl.....	2
1028	2753	.....	.....	5 3 56·0	−0·648	2	160 48 33·6	4·88	2	F; vS; R; vlbM; am st	2
1029	2750	.....	.....	5 3 58·7	−0·048	1	157 27 2·5	4·85	1	vF; R; 2nd neb in Cl.....	1
1030	349	VII. 4	.....	5 3 59·1	+3·458	2	73 28 42·5	4·75	2	Cl; L; Ri; lC; st11...14 ...	5*
1031	2749	.....	Δ. 236	5 4 2·0	+0·076	6	156 37 3·5	4·85	6	⊕; vB; pL; R; vmC; rr ...	6
1032	2754	.....	.....	5 4 22·1	−0·049	1	157 26 48·4	4·82	1	Cl; pL; Ri; C; iF	1
1033	2756	.....	.....	5 4 47·9	+0·104	1	156 23 46·6	4·78	1	vF; S; p of 2	1
1034	2758	.....	.....	5 4 51·8	−0·595	1	160 31 53·0	4·80	1	Cl; pF; L; iF; st12...15 ...	1
1035	2755	.....	.....	5 4 53·3	+0·834	2	149 54 12·5	4·75	2	vF; pL; vmE162°·0	2
1036	(199)	.....	.....	5 5 2·2	−0·328	1::	159 7 51·0	4·80	1::	No description.....	1
1037	2757	.....	.....	5 5 10·7	+0·101	1	156 24 57·5	4·75	1	vF; S; f of 2	1
1038	2751	.....	.....	5 5 12·8	+2·088	1	127 9 17·3	4·69	1	vF; vmE; long ray; ⁎11inv .	1
1039	2761	.....	.....	5 5 16·9	−0·411	4	159 34 33·2	4·76	4	F; S; R; 1st of 3	4
1040	2760	.....	.....	5 5 22·7	−0·177	1	158 14 14·8	4·74	1	F; pL; R; r	1
1041	2762	.....	.....	5 5 33·9	−0·403	4	159 31 45·1	4·73	4	F; pS; R; 2nd of 3	4
1042	2759	.....	Δ. 246	5 5 35·8	+0·275	2	155 6 40·7	4·71	2	B; L; R; glbM; r	2
1043	.....	II. 292	.....	5 5 52·9	+2·702	1	105 53 13·4	4·62	1	pB; iR; mbM; cSnf1′	1
1044	2765	.....	.....	5 5 56·2	−0·679	1	160 55 5·7	4·71	1	vF; pL; 1st of sev	1
1045	2764	.....	.....	5 6 3·3	0·381	1	159 23 56·5	4·68	1	○? B; eS; lE	1
1046	2763	.....	.....	5 6 3·7	0·415	4	159 35 14·6	4·68	4	cB; S; R; gmbM; 3rd of 3..	4
1047	2766	.....	.....	5 6 12·5	0·278	2	158 48 40·9	4·67	2	st+neb; 1st of sev.....	2
1048	2769	.....	.....	5 6 28·0	0·677	2	160 53 56·2	4·66	2	Cl; L; Ri; st sc	2
1049	2767	.....	Br. 895	5 6 32·8	−0·246	1	158 37 28·8	−4·64	1	Cl; L; vlC	1

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	h.	H.		h m s	s		° ′ ″	″			
1050	2768	.....	Δ. 170?	5 6 38·4	−0·278	2	158 48 37·5	−4·65	2	st+neb; pB; iF; 2nd of sev	2
1051	2771	.....	.....	5 6 46·2	0·909	1	161 56 6·8	4·64	1	F; R; bM; r(?min. of R.A.)	1
1052	2788	.....	.....	5 7 1·6	9·684	1	174 12 38·6	4·88	1	pF; L; iR; vsbM; r	1
1053	2772	.....	.....	5 7 20·8	0·060	2	157 27 15·9	4·57	2	vvF; R; p of 2	2
1054	2773	.....	.....	5 7 36·6	0·068	4	157 29 56·8	4·54	5	pF; pL; R; gbM; f of 2.....	5
1055	2770	.....	.....	5 7 38·3	0·651	2	160 44 41·2	4·56	2	Cl; vlCM; st 9, 11...16	2
1056	2774	.....	.....	5 7 45·1	0·089	3	157 37 57·8	4·54	4	pB; cL; R; vglbM; r.....	4
1057	2775	.....	.....	5 7 56·4	0·343	2	159 8 54·1	4·53	2	B; S; lE; ⁂ in M	2†
1058	2776	.....	.....	5 8 5·8	−0·785	1	161 21 52·1	4·53	1	Cl; vlC; st 9, ...	1
1059	2778	.....	.....	5 9 20·8	+0·078	1	156 28 44·3	4·39	1	vF; S; lE; glbM.....	1
1060	2780	.....	Δ. 170?	5 9 25·2	−0·309	6	158 55 47·0	4·40	6	⊕! vB; L; lE; vmCM; rr...	6
1061	2777	.....	Δ. 508	5 9 29·8	+1·970	2	130 12 20·1	4·33	2	⊕! vB; vL; R; vsvvbM; rrr.	3
1062	2781	.....	.....	5 9 41·5	−0·145	4	157 56 58·9	4·37	4	F; pL; R; vglbM	4
1063	2779	.....	.....	5 9 51·6	+1·019	3	147 33 40·1	4·33	3	F; S; mE 45°; vgvlbM; *11 nf.	3
1064	2782	.....	.....	5 10 2·3	−0·327	5	159 1 12·5	4·35	5	⊕; cB; S; R; gbm; 2d of 3	5
1065	2783	.....	.....	5 10 8·1	0·326	1	159 0 38·8	4·34	1	Cl; vB; L; R; st12.....	1
1066	2784	.....	.....	5 10 20·3	−0·379	3	159 17 59·1	4·33	3	B; pL; R; gbM; 12ˢ diam R.A.	3
1067	350	VII. 33	.....	5 10 26·0	+4·138	1	50 48 30·6	4·18	1	Cl; pRi; pC; st 7, ...	2
1068	2785	.....	.....	5 10 37·2	−0·337	7	159 3 44·0	4·30	7	B; L; iE; biN; Cl+neb ...	7
1069	2786	.....	.....	5 10 59·4	+0·220	1	155 24 46·2	4·26	1	F; S; R; vgbM; * 7 nf 6′ ...	1
1070	2787	.....	Δ. 172?	5 11 21·6	−0·316	1	158 55 38·1	4·23	1	F; pL; R; vgbM	1
1071	2790	.....	.....	5 12 2·3	−0·708	1	160 56 56·6	4·18	1	eF; pL; R; gvlbM	1
1072	2789	.....	.....	5 12 6·1	+0·094	1	156 18 45·2	4·16	1	pF; L; iR; vgbM; r	1
1073	2791	.....	Δ. 173?	5 12 19·1	−0·312	5	158 53 22·5	4·15	5	vB; vS; R; r or stellar	5
1074	2792	.....	.....	5 12 56·3	0·130	2	157 47 15·6	4·08	2	F; pS; iR; bM; r or stellar...	2
1075	2794	.....	Δ. 173??	5 13 6·0	−0·321	3	158 55 37·6	4·08	3	vF; pL; R; vglbM.....	3
1076	2793	.....	Δ. 247? 248?	5 13 11·3	+0·185	1	155 37 35·2	4·06	1	vB; L; R; vgmbM; r.....	1
1077	2795	.....	.....	5 13 27·1	+0·071	1	156 27 4·8	4·04	1	eF; pL; R	1
1078	2796	.....	.....	5 13 41·5	+0·376	2	154 6 36·7	4·01	2	pB; pL; R; vglbM.....	2
1079	2798	.....	Δ. 210	5 13 58·4	−0·092	3	157 32 7·0	4·00	2	Cl; L; pRi; st sc.....	2
1080	2799	.....	.....	5 13 59·0	0·386	2	159 16 29·7	4·01	2	B; S; R; glbM	2
1081	2800	.....	.....	5 14 5·5	0·105	2	157 36 46·0	4·00	2	Cl; lRi; 2nd of sev.....	2
1082	2802	.....	.....	5 14 7·8	0·423	4	159 28 12·0	4·00	4	pB; R; gbM; 1st of group...	4†
1083	2801	.....	.....	5 14 8·8	0·086	1	157 29 23·3	3·99	1	Cl; 3rd of sev	1
1084	2803	.....	.....	5 14 9·6	0·434	1	159 31 55·0	4·00	1	neb & Cl; biN.....	1†
1085	2804	.....	.....	5 14 16·2	0·432	4	159 31 1·6	3·98	4	pB; iR; biN; 2nd in group...	4†
1086	2805	.....	.....	5 14 19·0	0·434	1	159 31 50·6	3·98	1	vF; 3rd of group in Cl	1†
1087	2807	.....	.....	5 14 26·2	−0·651	1	160 37 52·6	3·98	1	vF; lE; gvlbM; r	1
1088	2797	.....	.....	5 14 37·2	+2·244	1	122 17 45·6	3·88	1	vF; L; R; vgvlbM; *12p ...	1
1089	2808	.....	.....	5 14 37·9	−0·435	1	159 31 47·2	3·96	1	4th N, of neb in Cl	1†
1090	2810	.....	.....	5 15 3·1	−0·421	1	159 27 2·4	3·92	1	vF; ⁂ p	1†
1091	2809	.....	.....	5 15 15·7	+0·091	1	156 16 34·6	3·88	1	pF; R; vgvlbM; r	1
1092	.....	VII. 34	.....	5 15 28·7	4·452	1	43 35 54·8	3·74	1	Cl; vF; pRi; pC; iF	1
1093	2812	.....	.....	5 15 45·0	0·084	1	156 18 45·8	3·84	1	eF; pL.....	1
1094	2814	.....	.....	5 15 47·4	0·362	1	159 7 24·2	3·86	1	pB; vS; R; bM	1
1095	2813	.....	.....	5 15 53·7	0·061	1	156 28 16·1	3·83	1	vF; vS; R; *p25″	1
1096	352 = 2806	II. 289	.....	5 16 3·7	+2·802	2	101 38 3·8	3·74	2	pB; pL; R; r	2
1097	352, *a*	.....	R. nova	5 16	.....	...	101 38	.....	...	Makes a close D neb with h. 352.	0
1098	2816	.....	.....	5 16 5·8	−1·017	1	162 13 55·5	3·85	1	vF; S; R; glbM	1
1099	2811	.....	.....	5 16 20·8	+2·124	1	125 51 33·8	3·74	1	Cl; L; Sc; ⁂ taken.....	1
1100	2815	.....	.....	5 16 31·9	+0·245	2	155 6 43·9	3·77	2	eF; pL; E 90°±; vglbM ...	2
1101	351	.....	.....	5 16 32·3	+3·935	1	56 44 33·9	3·67	1	Cl; L; Ri; lC	1
1102	2818	.....	.....	5 16 56·7	−0·457	1	159 36 42·2	3·76	1	F; pL; R; sbM; r; st inv ...	1
1103	2817	.....	.....	5 17 3·0	−0·092	4	157 28 36·8	3·74	4	pF; pL; R; gvlbM.....	4
1104	353	VIII. 4	.....	5 17 8·1	+3·802	1::	69 58 11·1	−3·63	1::	Cl; vlRi; vlC; st 9...12	3

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	h.	H.		h m s	s		° ′ ″	″			
1105	2820	.....	.....	5 17 44·0	−0·112	1	157 35 20·6	−3·68	1	eF; S; R	1
1106	2822	.....	.....	5 17 51·1	−0·495	1	159 47 44·6	3·68	1	F; pS; R	1
1107	2821	.....	.....	5 17 58·4	−0·180	1	158 1 7·2	3·66	1	F; pS; R; vglbM; 3st10p	1
1108	2819	.....	.....	5 18 1·2	+0·475	2	153 10 14·8	3·64	2	F; pL; lE; vgvlbM; *7np	2
1109	2824	.....	.....	5 18 7·8	−0·302	1	158 44 6·2	3·66	1	Cl; BM; lRi; st7	1
1110	2823	.....	.....	5 18 14·1	+0·013	5	156 46 1·1	3·63	5	⊕; pB; pL; R; pmbM; rr	5
1111	2825	.....	.....	5 18 22·1	−0·436	5	159 28 39·8	3·64	5	vB; S; R; gmbM	5
1112	.....	.....	M. 79	5 18 25·6	+2·469	A	114 39 39·5	3·55	A	⊕; pL; eRi; eC; rrr	4
1113	4016	.....	.....	5 18 36·3	−0·087	1	157 25 24·7	3·61	1	F; S; R; r	1
1114	354	VII. 39	.....	5 18 42·6	+4·001	3	54 48 28·6	3·48	3	Cl; pRi; pC; R; st 9...12	5
1115	.....	V. 33	.....	5 18 52·3	3·011	1	92 39 22·0	3·30	1	v diffused neb susp	1
1116	.....	V. 38	.....	5 19 10·4	+2·881	1	98 15 15·9	3·47	1::	eL; strongly susp (2° in P.D.).	1
1117	2827	.....	Δ. 129	5 19 10·4	−0·416	4	159 21 30·9	3·57	4	Cl; L; pRi; iR; st 11...16	4
1118	2826	.....	.....	5 19 13·2	−0·010	1	156 54 4·5	3·55	1	F; R; gbM; am st	1
1119	.....	.....	M. 38	5 19 17·0	+4·020	(2)	54 17 36·1	3·43	(2)	Cl; B; vL; vRi; iF; st L & S	7
1120	(356)	.....	.....	5 19 33·6	−0·480	1::	159 41 31·8	3·54	1::	No description	1
1121	2830	.....	.....	5 19 35·7	0·833	2	161 23 42·8	3·54	2	F; L; iE	2
1122	2828	.....	.....	5 19 36·7	0·016	1	156 56 22·4	3·52	1	eF; pL	1
1123	2829	.....	.....	5 19 39·1	0·453	3	159 32 47·1	3·53	3	B; S; R; vgvmbM; r	3
1124	2831	.....	.....	5 19 53·3	0·379	1	159 8 15·0	3·50	1	vF; L; R; vglbM	1
1125	(369)	.....	.....	5 20 10·1	0·496	1::	159 46 33·6	3·48	1::	No description	1
1126	2832	.....	.....	5 20 15·1	0·030	1	157 0 57·2	3·46	1	Cl; eF; L; iR; mC; rr	1
1127	2833	.....	.....	5 20 33·0	0·014	7	156 54 44·8	3·44	7	pB; pL; R; vgbM	7
1128	2834	.....	.....	5 20 33·9	0·527	1	159 55 8·5	3·45	1	vF; pS; lE; r	1
5063	.....	.....	.....	5 20 52·9	−0·469	1::	159 36 35·4	3·42	1::	(See No. 5063)	1
1129	2835	.....	.....	5 21 6·5	+0·168	1	155 36 58·6	3·38	1	vF; pS; R	1
1130	.....	III. 447	.....	5 21 8·1	2·947	2	95 26 56·0	3·30	2	vF; pL; iR; st nr	2
1131	2837	.....	.....	5 21 22·2	+0·113	1	156 0 17·2	3·36	1	Cl; vlRi; lC; st 10	1
1132	2838	.....	.....	5 21 40·7	−0·480	3	159 39 51·5	3·35	3	pB; pL; iR; r; in diff n	3
1133	356	.....	.....	5 22 0·7	+2·875	1	98 29 41·4	3·22	1	Diffused nebulosity	1*
1134	2839	.....	Δ. 131	5 22 1·5	−0·473	2	159 36 55·4	3·32	2	pF; pL; R; gbM	2
1135	2840	.....	.....	5 22 1·9	−0·198	1	158 3 33·7	3·31	1	F; p of group	1†
1136	2836	.....	.....	5 22 3·0	+1·666	2	136 51 6·2	3·26	2	pF; S; R; bM; 4B st p	2
1137	355	I. 261	.....	5 22 10·0	3·968	3	55 52 3·6	3·18	3	vB; L; R; b ⁂ in M	4†
1138 / 1139	2841	.....	.....	5 22 14·9	+0·074	5	156 16 28·3	3·29	5	pB; S; R; smbM / eF; R; stellar	D neb 26°, 80″	5*
1140	2842	.....	.....	5 22 21·3	−0·197	1	158 2 52·6	3·28	1	2nd neb of group	1†
1141	2843	.....	.....	5 22 24·9	0·204	4	158 5 19·6	3·28	4	pF; S; R; 3rd of group	4†
1142	2844	.....	Δ. 175	5 22 41·6	0·207	6	158 6 22·5	3·25	6	!; pB; S; R; 4th of group	6†
1143	2845	.....	.....	5 22 43·6	0·195	1	158 1 49·5	3·25	1	vF; pL; follows a group	1†
1144 / 1145	2848	.....	Δ. 89?	5 22 45·6	0·564	4	160 4 39·2	3·26	4	pB; pS; R; glbM / F; S; R; glbM	D neb 339°·1, 50″	4
1146	2847	.....	.....	5 22 54·5	−0·082	2	157 18 47·1	3·23	2	pB; vS; R; bM; 2st 9 & 10 f	2
1147	2846	.....	.....	5 22 55·3	+0·039	1	156 30 33·4	3·22	1	vS; neb+st	1
1148	2849	.....	.....	5 23 51·4	+0·358	2	154 4 25·8	3·14	2::	eF; stell; *14+neb	2
1149	2850	.....	Δ. 90	5 23 53·2	−0·608	3	160 16 48·9	3·17	3	pF; pS; iR; vglbM; *15, 190°·6, 60″	3
1150	2852	.....	.....	5 24 26·6	−1·138	1	162 36 15·8	3·14	1	pB; pL; R; bM	1
1151	2851	.....	.....	5 24 48·3	+0·025	1	156 34 43·9	3·07	1	eeeF; vvL; irr diff	1
1152	2854	.....	Δ. 237?	5 25 8·5	0·034	1	156 30 29·8	3·04	1	pF; R; gbM; r	1
1153	2855	.....	.....	5 25 37·5	0·255	1	154 52 39·3	2·99	1	pB; L; R; glbM; *9np	1
1154	2856	.....	.....	5 25 40·3	+0·051	1	156 23 6·3	2·99	1	Cl; cL; Ri; st13	1
1155	2857	.....	.....	5 25 47·4	−0·296	1	158 35 32·3	2·99	1	pB; S; R; psbM.	1
1156	2859	.....	.....	5 25 50·5	−0·561	2	160 1 23·3	2·99	2	The 1st of a group of 7!	2†
1157	357	.....	M. 1	5 26 3·9	+3·605	1	68 5 10·5	2·85	1	vB; vL; E135°±; vglbM; r	12†
1158	2858	.....	.....	5 26 4·1	+0·003	2	156 42 31·2	2·96	2	B; lE; sbM ⁂ 10 & 11	2
1159	2862	.....	.....	5 26 16·7	−0·362	2	158 57 2·5	2·95	2	pB; S; R; glbM	2
1160	2853	III. 590	.....	5 26 24·5	+2·738	1	104 9 58·5	2·85	1	vF; S; R; smbM	2
1161	2863	.....	Δ. 211	5 26 31·0	−0·137	1	157 37 22·4	2·92	1	Cl; Ri; 2nd of sev	1
1162	2874	.....	.....	5 26 39·9	−3·085	2	167 51 34·3	−2·99	2	.....	2

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	h.	H.		h m s	s		° ′ ″	″			
1163	2864	.....	.....	5 26 46·8	−0·550	3	159 57 22·7	−2·91	3	F; pL; iR; vgbM; 2nd of group!	3†
1164	2865	.....	.....	5 26 50·2	−0·569	1	160 2 51·7	2·91	1	F; vL; vgbM; 3rd of group!	1†
1165	2866	.....	Δ. 136?	5 27 15·3	−0·363	1::	158 57 7·3	2·89	1	vF; pL; R; 1st of 4!	1*†
1166	358	.....	M. 36	5 27 3·1	+3·966	3	55 57 28·2	2·76	3	Cl; B; vL; vRi; lC; st 9...11sc	9
1167	.....	III. 747	.....	5 27 11·2	+6·681	1	20 35 59·9	2·67	1	cF; pL; iF; mbM; er; * inv (? P.D.).	1*
1168	2867	.....	Δ. 136?	5 27 32·7	−0·358	2::	158 55 26·2	2·86	2::	F; S; 2nd of 4!	2*†
1169	2861	.....	.....	5 27 17·2	+2·094	1	126 28 48·3	2·79	1	Cl; st 8...11	1
1170	2860	IV. 21	.....	5 27 26·0	+2·536	1	112 2 39·9	2·77	1	F; vS; R; vsvmbM*12; 3st inv.	2
1171	2868	.....	Δ. 136	5 27 37·6	−0·361	4	158 56 0·7	2·84	4	Cl; pL; iF; 1st 9; + group of 4n neb pB; R; pslbM; 3rd of 4	3 1*†
1172	(456)	.....	.....	5 27 43·2	0·411	2:	159 12 33·1	2·83	2:	No description.....	2
1173	2870	.....	.....	5 27 44·2	0·132	1	157 34 9·4	2·82	1	Cl; Ri; 3rd of sev	1
1174	2872	.....	.....	5 27 46·7	0·553	1	159 57 36·7	2·82	1	F; S; 4th of gr of 7	1†
1175	2869	.....	.....	5 27 50·4	0·361	1::	158 56 34·5	2·84	1::	4th of 4	1*†
1176	2875	.....	.....	5 28 1·0	0·556	1	159 58 24·7	2·81	1	5th of gr of 7	1†
1177	2876	.....	.....	5 28 2·0	0·555	1	159 57 34·7	2·81	1	6th of gr of 7! D; a vS neb np	1†
1178	2877	.....	Δ. 213	5 28 16·4	−0·129	1	157 32 34·9	2·77	1	Cl; L; irr.....	1
1179	360	.....	M. 42= θ^1 Orionis	5 28 24·0	+2·945	B.A.C.	95 29 10·9	2·68	B.A.C.	!!!; θ^1 Orionis & the great neb	Mon.*†
1180	.....	V. 30	42, c^1 Orionis	5 28 29·2	+2·958	B.A.C.	94 56 2·3	2·67	B.A.C.	!!; c^1 42 Orionis & neb.....	2
1181	2878	.....	Δ. 238??	5 28 32·1	−0·019	3	156 20 18·8	2·74	3	vB; vL; lE; vgpmbM	3
1182	.....	III. 240	.....	5 28 32·9	+2·498	1	113 26 9·6	2·68	1	vF; vS; stellar.....	1
1183	361	V. 31	44, ι Orionis	5 28 35·3	2·933	B.A.C.	96 0 21·0	2·66	B.A.C.	vF; vvL; ι 44 Orionis inv ...	3
1184	362	.....	.....	5 28 36·5	2·969	1	94 26 50·5	2·65	1	Cl; vB; lRi; stL, sc	1
1185	.....	III. 1??	M. 43= 144 Bo. Orionis	5 28 38·4	+2·948	...	95 21 48·7	2·65	...	!vB; vL; R, with tail; mbM*8·9	Mon.*†
1186	2881	.....	.....	5 28 39·5	−0·393	1	159 5 49·5	2·75	1	Cl; vL; pRi; iF	1
1187	2882	.....	.....	5 28 39·8	−0·419	1	159 14 12·5	2·75	1	Cl; place of *.	2
1188	359	III. 865	.....	5 28 41·1	+3·897	1	58 6 38·4	2·62	1	cF; S; R; psbM.....	2
1189	2883	.....	.....	5 28 57·6	−0·581	4	160 4 57·4	2·72	4	B; pL; R; gbM	4
1190	2885	.....	.....	5 28 59·3	−0·739	2	160 50 53·1	2·73	2	F; L; iR; 3stp	2
1191	.....	.....	Chacornac	5 29 4·0	+3·581	...	68 52 20·4	.....	...	!!!; variable (Chacornac) ...	0*
1192	2871	.....	.....	5 29 5·5	2·279	3	120 53 59·1	2·63	3	vF; S; R; lbM; st nr	3
1193	363	V. 34	ε Orionis	5 29 6·6	+3·042	1	91 17 44·7	2·61	1	!!!; eL; ε Orionis inv	2
1194	2884	.....	.....	5 29 12·9	−0·130	1	157 32 21·3	2·69	1	Cl; 4th of sev	1
1195	2873	.....	.....	5 29 13·9	+2·276	1	120 59 31·4	2·62	1	eeF; vS	1
1196	.....	III. 269	.....	5 29 20·4	+2·644	1	107 55 16·0	2·60	1	eF; vS; stellar.....	1*
1197	2887	.....	.....	5 29 21·2	−0·423	2	159 15 1·3	2·69	2	Cl; eS; st 11...16	2
1198	2879	.....	.....	5 29 24·4	+1·559	1	138 46 56·4	2·62	1	eeF; R; bM; diffic; p of 2....	1
1199	.....	VIII. 42	.....	5 29 32·9	3·711	2	64 15 45·5	2·55	2	Cl; L; lC; lRi.....	2
1200	2886	.....	.....	5 29 35·3	0·437	1	153 18 40·5	2·65	1	eF; cS; R	1
1201	2880	.....	.....	5 29 37·1	1·559	2	138 47 31·0	2·60	2	vF; R; gbM; st s; f of 2 ...	2
1202	.....	IV. 33	.....	5 29 37·6	+2·914	3	96 48 42·9	2·57	4	B* inv in N.....	4
1203	2889	.....	.....	5 29 45·0	−0·997	1	161 58 34·9	2·67	1	F; pL; R; vlbM	1
1204	2888	.....	Δ. 178??	5 29 51·1	0·350	2	158 50 55·5	2·65	2	Cl; st 13m	2
1205	2890	.....	Δ. 214?	5 30 25·2	−0·048	2	156 59 13·3	2·59	2	vB; S; R; *. + neb in vLCl...	2
1206	2981	.....	.....	5 30 49·7	+0·014	1	156 34 8·5	2·55	1	B; S; stellar; r	1
1207	2893	.....	Δ. 215	5 30 54·5	−0·110	6	157 23 18·5	2·55	6	⊕; B; pL; pRi; C; st 12 ...	6
1208	(509)	.....	.....	5 31 22·8	0·541	1::	159 51 17·4	2·52	1::	No description.....	1
1209	2895	.....	.....	5 31 26·5	−0·061	2	157 4 8·3	2·49	2	Cl; eL; vRi; vBvSNM	2
1210	2892	.....	.....	5 31 36·8	+1·433	1	141 1 12·1	2·43	1	eF; pL; R	1
1211	2894	.....	.....	5 31 44·8	+1·431	1	141 2 52·1	2·43	1	eF; pL; R; vlbM	1
1212	2897	.....	.....	5 31 59·0	−0·434	4	159 16 53·2	2·46	4	pF; pS; R; glbM; in Cl.....	4
1213	2898	.....	.....	5 32 15·9	0·764	1	160 55 58·8	2·44	1	F; cL; R; vglbM	1
1214	2899	.....	.....	5 32 40·9	0·149	1	157 37 1·3	2·39	1	vB; S; R; psmbM	1
1215	2907	.....	.....	5 32 41·8	−4·411	1	169 57 24·4	−2·52	1	vF; S; lE; bM; 2 st 9nf	1

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	h.	H.		h m s	s		° ′ ″	″			
1216	364	.....	.....	5 32 43·1	+6·02	1	24 16 50·7	−2·21	1	Cl; vlRi; st 11	1
1217	2900	.....	.....	5 32 48·0	−0·177	3	157 47 24·3	2·39	3	Cl; pL; pC; iF; st 9...15	3
1218	2901	.....	.....	5 32 52·0	0·448	1	159 21 16·3	2·39	1	Cl; vL; Ri; vlC	1
1219	2902	.....	.....	5 32 57·5	−0·583	1	160 3 5·6	2·38	1	F; vL; iR; gbM	1
1220	2896	.....	.....	5 33 7·7	+2·643	1	107 55 45·9	2·27	1	Cl of Lst	1
1221	2904	.....	.....	5 33 16·8	−0·819	1	161 10 19·2	2·36	1	pB; pL; R; pglbM; *10pinv	1
1222	2905	.....	Δ. 98	5 33 29·3	0·624	2	160 15 3·1	2·33	2	B; pL; gbM	2
1223	2903	.....	Δ. 218	5 33 31·3	0·180	2	157 48 16·7	2·31	2	F; vL; vlE; vglbM	2
1224	2906	.....	.....	5 33 46·9	−0·139	1	157 32 58·0	2·30	1	vF; S; R; in pLCl	1
1225	365	IV. 34	.....	5 34 26·4	+3·283	2	80 59 3·8	2·14	2	○; pB; vS; vlE; r?	4†
1226	.....	IV. 24	.....	5 34 40·0	3·019	1	92 18 43·1	2·13	1	B* in M of L, lE neb	1*†
1227	.....	V. 28	.....	5 34 47·2	+3·028	2	91 55 43·7	2·11	2	lirr; B; vvL; black sp incl	2
1228	2909	.....	.....	5 34 47·8	−0·964	1	161 47 23·1	2·23	1	vB; vS; lE; gmbM; r	1
1229	.....	VIII. 28	.....	5 34 48·5	+3·557	1	69 57 43·0	2·10	1	Cl; lRi; lC; st pL	1
1230	2908	.....	Δ. 241	5 35 4·3	−0·058	3	157 0 29·6	2·18	3	Cl; vL; Ri; st 9...11	3
1231	2912	.....	Δ. 100?	5 35 11·2	0·585	1	160 2 26·6	2·18	1	vF	1
1232	2911	.....	Δ. 240	5 35 20·3	−0·158	2	157 38 43·5	2·15	2	pB; pL; R; gbM; in cLCl	2
1233	2910	.....	.....	5 35 26·6	+0·072	2	156 6 50·8	2·14	2	pB; L; iR; gbM; 1st of 3	2†
1234	2915	.....	.....	5 35 33·9	−0·804	2	161 5 22·5	2·15	2	⊕; B; pL; R; gbM; rr	2
1235	2913	.....	Δ. 219?	5 35 39·8	0·162	5	157 39 47·1	2·13	5	B; L; E; 2nd of 3	5†
1236	(579)	.....	.....	5 35 45·4	0·553	1::	159 52 28·8	2·14	1::	Cl; no description	1
1237	2914	.....	.....	5 35 51·8	0·055	1	156 58 42·7	2·11	1	Cl; vL; Ri	1
1238	2916	.....	Δ. 220	5 35 52·8	0·163	3	157 40 20·7	2·11	3	B; L; R; bM; 3rd of 3	3†
1239	2917	.....	.....	5 35 58·0	0·416	1	159 8 38·7	2·11	1	vF; pL; R; gbM	1
1240	(593)	.....	.....	5 36 18·4	0·553	1::	159 51 30·6	2·08	1::	Cl; no description	1
1241	2920	.....	.....	5 36 23·5	−0·710	3	160 38 22·6	2·08	3	pB; S; R; gbM; *9, np 5'	3
1242	366	.....	.....	5 36 25·7	+3·273	1	81 25 37·9	1·97	1	Cl; vL; lRi; lC	1
1243	2918	.....	.....	5 36 27·9	−0·160	5	157 39 3·2	2·06	5	F; L; iR; glbM; r	5†
1244	2919	.....	.....	5 36 35·9	0·070	4	157 4 23·8	2·04	4	B; S; R; vglbM	4
1245	2922	.....	.....	5 37 1·6	0·391	1	159 0 17·4	2·02	1	Cl; vL; Ri; st 12...15	1
1246	(608)	.....	.....	5 37 7·7	−0·444	1::	159 17 32·7	2·01	1::	Cl; no description	1
1247	367	.....	Lal. 10842	5 37 8·3	+3·375	1	77 10 43·0	1·90	1	*8, 9, with Fneb	1
1248	2923	.....	.....	5 37 11·1	−0·644	1	160 18 59·7	2·01	1	vF; R; gbM; 1st of 7	1†
1249	2925	.....	.....	5 37 27·0	0·635	1	160 16 15·3	1·99	1	F; S; lE; 2nd of 7	1†
1250	2926	.....	.....	5 37 35·8	−0·522	1	159 41 40·9	1·97	1	vF; L; pmE	1
1251	2921	.....	.....	5 37 53·2	+2·300	2	120 8 42·2	1·86	2	vF; S; R; bM	2
1252	2928	.....	.....	5 37 54·6	−0·479	1	159 28 11·8	1·94	1	Cl+neb; mC; iF; st vS	1
1253	2930	.....	.....	5 38 2·8	0·810	1	161 5 21·8	1·94	1	pB; S; R; gbM	1
1254	2929	.....	.....	5 38 3·3	0·557	1:	159 52 11·8	1·94	1	eF; vvS; vglbM	1
1255	2927	.....	.....	5 38 3·9	0·139	1	157 30 8·4	1·92	1	F; pL; lE; gbM	1
1256	2931	.....	.....	5 38 14·7	0·485	1	159 29 59·7	1·91	1	Cl; vL; Ri; st 10...15	1
1257	2932	.....	.....	5 38 17·9	0·755	1	160 45 15·4	1·92	1	pB; R; bM; p of 2; *9 bet	1
1258	2935	.....	.....	5 38 24·3	0·652	1	160 20 40·7	1·91	2	pF; S; R; gbM; 4th of 7	2†
1259	2933	.....	Δ. 102	5 38 24·6	0·631	2	160 14 33·7	1·91	2	vB; pL; R; gbM; 3rd of 7	2†
1260	2936	.....	.....	5 38 27·3	0·624	1::	160 12 26·7	1·91	1	vF; 5th of 7	2†
1261	(642)	.....	.....	5 38 42·9	−0·438	1::	159 14 36·6	1·88	1::	neb; no description	1
1262	2924	.....	.....	5 38 49·3	+2·174	1	124 1 5·3	1·79	1	Cl; L; lC; st 13	1
1263	2937	.....	.....	5 38 57·3	−0·055	1	156 56 50·8	1·84	1	vF; pS; E; glbM; 2st 10, s	1
1264	.....	VIII. 2	.....	5 39 6·6	+3·276	1	81 16 35·1	1·73	2	Cl; poor; S sc st	3
1265	2938	.....	Δ. 103?	5 39 10·9	−0·646	2	160 18 26·8	1·84	2	B; R; 6th of 7	2†
1266	2939	.....	.....	5 39 21·0	−0·634	1::	160 15 5·4	1·82	1::	vF; vS; E; 7th of 7	1†
1267	368	.....	M. 78	5 39 34·1	+3·072	2	90 0 15·7	1·61	2	B; L; wisp-sh; vgmbN; 3st inv; r.	8†
1268	2940	.....	Δ. 143	5 39 37·8	−0·409	1	159 4 43·3	1·79	1	F; L; E	1
1269	2941	.....	Δ. 142	5 39 40·7	−0·423	8	159 10 18·3	1·79	8	!!!vB; vL; looped	8†
1270	.....	IV. 36	.....	5 39 49·8	+3·077	3	89 46 49·6	1·68	3	* with vF, Lchev	3
1271	2934	III. 241	.....	5 39 59·5	+2·532	1	112 3 59·6	1·68	1	eF; vS; R; gbM	2
1272	2942	.....	.....	5 40 1·0	−0·499	1	159 33 35·2	1·76	1	pB; pL; mE; 5st inv	1
1273	2943	.....	.....	5 40 9·0	−0·740	1	160 45 20·2	1·76	1	B; R; bM; rr; f of 2	1
1274	.....	III. 267	.....	5 40 35·0	+2·670	1	106 48 12·4	1·62	1	vF; pS; iE; bM	1
1275	2947	.....	.....	5 40 49·6	−0·534	1	159 43 48·3	−1·69	1	F; R; p of D neb	1

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	h.	H.		h m s	s		° ′ ″	″			
1276	2948	.....	.....	5 40 53·3	−0·550	1	159 48 52·3	−1·69	1	neb; np of gr of 4	1†
1277	2949	.....	Δ. 152??	5 40 54·2	0·556	1	159 50 42·3	1·69	1	neb; sp of gr of 4	1†
1278	2950	.....	.....	5 40 56·7	0·532	1	159 43 22·6	1·68	1	B; R; f of D neb	1†
1279	2951	.....	.....	5 41 10·5	−0·484	1	159 28 20·2	1·66	1	Cl; vF; mC; st+neb	1†
1280	2945	.....	.....	5 41 11·3	+0·297	3	154 21 38·1	1·63	3	pF; L; R; glbM	3
1281	2952	.....	.....	5 41 11·8	−0·549	1:	159 48 24·2	1·66	1:	neb; nf of gr of 7	1†
1282	2953	.....	.....	5 41 15·6	0·554	1:	159 49 51·5	1·65	1:	neb; sf of gr of 7	1†
1283	2954	.....	.....	5 41 18·8	0·537	1:	159 44 57·5	1·65	1:	vF; R; *10vnr	1†
1284	2956	.....	.....	5 41 33·6	−0·536	1:	159 44 30·1	1·63	1:	B; pS; R; lbM; *10, p	1
1285	2946	.....	.....	5 41 38·9	+1·127	1	145 35 32·9	1·57	1	eF; pS; R; vlbM	1
1286	2955	.....	.....	5 41 39·6	−0·314	2	158 31 43·4	1·62	2	vF; S; R	2
1287	.....	III. 270	.....	5 41 43·7	+2·648	1	107 39 20·4	1·52	1	vF; eS; stellar.....	1*
1288	2944	.....	Δ. 594	5 41 56·8	+2·163	2	124 18 21·4	1·52	2	⊕; B; pL; iR; gbM	2
1289	2957	.....	.....	5 42 5·1	−0·495	1	159 31 7·6	1·58	1	vF; S; mE; glbM; ?D	1
1290	2962	.....	.....	5 42 38·5	0·450	1	159 16 34·1	1·53	1	vF; pL; R; rr.....	1
1291	2963	.....	Δ. 184??	5 42 43·0	0·397	1	158 59 18·4	1·52	1	vF; S; R.....	1
1292	2959	.....	.....	5 42 45·6	0·298	1	158 25 39·4	1·52	2	vF; S; R.....	1
1293	2961	.....	.....	5 42 47·9	0·128	2	157 23 26·7	1·51	2	Cl; F; cS; irr	2
1294	(725)	.....	.....	5 43 2·4	−0·319	1::	158 32 44·3	1·49	1::	neb; no description	1
1295	369	.....	M. 37	5 43 7·5	+3·922	3	57 29 38·3	1·49	3	Cl; Ri; pCM; st L & S	8
1296	2960	.....	.....	5 43 6·1	+0·474	3	152 50 34·2	1·46	3	vF; pS; iR; pslbM*16	3
1297	2965	.....	Δ. 185??	5 43 7·3	−0·282	1	158 20 10·3	1·49	2	⊕; B; S; rr	2
1298	2966	.....	Δ. 147? 151? 154?	5 43 9·6	−0·450	5	159 16 26·3	1·49	5	⊕; B; pL; irrR; rr	5
1299	2958	.....	.....	5 43 9·8	+1·358	1	142 8 17·1	1·43	1	eF; pS; R; 3st10 sf.....	1
1300	(730)	.....	.....	5 43 24·9	−0·503	1::	159 33 29·2	1·46	1::	neb; no description	1
1301	2968	.....	.....	5 43 44·7	−0·888	1	161 23 47·8	1·44	1	pB; L; pmE; gbM*13	1
1302	2964	.....	.....	5 43 49·9	+1·390	1	141 36 16·9	1·37	1	pB; pS; R; glbM	1
1303	2969	.....	.....	5 44 23·6	−0·064	1	156 58 0·9	1·37	2	F; pS; R; gbM	2
1304	2967	.....	.....	5 44 49·2	+2·544	1	111 36 16·5	1·25	1	vF; S; vlE; gbM	1
1305	2971	.....	.....	5 44 54·6	−0·736	2	160 42 13·8	1·34	2	pB; pS; R; gbM	2
1306	2970	.....	Δ. 153?	5 44 58·2	0·444	1	159 14 0·1	1·33	1	eF; pL; lE	1
1307	2972	.....	.....	5 45 6·7	−0·331	3	158 35 56·7	1·31	3	F; pS; R; vglbM	3
1308	370	III. 448 = III. 510	.....	5 45 30·3	+2·897	(4)	97 30 3·2	1·16	1	eF; cS; lE; pslbM; er	5
1309	2973	.....	.....	5 46 27·5	−0·817	2	161 2 46·7	1·21	2	vF; S; R; gbM	2
1310	371	VII. 24	.....	5 46 37·1	+3·080	1	89 38 56·6	1·08	1	Cl; pL; lRi; pC; stS	3
1311	2975	.....	.....	5 46 40·1	−0·560	4	159 49 44·6	1·18	5	Cl; F; S; iF; vlC; rr	5
1312	2974	.....	.....	5 46 44·7	−0·246	1	158 5 35·9	1·17	1	eF; pL; iR	1
1313	2976	.....	.....	5 47 56·7	+1·446	1	140 37 4·7	1·01	1	eeF; vS; 3st10 sp	1
1314	2977	.....	.....	5 47 57·0	−0·326	1	158 33 11·2	1·06	1	F; S; R; *11p	1
1315	2978	.....	.....	5 48 7·4	0·149	5	157 29 33·8	1·04	5	F; pL; iR; vlbM; rrr.....	5
1316	2979	.....	.....	5 48 39·2	−0·438	2	159 10 22·7	1·01	2	⊕; vB; vS; vsmbM; rr	2
1317	2980	.....	.....	5 49 41·3	+0·369	2	153 42 41·3	0·89	2	eF; pL; R; vglbM	2
1318	2982	.....	.....	5 50 15·5	−0·922	1	161 30 44·6	0·88	1	vF; cL; vgbM	1
1319	2981	.....	Δ. 106	5 50 16·8	−0·619	5	160 6 17·6	0·88	5	Cl; pB; iF; gvmCM; st15 ...	5
1320	2983	.....	.....	5 51 17·8	+0·162	3	155 20 50·2	0·76	3	pB; vS; R; gbM.....	3
1321	.....	III. 225	.....	5 51 46·8	+2·584	1	110 3 13·8	0·64	1	eeF; pS; E; r	1
1322	2985	.....	.....	5 51 59·6	−0·505	1	159 31 16·4	0·72	1	vF; pS; R; gbM.....	1
1323	.....	VIII. 68	.....	5 52 7·3	+4·659	1	40 6 11·5	0·55	1	Cl, not Ri; 1*7m	1
1324	2986	.....	.....	5 52 28·5	−0·481	3	159 23 33·9	0·67	3	pB; vS; R; gmbM	3
1325	372	VIII. 26	.....	5 52 34·6	+3·647	1	66 42 23·8	0·54	1	Cl; pL; 40 or 50 st 8...15 ...	2
1326	2987	.....	.....	5 52 41·1	−0·131	7	157 21 35·8	0·64	7	F; pS; R; glbM	7
1327	2984	.....	.....	5 53 11·9	+2·401	1	116 39 52·1	0·53	1	vF; pS; R; gbM	1
1328	2988	.....	.....	5 53 22·1	+0·765	1	149 55 53·5	0·55	1	Cl; vlC; st L & S.....	1
1329	2989	.....	.....	5 53 26·1	−0·854	2	161 12 17·0	0·60	2	F; pL; R; gpmbM	2
1330	2991	.....	.....	5 53 53·9	0·837	4	161 7 52·5	0·55	4	⊕; B; pL; R; gmbM; r ...	4
1331	2990	.....	.....	5 53 54·3	0·146	5	157 27 0·8	0·54	5	F; pS; R; r; am st	5
1332	2992	.....	Δ. 160	5 54 7·4	−0·504	4	159 30 51·1	−0·53	4	⊕; pB; R; gmbM; rr; st 14...16.	4

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	h.	H.		h m s	s		° ′ ″	″			
1333	2994	.....	.....	5 54 23·3	−0·503	2	159 30 24·0	−0·50	2	vF; S; R; f of 2	2
1334	2993	.....	.....	5 54 34·6	+0·090	1	155 51 30·9	0·47	1	eF; S; R	1
1335	.....	II. 264	.....	5 54 55·9	+2·482	1	113 49 28·9	0·37	1	F; S.....	1
1336	2995	.....	.....	5 55 1·4	−0·342	3	158 37 0·8	0·44	3	pF; pS; iR; bM	3
1337	373	.....	.....	5 55 15·5	+2·822	1	100 36 14·8	0·34	1	* (3 Monoc) inv in pL, F, n .	1
1338	374	.....	.....	5 55 39·0	+3·206	1	84 16 44·3	0·29	1	Cl; L; pRi; vlC; st10, ...	1
1339	3009	.....	.....	5 56 0·0	−6·638	2	172 9 27·8	0·54	2	F; pS; iR; bM	2
1340	2998	.....	.....	5 56 13·4	0·798	1	160 56 36·5	0·35	1	F; lE; r	1
1341	2997	.....	.....	5 56 22·5	−0·274	2	158 13 12·4	0·32	2	eF; S; R; bM	2
1342	2996	.....	.....	5 56 50·7	+0·836	1	149 7 34·5	0·25	1	eF; S; R; *12 vnr	1
1343	3000	.....	.....	5 57 0·8	−0·519	1	159 34 54·6	0·28	1	F; vS; R; vsmbM; stellar ...	1
1344	3001	.....	.....	5 57 13·7	−0·416	1	159 2 0·5	0·25	1	F; pS; R; bM	1
1345	2999	.....	.....	5 57 34·0	+1·437	2	140 44 5·6	0·18	2	eeF; R; *15 att	2
1346	3002	.....	.....	5 57 46·1	+0·010	1	156 24 55·3	0·19	1	eeF; lE; *16 att.....	1
1347	3003	.....	.....	5 57 52·5	−0·119	4	157 16 2·3	0·19	4	F; pL; R; vglbM	4
1348	3004	.....	.....	5 58 9·8	+0·141	3	155 28 41·2	0·16	3	F; pL; R; vglbM	3
1349	3005	.....	Δ. 196	5 58 32·0	−0·316	5	158 28 3·8	0·14	5	pB; S; R; gbM; 1st of 3 ...	5
1350	3006	.....	Δ. 161?	5 58 35·9	−0·447	4	159 11 59·1	−0·13	4	⊕; vB; S; R; vgvmbM; rr..	4
1351	375	VI. 17	.....	5 58 49·3	+3·670	1	65 53 46·0	0·00	1	Cl; pS; mC; vRi; nrΔ; steS.	3
1352	3007	.....	Δ. 193	5 58 50·0	−0·345	4	158 38 5·4	−0·12	4	pF; S; R; gbM; *15 att nf..	4
1353	3008	.....	.....	5 58 50·7	0·287	1	158 17 48·7	0·11	1	pF; pS; R; gbM	1
1354	3013	.....	.....	5 59 33·7	−1·702	1	164 21 22·3	0·09	1	F; pL; R; gpmbM.....	1
1355	3010	.....	.....	5 59 36·3	+0·365	3	153 43 19·4	0·02	3	F; pL; R; vglbM	3
1356	3011	.....	Δ 194	5 59 39·1	−0·325	5	158 31 0·8	−0·04	5	⊕; vB; R; mCM; rr.....	5
1357	376	.....	.....	5 59 59·5	+4·765	1	38 17 55·2	+0·14	1	Cl; pL; poor; st11	1
1358	3012	.....	Δ. 223?	6 0 4·7	−0·229	1	157 56 54·0	0·00	1	F; S; R; gbM	1
1359	378	IV. 44	.....	6 0 8·7	+2·927	1	96 11 46·0	+0·10	1	Nebulous *7; am 3 st	2
1360	377	.....	M. 35	6 0 12·5	3·677	1	65 39 16·9	0·13	1	Cl; vL; cRi; pC; st 9...16...	8
1361	379	VIII. 24	.....	6 0 33·4	3·405	1	76 1 38·5	0·15	1	Cl; S; lRi; pmC; ** Σ. 848...	3
1362	.....	IV. 19	.....	6 0 44·0	+2·923	3	96 22 39·5	0·15	3	*9 in vF, pLneb; E 170° ...	3
1363	3016	.....	.....	6 0 44·6	−0·750	1	160 43 11·2	0·04	1	eF; L; R; glbM	1
1364	3015	.....	.....	6 0 52·1	0·348	2	158 38 48·1	0·07	2	F; cL; R; lbM	2
1365	3018	.....	.....	6 0 56·3	−1·295	1	162 58 41·2	0·04	1	pF; pL; R; gmbM	1
1366	.....	.....	Auw. N. 21	6 1 19·1	+3·569	...	69 29 42·5	0·01	...	*8m in neb (Bruhns).....	0
1367	3017	.....	.....	6 1 27·2	−0·056	1	156 51 19·9	0·13	1	eeF; pL; R; gbM	1
1368	3020	.....	.....	6 1 42·0	−0·192	2	157 43 40·5	0·15	2	F; vS; iR; lbM; r	2
1369	3019	.....	.....	6 1 56·1	+0·359	1	153 45 54·4	0·18	1	eF; vS; R	1
1370	3014	.....	.....	6 2 6·2	2·539	1	111 43 53·8	0·26	1	F; pS; vmE; glbM	1
1371	380	VIII. 6	.....	6 2 12·0	3·182	1	85 15 56·7	0·29	1	Cl; pRi; lC; st L & S.....	4
1372	3021	.....	.....	6 2 28·9	0·171	1	155 15 14·6	0·22	1	vF; S; R.....	1
1373	381	IV. 38	.....	6 2 41·6	2·924	1	96 18 57·6	0·32	1	pB **; L*neb; E 90°±	3
1374	382	.....	.....	6 3 59·9	2·990	1	93 30 5·2	0·44	1	Cl; L; vlC	1
1375	383	IV. 20	.....	6 4 17·9	2·927	2	96 12 6·1	0·47	2	*11&4 S st in vF, L neb	5
1376	384	VII. 25	.....	6 4 39·8	+3·200	1	84 31 53·0	0·50	1	Cl; pL; pRi; pC; st L & S...	2
1377	3025	.....	.....	6 5 3·8	−0·516	3	159 33 49·6	0·42	3	{ pB; pS; R; gbM / vF; R; glbM } D neb; 12°·5	3
1378	3022	.....	.....	6 5 5·6	+2·168	1	124 4 30·3	0·51	1	pF; pL; vmE; gvlbM.....	1
5064	.....	.....	.....	6 5 7	.....	...	88 50 39	.....	...	See No. 5064.	
1379	3027	.....	.....	6 5 7·1	−1·817	1	164 42 26·7	0·39	1	vF; pL; R; glbM	1
1380	3023	.....	.....	6 5 16·5	+1·331	1	142 29 20·0	0·50	1	pB; vS; E; vsbM; *9 p 5s...	1
1381	.....	VII. 57	.....	6 5 25·2	4·189	1	50 6 21·0	0·60	1	Cl; cL; C; iF; st vS	1
1382	3026	.....	.....	6 5 47·6	0·196	1	155 4 9·3	0·51	1	F; iF; glbM; 2 or 3 st inv ...	1
1383	.....	VI. 5	.....	6 6 2·3	3·377	2	77 9 55·9	0·63	2	Cl; L; Ri; gvmCM	2
1384	3024	II. 265	.....	6 6 14·4	+2·539	4	111 46 26·6	0·62	4	pF; pS; vlE; pmbM; st nr...	5
1385	3028	.....	.....	6 6 21·3	−0·087	2	157 4 22·5	+0·55	2	vF; pS; R; gbM.....	2
5065	.....	.....	.....	6 6 40·9	.....	...	88 58 11·2	.....	...	See 5065.	
1386	3031	.....	.....	6 7 57·9	−1·404	1	163 22 10·8	+0·66	1	F; vS; R; bM.....	1
1387	3029	.....	.....	6 9 5·0	+1·799	2	133 37 23·5	0·85	2	eF; pS; R; vlbM; ?134° PD.	2
1388	3030	.....	.....	6 9 18·6	1·798	2	133 39 27·1	0·87	2	eF; S; R; pslbM; ?134° PD.	2
1389	385	.....	Σ. 885	6 9 23·0	+3·213	1	83 58 10·6	0·92	1	* Chief of Cl	1
1390	3035	.....	.....	6 9 26·6	−2·061	1	165 24 21·8	+0·76	1	pB; pL; iR; vgpmbM; r ...	1

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	h.	H.		h m s	s		° ′ ″	″			
1391	.....	VII. 13	.....	6 9 33·3	+2·622	1	108 36 47·3	+0·91	1	Cl; L; pRi; lC	1
1392	3034	.....	.....	6 10 13·2	0·506	1::	152 29 50·0	0·90	1	pF; S; R; bM.....	1
1393	3032	.....	.....	6 10 22·8	2·551	1	111 19 46·4	0·98	1	pB; pL; mE, 87°; pslbMRN	1
1394	3033	.....	.....	6 10 23·9	+2·399	2	116 43 35·4	0·98	2	F; pS; vlE; pslbM	3
1395	3037	.....	.....	6 12 5·0	−1·526	1	163 47 55·3	1·01	1	vF; cL; R; gvlbM	1
1396	3036	.....	.....	6 12 33·1	0·423	3	159 5 2·4	1·08	3	vB; pL; R; mbM; r	3
1397	3038	.....	.....	6 12 45·1	0·917	1	161 29 30·7	1·09	1	vF; S; R; glbM; ⁂ p	1
1398	3039	.....	Δ. 201	6 13 34·4	−0·270	2	158 13 12·4	1·18	2	B; pS; lE; gbM; rrr	2
1399	386	VII. 20	.....	6 14 5·0	+2·902	2	97 14 22·3	1·31	2	Cl; cL; pRi; pC; st 11...15 .	5
1400	3040	.....	.....	6 15 36·9	2·532	1	112 0 58·2	1·44	1	vF; pL; R; vglbM	1
1401	3041	.....	.....	6 16 4·8	2·387	2	117 10 38·1	1·47	2	vB; S; R; psmbM; r	2
1402	.....	.....	Auw. N. 22	6 16 25·2	3·539	...	70 35 28·2	1·54	...	F Cl (Markree Obs. Jan. 13, 1853).	0
1403	387	.....	.....	6 16 28·9	2·964	1	94 37 19·9	1·53	1	Cl; P; vlC; st 6, 11...12 ...	1
1404	3042	.....	.....	6 17 5·4	1·753	1	134 41 54·5	1·55	1	Cl; B; P; st 8, ...	1
1405	3044	.....	.....	6 18 1·5	0·980	1	147 29 35·0	1·60	1	vF; lE; vgbM; p of 2.....	1
1406	3045	.....	.....	6 18 1·9	0·983	1	147 27 30·0	1·60	1	vF; lE; vgvlbM; f of 2	1
1407	3043	.....	.....	6 18 43·9	2·513	3	112 46 8·0	1·70	3	F; pL; R; vglbM; 2st inv...	3
1408	.....	VII. 35	.....	6 19 44·5	3·372	1	77 16 45·6	1·82	1	Cl; pC; with neb?	1
1409	388	VII. 26	.....	6 19 57·6	2·847	1	99 34 30·9	1·83	1	Cl; P; lCM; st 12...15	2
1410	3046	.....	.....	6 20 1·4	2·536	1	111 55 24·9	1·83	1	eF; R; ⁂ p 270°, 90″	1
1411	3047	.....	.....	6 20 33·0	0·293	1	154 23 21·3	1·81	1	F; S; R; glbM	1
1412	3048	.....	.....	6 20 49·4	0·231	1	154 52 49·6	1·82	2	eF; vS; R; 1st of 3.....	2
1413	3049	.....	.....	6 20 55·3	+0·226	1	154 55 25·2	1·84	1	eF; S; lE; 2nd of 3	1
1414	3050	.....	.....	6 21 0·8	−0·136	3	157 27 7·2	1·84	3	F; pL; R; gvlbM; ⁂ f	3
1415	.....	VIII. 25	.....	6 21 1·6	+2·963	1	94 40 44·6	1·92	1	B⁂ (10 Monoc)+Cl	1
1416	3051	.....	.....	6 21 11·0	0·220	1	154 58 9·5	1·85	1	eF; S; 3rd of 3	1
1417	389	VIII. 9	.....	6 21 13·5	3·473	(1)	73 13 33·5	1·95	1	Cl; eL; pRi; lC; st L & S...	2
1418	3052	.....	.....	6 21 49·5	0·235	1	154 51 45·3	1·91	1	vF; S; R; ⁂12 nr	1
1419	390	VII. 5	.....	6 22 11·0	3·233	1	83 4 23·2	2·04	1	Cl; pRi; pC; st 10, 12...15...	2†
1420	392	.....	.....	6 23 28·8	3·189	1	84 57 32·2	2·14	1	⁂8 in L; P; BCl.....	4
1421	391	VIII. 49	.....	6 23 31·7	+4·013	2	54 42 17·1	2·17	2:	Cl; pL; P; vlC; st 7, 10...15	3
1422	3054	.....	.....	6 23 42·4	−0·366	3	158 50 33·8	2·06	3	vF; pL; R; glbM	3
1423	3053	.....	Δ. 616?	6 24 13·8	+2·267	2	121 11 28·4	2·18	2	pB; cL; R; vlgbM; 4′	2
1424	.....	VII. 2	12 Monoc. B.A.C.	6 24 53·4	3·189	B.A.C.	85 2 14·5	2·27	B.A.C.	Cl; beautiful; st sc	
1425	393	IV. 3	.....	6 24 58·0	3·312	2	79 44 43·1	2·27	2	pL; com; mbNsf alm⁂; ⁂7·8 nf.	7*†
1426	.....	.....	Auw. N. 23	6 25 51·9	+3·729	...	63 35 16·9	2·36	...	Small cluster (Markree Obs. Dec. 23, 1853).	0
1427	3055	.....	.....	6 26 38·1	−0·360	4	158 50 0·3	2·31	4	pB; pL; R; vgbM; ⁂ p	4
1428	394	.....	.....	6 27 5·0	+2·956	1	94 57 53·2	2·44	1	Cl; pRi; lC; iF; st 8, 12...14	1
1429	395	VIII. 3	.....	6 27 8·4	3·269	(2)	81 32 16·8	2·46	(2)	Cl; vL; E; Ri; lC	4
1430	396	VIII. 50	.....	6 27 23·7	3·199	(1)	84 32 14·7	2·49	1::	Cl; vL; pRi; lC; st S	3
1431	.....	VII. 54	.....	6 27 56·0	6·043	1	24 2 15·6	2·62	1	vF; st eS	1
1432	397	VII. 22	.....	6 28 25·1	3·253	1	82 13 44·4	2·58	1	Cl; S; pC; iF; st 11...15 ...	2
1433	3056	.....	.....	6 28 59·1	2·153	2	124 42 52·7	2·59	2	eF; S; lE; vlbM	2
1434	3057	.....	.....	6 29 25·9	0·325	3	154 13 23·4	2·58	3	F; cL; R; vglbM; r; 17ˢ·0d	3
1435	.....	VI. 28	.....	6 30 47·9	3·329	1	79 0 33·4	2·78	1	Cl; cRi; eC; iF; st eS	1
1436	398	VIII. 48	.....	6 31 2·3	3·041	1	91 20 42·7	2·79	1	Cl; vL; P; vlC; st L & S ...	2
1437	399	IV. 2	.....	6 31 31·4	3·278	3	81 8 20·5	2·85	3	B; vmE 330°; Ncom=⁂11	7†
1438	400	VII. 37	.....	6 32 24·0	3·101	1	88 43 47·6	2·92	1	Cl; vC; iR; bM; st eS	2
1439	3058	.....	.....	6 32 41·8	2·462	1	114 43 55·6	2·92	1	pF; lE; bet 2 vS st; pslbM...	1
1440	401	V. 27 VIII. 5	15 Monoc.	6 33 16·0	3·305	1	79 59 24·7	2·99	1	15 Monoc; Cl; ⁂; ? neb.....	6*
1441	402	.....	.....	6 33 40·5	3·354	1	77 57 3·2	3·04	1	Cl; P; 30 or 40 st 12...13 ...	1
1442	403	VI. 21	.....	6 34 32·6	3·748	1	62 53 35·6	3·12	1	Cl; pS; eC; Ri; st 11...15...	2
1443	3059	.....	.....	6 35 31·5	2·236	1	122 20 49·8	3·16	1	pB; S; R; 2 or 3 st v nr	1
1444	404	VI. 3	.....	6 36 26·7	3·180	(1)	85 17 41·1	3·27	1	Cl; vmC; not Ri; st vS	2
1445	405	VII. 36	.....	6 36 35·5	3·154	1	86 24 51·4	3·28	1	Cl; lC; not Ri	2
1446	3060	.....	.....	6 37 3·1	2·503	3	113 20 15·0	3·30	3	pF; S; R; gbM; am st	3
1447	3061	.....	.....	6 37 7·0	+2·390	3	117 19 37·3	+3·31	3	pF; pS; vlE; bM; r	3

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	h.	H.		h m s	s		° ′ ″	″			
1448	406	II. 615	.....	6 38 2·9	+3·950	2	56 17 42·9	+3·43	2	F; S; bM.....	4
1449	407	II. 614	.....	6 38 2·9	3·951	2	56 15 56·9	3·43	2	eF; vS.....	4
1450	3062	.....	.....	6 39 16·6	2·386	1	117 30 7·7	3·49	1	pF; pL; lE; gbM	1
1451	.....	VIII. 71	.....	6 39 30·5	4·223	1	48 47 17·8	3·56	1	Cl; pRi; vlC; st ρL	1
1452	.....	III. 271	.....	6 39 46·2	2·642	1	108 3 23·8	3·56	1	3 or 4 S st + neb.....	1*
1453	408	VIII. 31	.....	6 40 39·4	3·002	1	93 1 23·9	3·63	1	Cl; L; C; ab 100 st 9...15...	3
1454	411	.....	M. 41	6 41 0·3	2·578	1:	110 36 2·2	3·64	1	vL; B; lC; st 8,...	3*
1455	410, *a*	.....	R. nova	6 41 34·1	3·944	...	56 23 51·2	3·74	...	No desc.; β of Lord R.'s diag.	0
1456	410, *b*	.....	R. nova	6 41 35·9	3·944	...	56 22 58·2	3·74	...	No desc.; γ of Lord R.'s diag.	0 *}
1457	410	III. 898	.....	6 41 39·3	3·944	1:	56 25 16·2	3·74	1	eF; vS	2
1458	409	III. 897	.....	6 41 39·4	3·946	1:	56 21 16·2	3·74	1	eF; vS	2
1459	3063	.....	.....	6 41 44·2	2·414	1	116 35 49·0	3·70	1	{pB; R; gbM / eF; R; gbM} D neb; am st	1
1460	410, *c*	.....	R. nova	6 41 54·0	3·944	...	56 19 55·2	3·74	...	No descr.; ε of Lord R.'s diag.	0*
1461	3064	.....	.....	6 42 3·3	2·414	1	116 34 19·9	3·73	1	eF; S; R; bet st; D neb p ...	1
1462	3066	.....	.....	6 43 23·6	0·428	1	153 34 16·4	3·78	1	vF; S; R; vglbM	1
1463	3065	.....	Δ. 578	6 44 1·7	2·124	4	125 50 56·4	3·88	4	⊕; B; pL; iR; gbM; rr.....	4
1464	412	.....	.....	6 44 17·3	2·915	1	96 49 35·2	3·94	1	Cl of 30 or 40 st.....	1
1465	413	VI. 27	.....	6 44 35·1	3·086	2	89 22 44·1	3·97	3	Cl; Ri; L; iF; st L & S	5
1466	414	VIII. 39	.....	6 45 3·1	2·912	3	96 55 13·0	4·00	3	Cl; L; P; lC	6
1467	415	VI. 2	.....	6 46 55·4	3·501	2	71 49 12·7	4·09	2	Cl; pL; Ri; mC; st vS	5†
1468	3067	.....	.....	6 47 45·6	0·375	1	154 6 43·8	4·16	1	vF; vS; R; 2 st Δ	1
1469	416	VIII. 51	.....	6 47 47·1	2·910	1	97 1 26·2	4·24	1	Cl; P; vlC	4
1470	3068	.....	.....	6 47 58·3	0·369	2	154 9 52·4	4·18	2	vF; pS; vlE 90°	2
1471	417	VI. 18	.....	6 49 15·4	2·911	3	97 1 24·8	4·36	3	Cl; pL; pRi; mC; st 13... ...	7
1472	3069	.....	.....	6 49 23·0	1·949	2	130 41 29·2	4·34	2	pB; pL; vmE 44°·8; pslbM..	2
1473	418	VIII. 60	.....	6 50 51·9	2·971	1	94 24 15·0	4·50	1	Cl; lC; not Ri.....	2
1474	419	.....	.....	6 51 6·4	3·311	1	79 33 25·9	4·53	1	Cl; P	1
1475	.....	.....	D'Arrest, 50	6 51 23	2·89	[3]	97 45 24	4·51	[3]	F; vS; R	0
1476	420	.....	.....	6 51 49·9	4·665	2	39 12 51·9	4·63	2	eF	2
1477	421	II. 304	.....	6 52 55·6	2·898	3	97 35 39·1	4·67	3	pF; S; R; r; S st inv	6†
1478	421, *a*	.....	R. nova	6 52	.....	...	97 35	.....	...	Makes a close D neb with h. 421.	0
1479	422 = 3070	VII. 14	.....	6 53 4·4	2·759	2	103 30 44·4	4·68	2	Cl; L; Sc; st 8...9	3
1480	423	VIII. 1B	.....	6 53 48·2	3·145	2	86 44 53·5	4·75	2	Cl of sc st; st 8, 9,...	3*
1481	.....	III. 874	.....	6 54 46·7	4·658	1	39 15 39·4	4·88	1	vF; vS; lE	1
1482	424	II. 861	.....	6 54 57·4	4·661	1	39 13 10·3	4·81	1	pB; S; iR; gbM; *8, 120°...	2
1483	425	.....	M. 50	6 56 12·5	2·886	4	98 8 46·5	4·95	4	! Cl; vl; Ri; pC; E; st 12...16	8
1484	427	VII. 38	.....	6 56 57·0	3·100	2	88 44 31·6	5·02	3	Cl; L; Ri; cC; st 12...16 ...	5
1485	3071	.....	.....	6 57 7·4	2·368	1	118 30 13·3	5·01	1	pB; pL; lE; gbM	1
1486	426	II. 734	.....	6 57 28·6	4·663	1	39 5 50·6	5·02	1	vF; pL; iR; psmbM; st p ...	2
1487	428	IV. 25	.....	6 57 33·2	2·817	1	101 6 47·8	5·06	1	pB ** inv in S, vF, neb	3
1488	3072	.....	.....	6 58 6·8	1·912	2	131 51 55·4	5·08	2	vF; S; vlE; bM; am st	2
1489	429	II. 735 = III. 875	.....	6 58 33·7	4·547	1	41 10 42·0	5·20	1	vF; vS; stellar.....	4
1490	432	VIII. 40	.....	6 58 47·5	3·741	2	62 35 40·7	5·19	2	Cl; L; vlC; Scl inv.....	3
1491	430	II. 862	.....	6 58 49·2	4·631	1	39 36 2·6	5·22	1	F; S; R; psbM	2
1492	430, *a*	.....	R. nova	6 58 ±	.....	...	39 36 ±	.....	...	Several near h. 430 (? 426, 433 & 1 nov).	0
1493	431	III. 899	.....	6 58 54·3	3·986	(1)	54 39 36·3	5·21	1::	vF; S; R; bM.....	2
1494	.....	VIII. 32	.....	6 59 54·6	2·847	1	99 52 4·8	5·26	1	Cl; L; lC.....	1
1495	435	.....	.....	7 0 6·6	2·949	1	95 24 37·7	5·29	1	Cl; vlC	1
1496	434	II. 769	.....	7 0 9·7	3·515	1	71 0 17·0	5·30	1	pB; pL; R; glbM	2
1497	433	II. 736	.....	7 0 27·9	4·627	2	39 36 26·8	5·36	2	pF; S; R; glbM; r.....	4
1498	.....	VIII. 33	.....	7 1 35·7	2·834	1	100 26 14·0	5·40	1	Cl; cL; P; lC	1
1499	3073	.....	.....	7 1 52·0	2·775	1	102 57 4·9	5·43	1	Cl; pL; pRi; gbM; st 10...14	1
1500	.....	IV. 65	.....	7 2 14·0	3·055	2	90 30 8·1	5·47	1	*9 aff with S, vF, neb	1
1501	.....	III. 746	.....	7 2 47·5	+5·827	1	24 57 49·7	+ 5·59	1	vF; S; R; lbM	1

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	h.	H.		h m s	s		° ′ ″	″			
1502	3074	.....	.....	7 3 7·1	+0·009	1	157 11 8·8	+5·46	1	Cl; P; lC; 30 st ±	1
1503	436	VII. 27	C. H.	7 3 16·3	2·881	1	98 23 59·5	5·55	1	Cl; cL; P; cC	3
1504	437	.....	.....	7 6 55·9	2·817	1	101 15 9·5	5·85	1	Cl; lC; * taken	1
1505	.....	VII. 15	.....	7 7 48·2	2·506	1	113 51 10·6	5·92	1	Cl; pRi; pC	1
1506	.....	VIII. 34	.....	7 7 50·5	2·845	1	100 3 44·9	5·93	1	Cl; L; lC; one vB*	1
1507	438	VII. 16	.....	7 8 28·2	2·463	1	115 29 29·4	5·98	1	Cl; cRi; lC	2
1508	439	VI. 6	.....	7 9 3·8	3·390	1	75 58 53·5	6·05	1	Cl; pS; pRi; mC; st 15...16	2*
1509	.....	VII. 6	.....	7 9 12·4	3·394	1	75 46 51·8	6·06	1	Cl; lC	1
1510	.....	VIII. 45	.....	7 10 31·8	2·687	2	106 47 59·8	6·16	2	Cl; P; lC	1
1511	3075	V. 21	.....	7 11 3·0	2·778	1	102 57 54·0	6·20	1	!!; vF; vvL; viF	3†
1512	440 = 3076	VII. 12	C. H.	7 11 23·4	2·721	2	105 23 19·9	6·23	2	Cl; vL; Ri; pC; st 9...12 ...	5
1513	441 = 3077	VII. 17	A.S.C. 905	7 12 54·6	2·488	2	114 42 14·2	6·34	2	Cl; pL; Ri	4
1514	442	.....	.....	7 13 59·7	2·908	1	97 18 9·5	6·05	1	Cl; pC; st pL; bifid	1
1515	.....	III. 748	.....	7 14 2·3	6·410	1	20 42 16·2	6·54	1	vB; pL; R; mbM; r; vS* inv.	1
1516	.....	VIII. 27	.....	7 14 8·9	2·568	1	111 40 18·5	6·45	1	Cl; S; P; lC	1
1517	443	.....	.....	7 14 20·5	2·845	1	100 7 38·4	6·48	1	Cl; S; pRi; st 15	1
1518	3078	.....	.....	7 15 0·5	0·679	2	152 5 45·1	6·47	2	pB; pL; iE; glbM	2
1519	444	II. 316	.....	7 16 42·9	3·792	1	60 14 41·0	6·70	1	B; S; R; bMN; p of D neb, 45°, 60″.	3†
1520	445	II. 317	.....	7 16 44·7	3·792	1	60 14 21·0	6·70	1	pB; S; R; bMN; f of D neb	3†
1521	3080	VIII. 35	.....	7 17 31·6	2·781	1	102 59 33·2	6·74	1	Cl; vL; pRi; lC; st L	5
1522	3079	.....	.....	7 18 18·9	2·423	1	157 15 54·7	6·79	1	pF; pS; R; vsmbM; am st ...	1
1523	3084	.....	.....	7 18 27·0	0·617	1	112 48 48·5	6·75	1	vF; vS; R; am st	1
1524	3082	.....	.....	7 18 32·8	2·427	1?	117 6 24·0	6·80	1::	pF; S; R; bM	1
1525	3081	.....	.....	7 18 39·7	2·597	1	110 39 57·6	6·82	1	Cl; pS; pmC; st 12	2
1526	3083	.....	.....	7 18 59·7	2·595	2	110 44 57·5	6·85	2	Cl; lC; bifid; *	2
1527	446	.....	.....	7 19 17·6	3·920	1?	55 54 27·3	6·91	1::	neb; 1st of 4	1*
1528	447	III. 703	.....	7 19 23·1	3·921	1	55 53 27·3	6·91	1::	vF; vS; R; bM	3*
1529	.....	II. 820	.....	7 19 44·8	4·017	1	52 58 44·5	6·95	1	pB; S; stellar	1
1530	448	III. 900	.....	7 19 45·1	3·920	1	55 55 8·2	6·95	1	vF; S; R; bM	2*
1531	449	III. 901	.....	7 19 57·6	3·921	1	55 51 47·1	6·97	1	vF; S; R; psbM	2*
1532	450	IV. 45	.....	7 20 54·4	3·557	1	68 48 33·2	7·04	1	B; S; R; *8 M	4†
1533	.....	VIII. 44	.....	7 21 2·5	3·232	1	82 41 1·2	7·04	1	Cl; L; P; vlC; st L	1*
1534	.. ...	VIII. 11	.....	7 21 11·7	3·384	1	75 56 51·5	7·05	1	Cl; pRi; C	1
1535	451	VIII. 36	.....	7 21 38·5	+2·818	1?	101 27 32·1	7·07	1?	Cl; vL; vlC	2
1536	3085	.....	.....	7 21 42·1	−0·151	2	158 43 56·0	7·00	2	pB; cL; cE 117°, lbM	2
1537	.....	.....	Auw. N. 24	7 22 32·1	+3·070	::	89 55 49·5	7·15	...	Two B neb (Bond, Feb. 1853).	0
1538	.....	.....	Auw. N. 25	7 22 32·1	3·070	::	89 55 49·5	7·15	...		0
1539	454	VII. 65	.....	7 22 57·2	2·767	1	103 41 23·1	7·17	1	Cl; S; cRi; cC; st vS	2
1540	453	III. 19	.....	7 23 6·9	3·290	2	80 3 25·0	7·20	3	eF; S; R; lbM; * inv	4
1541	.....	V. 44	.....	7 23 18·6	5·864	1	24 0 3·0	7·30	1	!!; cB; eL; vmE; vgmbMN 7′	2
1542	452	.....	.....	7 24 35·7	6·898	1	18 1 37·9	7·43	1	Cl; vlC	1
1543	3086	.....	.....	7 25 21·7	2·693	1	106 54 16·1	7·37	1	Cl; S but B; st 8...10	1
1544	.....	VIII. 52	.....	7 26 49·5	2·789	1	102 47 49·7	7·49	1	Cl; vL; P; vlC	1
1545	455	VIII. 37	.....	7 26 49·5	2·735	1	105 8 46·7	7·49	1	Cl; P; lC; st 9, &c	3
1546	456	II. 821	.....	7 27 43·4	3·954	1	54 28 22·7	7·59	2	pB; cS; R; vgvlbM; r; almO	3
1547	3087	.....	.....	7 28 25·2	0·743	1	151 57 47·1	7·57	1	vF; L; R; gbM; r	1
1548	457	L 218	.....	7 28 37·8	4·077	1	50 48 47·4	7·68	1	pB; pL; lE 90°; vgbM; *7, 8, 19°.	3
1549	458	VI. 1	.....	7 30 5·7	3·566	1	68 7 10·4	7·78	1	Cl; cL; Ri; C; st 11...18 ...	10
1550	3089	VII. 67	.....	7 30 10·0	2·615	1	110 18 0·8	7·76	1	Cl; L; cRi; st 11...13	3
1551	459 = 3088	VIII. 38	.....	7 30 10·8	2·760	2	104 10 31·8	7·76	2	Cl; B; vL; pRi; st L & S ...	4
1552	3090	VII. 28	.....	7 30 38·0	2·774	1	103 32 55·0	7·80	1	Cl; vL; Ri; pC; st vS	2
1553	.....	VIII. 87	.....	7 31 51·7	+2·751	1	104 35 14·0	+7·90	1	Cl; P; S; st vS	1

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	h.	H.		h m s	s		° ′ ″	″			
1554	460	II. 822	.....	7 32 26·8	+4·676	1	37 20 50·0	+8·00	1	cF; R; vgbM; r; *8 p	2
1555	3091	.....	.....	7 32 31·5	1·739	1	137 18 28·9	7·93	1	eF; L; pmE; gmbM; 2 st inv	1
1556	.....	VIII. 47	.....	7 32 55·5	2·715	1	106 11 49·4	7·98	1	Cl; vL; vlC.....	1
1557	.....	VIII. 46	.....	7 33 4·6	2·719	1	106 1 50·0	8·00	1	Cl; vL; vlC.....	1
1558	.....	III. 829	.....	7 34 26·7	4·715	1	36 34 59·8	8·16	1	eF; vS; R; bM	1
1559	3092	VI. 36	.....	7 34 41·6	2·656	1	108 45 38·6	8·12	1	Cl; pL; pC; E 0°; st L & S...	3
1560	462	.....	.....	7 35 4·7	+3·277	1	80 24 50·1	8·17	1	eF; *15, 300°·0, 90″	1
1561	3096	.....	.....	7 35 9·9	−0·117	5	158 58 3·7	8·09	5	pB; S; R; pmbM; 3 st 11 n...	5
1562	.....	II. 616	.....	7 35 11·2	+3·833	1	57 59 59·0	8·20	1	F; S; lbM	1
1563	461	.....	.....	7 35 19·3	4·653	1	37 35 56·6	8·22	1	vF; vS; R; bM	1
1564	463	.....	M. 46	7 35 24·3	2·755	1	104 29 50·4	8·18	1	!; Cl; vB; vRi; vL; inv ⊙...	4
1565	464 = 3093	IV. 39	.....	7 35 25·4	2·757	2	104 24 39·4	8·18	3	⊙; pB; pS; elE; r; 3·75 d...	4†
1566	3094	.....	.....	7 35 26·2	2·328	1	121 19 45·1	8·17	1	Cl; B; pRi; pL; lC; st 9, 12...14.	1
1567	3095	IV. 64	.....	7 35 41·2	+2·677	1	107 53 22·3	8·21	1	⊙; cB; not v well def	3†
1568, 1569	3097	.....	.....	7 36 43·9	−0·149	4	159 12 49·3	8·21	4	{cL; vF; R / pL; vF; R} D neb; 40°; * inv M ...	4
1570	465	.....	.....	7 37 36·4	+4·803	1	35 3 14·3	8·41	1	F; am 4 st	1
1571	3098	.....	M. 93	7 38 39·2	2·542	1	113 32 43·2	8·44	1	Cl; L; pRi; lC; st 8...13 ...	2
1572	466	.....	Lal. 15134	7 38 41·4	2·522	1	114 21 12·2	8·44	1	Cl of 18 or 20 st 11...13 ...	1
1573	3099	.....	.....	7 40 19·2	2·138	1	127 38 15·8	8·56	1	Cl; vvL; vlC; 1* 4·5 m.....	1
1574	3100	.....	.....	7 41 47·4	2·457	2	117 0 6·7	8·69	2	⊙; F; S; lE; am 60 st	2
1575	3101	.....	.....	7 41 56·8	2·459	1::	116 54 21·0	8·70	1::	Cl; S; pRi; pC	1
1576	3102	.....	.....	7 42 52·2	2·611	1	110 57 4·1	8·77	1	Cl; cL; pRi; lC; st 12	1
1577	467	.....	.....	7 42 56·7	4·838	1	34 9 26·9	8·83	1	vF; R; vgbM	1
1578	468	III. 479	.....	7 44 24·4	3·280	2	80 5 29·5	8·91	2	vF; S; rr group + neb	3*
1579	469	.....	.....	7 45 47·6	+4·908	1	32 57 44·1	9·07	1	eF; R; p of 2	1
1580	3104	.....	.....	7 46 20·9	−0·423	1	161 3 33·8	8·96	1	vF; S; R; lbM	1
1581, 1582, 1583, 1584, 1585, 1586, 1587, 1588	469, *a*	.....	R. 8 novæ	7 47 ±	.....	...	32 57 ±	.....	...	8 of 10 neb, in line with h. 469, 470.	0
1589	472	IV. 22	.....	7 46 40·1	+2·488	1	116 2 1·1	9·07	1	pB; vL; R; er; *8 M.....	3
1590	470	III. 836	.....	7 46 42·0	4·905	2	32 57 5·9	9·13	2	F; vS; R; *9 sf; f of 2	3
1591	471	III. 830	.....	7 47 11·2	4·660	1	36 46 9·8	9·16	1	F; pS; E?; bM vS*? L* nf	2
1592	471, *a*	.....	R. nova	7 47	.....	...	36 46	.....	...	Makes D neb with h. 871 ...	0
1593	3103	.....	Δ. 535	7 47 18·9	2·133	2	128 11 8·3	9·11	2	!; Cl; B; Ri; L; lC; st 12 ...	3
1594	.....	.....	M. 47	7 48 20·5	2·751	W.	105 3 19·3	9·21	W.	Place from Wollaston's Cat.	0*
1595	.....	VII. 58	.....	7 48 39·8	2·700	1	107 21 4·6	9·22	1	Cl; pL; pRi; pC; st S.....	1
1596	473	II. 302	.....	7 48 50·3	3·602	1	65 52 5·8	9·26	1	F; S; lE; bM; er	3
1597	473, *a*	.....	R. nova	7 48 ±	.....	...	65 52 ±	.....	...	vF; E; * inv near N	0
1598	474 = 3106	VII. 10	.....	7 49 0·6	2·544	2	113 56 10·5	9·25	2	Cl; L; cRi; vlC	5
1599	3105	.....	.....	7 49 1·8	2·453	1	117 29 59·5	9·25	1	Cl; L; lC.....	1
1600	475	III. 837	.....	7 50 26·3	4·881	1	33 3 54·6	9·42	1	vF; vS; R; glbM	2
1601	479 = 3107	VII. 23	Δ. 626	7 50 36·9	2·396	3	119 41 58·1	9·37	3	Cl; pL; cRi; pC; st 11...13	4
1602	477	.....	.....	7 50 53·9	3·682	1	62 35 59·9	9·43	1	vF; S; R; bM.....	1
1603	477, *a*	.....	R. nova	7 50	.....	...	62 35	.....	...	F; S.....	0
1604	476	III. 750	.....	7 50 55·0	4·067	(1)	49 47 50·2	9·44	(1)	cB; S; R; sbM	2
1605	476, *c*	.....	R. nova	7 50 +	.....	...	49 47 ±	.....	...	Follows III. 750 (h. 476) ...	0
1606	.....	III. 838	.....	7 51 11·3	4·903	1	32 42 17·4	9·48	1	eF; vS.....	1
1607	478	III. 709	.....	7 51 25·4	+4·530	1	38 52 4·7	+9·49	1	F; L; R; vgbM; r; am st ...	3

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	h.	H.		h m s	s		° ′ ″	″			
1608	3108	.....	.....	7 52 3·2	+2·778	2	103 59 2·7	+ 9·49	2	cF; S; vlE 90°; glbM; am st.	2
1609	3109	.....	.....	7 52 12·0	1·565	1	141 55 10·1	9·47	1	pF; S; R; vgpmbM	1
1610	.....	III. 839	.....	7 53 15·3	4·672	1	36 10 28·9	9·63	1	eF; vS	1
1611	480	VI. 37	.....	7 53 15·8	2·858	1	100 14 21·4	9·58	1	Cl; pL; vRi; C; st 11...20...	2*
1612	481	II. 544	.....	7 53 39·5	3·409	1	73 54 23·9	9·63	1	pB; pL; iR; vgbM; er; *225°·5, 60″.	3
1613	.....	VIII. 1	.....	7 54 31·8	2·675	3	108 41 12·4	9·68	3	Cl; B; pRi; lC; stS	4
1614	482	III. 605	.....	7 54 45·3	3·586	1	66 13 22·6	9·72	1	vF; S; iR	2
1615	483, *a*	.....	R. nova	7 54 32·6	3·273	...	80 7 43·3	9·71	...	γ in Lord Rosse's diagram ..	0*
1616	.....	.....	D'Arrest, 51	7 54 40·8	3·27	[2]	80 12 48	9·70	[2]	eF; III. 512 f10ˢ·5; n 50″ ...	0
1617	483	III. 512	.....	7 54 47·2	3·273	2	80 11 58·3	9·71	2	F; S; R; psmbM; r	3
1618	484	III. 7	.....	7 54 48·7	3·255	1	81 4 16·3	9·71	1	F; vS; vlE; 2 st p	3
5066	.....	.....	.....	7 55 12·5	.....	...	65 25 19·4	.....	...	See No. 5066.	
1619	3111	.....	.....	7 56 1·4	1·004	6	150 29 10·5	9·75	6	Cl; vB; vL; pRi; st 7...13 ...	6
1620	3110	.....	.....	7 56 17·4	2·825	1	101 54 45·3	9·81	1	F; vS; R; bet 3 st 13, 14 ...	1
1621	3112	.....	.....	7 56 48·9	2·457	1	117 47 40·5	9·85	1	Cl; B; pRi; pC	1
1622	485	.....	.....	7 57 22·1	4·938	1	31 49 50·5	9·95	1	pF; pL; R; psbM; *9, np 3′.	1
1623	486	III. 877	.....	7 59 0·5	2·845	1	101 2 6·9	10·03	1	cF; pL; R; vgvlbM; am st...	2
1624	488	VIII. 30	.....	7 59 28·2	2·461	(2)	117 46 23·5	10·05	1	Cl; vL; pRi; lC; st 10...15...	3
1625	487	III. 752	.....	7 59 54·2	3·451	1	71 46 29·0	10·10	1	eF; lE; vS*n	2
1626	489	II. 726	.....	8 1 15·2	3·857	2	55 38 18·6	10·22	2	pB; pL; R; vglbM; r; 2 st nf	4
1627	3113	.....	.....	8 1 22·2	2·419	2	119 29 53·7	10·19	2	Cl; pL; Ri; C; st 9, 13...14..	2
1628	490	III. 840	.....	8 1 50·7	4·775	1	33 55 30·7	10·29	1	pF; pL; R; psbM; *8, 164°·3	2
1629	491	IV. 55	.....	8 3 18·1	4·271	1	43 35 28·4	10·38	1	$\oplus$; pB; pL; R; rrr st 20.....	3
1630	3114	VII. 11	.....	8 4 7·8	2·819	2	102 24 59·0	10·40	2	Cl; vL; Ri; lC; st 11...13 ...	3
1631	492	III. 710	.....	8 4 26·2	4·404	1	40 30 20·4	10·48	1	F; L; E; vgbM	2
1632	3115	.....	B.A.C. 3073	8 4 42·2	2·817	1	102 30 54·5	10·45	1	Nebulous * 6·7	1
1633	493	II. 719	.....	8 4 51·0	3·919	1	53 19 26·7	10·49	1	F; pL; iR; vgbM; ** nr	3*
1634	494	II. 627	.....	8 6 2·9	3·524	1	68 13 36·1	10·57	1	F; S; lE 45°; *8, np 4′	4
1635	3116	.....	Δ. 563	8 6 26·4	2·215	3	126 58 24·1	10·57	3	Cl; B; L; lC; iE; st 9...12...	3
1636	3117	.....	Δ. 411	8 6 31·6	1·769	2	138 51 3·1	10·57	2	Cl; B; L; lC; st 7...16	2
1637	496	VI. 22	C. H.	8 6 50·1	2·964	2	95 22 30·6	10·62	3	Cl; vL; pRi; pmC; st 9...13.	7
1638	495	.....	.....	8 7 37·5	4·892	1	31 46 48·9	10·73	1	pB; S; mE 0°; psmbM	1
1639	.....	III. 711	.....	8 8 46·0	4·438	1	39 32 33·9	10·73	1	eF; cL; lE 45°±	1
1640	497	II. 303	.....	8 10 33·7	3·568	1	66 6 1·0	10·90	1	F; S; R; mbM; r	4
1641	498	III. 256	.....	8 10 43·9	3·094	1	88 48 46·3	10·91	1	vF; cS; iF; 3Sst inv?	3
1642	499	III. 606	.....	8 11 6·8	3·500	1	69 3 9·5	10·95	1	vF; S; R; sbM; stellar	3
1643	3118	.....	.....	8 11 21·1	2·499	1	117 2 10·9	10·93	1	F; pL; gmbM; am 60 st	1
1644	.....	.....	D'Arrest, 52	8 11 42	3·51	[3]	68 34 36	10·98	[3]	F; pL	0
1645	500	III. 607	.....	8 12 13·6	3·512	1	68 26 14·6	11·02	1	vF; cS; R	2
1646	501	II. 634	.....	8 12 26·5	3·510	1	68 30 37·2	11·04	1	cF; S; R; bM.....	2
1647	3119	.....	.....	8 12 27·9	2·633	1	111 22 33·6	11·02	1	vF; S; R; gbM; am 60± st ..	1
1648	.....	III. 288	.....	8 12 48·8	2·549	1	115 1 53·2	11·04	1	vF; cL; er	1
1649	503 = 3120	VII. 64	.....	8 12 58·1	2·421	3	120 12 19·8	11·06	3	Cl; pL; pRi; lC; iR; st 11...14.	4
1650	.....	.....	D'Arrest, 53	8 13 10	3·50	[2]	68 41 48	10·98	[2]	vF; cE; 3vSst f	0
1651	502	VI. 39	.....	8 13 15·1	+2·444	1	119 18 33·1	11·07	1	Cl; vL; cRi; lC; st 9, ...	3
1652	3176	.....	.....	8 13 25·4	−140·624	1	179 41 7·5	7·74	1	F; S; R; glbM; Polariss. Austr.	1*
1653	.....	II. 259	.....	8 14 16·8	+3·543	1	66 57 59·4	11·18	1	F; S; iF; r	1
1654	3121	III. 902	.....	8 14 49·0	2·818	2	102 52 35·0	11·20	2	F; vlE; gbM; r; am 50 st ...	3
1655	3122	.....	.....	8 15 35·1	2·272	4	125 46 36·2	11·24	4	** = h. 4083 in pS neb; am 70 st.	4
1656	3123	.....	.....	8 15 44·3	2·435	1	119 52 8·5	11·25	1	Cl; cL; pRi; pC; R; st 12 ...	1
1657	504	III. 753	.....	8 17 3·0	3·488	2	69 13 21·1	11·37	3	vF; pS; R; glbM; * p 75″...	4
1658	3124	.....	.....	8 17 39·0	2·461	1	119 2 32·8	11·46	1	Cl; pmCM; iF; st 9, 10...13.	1
1659	3125	.....	.....	8 17 39·2	2·369	1	122 31 10·1	11·47	1	Cl; F; S; R; gbM; st 15 ...	1
1660	505	II. 315	.....	8 18 41·2	3·615	1	63 35 7·7	11·49	1	pF; S; R; vsbM*	2
1661	506	III. 599	.....	8 19 34·0	3·511	1	68 3 46·8	11·56	1	vF; pL; iF; r; ** sp 2′.....	2
1662	507	III. 234	.....	8 23 58·8	+3·529	1	66 58 8·1	+11·87	1	vF; S; stellar	2

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	h.	H.		h m s	s		° ′ ″	″			
1663	3126	.....	.....	8 24 27·7	+0·438	1	157 39 23·2	+11·84	1	F; pS; R; gbM	1
1664	508	.....	.....	8 24 32·8	4·510	2	36 41 28·9	11·93	2	eF; S; R; *95°; p of 2	2
1665	509	III. 292	.....	8 24 48·6	3·691	1	59 59 13·9	11·93	2	vF; pL; R; lbM; r; * nr ...	4
1666	510	.....	.....	8 25 8·2	4·500	2	36 44 52·5	12·05	2	cF; S; R; f of 2; *310°	2
1667	510, *a*	.....	R. nova	8 25 8·2	4·500	::	36 40 52·5	12·05	::	Place from 510 h. by MS. ...	0*
1668	510, *b*	.....	R. nova	8 25 ±	.....	...	36 44 ±	.....	...	No description or place	0
1669	511	.....	.....	8 25 27·2	3·628	1	62 32 51·4	11·98	1	eF	1
1670	512	II. 318	.....	8 26 43·8	3·661	2	61 3 35·1	12·07	2	F; vlE; mbM; r	3
1671	3130	.....	.....	8 26 48·7	1·170	2	150 38 29·3	12·01	2	Cl; pS; lRi; lC	2
1672	513 = 3127	IV. 35	.....	8 26 57·1	2·771	2	105 39 51·8	12·06	2	F; S; att to *13; *7 nf, 10s...	3
1673	3128	.....	.....	8 27 10·4	2·830	1	102 41 44·4	12·08	1	B; S; E; psbM; bet 2 st.....	1
1674	3129	II. 266	.....	8 27 14·9	2·628	3	112 29 47·4	12·08	3	cB; L; vmE 110°·3	5
1675	515	III. 257	.....	8 28 48·7	3·093	1	88 48 50·0	12·20	1	eF; pL; iF	2
1676	514	II. 319	.....	8 29 0·5	3·662	3	60 49 18·6	12·22	3	F; pS; R; bM; r.....	4
1677	3131	.....	.....	8 30 27·5	2·178	3	130 11 3·7	12·29	3	*9 inv in pB, pL, R, neb ...	3†
1678	516 = 3132	VII. 63	.....	8 31 28·3	2·476	2	119 28 1·1	12·37	2	Cl; cL; pRi; pC; st 11...13..	4
1679	.....	III. 982	H. O. N.	8 31 32·3	6·536	1	16 45 45·1	12·47	1	vF; S; stellar	1
1680	.....	III. 235	.....	8 31 51·1	3·539	1	65 57 15·6	12·42	1	eF; S	1
1681	517	.....	M. 44	8 32 9·0	3·462	1	69 32 36·2	12·44	1	Præsepe Cancri	3
1682	.....	III. 983	H. O. N.	8 32 33·3	6·501	1	16 51 47·2	12·54	1	vF; S; stellar	1
1683	3133	.....	.....	8 32 58·2	2·357	1	124 16 9·1	12·47	1	Cl; pmC; irr Δ; st 13	1
1684	518	I. 204	.....	8 33 37·9	4·342	4	39 17 45·8	12·56	4	cB; S; E 130° ±; psmbM*?..	5
1685	3134	.....	.....	8 33 41·5	1·596	2	144 37 47·0	12·50	2	pB; S; R; 3 or 4 vS st p nr ...	2
1686	519	.....	.....	8 34 20·5	3·005	1	93 37 53·4	12·50	1	vF; pL; gbM; r; 2 pB st s, sf	1
1687	3136	.....	.....	8 34 20·5	2·000	1	135 43 55·5	12·55	1	Cl; S; st L & S	1
1688	521 = 3135	III. 49	.....	8 34 51·4	3·345	3	75 13 2·6	12·62	3	F; S; vlE 135° ±; psbM.....	5
1689	522	II. 727	.....	8 35 17·8	3·802	2	54 47 16·5	12·65	3	F; L; R; r	4
1690	.....	II. 908	.....	8 35 58·9	6·024	1	19 11 53·8	12·76	1	pB; pL; iF; er	1
1691	520	I. 288	.....	8 37 4·6	8·188	1::	11 15 26·7	12·89	1	vB; cL; lE 90° ±; g, svmbM.	2
1692	523	.....	.....	8 37 28·1	4·503	1	35 36 46·6	12·82	1	eF; psbM	1
1693	4017	.....	Δ. 609	8 37 45·6	2·423	1	122 9 4·7	12·79	1	Cl; pS; lRi; lC; viF; st 12,13	1
1694	3137	.....	.....	8 37 50·2	2·060	2	134 27 15·7	12·79	2	Cl; L; Ri; pmE; st 11...14...	2
1695	3138	.....	.....	8 38 1·3	1·977	2	136 42 16·0	12·80	2	Cl; pS; mC; iR; gbM; st 13...15.	2
1696	.....	III. 50	.....	8 38 43·9	3·309	1	76 54 43·4	12·88	1	eF; cL; R; lbM	1*
1697	3139	.....	.....	8 38 59·6	2·800	1	104 47 19·7	12·89	1	vF; vS; R; bM; *15m nr ...	1
1698	524	.....	.....	8 39 29·7	3·309	1	76 53 9·2	12·94	1	Cl; st 9...10	1
1699	.....	.....	D'Arrest, 54	8 40 20	3·43	[1]	70 27 48	12·99	[1]	eF	0
1700	525	.....	.....	8 40 20·3	4·183	1	42 25 39·3	13·01	1	Cl; lC	1
1701	3140	.....	.....	8 40 50·8	1·694	1::	143 27 29·7	12·99	1::	Cl; L; P; lC; st 10...13.....	1
1702	3142	.....	.....	8 41 3·4	1·928	1	138 16 31·0	13·00	1	Cl; pL; P; lC; st 13	1
1703	3141	.....	Δ. 489? 490?	8 41 7·1	2·174	1	131 22 30·3	13·01	1	Cl; pRi; lCM; st 12...13 ...	1
1704	526	II. 80	.....	8 41 23·5	3·432	3	70 24 45·8	13·06	3	B; pL; lE 10° or biN; mbM*	5
1705	526 *a*	.....	R. nova	8 41 23 ±	.....	...	70 24 ±	.....	...	Nearly in contact with h. 526 (see description of h. 526).	?
1706	.....	.....	D'Arrest, 55	8 41 52	4·46	[1]	35 58 48	13·11	[1]	vF; R; *15 p 12s, 270°	0
1707	527	II. 48	.....	8 42 1·3	3·430	1	70 28 19·0	13·10	1	eeF; pL; lbM; r	2*
1708	528	VIII. 10	.....	8 42 32·9	3·283	3	78 8 45·2	13·14	4	Cl; vlC; P	5
1709	529	III. 294	.....	8 42 59·4	3·685	1	58 36 38·1	13·17	1	pF; vS; R; bM	2
1710	529, *a*	.....	R. nova	8 43 ±	.....	...	58 36 ±	.....	...	Makes e close D neb with h. 529.	0
1711	530	I. 242	.....	8 43 26·1	4·348	2	38 9 35·3	13·21	2	vB; L; vg, vsmbM*10	3
1712	531	.....	M. 67	8 43 34·3	3·291	4	77 40 36·0	13·20	5	!; Cl; vB; vL; eRi; lC; st 10...15.	8*
1713	532	I. 200	.....	8 43 58·0	+3·746	3	56 3 38·9	+13·23	3	vB; vL; vmE 40°·9; gmbM ..	5

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	h.	H.		h m s	s		° ′ ″	″			
1714	533	III. 712	.....	8 45 2·1	+4·247	2	40 18 38·6	+13·32	2	F; pL; R; gbM; 4 S st nr ...	3
1715											
1716	533, *a*	.....	R. 3 novæ	8 45 ±	.....	...	40 18 ±	.....	...	4 (incl h. 533) nearly in a line	0
1717											
1718	.....	II. 658	.....	8 45 42·6	3·909	1	49 55 12·8	13·36	1	pF; vS; mbM	1
1719	534	III. 831	.....	8 46 48·6	4·366	1	37 23 56·2	13·44	1	vF; S; R; psbM	2
1720	535	II. 823	.....	8 46 53·6	4·333	1	38 7 1·2	13·44	1	pB; mE 0°±; psmbM	2*
1721	536	II. 280	.....	8 47 20·4	3·027	1	92 32 2·2	13·44	1	pF; cS; E 90°±; bet 2 st ...	2†
1722											
1723	536, *a*	.....	R. 3 novæ	8 47 ±	.....	...	92 32 ±	13·48	...	No description	0
1724											
1725	536, *b*	.....	R. nova	8 48 0·0	3·025	...	92 28 2·2	.....	...	MS. No description	0
1726	538	.....	.....	8 48 33·4	3·025	1	92 39 34·6	13·52	1	vF; pS; R; r; *9 p	1
1727	.....	.....	D'Arrest, 56	8 48 43	3·025	[2]	92 34 48	13·53	[2]	vF; S; R; *15 p, 44″ n; h. 538 nr.	0
1728	537	IV. 66	.....	8 48 46·5	4·438	1	35 41 54·1	13·57	1	pB; fan-shaped; *11 att	2†
1729	.....	III. 625	.....	8 48 54·1	3·892	1	50 7 22·8	13·56	1	vF; vS	1
1730	.....	II. 281	.....	8 48 58·2	3·022	2	92 50 24·5	13·55	1	vF; pS, R	2
1731	.....	III. 841	.....	8 49 15·0	4·536	1	33 46 55·0	13·60	1	vF; S	1
1732	540	.....	.....	8 50 3·8	4·065	1	44 33 26·5	13·65	1	pB; L; E; vgbM *18	1
1733	3143	.....	.....	8 50 5·7	1·451	1	148 41 21·4	13·58	1	eF; S; R; pslbM	1
1734	3144	.....	.....	8 50 52·5	2·632	2	114 8 0·1	13·67	2	pF; S; R; vgpmbM	2
1735	542	.....	.....	8 51 19·6	3·189	??	83 7 51·0	13·70	1::	F; pL; R	1*
1736	.....	II. 557	.....	8 51 19·6	3·189	1	83 9 32·0	13·70	1	F; pL; mE	1*
1737	541	III. 540	.....	8 51 25·7	3·785	1	53 44 3·6	13·72	1	vF; S; E 110°±; 2 vF st inv..	4
1738	539	.....	.....	8 51 28·6	8·388	1:	10 14 54·9	13·83	1::	pB; S; E 45°±; *nf	1
1739	543	II. 529	.....	8 51 59·2	2·997	2	94 21 30·2	13·74	2	cF; pL; R; vgbM	3
1740	.....	III. 264	.....	8 52 29·4	3·017	2	93 11 6·1	13·77	2	vF; vS; stellar	2
1741	544	.....	.....	8 53 6·7	3·781	1	53 42 41·9	13·83	1	eF; S; stellar	1
1742	545	II. 834	.....	8 53 51·4	4·769	1	29 30 44·0	13·90	1	cF; pS; iR; er	2*
1743	546	.....	.....	8 54 2·0	3·023	1	92 50 15·1	13·87	1	vF; L; R; bM	1*
1744	547	.....	.....	8 55 0·5	3·018	1::	93 10 51·9	13·93	1	eF; R	1
1745	3145	.....	.....	8 55 30·8	2·097	1	135 20 55·2	13·94	1	!; eeF; vL; vvmE 19°	1†
1746	.....	.....	D'Arrest, 57	8 55 58	3·47	[2]	67 28 48	14·00	[2]	D neb; pB; S, not R; comes s 4′.	0
1747	.....	.....	D'Arrest, 58	8 55 59	3·46	[2]	67 32 48	14·00	[2]	vF; vS	0
1748	549	.....	.....	8 56 5·6	4·305	1	37 41 23·9	14·03	1	4S st in neb	1
1749	549, *a*	.....	R. nova	8 56	.....	...	37 41	.....	...	Makes D neb with h. 549 ...	0
1750	550	I. 249	.....	8 56 26·3	4·788	1	28 58 21·8	14·06	1	cB; cL; E 90°±; er	3
1751	.....	III. 608	.....	8 56 34·0	3·527	1	64 26 53·5	14·05	1	eF; S; R; vlbM	1
1752	551	III. 60	.....	8 56 43·6	3·399	2	70 59 30·5	14·05	2	vF; S; R; r; *nr	3
1753	548	.....	.....	8 57 9·1	7·170	1:	12 56 4·8	14·16	1::	pB; pL; E; vglbM	1
1754	552	III. 825	.....	8 57 15·0	3·760	4	54 3 51·7	14·09	4	eF; S; R; vglbM; *12. 345°, 50″.	5
1755	.....	.....	D'Arrest, 59	8 57 28	3·39	[4]	71 7 5	14·09	[4]	pF; S; R; bMN=*15	0
1756	.....	III. 291	.....	8 57 34·4	3·514	3	64 0 27·3	14·11	3	vF; cL; R; bMN; 2 c st p ...	3*
		.....	D'Arrest, 60	8 57 35	3·53	[2]	64 0 24	14·10	[2]	*15·16 inv in pB; pL neb 40″ diam.	0*
1757	.....	.....	D'Arrest, 61	8 57 55	3·53	[1]	64 6 12	14·12	[1]	vF; vS	0
1758	.....	III. 626	.....	8 58 51·7	3·928	2	47 44 29·7	14·19	2	vF; S; iF; lbM; r	2
1759	553	II. 828	.....	8 58 52·0	4·387	1	35 35 23·3	14·21	1	pB; pS; E; vgbM	2
1760	554	III. 647	.....	8 59 32·7	3·811	1	51 48 43·9	14·23	1	vF; cS; R	3
1761	560	III. 275	.....	9 0 13·6	2·820	1	104 56 21·5	14·25	1	vF; pS; bM; S* 30″ n	2
1762	557	III. 236	.....	9 0 16·2	3·450	1	67 59 30·1	14·27	1	cF; vS; R; er; bet 2 pB st ...	3
1763	558	II. 520	.....	9 0 16·9	3·136	1	86 2 37·8	14·26	1	vF; pL; E; gbM; er	3
1764	556	.....	.....	9 0 29·6	4·225	1	39 2 40·0	14·30	1	eF; sbM *15; 1st of 3	1
1765	555	I. 250	.....	9 0 41·1	4·728	1	29 23 40·6	14·32	1	cB; cL; lE; psmbMLBN ...	2
1766	559	.....	.....	9 0 51·3	4·224	2	39 0 48·6	14·32	2	pF; S; E; pslbM; 2nd of 3...	2
1767	559, *a*	.....	R. nova	9 0 ±	.....	...	39 ±	.....	...	One of 4 (h. 556, 559, 561); one vF; one E.	0
1768	562	II. 490	.....	9 0 56·7	+3·694	3	56 18 26·3	+14·31	3	F; L; mE 150°; r; 2 st n.....	4

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	h.	H.		h m s	s		° ′ ″	″			
1769	561	.....	.....	9 1 0·0	+4·226	2	39 4 21·1	+14·27	2	vF; vS; lE; 3rd of 3	2
1770	3146	.....	.....	9 1 27·6	2·671	1	113 5 19·6	14·32	1	eF; lE; lbM?	1
1771	564	I. 2	.....	9 2 52·2	3·195	2	82 23 38·9	14·43	2	cB; cL; R; vg, vsmbM; r? ..	7
1772	563	.....	.....	9 2 55·9	4·014	1	44 28 15·5	14·45	1	pB; L; R; vgbM; r	1
1773	565	III. 61	.....	9 3 1·4	3·377	1	71 44 55·2	14·44	1	vF; S; R; am 5S st; (?PD 70°)	2*
1774	566	II. 564	.....	9 3 44·1	3·732	4	54 24 3·7	14·49	4	pB; S; R; psmbM	6
1775	566, *a*	.....	R. nova	9 3	.....	...	54 24	.....	...	eF; companion of h. 566, 567.	0
1776	567	III. 826	.....	9 4 3·5	3·728	1	54 29 46·3	14·51	1	vF; S; R; S *₈ 7·5 p	2
1777	569 = 3147	I. 66	.....	9 4 50·4	2·837	2	104 14 58·2	14·54	2	B; S; pmE 90°±; psmbM...	3
1778	568	I. 167	.....	9 5 16·1	3·858	(1)	49 21 24·4	14·58	(1)	cB; R; mbMBN.....	2
1779	.....	III. 295	.....	9 5 21·2	3·613	1	59 23 25·4	14·58	1	vF; vS; R; 2pB st sp	1
1780	571 = 3148	I. 59	.....	9 6 5·8	2·670	3	113 36 36·3	14·61	3	B; L; mE63°·7; gmbM	5
1781	570	I. 216	.....	9 6 25·9	5·535	1	20 12 11·7	14·69	1	B; pL; lE90°±; mbM; r; vS*sf inv.	4
1782	3150	.....	.....	9 6 36·0	0·866	1::	157 21 50·0	14·60	1	vF; vS; mE105°.....	1
1783	3149	.....	.....	9 7 10·6	2·253	3	131 51 37·1	14·67	3	!; ○; pB=*9; vS; R; am st.	4
1784	572	.....	.....	9 8 11·6	3·705	2	54 59 4·8	14·76	2	vF; S; R; * p1ˢ, n5′	2
1785	573	III. 296	.....	9 8 17·0	3·624	1	58 31 50·8	14·76	1	eF; S; R; lbM	2
1786	575	III. 62	.....	9 8 21·5	3·392	(1)	70 27 55·8	14·76	1	vF; S; R; r.....	2
1787	575	III. 63	.....	9 8 21·8	3·392	(1):	70 28 25·8	14·76	1	vF; S; R; r.....	2
1788	.....	II. 708	.....	9 8 31·6	3·899	1	47 27 36·4	14·78	1	pB, S; stellar	1*
1789	574	III. 832	.....	9 8 39·8	4·271	1	36 54 12·0	14·80	1	vF; S; lE; *att; *inv	2
1790	.....	III. 878	.....	9 8 45·5	4·971	2	25 18 38·6	14·82	2	vF; L; R; mbM.....	2
1791	577	.....	.....	9 8 54·8	3·413	1	69 13 19·7	14·79	1	vF; S; R; np of 2	1*
1792	.....	.....	D'Arrest, 62	9 9 5	3·34	[3]	69 22 9	14·80	[3]	vF; vS; h. 578 f7ˢ·5; Δ.P.D. 118″.	0*
1793	3152	.....	Δ. 265	9 9 9·9	1·185	4	154 17 18·8	14·76	4	!; ⊕; vL; eRi; vgeCM; 45ˢd; st 13...15.	4
1794	578	.....	.....	9 9 12·3	3·410	1:	69 21 43·3	14·81	1	vF; S; R; sf of 2	1
1795	.....	III. 749	.....	9 9 35·0	5·953	1	17 34 40·4	14·88	1	F; cS; bM	2
1796	580 = 3151	II. 505	.....	9 9 37·1	2·817	2	105 43 14·6	14·82	2	pB; pS; E 45°±; psmbM ...	3
1797	.....	II. 868	.....	9 9 39·0	4·975	(1)	25 9 42·1	14·87	(1)	F; S; iF; 1st of 2	1
1798	576	II. 869	.....	9 9 41·2	4·974	1	25 10 11·1	14·87	1	F; S; E; 2nd of 2	2
1799	3153	III. 242	.....	9 10 3·6	2·688	1	113 2 16·5	14·85	1	F; S; lE; gbM	3
1800	579	.....	.....	9 10 17·0	4·684	1	28 57 59·7	14·89	1	F; pmE	1
1801	3154	.....	Δ. 564	9 10 21·5	2·417	2	126 1 53·8	14·86	2	!; ○pB; pL; R; vglbM; in L, C, Cl.	2†
1802	3155	.....	.....	9 10 39·7	2·628	1	116 14 46·4	14·88	1	eF; *11 att	1
1803	3156	.....	.....	9 10 41·4	0·713	1::	159 3 42·5	14·85	1	pF; vS; R; glbM	1
1804	581, *a*	.....	R. nova	9 10 43·8	3·680	::	55 49 34·9	14·88	::	R.MS. No description	0*
1865	581, *b*	.....	R. nova	9 10 43·8	3·680	::	55 19 34·9	14·88	::	R.MS. No description	0*
1806	581	.....	.....	9 10 50·9	3·680	1	55 40 39·3	14·91	2	vF; E; I. 113 f	2*
1807	.....	.....	D'Arrest, 63	9 10 52	3·68	[2]	55 47 48	14·91	[2]	vF; vS; R; h. 581, 6′ n	0*
1808	581, *c*	.....	R. nova	9 10 53·4	3·680	::	55 29 4·9	14·92	::	R.MS. No description	0*
1809	581, *d*	.....	R. nova	9 10 58·4	3·680	::	55 47 34·9	14·93	::	R.MS. No description	0*
1810	582, *a*	.....	R. nova	9 11 3·1	3·680	::	55 28 34·9	14·93	::	R.MS. No description	0*
1811	582	I. 113	.....	9 11 12·9	3·680	2	55 39 34·9	14·93	2	cB; cL; lE; mbf; 3 st s	4*
1812	582, *b*	.....	R. nova	9 11 14·5	3·680	::	55 40 20·3	14·92	::	β in Lord R.'s diag. } v nr I.	0*
1813	582, *c*	.....	R. nova	9 11 16·0	3·680	::	55 27 34·9	14·92	::	α in Lord R.'s diag. } 113.	0*
1814	582, *d*	.....	R. nova	9 11 17·6	3·680	::	55 27 34·9	14·92	::	R.MS. No description	0*
1815	582, *e*	.....	R. nova	9 11 32·6	3·680	::	55 42 29·3	14·92	::	ε of Lord R.'s diagram	0*
1816	3157	.....	.....	9 11 41·7	+0·760	1	158 45 49·0	+14·90	1	F; pS; R; glbM	1

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	h.	H.		h m s	s		° ′ ″	″			
1817 } 1818	582, *f*	.....	R. 2 novæ	9 11±	.....	...	55 40±	.....	...	2 of 15 seen	0*
1819	585	.....	.....	9 11 45·3	+2·817	1	105 53 11·2	+14·94	1	eF; R; bM; *f 8ˢ·5	1
1820	583	III. 627	.....	9 11 50·3	3·813	1	50 7 15·1	14·97	1	vF; vS; R	3
1821	582, *g*	.....	R. nova	9 12 6·0	3·680	::	55 46 35·3	14·98	::	ζ of Lord R.'s diagram	0*
1822	586	III. 827	.....	9 12 13·5	3·714	1	54 2 26·7	14·99	1	cF; S; R; *10 np 2′	3
1823	584	I. 205	.....	9 12 19·6	4·187	1	38 25 33·3	15·01	1	vB; L; vmE 150°·8; vsmbM =*10.	3
1824	3158	.....	.....	9 12 29·8	1·357	1	152 28 51·8	14·96	1	F; vS; bet 2 st	1
1825	.....	III. 64	.....	9 12 41·2	3·385	1	70 28 52·3	15·01	1	S* and neb	1
1826	.....	III. 628	.....	9 12 53·2	3·832	1	49 15 51·9	15·03	1	cF; cS	1
1827	3159	.....	.....	9 13 2·9	2·392	1	127 25 37·3	15·01	1	vF; S; R; *12 att sf	1
1828	587, *a*	.....	R. nova	9 13 30	.....	...	105 55	.....	...	np 587 h.; close	0
1829	587	III. 488	.....	9 13 30·4	2·819	1	105 55 14·5	15·05	1	vF; cL; E 45°±; glbM; *11 sf 9ˢ.	2
1830	3160	.....	.....	9 13 52·9	2·330	1	129 57 21·8	15·06	1	eF; cL; R; vglbM rr	1
1831	588	III. 629	.....	9 14 20·7	3·826	1	49 16 29·6	15·12	1	vF; cS; R; *10 p 2′; 1st of 2	2
1832	590	III. 630	.....	9 14 24·2	3·827	1	49 14 39·6	15·12	1	vF; S; vgbM; 2nd of 2	2*
1833	589	III. 714	.....	9 14 30·9	4·108	2	40 11 39·9	15·13	2	cF; cS; vlE; pglbM; 1st of 2	3
1834	589, *a*	.....	R. nova	9 14±	.....	...	40 11±	.....	...	Seen with h. 589, 591	0
1835	592	I. 132	.....	9 14 41·5	2·895	1	101 18 57·6	15·12	1	pB; pL; R; gmbMN	4
1836	591	III. 713	.....	9 14 44·2	4·108	2	40 9 20·2	15·14	2	cF; cS; lE; bM; 2nd of 2	3
1837	593	I. 137	.....	9 15 45·1	3·684	3	54 53 13·7	15·19	3	vB; pL; R; smbM	4
1838	594	III. 520	.....	9 16 48·2	2·920	1	99 50 3·2	15·24	1	cF; S; E; bet 2 st 12, 16	2
1839	.....	II. 57	.....	9 17 8·3	3·259	1	77 46 1·8	15·26	1	F; vS, p of 2	1
1840	.....	II. 58	.....	9 17 11·2	3·258	1	77 46 16·1	15·27	1	pF; S, f of 2	1
1841	3161	.....	.....	9 17 11·3	2·710	2	112 34 33·8	15·26	2	B; S; R; gbM	2
1842	3162	.....	.....	9 17 21·9	2·016	1	140 30 21·5	15·25	1	Cl; lC	1
1843	3163	.....	.....	9 17 28·1	1·694	7	147 42 57·5	15·25	7	!!; ○ =*8; vS; R; *15, 59°·13, 13″.	8
1844	595	III. 846	.....	9 17 37·9	4·454	1	32 1 44·8	15·26	1	cF; S; E; vglbM	2
1845	597	II. 546	.....	9 18 8·2	3·255	5	77 57 53·6	15·32	6	pF; pS; R; bM; p of 2, 109°	7
1846	597, *a*	.....	R. nova	9 18	.....	...	77 58	.....	...	Forms Δ with 2 E neb	0
1847	598	II. 547	.....	9 18 13·1	3·255	6	77 58 34·9	15·33	6	vF; pL; R; bM; f of 2	7
1848	596	I. 260	.....	9 18 33·5	4·758	2	26 54 27·1	15·37	2	B; cS; R; mbM; am st	3
1849	3164	.....	.....	9 19 30·4	2·502	1	123 29 36·4	15·38	1	vF; S; vglbM; rrr; st 11m...	1
1850	599	.....	.....	9 19 42·4	3·445	1::	66 22 59·3	15·41	1	eF; vS; E 90°±	1
1851	3165	.....	.....	9 20 8·5	2·740	1	111 8 37·6	15·42	1	eeF; pL	1
1852	3168	.....	.....	9 20 11·4	1·370	2	153 12 29·0	15·40	3	F; S; R; pmbM; B*nr	3
1853	3166	.....	.....	9 20 12·5	2·627	2	117 25 24·9	15·43	2	cF; S; R; gmbM	2
1854	600	II. 555	.....	9 20 24·7	2·904	1	101 2 12·2	15·44	1	pF; pS; vlE; vglbM; r	2
1855	3167	.....	.....	9 20 41·0	2·688	1	114 11 43·5	15·45	1	F; S; R; bM	1
1856	602	III. 297	.....	9 21 59·9	3·562	2	59 49 57·2	15·54	2	vF; S; R; vsbM*12	3
1857	603	III. 8	.....	9 22 2·3	3·195	1	81 39 42·2	15·54	1	vF; E; er; 2 or 3 st inv	4
1858	601	.....	.....	9 22 12·0	4·421	1	31 54 24·1	15·57	1	vF; vS; R; vgbM; * 7′ s	1
1859	3169	.....	.....	9 22 42·2	1·839	1	145 30 15·5	15·55	1	F; pL; R; gmbM; am 80 st	2
1860	.....	III. 276	.....	9 24 5·4	2·861	1	104 6 31·2	15·64	1	vF; vS; stellar	1
1861	604·1	I. 56	.....	9 24 14·6	3·409	2	67 53 46·8	15·66	3	cB; vL; E; gmbM; r; sp of 2	4†
1862	3170	.....	.....	9 24 15·4	2·592	1	119 46 47·5	15·65	1	F; S; lE; psbM	1
1863	604·2	I. 57	.....	9 24 16·3	3·410	2:	67 52 50·1	15·67	2:	vF; cL; R; psbM; r; nf of 2	4†
1864	606	II. 495	.....	9 24 37·6	3·203	2	80 57 11·4	15·68	2	F; pS; lE; gbM	3
1865	607	II. 506	.....	9 25 2·9	2·830	1	106 7 27·0	15·70	1	pF; S; lE 90...180; mbsf	2
1866	.....	III. 977	.....	9 25 15·9	7·880	1	9 37 30·0	15·80	1	eF; vS	1
1867	605	.....	.....	9 25 26·7	4·972	1	23 26 15·8	15·76	1	eF; S; psbM	1
1868	3171	.....	.....	9 25 37·0	1·992	3	142 17 26·0	15·70	3	Cl; cL; pRi; pC; st 10...14	3*
1869	608	II. 40	.....	9 26 15·3	3·228	1	79 13 53·1	15·77	1	F; pL; R; gbM; p of 2	4
1870	609	III. 513	.....	9 26 33·1	+3·227	1	79 16 23·4	15·78	1	vF; S; R; bMN, f of 2	2
1871	3174	.....	.....	9 26 54·2	−0·275	1	166 0 46·2	15·74	1	pF; pL; R; gbM	1
1872	610	II. 260	.....	9 26 57·2	+3·408	2	67 40 32·3	15·81	2	F; S; vlE	3
1873	611	III. 298	.....	9 27 24·1	3·589	1	57 40 57·2	15·84	1	vF; cS; R; sbMN	3
1874	3172	.....	.....	9 27 49·1	+2·769	1::	110 13 55·2	+15·84	1::	eF; S; R; p of 2	1

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	h.	H.		h m s	s		° ′ ″	″			
1875	3173	III. 597	.....	9 28 2·3	+2·768	2	110 17 59·8	+15·86	2	vF; pS; lE; vglbM; f of 2...	3
1876	3175	.....	.....	9 28 32·8	2·840	1	105 46 48·4	15·88	1	pB; S; R	1
1877	3177	.....	.....	9 28 57·4	1·993	1	142 49 22·7	15·89	1	Cl; pRi; pC; ⁂ taken.....	1
1878	.....	.....	D'Arrest, 64	9 29 32	3·43	[1]	66 10 24	15·94	[1]	eF; vS; lE; vlbM; 1st of 3...	0
1879	.....	.....	D'Arrest, 65	9 29 34	3·43	[1]::	66 12 12	15·94	[1]	eF; S; 2nd of 3	0
1880	.....	.....	D'Arrest, 66	9 29 42	3·43	[1]	66 8 18	15·95	[1]	eF; vS; 3rd of 3	0
1881	3179	.....	.....	9 30 6·6	2·221	1::	136 18 58·8	15·96	1::	Cl; eL; vRi; st L & S	1
1882	3178	II. 556	.....	9 30 13·5	2·768	2	110 30 23·1	15·97	2	pB; pS; vlE; gmbM	5
1883	612	III. 963	.....	9 30 28·4	6·574	1	12 47 47·8	16·06	1	eF; S; iFig; ⁂ f 3′	2
1884	614	III. 4	.....	9 30 39·3	3·215	2	79 51 27·0	16·00	3	vF; S; vlE; bM; Δ st nf.....	5
1885	613	.....	.....	9 30 42·6	3·626	2	55 21 52·3	16·01	2	F; pL; vl E0°; vglbM.....	2
1886	3180	.....	.....	9 31 15·5	2·756	2	111 24 53·9	16·03	2	F; S; R; glbM; 2 or 3 S st nr	2
1887	615	III. 519	.....	9 31 34·7	3·178	(1)	82 24 1·5	16·05	1::	vF; pL; vgbM	2
1888	616	IV. 68	.....	9 32 17·7	4·410	2	30 31 15·3	16·11	2	cF; vS; R; vgvmbMN	3
1889	3182	.....	.....	9 32 38·7	3·291	1::	74 32 3·3	16·11	1::	eeF; susp	1
1890	3181	.....	.....	9 32 44·3	3·292	1	74 26 8·3	16·11	1	vF; S; R; n of 2.....	1
1891	620	III. 541	.....	9 32 45·9	3·659	1	53 29 0·6	16·12	1	cF; pS; iR; glbM; r	4
1892	617	.....	.....	9 33 7·8	5·746	1	16 22 12·4	16·18	1	eF; ⁎13 nr	1
1893	618	.....	.....	9 33 12·5	5·149	1	20 45 24·1	16·17	1	F; pL; R; vglbM; ⁎ n	1
1894	621	.....	.....	9 33 24·7	3·131	1	85 46 2·7	16·19	1	vF; R; gbM	1
1895	619	III. 315	.....	9 33 39·4	5·734	1	16 23 43·3	16·21	1	vF; vS; R; bM	2
1896	622	I. 114	.....	9 34 34·3	3·571	4	57 31 54·6	16·22	3	B; vL; lE; vgbM; p of 2 ...	5
1897	623	III. 751	.....	9 34 46·9	3·660	1	53 6 33·9	16·23	1	eF; vS; R; bM; r	3
1898	626	II. 275	.....	9 34 49·3	3·084	1	89 1 56·6	16·22	2	pF; pL; R; vglbM	4
1899	624	II. 491	.....	9 34 51·5	3·572	4	57 25 34·9	16·23	4	pB; pL; lE; vglbM; f of 2...	5
1900	628	III. 527	.....	9 34 59·1	2·961	1	97 57 26·9	16·23	1	vF; pS; iR; vglbM.....	3
1901	627	.....	.....	9 35 7·4	3·573	1	57 21 1·2	16·24	1	F; nf of 3.....	1
1902	3183	.....	Δ. 397	9 35 16·9	2·143	1	139 41 32·9	16·23	1	Cl; S; lRi; pC; st 13	1
1903	4018	.....	.....	9 35 22·9	2·628	1	119 24 42·2	16·24	1	eF; pS; B⁎8m f	1
1904	630	I. 61	.....	9 35 27·7	3·029	1	93 4 16·5	16·25	1	B; cS; iR; bM; ⁎9 sp 3'.....	3
1905	625	I. 285	.....	9 35 35·6	5·048	1	21 26 21·7	16·29	1	B; vL; mE 152°·4; st inv ...	2
1906	.....	I. 282	.....	9 35 47·6	6·111	1	14 15 5·9	16·33	1	cB; pL; iF	1
1907	631	III. 521	.....	9 36 17·2	2·937	1	99 44 57·7	16·29	1	pF; pS; vlE; psbM.....	2
1908	632	III. 528	.....	9 36 18·4	2·948	1	98 58 2·7	16·29	1	vF; pS; lE 0°±; vglbM.....	3
1909	629	I. 78	.....	9 36 41·2	5·576	1	17 4 29·8	16·36	1	vB; cL; R; psmbM; ⁎ inv f..	3
1910	3184	.....	.....	9 36 52·2	2·330	1	133 33 40·3	16·31	1	Cl; P; E; st 10...11	1
1911	3185	III. 289	.....	9 37 7·5	2·791	1	109 49 54·9	16·33	1	F; pS; R; bM; r; stellar ...	4*
1912	633	III. 34	.....	9 37 23·0	3·231	(1)	78 20 10·5	16·35	2::	eF; vS; R; bM (? P.D. 15′)..	3
1913	.....	II. 311	.....	9 38 10·3	2·780	3	110 37 58·7	16·39	3	pB; pS; iR; mbM	3
1914	.....	II. 624	.....	9 38 39·5	3·156	1	83 41 19·3	16·41	1	F; pS; lE 90°±	1
1915	3186	.....	.....	9 38 52·0	2·825	1	107 44 26·6	16·42	1	F; R; gbM; ⁂ f	1
1916	634, *a*	.....	R. nova	9 38	.....	...	67 20	.....	...	Makes a D neb with h. 634; which follows it.	0
1917	634	.....	.....	9 38 55·9	3·391	1	67 20 5·9	16·43	1	F; vS; bM; sp of 2	1
1918	635	III. 277	.....	9 38 58·1	2·884	1	103 41 8·9	16·43	1	cF; S; R; bM; stellar; p of 2	2
1919	637	III. 278	.....	9 39 4·6	2·884	1	103 43 23·9	16·43	1	cF; S; R; bM; stellar; f of 2	2
1920	636	.....	.....	9 39 18·1	3·391	1	67 16 32·5	16·45	1	F; S; R; bM; nf of 2.....	1
1921	3189	.....	.....	9 39 21·6	2·008	1	144 8 1·9	16·43	1	Cl; P; lC; st mm.....	1
1922	3187	.....	.....	9 39 28·0	2·778	1	110 56 47·5	16·45	1	vF; S; ⁎ 20 f 1′	1
1923	3188	V. 50	.....	9 39 32·5	2·619	2	120 32 50·5	16·45	2	!; vF; vL; vg, vsbMN 4″; 19ˢ·5 d.	3
1924	638	II. 717	.....	9 40 2·0	3·823	1	45 15 27·0	16·50	1	pF; pL; iR; bM; r.....	2
1925	638, *a*	.....	R. nova	9 40 4·8	3·823	...	45 16 27·0	16·48	...	RMS	0
1926	638, *b*	.....	R. nova	9 40 4·8	3·823	...	45 16 57·0	16·48	...	Suspected; MS	0
1927	3191	.....	Δ. 397	9 40 5·0	2·167	1?	139 47 14·1	16·47	1?	Cl; S; lRi; iF; st 12...15 ...	1
1928	638, *c*	.....	R. nova	9 40 7·6	2·823	...	45 12 27·0	16·48	...	MS	0
1929	3190	.....	.....	9 40 10·4	2·634	1	119 48 2·4	16·48	1	F; S; R; ⁎12 att 320°	1
1930	638, *d*	.....	R. nova	9 40 13·3	3·823	...	45 21 27·0	16·49	...	MS	0
1931	639	V. 26	.....	9 40 15·0	3·584	1	55 56 14·0	16·50	1	!; cB; L; vimE 90°.....	3†
1932	638, *e*	.....	R. nova	9 40 30·2	3·823	...	45 13 27·0	16·52	...	MS	0
1933	640	.....	.....	9 41 1·2	+3·825	1	45 1 50·5	+16·55	1	pF; R; bM; r; p of 2.....	1

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	h.	H.		h m s	s		° ′ ″	″			
1934	638, *f*	.....	R. nova	9 41 4·0	+3·823	...	45 15 27·0	+16·55	...	MS	0
1935	641	.....	.....	9 41 7·2	3·825	1	45 0 16·5	16·55	1	F; psbM; rr; f of 2.....	1
1936 } 1937 }	641, *a*	.....	R. novæ	9 41 ±	.....	...	45 0 ±	.....	...	Several near	0
1938	.....	.....	D'Arrest, 67	9 41 32	3·49	[1]	54 38 7	16·56	[1]	vF; pL; R; cometary	0
1939	642	.....	.....	9 41 32·1	3·251	1	76 32 0·8	16·56	1	F; pL; R; glbM.....	1
1940	642, *a*	.....	R. nova	9 41	.....	...	76 32	.....	...	3 "novæ," with 642 (Vide h. 646, 648).	0
1941	644	.....	.....	9 42 3·2	3·011	1	94 33 38·4	16·58	1	eF; L; p of 2	1
1942	646	III. 51	.....	9 42 31·0	3·250	3	76 31 58·3	16·61	3	eF; pS; lE 0°±; r	4
1943	647	.....	.....	9 42 38·9	3·012	1	94 31 9·3	16·61	1	F; R; vglbM; f of 2	1
1944	645	I. 115	.....	9 42 39·6	3·579	2	55 47 35·6	16·62	2	pB; pS; vlE; mbM; *10 sf 100°.	4
1945	648	III. 52	.....	9 42 54·1	3·249	1	76 36 18·9	16·63	1	eF; pL; E; r	2
1946	3192	.....	.....	9 42 58·1	2·782	1	111 5 19·6	16·62	1	eF; vS; R; *9 s	1
1947	643	V. 23	.....	9 43 9·9	5·466	1	17 8 23·4	16·68	1	vF; vL; lE; r	3
1948	3193	.....	.....	9 43 17·7	2·821	1	108 31 38·2	16·64	1	F; S; R; lbM	1
1949	649	.....	M. 81	9 43 48·9	5·066	1	20 16 10·0	16·70	1	!; eB; eL; E 156°·0; g, svmbMBrN.	4
1950	.....	IV. 79 = 4H. ON	M. 82	9 43 52·3	5·142	1	19 34 16·3	16·71	1	vB; vL; vmE "a beautiful ray."	2*
1951	650	.....	.....	9 44 0·3	3·497	2	60 7 7·4	16·68	2	F; S; sbM *12; bet 2B st ...	2
1952	3194	.....	B. 2686	9 44 1·8	1·975	2	145 45 42·8	16·66	2	Cl; pL; pRi; iF; st 11...12...	2
1953	.....	W. H. nova?	M. 81??	9 44 38·0	5·064	1	20 12 18·9	16·73	1	vB; cL; mE; 5 or 6 st (?) inv	1*
1954	3197	.....	.....	9 45 5·8	1·674	1	152 2 12·3	16·71	1	Cl; cL; lC	1
1955	3195	.....	.....	9 45 6·2	2·705	1	116 22 6·6	16·72	1	F; pS; R; lbM	1
1956	3196	II. 98	.....	9 45 25·6	3·300	1	72 39 56·5	16·75	1	⊕; F; L; R; vglbM; rr; 2B st sp.	4
1957	651	II. 835	.....	9 46 19·3	4·327	2	30 2 40·3	16·81	2	eF; pS; lE; vgbM; *10 n 7′	4
1958	652	III. 254	.....	9 46 26·5	3·097	1	87 55 58·0	16·80	1	vF; vL; vmE 111°·5	3
1959	3198	.....	.....	9 46 38·8	2·834	1	107 59 3·0	16·80	1	vF; pS; R; lbM	1*
1960	3199	.....	.....	9 47 1·9	2·704	1	116 40 25·6	16·82	1	pF; R	1*
1961	3201	.....	.....	9 47 41·3	2·707	1	116 37 56·5	16·85	1	pF; S; R; gbM	1*
1962	3202	III. 272	.....	9 47 50·8	2·836	1	107 58 44·8	16·86	1	F; pL; R; glbM.....	2*
1963	3200	III. 600	.....	9 47 53·6	3·293	1	72 54 4·1	16·87	1	vF; S; vlE; gbM	2
1964	656	VI. 4	.....	9 47 59·1	3·133	2	85 4 19·1	16·87	2	F; pL; vlE; vgbM; rr; *7f90s.	4
1965	3203	.....	.....	9 48 15·8	2·692	2	117 38 37·4	16·88	2	pB; S; R; vgmbM; *11 att 203°·8.	2
1966	.....	III. 978	.....	9 48 24·1	7·497	1	9 3 41·8	16·96	1	eF; pL; vlbM; 2 S st s	1
1967	3205	.....	.....	9 48 31·2	0·647	1	163 16 15·5	16·85	1	F; L; iR; glbM; S * inv ...	1
1968	3204	III. 601	.....	9 48 39·8	3·297	1	72 30 4·3	16·91	1	vF; cS; vlE; er	2
1969	654	II. 333	.....	9 48 42·7	5·376	1	17 9 25·2	16·94	1	pF; vS; R; bM; *11 nr.....	3
1970	653	II. 903	.....	9 48 44·4	6·102	1	13 10 9·5	16·95	1	vF; pL; r	2
1971	655	II. 334	.....	9 48 57·4	5·366	1	17 12 16·5	16·95	1	vF; vS; vglbM	3
1972	.....	II. 909	H. ON 5	9 49 50·5	5·382	1	17 12 24·7	16·99	1	F; pL; R; 3rd of 3.....	1
1973	657	II. 492	.....	9 50 7·9	3·533	3	56 57 50·4	16·98	3	pB; pL; E 90±; gbM; *9 nf	4
1974	.....	III. 293	.....	9 50 32·8	3·474	1	60 21 51·7	16·99	1	eeF; eS; stellar (?).....	1*
1975	659	II. 59	.....	9 50 39·1	3·209	1	78 58 42·7	16·99	1	pB; pS; R; gmbMN; 3 st nr	2
1976	3206	III. 273	.....	9 50 47·0	2·831	2	108 40 49·7	16·99	2	vF; pS; lE; glbM	3
1977	.....	III. 853	.....	9 51 10·7	4·126	1	33 42 23·9	17·03	1	vF; S; vglbM	1
1978	660	III. 542	.....	9 51 18·7	3·585	1	53 55 47·9	17·03	1	vF; pL; iR; vgvlbM	4
1979	3207	.....	.....	9 51 19·5	3·261	1	74 53 56·9	17·03	1	vvF; *14 att; *11 f	1
1980	3208	.....	.....	9 51 32·2	2·848	1	107 30 25·9	17·03	1	eF; S; R	1
1981	3209	II. 268	.....	9 52 4·6	2·731	1	116 15 22·5	17·05	1	pB; S; R; mbM	2
1982	658	I. 286	.....	9 52 7·4	4·925	(2)	20 35 17·7	17·09	1	cB; cL; mbM; R with ray...	3
1983	.....	V. 47	.....	9 52 24·3	4·119	1	33 38 27·7	17·09	1	vB; L; mE 135°±	1
1984	.....	III. 934	.....	9 52 34·6	3·241	1	76 19 59·7	17·09	1	vF	1
1985	.....	III. 596	.....	9 52 37·0	2·786	2	112 7 58·4	17·08	2	vF; cS; lbM; ΔS st np	2
1986	3210	.....	.....	9 52 40·5	2·671	1	119 41 50·4	17·08	1	vF; S; R; * att	1
1987	3211	.....	.....	9 52 45·4	+2·722	1	116 28 7·7	+17·09	1	vF; S; R; *13 att sf	1

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	Sir J. H.'s Catalogues of Nebulæ.	Sir W. H.'s Classes and Nos.	Other Authorities.								
	h.	H.		h m s	s		° ′ ″	″			
1988	3212	.....	.....	9 52 50·7	+2·832	1	108 50 56·7	+17·09	1	vF; S; R	1
1989	3213	.....	.....	9 53 4·5	2·607	1	123 33 46·0	17·10	1	pB; S; R; pmbM; bet 2 st...	1
1990	661	III. 24	.....	9 53 17·7	3·367	1	66 55 52·6	17·12	1	vF; S	2
1991	3214	.....	.....	9 53 19·7	2·705	1	117 38 50·3	17·11	1	pF; pS; R; vS st inv	1
1992	3215	II. 293	.....	9 53 38·9	2·831	1	108 57 52·9	17·13	1	pB; pS; iR; bM; p of 2.....	2
1993	3216	.....	.....	9 53 53·3	2·655	1	120 52 53·2	17·14	1	F; L; E; vgvlbM	1
1994	3217	.....	.....	9 54 2·5	2·832	1	108 57 58·5	17·15	1	eF; R; lbM; f of 2.....	1
1995	663	.....	.....	9 54 22·3	3·398	2	64 37 15·1	17·17	2	pB; S; mE 90°±; psbMN...	2
1996	664	III. 478	.....	9 54 25·4	3·525	1	56 37 10·4	17·18	1	eF; S	2
1997	3218	.....	.....	9 54 27·6	2·655	1	120 59 37·8	17·16	1	pB; pS; R; gpmbM	3
1998	662	III. 916	.....	9 54 36·7	4·298	1	29 13 26·7	17·19	1	vF; vS; R; bM; *11, 142°·2	1
1999	665	IV. 48	.....	9 55 19·4	3·675	1:	48 35 27·3	17·21	1:	eF; pL; E 45°±; vF * inv...	2
2000	3219	.....	.....	9 55 46·4	2·120	2	144 6 16·3	17·21	2	Cl; C; lE; st 13...16	2
2001	666	II. 320	.....	9 55 58·4	3·504	1	58 8 19·2	17·24	1	F; S; R; sbM.....	2
2002	3220	.....	.....	9 56 17·6	2·660	2	121 0 33·2	17·24	2	F; S; R; glbM	2
2003	3221	.....	.....	9 56 40·1	2·746	2	115 29 25·8	17·26	2	cF; vL; vmE 82°·3; lbM ...	2†
2004	.....	II. 898	.....	9 56 54·3	3·242	1	75 49 0·4	17·28	1	F; L red * n 3′	1
2005	667	.....	.....	9 57 14·8	3·818	3	42 3 28·0	17·30	3	pB; S; R; SmbM *12	3
2006	3222	.....	.....	9 58 3·2	2·716	1	117 46 13·6	17·32	1	eF; L; Δ 2 st 8m	1
2007	3224	.....	Δ. 297	9 58 11·2	1·934	3	149 26 46·6	17·32	3	Cl; eL; lC; B; st 9...14.....	3
2008	668 = 3223	I. 163	.....	9 58 14·3	2·988	2	97 2 32·9	17·33	2	vB; L; vmE 45°; vg, vsmbMEN.	3
2009	3225	.....	.....	9 59 14·8	2·627	1	123 32 36·4	17·38	1	F; pS; R; gbM	1
2010	.....	.....	Auw. N. 26	9 59 18·4	3·247	...	74 55 35·7	17·39	...	F; (Lassell, Mar. 31, 1848)...	0
2011	.....	II. 305	.....	9 59 26·0	3·003	1	95 51 17·9	17·43	1	F; S; lE; er	2
5067	.....	.....	.....	9 59 51·1	.....	...	89 15 7·3	.....	...	See No. 5067.	...
2012	3226	.....	.....	10 0 2·2	2·848	1	108 33 36·3	17·41	1	F; pL; R; lbM; ⁂ s	1
2013	3227	.....	.....	10 0 14·8	2·700	2	119 15 12·6	17·42	2	cF; S; R; vgbM.....	2
2014	669	III. 65	.....	10 0 40·4	3·299	(1)	70 53 43·5	17·45	1::	eF; cS; vlE; r	2*
2015	670	.....	.....	10 0 45·2	3·195	1	79 20 43·5	17·45	1	eF; S; psbM; 31 Leon sf 100″	1
2016	671	.....	.....	10 0 54·9	3·296	1	71 4 49·8	17·46	1	pB; pS; pmE; gbM	1
2017	3228	.....	.....	10 1 8·2	2·523	4	129 45 5·5	17·45	4	!!; ○; vB; vL; lE; *9M; 4ˢ·0 d.	4†
2018	3229	.....	.....	10 1 46·2	1·540	1?	156 41 44·1	17·47	1?	B; R; bM	1
2019	672	.....	.....	10 2 9·8	3·759	1	43 21 12·6	17·52	1	F; S; R; gbM	1*
2020	3231	.....	.....	10 2 9·9	1·545	2	156 41 30·4	17·48	2	pB; pS; R; gbM; * 13 n ...	2
2021	3230	.....	.....	10 2 30·4	2·719	1	118 22 22·3	17·51	1	vF; S; lE	1
2022	3232	.....	.....	10 3 9·9	2·982	1	97 47 52·5	17·55	1	F; R	1
2023	673	III. 518	.....	10 3 17·7	2·936	1	101 44 15·8	17·56	1	F; pL; R; vg, slbM; f of 2...	4
2024	674	I. 79	.....	10 4 47·5	5·285	1	15 54 35·5	17·65	1	vB; L; R; vg, vsvmbM	2
2025	675	.....	.....	10 4 48·3	3·861	1	38 49 21·9	17·63	1	* 7 m in photosphere 2′ or 3′ d	1
2026	677	III. 53	.....	10 5 8·4	+3·222	1	76 38 47·9	17·63	1	eF; pL; vlE; r; st inv	3
2027	3234	.....	.....	10 5 10·7	−0·511	1	169 43 54·4	17·58	1	F; S; lE; vlbM; * 15 inv ...	1
2028	680	III. 255	.....	10 5 25·3	+3·113	1	86 10 27·2	17·64	1	F; cS; R; psbM; Δ B st f ...	3
2029	3233	.....	.....	10 5 27·7	2·700	1	120 16 4·2	17·64	1	vF; pS; E; * 8·9 sp	1
2030	678	II. 639	.....	10 5 31·3	3·592	1:	50 33 28·5	17·65	1:	cB; cS; R; psbM; r	2
2031 2032	678, *a*	.....	R. 2 novæ	10 5 ±	.....	...	50 33 ±	.....	...	3 seen; one (? which) = h. 678	0
2033	676	.....	.....	10 5 42·7	5·424	1?	14 53 50·7	17·69	1::	vF; S; R.....	1
2034	682	II. 43	.....	10 5 43·5	3·345	2	66 34 30·8	17·66	3	pF; cL; R; vglbM; r; S * inv	5
2035	681	II. 640	.....	10 5 48·2	3·589	1:	50 40 11·1	17·67	1:	F; S; R; gbM.....	2
2036	679	.....	.....	10 5 49·2	4·054	1	32 38 47·1	17·67	1	eF; S; R; vglbM	1
2037	684, *a*	.....	R. nova	10 6 15·4	3·116	::	85 56 15·7	17·69	::	vvF; mE 0°±	0
2038	684	I. 3	.....	10 6 29·6	3·116	3	85 52 53·7	17·69	4	B; pS; R; psmbM; p of 2...	8
2039	.....	.....	D'Arrest, 68	10 6 36	3·34	[1]	59 42 7	17·69	[1]	F; S; ?? Cl of vS st	0
2040	683	.....	.....	10 6 45·3	4·194	1	29 4 36·3	17·71	1	F; psbM; stellar; *7·8 np 5′	1
2041	685	I. 4	.....	10 6 58·5	3·116	3	85 50 20·3	17·71	4	B; pL; vlE; pgmbM; * 11, 78°·2, 80″.	8
2042	686	.....	.....	10 7 32·0	3·745	1	42 42 39·2	17·74	1	F; S; R	1
2043	250	.....	.....	10 8 7·9	+87·502	1::	0 6 46·2	+19·47	1::	vF; R; gbM; *11, 2′ s; *Polarissima Borealis.*	1*

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	h.	H.		h m s	s		° ′ ″	″			
2044	3235	.....	.....	10 8 9·4	+2·754	1	116 59 43·5	+17·75	1	eF; S; R; 2 B st f	1
2045	.....	III. 964	.....	10 8 16·1	5·415	1	14 38 38·0	17·80	1	cF; S; stellar; S * f nr	1
2046	3236	.....	.....	10 8 18·9	2·738	2	118 11 3·8	17·76	2	cB; L; mE 50°·5; vglbM ...	2
2047	687	III. 25	.....	10 8 51·5	3·318	3	68 10 42·7	17·79	3	cF; S; R; psBM.....	4
2048	3237	.....	.....	10 9 23·5	2·905	1	105 5 56·0	17·80	1	pB; pL; gpmbM.....	1
2049	688, *a*	.....	R. nova	10 9 44·5	3·623	...	47 53 13·9	17·83	...	MS; no description.....	0
2050	688, *b*	.....	R. nova	10 9 47·2	3·623	...	47 54 1·9	17·83	...	MS; no description.....	0
2051	.....	I. 265	.....	10 9 47·5	4·082	1	31 5 44·2	17·84	1	cB; cL; iR; vgbM	1
2052	688	I. 168	.....	10 9 49·9	3·623	1	47 53 1·9	17·83	1	pB; vL; R; vgbM	4
2053	689	.....	.....	10 9 53·3	3·627	1	47 41 6·2	17·84	1	pF; vL; R; vgbM; 12·5 d; * 11 n 2′.	1
2054	692, *a*	.....	D'Arrest, 69	10 9 57	3·32	[2]	67 35 48	17·83	[2]	pF; pL; gmbM (δ in Lord R.'s diagram).	0
2055	692, *b*	.....	R. nova	10 10 4·7	3·324	...	67 25 19·5	17·85	...	Marked γ in Lord R.'s diagr.	0
2056	690	III. 910	.....	10 10 17·0	4·047	1	31 53 7·8	17·86	1	vF; pL; r	2
2057	692, *c*	.....	R. nova	10 10	.....	...	67 28	.....	...	mE, parallel to h. 692, with which it forms D neb.	0
2058	692	II. 44	.....	10 10 23·3	3·324	3	67 28 10·5	17·85	3	B; pS; E; psbMN; sp of 2	4†
2059	691	.....	.....	10 10 25·8	3·726	1	42 51 47·8	17·86	1	F; S; R; bM	1
2060	.....	III. 704	.....	10 10 27·6	3·728	1	42 43 44·8	17·86	1	eF; vS; (?)	1
2061	693	II. 45	.....	10 10 41·6	3·324	3	67 24 24·8	17·86	3	B; S; vlE; pslbM; r; * 9, 352°·0, 75″ nf of 2.	4
2062	.....	III. 695	.....	10 10 46·8	+5·391	1	14 29 43·0	17·90	1	vF; vS.....	1
2063	3241	.....	.....	10 10 51·5	−0·506	2	170 10 11·6	17·82	2	!; ○; pB; S; lE; 13·0 d; 3S st nr.	2†
2064	694	III. 348	.....	10 10 53·6	+3·398	1:	61 38 27·1	17·87	1:	eeF; pS; lE.....	2
2065	.....	III. 966	.....	10 10 57·9	6·114	1	11 4 53·6	17·92	1	vF; vS.....	1
2066	695	I. 199	.....	10 11 14·4	3·702	1	43 44 15·7	17·89	1	pB; vL; mE 45°±; vgbM...	3
2067	3239	.....	.....	10 11 46·1	2·128	4	147 15 39·7	17·89	4	!; vB; vL; falcate; * N.....	4†
2068	3238	.....	Δ. 445	10 11 52·8	2·452	2	135 42 6·0	17·90	2	⊕; vL; iR; lCM; gbM; st 13...16.	2
2069	696	II. 720	.....	10 12 5·3	3·643	1::	46 18 42·6	17·92	1:	cF; S; R; vgbM; 1st of 3...	2
2070	3240	.....	.....	10 12 5·5	2·777	2	116 0 17·3	17·91	2	pB; S; cE; gbM.....	2
2071	698	.....	.....	10 12 12·9	3·396	1	61 28 54·6	17·92	1	eF; pL; gbM	1
2072	699	II. 721	.....	10 12 21·7	3·641	1	46 20 50·2	17·94	1	cF; S; R; vgbM; 2nd of 3...	2
2073	697	I. 266	.....	10 12 30·9	4·011	1	32 22 5·2	17·94	1	pB; cL; E; vglbM.....	2
2074	700	II. 722	.....	10 12 33·3	3·641	1	46 18 50·2	17·94	1	cF; S; R; stellar; 3rd of 3...	2
2075	701	.....	.....	10 12 47·0	3·365	1	63 47 46·5	17·95	1	F; S; R; has a *	1
2076	3242	.....	.....	10 13 17·6	1·946	2	151 58 35·5	17·95	2	○; =* 10 m; R; am 150 st	2
2077	.....	III. 979	H. ON	10 13 34·0	6·559	1	9 27 5·6	18·02	1	Stellar; 1st of 3	1
2078	.....	III. 980	H. ON	10 13 34·2	6·565	1	9 26 5·6	18·02	1	vF; S; 2nd of 3	1
2079	.....	III. 981	H. ON	10 13 34·3	6·571	1	9 25 5·9	18·03	1	vF; S; 3rd of 3	1
2080	702	III. 330	.....	10 13 55·0	3·342	1	65 21 53·7	17·99	1	vF; pS; R; bM	2
2081	.....	I. 283	.....	10 14 23·0	5·297	1	14 37 52·9	18·03	1	cB; cL; eR.....	1
2082	.....	III. 911	.....	10 14 26·4	3·998	1	32 15 55·6	18·02	1	vF; cL; iF	1
2083	.....	.....	D'Arrest, 70	10 14 39	3·31	[2]	67 42 12	18·01	[2]	eF; mE; a ray	0
2084	.....	.....	Auw. N. 27	10 14 55·0	3·288	...	69 24 42·6	18·02	...	F; lbMr (Winnecke, June 1855).	0
2085	3243	.....	.....	10 15 20·5	2·683	1	123 32 59·9	18·03	1	pB; vL; vlE; pslbMN	1
2086	3244	.....	.....	10 15 27·7	2·677	1	123 59 28·2	18·04	1	vF; pS; R; vgmbM	1
2087	703	II. 882	.....	10 15 43·0	4·028	1	31 9 19·1	18·07	1	cF; pL; lE; vgbM.....	2
2088	.....	II. 28	.....	10 15 55·1	3·289	1	69 23 27·8	18·06	1	vF; cL; R } D neb; 45°,2′ {	1*
2089	.....	II. 29	.....	10 15 58·5	3·289	1	69 22 28·1	18·07	1	vF; cL; R }	1*
2090	3245	.....	Δ. 386	10 16 10·6	2·352	1::	141 1 1·8	18·06	1::	Cl; 9 L & a few S st	1
5068	.....	.....	.....	10 16 14·1	.....	...	89 13 46·0	.....	...	See No. 5068.	
2091	705	.....	.....	10 16 15·7	3·207	3	76 44 21·4	18·08	3	!; * or ** in neb	3
2092	704	.....	.....	10 16 25·6	4·456	1	22 29 6·0	18·10	1	Cl; cL; P; lC; st 10...12 ...	1
2093	.....	.....	D'Arrest, 71	10 16 33	3·39	[1]	61 16 42	18·09	[1]	eeF; *11 p, ls, 150″ p of 2...	0
2094	706	.....	.....	10 17 5·1	3·374	1	62 16 5·0	18·10	1	pB; pS; R; psbM	1*
2095	.....	.....	D'Arrest, 72	10 17 7	3·38	[2]	61 16 12	18·11	[2]	F; S; f of 2	0
2096	707	.....	.....	10 17 16·6	+4·142	1	28 1 16·9	+18·13	1	eF; vS; psbM; 2 st 11, 12, f	1

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	h.	H.		h m s	s		° ′ ″	″			
2097	709	III. 631	.....	10 17 27·7	+3·556	1:	49 39 49·9	+18·13	1:	vF; vS; R; pgbM	3
2098	708	III. 883	.....	10 17 28·5	3·980	1	32 4 25·9	18·13	1	F; S; R; pslbM	2
2099	710 = 3246	IV. 10	.....	10 17 31·0	3·255	3	72 8 18·9	18·13	3	vF; *9 inv nr M	5
2100	3247	.....	.....	10 17 53·2	2·851	2	111 4 56·9	18·13	2	eF; S; R; * nr	2
2101	3249	.....	.....	10 17 56·8	2·717	1	121 45 28·9	18·13	1	F; pmE; glbM; *11 np ...	1
2102	3248	IV. 27	Lal. 20204	10 18 2·2	2·886	4	107 55 50·2	18·14	4	!; ○; vB; lE, 135°; 32″ d±; *blue*.	7†
2103	4019	.....	.....	10 19 20·9	2·612	1	129 6 23·4	18·18	1	vF; *11 m 90″ n	1
2104	711	I. 86	.....	10 19 24·9	3·385	4	60 47 1·7	18·19	5	vB; pL; E; smbMEN	6
2105	712	.....	.....	10 19 26·0	3·116	1	85 26 24·7	18·19	2	eF; S; R; 2 st Δ; * 6, 300°, 8′	3
2106	3250	.....	.....	10 19 37·9	2·196	1::	147 10 35·7	18·19	1	st inv in neb	3
2107	713	II. 347	.....	10 20 2·0	3·314	1	66 26 28·6	18·22	3	pB; S; R; psbM.....	4
2108	3251	.....	.....	10 20 6·9	2·690	1	124 14 38·3	18·21	1	eF; pL; R; vgvlbM	1
2109	3252	.....	.....	10 20 25·6	2·625	4	129 13 45·9	18·23	4	pB; pL; R; vg, psbM; *13, 45°.	5
2110	.....	.....	D'Arrest, 73	10 20 29	3·35	[1]	63 11 42	18·23	[1]	vF; pL; 3 B st sp	0
2111	.....	III. 316	.....	10 20 51·1	5·054	1	15 27 11·9	18·27	1	eF; pS; mE; r	1*
2112	714	I. 72	.....	10 21 27·2	3·392	2	59 47 27·1	18·27	3	cB; L; E 45°±; psmbMN...	5
2113	3253	.....	.....	10 21 32·2	2·111	1	149 57 49·8	18·26	1	Cl; pS; vC; st 15	1
2114	3254	.....	.....	10 21 53·0	2·553	1	133 11 7·1	18·27	1	cB; S; R; gmbM	2
2115	3255	.....	.....	10 22 29·8	2·689	3	124 56 49·0	18·30	2	vF; vS; R; psbM; 1st of 4...	3
2116	3256	.....	.....	10 22 36·9	2·689	4	124 53 9·0	18·30	4	cF; S; R; pslbM; 2nd of 4...	4
2117	715	II. 870	.....	10 22 42·9	4·272	1	24 14 50·9	18·33	1	F; S; R; gbM.....	2
2118	3257	.....	.....	10 22 52·7	2·689	4	124 52 39·0	18·32	4	vvF; vS; R; pslbM; 3rd of 4	4
2119	3258	.....	.....	10 23 3·0	2·546	1	133 56 12·6	18·32	1	F; S; R; am st	1
2120	3260	.....	.....	10 23 8·2	2·554	1	133 29 7·6	18·32	1	eF; S; R.....	1
2121	3259	.....	.....	10 23 11·4	2·692	2	124 53 48·9	18·33	2	vF; vS; R; pslbM; 4th of 4	2
2122	3261	.....	.....	10 23 13·8	2·556	1	133 24. 32·9	18·33	1	F; S; mE 280°+; psbM ...	1
2123	718	III. 349	.....	10 23 15·9	3·377	1	60 29 34·9	18·33	1	pF; S; R; psbM; * sf nr ...	5
2124	716	.....	.....	10 23 18·3	3·895	1	33 11 37·5	18·35	1	eF; bet 2 S st	1
2125	717	II. 871	.....	10 23 29·5	4·246	1	24 32 16·8	18·36	1	cF; vS; R; psmbM *	2
2126	3262	.....	.....	10 23 33·9	2·696	1::	124 38 10·2	18·34	1::	eF; vS; R; 1st of 4.....	1
2127	3263	.....	.....	10 23 37·9	2·697	2?	124 39 10·2	18·34	2?	F; S; R; 2nd of 4	2
2128	3264	.....	.....	10 23 41·1	2·699	1	124 30 10·5	18·35	2	F; S; R; bM; 3rd of 4	3
2129	719	III. 331	.....	10 23 44·1	3·329	1	64 24 28·5	18·35	1	cF; vS; E; glbM	2
2130	3265	.....	.....	10 23 45·9	2·697	1	124 39 3·5	18·35	1	pF; S; E; pmbM; 4th of 4...	2
2131	720	II. 358	.....	10 24 27·7	3·360	4	61 36 59·4	18·38	4	F; pL; R; glbM; * f.....	5
2132	3266	.....	.....	10 24 34·0	2·681	2	126 1 22·1	18·37	2	F; L; vlE; pslbM	3
2133	3267	.....	.....	10 24 57·7	2·635	1	129 13 51·7	18·39	1	F; S; * 8 p.....	1
2134	721	II. 359	.....	10 25 4·1	3·369	3	60 46 20·7	18·39	3	cB; cS; R; pgmbM	4
2135	3268	.....	.....	10 25 26·1	2·637	3	129 13 52·0	18·40	3	F; S; R; * nf.....	2
2136	3269	.....	.....	10 25 34·3	2·711	1	124 8 4·3	18·41	1	eF; pL; E; glbM	1
2137	3271	.....	.....	10 26 51·1	2·536	1	135 22 3·5	18·45	1	pF; S; R; gbM	1
2138	.....	III. 912	.....	10 26 58·6	3·944	1	30 44 23·1	18·47	1	eF; vS.....	1
2139	3270	.....	.....	10 27 1·3	2·808	4	116 44 11·8	18·46	4	pB; S; lE; gbM; 1st of 9 ...	4
2140	722	III. 917	.....	10 27 9·3	3·945	1	30 40 11·4	18·45	1	vF; pS; R; pslbM	2
2141	.....	.....	D'Arrest, 74	10 27 11	3·28	[2]	67 37 18	18·47	[2]	F; pL; * p 24′, 225″ s	0
2142	723	III. 918	.....	10 27 12·7	3·942	1	30 43 31·4	18·48	1	eF; cS; R; vglbM	2
2143	3272	.....	.....	10 27 47·4	2·713	1	124 34 31·4	18·48	1	eF; vS; R	1
2144	3276	.....	.....	10 28 7·7	2·258	1::	147 28 14·7	18·49	1::	Cl; B; Ri; pL.....	1*
2145	724	I. 164	.....	10 28 12·8	3·474	1	51 57 17·3	18·51	1	cB; L; mE 135°±; glbM ...	4
2146	725	III. 767	.....	10 28 44·6	3·698	1	39 9 51·9	18·53	1	vF; pS; iE	2
2147	726	III. 54	.....	10 28 57·8	3·193	1	76 34 38·9	18·53	1	eF; cL; R; vgbM; r	2
2148	727 = 3273	III. 55	.....	10 29 10·6	3·206	3	75 6 29·2	18·54	3	cF; cS; R; pmbM; r; am B st	5
2149	.....	II. 46	.....	10 29 13·4	3·285	1	67 15 27·2	18·54	1	pF; S; r; Δ pB st n.....	1
2150	728	II. 46??	.....	10 29 18·1	3·283	2	67 23 45·2	18·54	2	cB; S; lE; psbM; r	3
2151	3274	.....	.....	10 29 20·3	+2·757	1	121 37 4·2	+ 18·54	1	eF; S; R	1

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	h.	H.		h m s	s		° ′ ″	″			
2152	3275	.....	.....	10 29 22·6	+2·756	1	121 38 41·2	+18·54	1	vF; S; R	1
2153	730	III. 66	.....	10 29 27·1	3·245	2	71 8 48·2	18·54	2	vF; vS; vlE; glbM; r.....	3
2154	729	III. 615	.....	10 29 33·9	3·470	2	51 49 25·5	18·55	2	vF; cS; psbM; er	4
2155	3277	.....	.....	10 29 38·5	2·818	1	116 26 17·5	18·55	1	vF; S; R; 2nd of 9	1
2156	3278	.....	.....	10 29 41·3	2·813	1	116 52 38·5	18·55	1	eeF; 3rd of 9	1
2157	3279	.....	.....	10 29 48·4	2·816	4	116 42 50·5	18·55	4	F; S; R; 4th of 9	4
2158	731	IV. 60	.....	10 29 59·7	3·770	1	35 45 49·1	18·55	1	○? cB; pL; R; vg, vsmbMN 15″.	3†
2159	3280	.....	.....	10 30 1·1	2·815	2	116 48 5·8	18·56	2	B; L; R; p of D neb; 5th of 9	3
2160	3281	.....	.....	10 30 9·5	2·815	1::	116 49 17·1	18·57	1::	B; L; R; f of D neb; 6th of 9	1
2161	3282	.....	.....	10 30 28·7	2·815	2	116 53 42·1	18·57	2	cF; E; gbM; 7th of 9	2
2162	3283	.....	.....	10 30 39·9	2·815	1	116 56 48·4	18·58	1	8th of 9	1
2163	3284	.....	.....	10 30 59·8	2·817	3	116 52 45·7	18·59	3	F; S; R; bM; 9th of 9	3
2164	3285	.....	.....	10 31 6·1	2·636	2	130 54 24·7	18·59	2	cF; pL; pmE; lbM	2
2165	.....	III. 700	.....	10 31 7·4	3·526	1	47 36 30·3	18·61	1	cF; L; iE; mb, s of M	1
2166	732	II. 745	.....	10 31 12·8	3·626	2	41 51 29·3	18·61	2	F; pS; mE 0...90°; * 10 nf.	4
2167	3286	.....	Δ. 322?	10 32 2·9	2·277	1	147 53 48·6	18·62	1	pB; vvL; iF; ** inv	1
2168	734	II. 348	.....	10 32 17·5	3·299	2	65 11 2·2	18·64	2	vF; S; R; gbM; vS * att ...	3
2169	733	.....	.....	10 32 34·7	5·264	3	12 26 32·4	18·68	3	pB; S; lE; psmbM	3
2170	.....	I. 272	.....	10 32 34·7	3·158	1::	79 59 19·5	18·65	1::	B; S; iR; mbMBN	2
2171	3287	.....	Δ. 355	10 33 1·6	2·409	1	143 24 4·5	18·65	1	Cl; P; st 9	1
2172	3288	.....	.....	10 33 26·3	2·729	1	125 19 17·0	18·70	1	eF; vS; mE; * 15 att.....	1
2173	735	II. 641	.....	10 33 28·5	3·451	1	51 58 16·4	18·68	1	cF; vS; R; bM	4
2174	3289	.....	.....	10 33 43·6	2·823	1	117 1 41·4	18·68	1	vF; pL; lE; glbM	1
2175	737	II. 77	.....	10 34 42·7	3·195	2	75 31 44·6	18·72	2	F; cL; E; vgbM; r; *7p10^s	4
2176	736	III. 317	.....	10 35 17·6	4·724	1	15 54 50·5	18·75	1	pF; S; R; gbM	2
2177	.....	III. 5	.....	10 35 25·5	3·157	1	79 49 40·2	18·74	1	eF; eS	1
2178	739	I. 81	.....	10 35 49·5	3·298	1	64 20 20·5	18·75	1	cB; L; gbM; *inv; 2st f ...	3
2179	740	I. 26	.....	10 36 8·6	3·178	1	77 16 41·8	18·76	1	cB; pL; E; mbM	2
2180	3290	V. 7	.....	10 36 10·9	3·203	1	74 23 11·8	18·76	1	cF; vL; R; vgvlbM; er.....	2
2181	3291	.....	.....	10 36 23·8	2·732	4	125 37 46·8	18·76	3	pF; S; mE 0°±; vsvmbM; 1st of 3.	4
2182	738	I. 80	.....	10 36 29·0	4·648	1	16 25 22·7	18·79	1	B; S; ilE; psbM; *11, 281°·8, 20^s·0.	2
2183	742	.....	.....	10 36 33·7	3·358	1	58 32 21·1	18·77	1	eF; vS; 2st 9·10, s	1
2184	743	.....	M. 95	10 36 36·7	3·175	2	77 34 22·1	18·77	4	B; L; R; pgmbMrN	8
2185	741	III. 842	.....	10 36 39·2	3·782	1	33 18 30·6	18·78	1	F; cS; R; pgbM; *s 90″ ...	2
2186	3292	.....	.....	10 36 41·4	2·734	4	125 38 53·1	18·77	3	F; S; vlE; psbM; 2nd of 3...	4
2187	744	III. 107	.....	10 36 53·2	3·133	2	82 30 48·4	18·78	2	vF; pS; R; bM; *9, 150″ ...	4
2188	3293	.....	.....	10 37 11·7	2·735	...	125 38 59·7	18·79	...	cF; vS; vlE; vS* att; 3rd of 3	2
2189	745	V. 52	.....	10 37 21·0	4·018	1	26 2 25·3	18·81	1	pB; L; E 0°; glbM.....	2*
2190	746	III. 318	.....	10 37 57·1	4·583	1	16 49 37·9	18·83	1	vF; L; R; vgbM; r; ** sf ...	2
2191	747	.....	.....	10 38 59·5	3·091	1	87 28 32·5	18·85	1	eF; L; eE; vgvlbM; a ray...	1
2192	3294	.....	.....	10 39 4·1	2·644	1?	132 58 43·5	18·85	1	F; E; gbM; *6, 7 v nr	1*
2193	748	II. 78	.....	10 39 10·5	3·189	2	75 31 1·5	18·85	2	pB; cL; iR; vglbM; r; 1st of 3	5
2194	749	.....	M. 96	10 39 20·4	3·173	4	77 26 55·8	18·86	4	vB; vL; lE; vsvmbM; r.....	8
2195	750	II. 81	.....	10 39 34·8	3·219	2	71 59 40·1	18·87	2	cB; pL; vlE; gbM; r.....	3
2196	751	.....	.....	10 39 37·3	3·188	1	75 28 25·1	18·87	1	F; R; 2nd of 3	1
2197	3295	.....	Δ. 309	10 39 36·8	2·313	3	148 56 44·8	18·86	3	η Argûs. The great neb ...	Mon.†
2198	753	.....	.....	10 39 49·3	3·187	1	75 35 15·1	18·87	1	F; R; 3rd of 3	1
2199	752	III. 701	.....	10 39 49·4	3·506	1	46 4 18·4	18·88	1	vF; cS; iR	2
2200	.....	.....	D'Arrest, 75	10 40 12	3·12	[1]	83 12 24	18·88	[1]	vF; S	0
2201	754	II. 99	.....	10 40 16·7	3·189	2	75 16 24·7	18·89	2	vB; cL; R; svmbMBN	5*
2202	3296	.....	.....	10 40 22·4	2·702	3	129 17 2·7	18·89	3	cF; S; R; glbM	4
2203	757	I. 17	Mechain.	10 40 25·7	3·177	3	76 41 10·7	18·89	3	vB; cL; R; psbM; r	8
2204	755	II. 360	.....	10 40 27·4	3·323	5	60 39 47·7	18·89	5	pB; pS; R; sbM.....	6
2205	756	II. 565	.....	10 40 33·2	3·390	2	54 33 18·7	18·89	2	pF; cL; iR; vglbM; 1st of 3	3
2206	3297	.....	.....	10 40 39·5	2·874	2	113 41 36·7	18·89	2	F; pL; iR; glbM	2
2207	758	I. 18	.....	10 40 52·2	3·177	3	76 38 27·0	18·90	3	vB; L; R; psmbM; 2nd of 3	8
2208	759	.....	.....	10 40 54·9	3·116	1	84 15 58·0	18·90	1	vF; R	1
2209	760	.....	.....	10 40 55·7	+3·116	2	84 20 22·0	+18·90	2	F; S; lE; bM	2

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	h.	H.		h m s	s		° ′ ″	″			
2210	762	.....	.....	10 41 2·5	+3·116	1	84 18 1·3	+18·91	1	Suspected; *nr	1
2211	761	II. 41	.....	10 41 3·8	3·176	2	76 43 38·3	18·91	2	F; L; E 90°±; vglbM; 3rd of 3.	9
2212	3298	.....	.....	10 41 32·5	2·807	1	120 48 44·6	18·92	1	F; S; pmE 0°	1
2213	763	III. 881	.....	10 41 36·0	4·082	1	23 28 40·9	18·93	1	vF; S; psbM; st nr	2
2214	3299	.....	.....	10 41 41·8	2·870	3	114 25 38·6	18·92	3	F; S; R; psbM; 2st 10f	3
2215	764	II. 872	.....	10 41 59·8	4·075	1	23 30 51·2	18·94	1	cF; S; lE; vgbM	2
2216	765	I. 116	.....	10 42 2·4	3·364	2	56 16 38·2	18·94	2	cB; pS; ilE; 1st of 2	4†
2217	766	I. 117	.....	10 42 7·5	3·364	2	56 15 59·2	18·94	2	pB; pS; ilE; 2nd of 2.....	4†
2218	.....	I. 284	.....	10 42 34·7	5·103	1	11 57 49·1	18·97	1	cB; vS; iF	1
2219	.....	III. 792	.....	10 42 57·4	3·717	1	33 49 54·1	18·97	1	vF; S; E; er	1
2220	768	II. 361	.....	10 43 2·3	3·314	3	60 47 45·1	18·97	3	pF; S; R; bM	4
2221	767	II. 335	.....	10 43 15·4	4·609	1	15 34 35·7	18·97	1	pF; L; iE; vgbM	2
2222	771	.....	.....	10 43 17·6	3·619	1	38 13 52·4	18·98	1	pB; R; pgbM.....	1
2223	769	III. 919	.....	10 43 20·3	3·884	1	27 53 7·4	18·98	1	vF; vS; R; vS* nr.....	2
2224	770	III. 913	.....	10 43 21·3	3·792	1	30 49 46·4	18·98	1	vF; cS; R; 2pB st s	2
2225	772·	II. 718	.....	10 43 33·3	3·496	1	45 32 51·4	18·98	1	pB; S; vlE; stellar; 3S st nr.	3
2226	772, *a*	.....	R. nova	10 43 ±	.....	...	45 ±	.....	...	3′ dist. from h. 772	0
2227	773	II. 362	.....	10 43 33·5	3·307	4	61 17 10·4	18·98	4	B; pL; R; mbM.....	5
2228	776	III. 522	.....	10 43 28·5	2·982	(3)	102 6 30·0	19·00	1::	F; S; R; lbM	4
2229	774	I. 27	.....	10 43 29·8	3·180	2	75 50 51·4	18·98	2	B; S; lE 135°±; smbMN...	5
2230	775	II. 363	.....	10 43 41·7	3·308	2	61 9 14·7	18·99	4	cF; S; R; bM.....	5
2231	.....	IV. 6 = II. 131	.....	10 43 49·0	3·117	4	83 26 44·4	18·99	4	B; vL; R; bM; r	5*
2232	.....	II. 493	.....	10 43 52·8	3·355	1	56 29 54·7	18·99	1	F; S.....	1
2233	.....	I. 118	.....	10 43 54·7	3·327	1	57 16 54·7	18·99	1	cB; cL; iR; mbM (?58° P.D.).	1*
2234	777	III. 88	.....	10 43 57·2	3·121	3	83 25 0·7	18·99	3	F; vL; R; vgbM; rr	5*
2235	778	II. 494	.....	10 44 1·8	3·356	1	56 21 52·0	19·00	1	pF; pL; lE; sp of 3	3
2236	779	I. 118?	.....	10 44 27·8	3·355	1	56 18 10·3	19·01	1	pB; L; iE; gbM; 2nd of 3...	2*
2237	.....	III. 108	.....	10 44 33·7	3·141	1	80 44 57·3	19·01	1	eF; eS; R	1
2238	780	I. 172	.....	10 44 35·5	3·395	2	52 38 29·3	19·01	2	pB; pL; vmE 42°·5; * inv?	3*
2239	782	.....	.....	10 44 40·7	3·356	1::	56 10 30·3	19·01	1::	pB; nf of 3 in a line.....	1
2240	783	III. 20	.....	10 44 40·7	3·156	1	79 6 47·3	19·01	1	vF; vL; R; vgbM	2
2241	784	III. 497	.....	10 44 43·3	3·105	1	85 28 16·3	19·01	1	F; pS; R; vglbM	3
2242	781	II. 887	.....	10 44 54·9	3·865	1	27 58 21·6	19·02	1	cF; pS; lE; vgbM	2
2243	786	II. 47	.....	10 44 59·2	3·257	2	66 19 33·6	19·02	3	pB; pL; lE 120°; gbM	5
2244	785	III. 914	.....	10 45 10·9	3·740	1	32 8 27·9	19·03	1	vF; S; lE	2
2245	787	I. 267	.....	10 45 58·4	3·730	1	32 16 18·5	19·05	1	cB; pL; iR; vglbM; *10nf2′	2
2246	3301	.....	.....	10 45 58·5	2·660	2	134 24 21·2	19·04	2	Cl; pL; P; lC; iF; st 9...13	2
2247	3300	.....	.....	10 45 59·6	3·203	1	72 29 30·5	19·05	1	eF; vL; vgvlbM; B * sp ...	1
2248	788	I. 233	.....	10 46 5·2	3·666	1	34 56 48·5	19·05	1	B; pL; mE 67°·0; gbM	3
2249	3302	.....	.....	10 46 20·2	2·809	1	122 10 58·5	19·05	1	F; S; R; *6·7 sf.....	1
2250	3303	.....	.....	10 46 25·7	2·919	1	110 6 14·5	19·05	1	vF; L; R; vglbM; r	1
2251	789	II. 364	.....	10 46 40·2	3·291	4	62 1 7·1	19·07	4	F; pL; vlE; vlbM	5
2252	3304	.....	.....	10 46 52·3	2·912	1	111 2 13·1	19·07	1	F; S; R; bM	1
2253	790	.....	.....	10 47 1·0	3·206	1	71 54 33·4	19·08	1	pF; lE; np of 2	1
2254	791	II. 82	.....	10 47 3·0	3·205	1	71 58 7·4	19·08	2	pF; S; E; gbM; r; sf of 2...	3
2255	792	IV. 29	.....	10 47 11·5	2·958	1	105 16 57·4	19·08	1	eF; att to *12f	2
2256	793	.....	.....	10 47 21·7	3·207	1	71 38 54·7	19·09	1	2 or 3 S st & neb	1
2257	.....	I. 268	.....	10 47 23·7	3·721	1	32 8 1·7	19·09	1	vB; vS; R; stellar	1
2258	794	II. 16	.....	10 48 2·0	3·132	1	81 33 42·0	19·10	1	vF; vS; vlE; psbM	5
2259	3305	.....	.....	10 48 29·5	2·879	1	115 23 58·3	19·11	1	F; S; R; glbM	1
2260	795	.....	.....	10 48 57·1	4·652	2	14 3 47·2	19·14	2	eF; pL; R; vglbM; * nf ...	2
2261	796	.....	.....	10 48 57·6	3·146	1	79 30 48·9	19·13	1	vF; *9, 90°; p of 2	1
2262	798	.....	.....	10 49 26·2	3·145	1	79 29 49·2	19·14	1	vF; R; vsmbM*12; f of 2...	1
2263	797	III. 632	.....	10 49 33·9	3·425	2	48 18 8·2	19·14	2	F; eS; R; bM.....	4
2264	3306	.....	.....	10 49 58·9	2·976	1	103 33 21·5	19·15	1	eeF; S	1
2265	799	II. 888	.....	10 50 5·6	3·759	1	29 44 47·8	19·16	1	vF; S; R; vgbM.....	2
2266	.....	III. 972	.....	10 50 15·1	3·819	1	27 39 6·1	19·17	1	vF; S; R; bM.....	1
2267	.....	III. 67	.....	10 50 35·3	+3·197	1	72 9 7·1	+19·17	1	vF; E; bet 2 st	1

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	h.	H.		h m s	s		° ′ ″	″			
2268	800	III. 332	.....	10 50 49·8	+3·253	1	65 1 18·4	+19·18	1	vF; R; gbM; *13 {H. 1′n / h. 2′s}	2
2269	801	III. 705	.....	10 51 18·6	3·485	1	43 8 17·7	19·19	1	cF; S; R	2
2270	3308	.....	.....	10 52 16·3	2·675	1	135 49 22·3	19·21	1	eF; S; R; gbM	1
2271	3307	.....	.....	10 52 17·7	2·869	1	117 43 48·3	19·21	1	pF; S; R; bM; am st	1
2272	802	.....	.....	10 52 29·0	4·670	1	13 25 47·9	19·23	1	Very doubtful object	1
2273	{804 = 3309}	II. 100	.....	10 52 37·6	3·178	4	74 24 56·6	19·22	4	F; L; R; glbM; r	5
2274	805	I. 87	.....	10 52 44·4	3·288	10	60 16 20·6	19·22	10	cB; cL; R; gmbM	13
2275	803	I. 269	.....	10 52 50·3	3·686	1	31 34 53·9	19·23	1	{H. eF; / h. cB;} vlE; pS; *13 s att	2
2276	806	II. 101	.....	10 52 56·1	3·170	2	75 20 58·9	19·23	2	vB; pL; lE 80°±; smbMN.	4*
2277	807	III. 21	.....	10 53 14·5	3·158	1	77 5 16·2	19·24	1	eF; cS; R; bMN	3
2278	808	.....	.....	10 53 49·7	3·274	2	61 32 11·5	19·25	2	vF; R; bM; *sp	2
2279	809	III. 498	.....	10 54 0·3	3·100	3	85 37 30·5	19·25	3	vF; pL; mE	4
2280	3310	.....	.....	10 54 11·7	2·432	1	149 34 46·5	19·25	1	Cl; pL; pRi; lC; st 13	1
2281	.....	III. 824	.....	10 54 29·4	2·945	1	108 43 14·1	19·27	1	vF; vS; iR; glbM	1
2282	.....	III. 75	.....	10 54 30·4	3·171	1	74 52 13·1	19·27	1	eF; pL	1
2283	.....	III. 793	.....	10 54 45·6	3·636	1	33 2 13·4	19·28	1	vF; vS; stellar	1
2284 / 2285	.....	III. {967 / 968}	.....	10 55 9·9	4·582	1	13 27 12·0	19·30	1	{vF / eF}; D neb; v near	1
2286	3311	.....	.....	10 55 32·8	2·457	1	149 5 48·7	19·29	1	3S st 10 m in vF neb	1
2287	810	I. 88	.....	10 55 33·8	3·271	5	61 16 22·7	19·29	6	B; L; E; mbMN; rr; p of 2	8
2288	3312	.....	.....	10 55 50·2	2·976	1	104 44 26·0	19·30	1	pF; S; R; glbM; *14 nr ...	1
2289	811	III. 22	.....	10 55 53·7	3·147	3	78 10 23·0	19·30	3	vF; cS; R; vgvlbM	4
2290	812	IV. 7	.....	10 55 59·3	3·195	2	71 6 42·0	19·30	2	cF; pL; R; sbMS*; *9 att 25°.	4
2291	814	II. 507	.....	10 56 3·9	2·970	1	105 32 3·0	19·30	1	F; {H. S / h. vL}; bM; *nf inv ...	2
2292	.....	III. 598	.....	10 56 5·4	3·106	1	84 28 16·3	19·31	1	eF; S; lE; ?	1
2293	813	II. 365	.....	10 56 6·3	3·277	2	60 21 55·3	19·31	2	F; L; cE; *7, 310° 8′	5
2294	.....	V. 39	.....	10 56 27·4	2·923	2	112 21 17·3	19·31	2	vF; vL; mE	2
2295	815	II. 366	.....	10 56 28·0	3·269	1	61 11 48·3	19·31	1	F; pS; R; pgbM, f of 2	2
2296	.....	V. 40	.....	10 56 43·8	2·923	2	112 29 17·6	19·32	2	vF; vL; mE	2
2297	3313	.....	.....	10 56 50·2	2·955	1	108 1 41·6	19·32	1	vF; pL; R; vgvlbM	1
2298	816	II. 336	.....	10 57 1·2	4·248	1	16 40 22·2	19·34	1	pB; vS; iR; psmbM*	2
2299	817	II. 884	.....	10 57 13·1	3·622	1	32 43 27·2	19·34	1	cF; S; R; vgbM	2
2300	3314	.....	.....	10 58 19·3	2·446	1	150 36 38·5	19·35	1	Cl; pRi; pC	1
2301	818	I. 13	.....	10 58 38·7	3·076	1	89 16 57·8	19·36	1	cB; cL; mE 140°±; vsmbMN	4
2302	.....	II. 904	.....	10 59 4·5	4·481	1	13 33 18·7	19·39	1	F; pL; lbM	1
2303	819	III. 23	.....	10 59 13·5	3·145	2	77 51 22·4	19·38	3	F; S; lE; psbM; 2st np in line.	5
2304	820	III. 350	.....	10 59 41·3	3·263	3	60 43 33·7	19·39	3	eF; S; *10 p 60″	5
2305	3316	.....	.....	11 0 17·4	2·956	1	108 43 4·0	19·40	1	F; S; R; pslbM; p of 2	1
2306	3317	.....	.....	11 0 19·9	2·956	1	108 47 19·0	19·40	1	eF; S; R; vlbM; f of 2	1
2307	821	III. 915	.....	11 0 20·6	3·609	1	32 1 29·0	19·40	1	vF; S; R; pgbM	2
2308	3315	.....	Δ. 323	11 0 33·8	2·530	2	147 55 1·0	19·40	2	!!; Cl; eL; R; lC; st 8...12...	4
2309	3318	.....	.....	11 0 45·4	2·823	1	126 25 0·3	19·41	1	eeF; vS* att	1
2310	823	III. 111	.....	11 1 17·1	3·104	1	84 24 45·6	19·42	1	cF; vS; R; bM; r	2*
2311	822	.....	.....	11 1 18·9	3·260	1	60 47 14·0	19·40	1	F; S; R; bM	1
2312	825	.....	.....	11 1 31·1	3·258	1	60 34 29·9	19·43	1	eF	1
2313	824	.....	.....	11 1 32·2	3·319	1	53 12 44·9	19·43	1	vF; R; psbM; *7 p 7′	1
2314	826	III. 920	.....	11 2 29·3	3·683	1	27 54 1·5	19·45	1	eF; vS; E 0°±; r	2
2315	828	II. 42	.....	11 2 38·9	3·137	1	78 30 58·5	19·45	1	F; S; lE; vlbM	2*
2316	827	.....	.....	11 2 40·8	3·314	1	53 12 35·5	19·45	1	eF; S; *8, p	1
2317	.....	I. 220	.....	11 2 44·9	3·518	2	35 51 45·8	19·46	2	cB; cL; cE 160°	2
2318	831	V. 46	.....	11 3 3·0	3·554	1	33 34 44·1	19·47	1	cB; vL; vmE 79°·0; pbM; r.	3
2319	829	III. 351	.....	11 3 3·7	3·254	5	60 28 50·8	19·46	6	!; F(*? var*); S; R; bM; *9 f 1′; 1st of 4.	8*
2320	832	III. 352	.....	11 3 9·6	+3·253	3	60 33 4·1	+19·47	3	eF; vS; 2nd of 4	5

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	Sir J. H.'s Catalogues of Nebulæ.	Sir W. H.'s Classes and Nos.	Other Authorities.								
	h.	H.		h m s	s		° ′ ″	″			
2321	833	.....	.....	11 3 12·0	+3·253	1	60 36 21·1	+19·47	2	vF; pS; R; bM; 3rd of 4 ...	2
2322	3319	.....	.....	11 3 19·8	2·830	2	126 46 48·1	19·47	2	B; S; R; pgmbM; 1st of 3...	2
2323	.....	III. 79	.....	11 3 25·7	3·144	1	77 19 26·1	19·47	1	eF; pS; lE; r	1
2324	834	.....	.....	11 3 26·1	3·139	1	78 3 34·1	19·47	1	F; S; R; gbM.....	1
2325	830	II. 337	.....	11 3 30·4	4·167	1	16 22 0·4	19·48	1	pF; pS; lE; gbM; *15, 22°·1, 70″.	2
2326	835	.....	.....	11 3 36·1	3·252	3	60 32 50·1	19·47	3	vF; pL; 4th of 4	3
2327	3320	.....	.....	11 3 56·5	2·832	2	126 46 43·4	19·48	2	pF; S; R; bM; 2nd of 3.....	2
2328	836	III. 89	.....	11 4 2·4	3·108	2	83 25 3·4	19·48	2	eF; R; sbM; r	3
2329	3321	.....	.....	11 4 9·7	2·835	1	126 42 10·4	19·48	2	vF; pL; R; * inv; 3B st nr...	2
2330	.....	II. 819	.....	11 4 32·1	2·972	1	107 31 27·7	19·49	1	pF; pL; iF; bM	1
2331	3323	.....	.....	11 4 32·5	2·534	1	149 28 52·7	19·49	1	Cl; pRi; lC	1
2332	3322	.....	.....	11 4 39·9	2·842	1	126 5 31·7	19·49	1	eF; S; R; glbM; 3 st 11 f ...	1
2333	3324	.....	.....	11 5 52·5	2·522	1	150 36 57·3	19·51	1	F; lE; 1st of 6	1†
2334	.....	III. 723	.....	11 5 53·4	3·424	1	40 53 27·6	19·52	1	eF; vS; p of 2	1
2335	837	.....	.....	11 5 54·4	2·988	1	105 11 45·6	19·52	1::	Neb (?)	1
2336	3325	.....	.....	11 5 56·2	2·526	2	150 28 3·6	19·52	2	F; lE; sbM; 2nd of 6	2†
2337	3326	.....	.....	11 6 3·2	2·526	2	150 32 58·6	19·52	2	*12 with fan-shaped neb att; 3rd of 6.	2†
2338	3327	.....	.....	11 6 14·4	2·528	2	150 30 34·6	19·52	2	B; bM*; 4th of 6	2†
2339	.....	II. 728	.....	11 6 18·3	3·422	2	40 51 28·9	19·53	2	pB; pL; R; vgmbM	2
2340	3329	.....	.....	11 6 21·4	2·541	2	150 26 42·6	19·52	2	F; L; E 0°; bM; 5th of 6 ...	2†
2341	3328	II. 269	.....	11 6 28·1	2·923	2	115 59 51·9	19·53	2	B; pL; E; vsmbMN; 2 B st Δ	4
2342	3330	.....	.....	11 6 31·0	2·540	2	150 35 29·9	19·53	2	eF; S; E 160°±; 6th of 6 ...	2†
2343	838	.....	M. 97	11 6 34·8	3·514	1	34 13 38·2	19·54	1	!!; ○; vB; vL; R; vvg, vsbM ○; 19ˢ·0 d.	4†
2344	839	III. 921	.....	11 6 51·9	3·621	1	28 32 29·2	19·54	1	vF; L; E; vgbM; in Δ of L st	2
2345	3332	.....	.....	11 6 59·1	2·546	1	150 2 19·2	19·54	1	Cl; pRi; C; E.....	1
2346	3331	III. 529	.....	11 7 4·5	3·000	1	103 19 48·2	19·54	1	vF; S; iR; lbM	3
2347	840	I. 29	.....	11 7 16·1	3·144	3	76 25 29·5	19·55	3	B; cL; E 90°±; psmbM.....	4
2348	.....	III. 770	.....	11 7 26·0	3·520	1	33 29 29·5	19·55	1	vF; vS; stellar.....	1
2349	.....	III. 706	.....	11 7 30·1	3·404	2	41 45 30·5	19·55	2	vF; vS; vlE; stellar; cB* n...	2
2350	841	II. 102	.....	11 7 43·8	3·154	1	74 26 53·8	19·56	2	pF; L; R; glbM	2
2351	3333	.....	.....	11 7 49·1	2·946	1	112 57 42·8	19·56	1	vF; pS; R; bM	1
2352	843	II. 49	.....	11 8 4·2	3·172	1	71 7 42·8	19·56	1	B; pS; R; pgmbM	2
2353	842	II. 709	.....	11 8 6·6	3·339	1	47 38 28·8	19·56	1	pF; S; lE 0°±; vgbM	4
2354	3334	.....	.....	11 9 7·0	2·558	1	150 29 39·4	19·58	1	⊕ and neb; st 15...18	2
2355	.....	II. 626	.....	11 9 7·9	3·098	1	84 42 34·4	19·58	1	pB; S; lE; mbM.....	1
2356	844	III. 27	.....	11 9 21·8	3·169	2	71 14 8·7	19·59	2	F; S; R; sp of 3	3
2357	3335	.....	.....	11 9 29·9	2·885	1	123 3 54·7	19·59	1	eF; S; R; gbM	1
2358	845	II. 50	.....	11 9 30·6	3·169	2	71 11 38·7	19·59	2	vB; L; R; vmbM; 2nd of 3..	3
2359	846	II. 51	.....	11 9 35·3	3·169	2	71 5 49·7	19·59	2	B; pL; R; psbM; 3rd of 3 ...	3
2360	847	I. 270	.....	11 10 11·5	3·548	3	30 27 29·0	19·60	3	vB; pS; lE 90°±; vsvmbMSN.	5
2361	849	II. 521	.....	11 10 16·1	3·098	2	84 40 50·0	19·60	2	pF; cS; iR; psmbM; *10, 330°, 3′.	5
2362	848	I. 271	.....	11 10 20·9	3·533	1	31 14 40·3	19·61	1	vB; cL; mE 305°·0; smbMN	2
2363	850	II. 729	.....	11 10 29·9	3·366	1	43 29 5·3	19·61	1	F; pL; lE 90°±; glbM; r ...	3
2364	851	III. 333	.....	11 10 39·5	3·197	1	65 49 46·3	19·61	1	cF; vS; smbM; stellar; p of 2	2
2365	851, *a*	.....	R. nova	11 10 ±	.....	...	65 49 ±	.....	...	F; S; bM; place from MS ...	0
2366	.....	III. 76	.....	11 10 53·0	3·149	1	74 29 36·6	19·62	2	eF; pL.....	1
2367	3336	.....	.....	11 10 59·5	2·939	1	115 21 55·6	19·62	1	F; S; R; gbM.....	1
2368	.....	III. 334	.....	11 11 0·0	3·197	1	65 42 34·6	19·62	1	vF; S; f of 2	1
2369	852	I. 244	.....	11 11 9·6	3·520	1	31 30 10·6	19·62	1	cB; cL; R; vgmbM	3
2370	3338	.....	.....	11 11 21·4	1·992	1	165 27 17·6	19·62	1	F; pS; pmE; gbM	1
2371	3337	I. 241	Δ. 617	11 11 29·6	2·899	1	122 2 45·9	19·63	1	cB; vL; E 160°±; am 4 st ...	2
2372	853	II. 879	.....	11 11 32·8	3·745	1	21 59 31·9	19·63	1	pB; S; R; gbM	2
2373	854	.....	M. 65	11 11 36·7	3·139	3	76 8 46·9	19·63	3	B; vL; mE 165°±; gbMBN.	8*†
2374	855	.....	.....	11 11 40·5	3·111	1	81 42 52·9	19·63	1	eF	1
2375	.....	II. 885	.....	11 12 17·2	3·512	1	31 22 36·2	19·64	1	F; S; lE; 135°±	1
2376	856	II. 52	.....	11 12 43·1	+3·164	1	70 52 55·5	+19·65	1	B; S; vlE; sbM	2

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	h.	H.		h m s	s		° ′ ″	″			
2377	857 = 875?	.....	M. 66	11 12 48·3	+3·137	2	76 15 17·5	+19·65	3	B; vL; mE150°; mbM; 2st np	9*†
2378	859	V. 8	.....	11 12 57·4	3·140	4	75 38 28·5	19·65	4	pB; vL; vmE102°·0	8†
2379	858	I. 226	.....	11 13 1·7	3·435	1	36 4 6·5	19·65	1	pB; L; R; svmbMrN	2†
2380	860	II. 338	.....	11 13 3·3	3·211	7	62 16 12·5	19·65	7	cF; L; R; vgvlbM	9
2381	861	.....	.....	11 13 5·2	3·089	2	86 16 11·5	19·65	2	pB; S; R; smbMN	3
2382	.....	II. 30	.....	11 13 6·1	3·163	1	71 4 37·5	19·65	1	pB; *inv	1*
2383	862	II. 550	.....	11 13 21·8	3·027	2	99 30 44·8	19·66	2	F; vS; R; lbM; *7 f; p of 2.	4
2384	863	II. 551	.....	11 13 36·0	3·028	2	99 28 56·8	19·66	2	F; vS; R; psbM; *7p; f of 2	4
2385	856, *a*	.....	R. nova	11 13 46·1	3·164	::	70 52 55·5	19·66	::	pF; S; R; vlbM; foll h. 856, 15′.	0
2386	864	II. 33	.....	11 13 53·9	3·090	1	85 59 53·1	19·67	1	B; pL; R; psbM	3
2387	865	I. 245	.....	11 14 10·0	3·515	4	30 9 43·1	19·67	4	pB; pL; R; vgbM	7
2388	867 = 861?	II. 32	.....	11 14 20·6	3·088	1?	86 16 50·1	19·67	1?	pB; S; E; bM	1*
2389	866	III. 15	.....	11 14 20·9	3·170	2	69 4 20·4	19·68	2	cF; cL; lE; gbM; sp of 2 ...	3
2390	868	.....	.....	11 14 51·7	3·290	1	49 22 36·7	19·69	1	pB; S; pmE; bMN=close *?	1
2391	869	III. 16	.....	11 14 52·5	3·169	2	69 1 43·7	19·69	2	vF; pS; R; gbM; nf of 2 ...	3
2392	870	III. 335	.....	11 15 1·4	3·190	1	64 56 3·7	19·69	1	cF; vS; R; bM; np of 2	2
2393	872	III. 336	.....	11 15 6·1	3·190	1	64 57 48·7	19·69	1	vF; vS; sf of 2	2
2394	871	II. 775	.....	11 15 6·6	3·274	1	51 27 49·7	19·69	1	pF; cL; lE; vgbM	2
2395	.....	II. 880	.....	11 15 24·0	3·766	2	19 47 39·0	19·70	2	F; S; lE15°±	2
2396	873	I. 5	.....	11 15 33·5	3·150	3	72 38 30·0	19·70	3	pB; pS; iR; bM; r	5
2397	874	II. 782	.....	11 15 40·7	3·423	1	35 23 23·0	19·70	1	pB; S; R; vgbM; *12 p ...	2
2398	876	III. 768	.....	11 15 58·6	3·409	1	36 18 44·3	19·71	1	cF; vS; R; stellar	3
2399	878	II. 53	.....	11 16 22·1	3·154	1	71 25 28·3	19·71	1	cF; S; lE; r	3
2400	877	IV. 59	.....	11 16 23·3	3·273	1:	50 42 2·3	19·71	1:	H. cB; S; R; svmbMN h. F; R; *17 M.	3
2401	.....	II. 635	.....	11 16 27·0	3·037	1	97 52 41·3	19·71	1	F; pL; iR; vgbM	1
2402	3339	III. 530	.....	11 16 37·0	3·014	1	103 3 31·3	19·71	1	F; S; R; stellar; p of 2	2
2403	879	IV. 4	.....	11 16 39·9	3·070	1	90 19 53·3	19·71	1	vF; S; att to *13 m	3
2404	881	I. 219	.....	11 17 10·2	3·271	2	50 28 40·6	19·72	2	cB; cL; iR; pgmbM	3
2405	882	I. 20	.....	11 17 11·3	3·123	3	77 53 21·6	19·72	3	F; E90°±; B* f34s	5*
2406	3340	III. 531	.....	11 17 11·8	3·015	2	103 4 29·6	19·72	1	pF; pL; iR; vlbM	4
2407	880	II. 845	.....	11 17 14·0	3·569	1	25 47 2·9	19·73	1	F; pS; iR; gbM; *9 np.....	4
2408	883	II. 829	.....	11 17 24·4	3·462	1	31 30 53·9	19·73	1	vF; pL; pmE135°±; er ...	3
2409	884	III. 337	.....	11 17 25·2	3·182	1	65 16 34·9	19·73	1	vF; vS; R	2
2410	885	III. 922	.....	11 17 54·2	3·503	1	28 45 10·2	19·74	1	vF; vS; 2 vS st inv	2
2411	886	I. 131	.....	11 17 58·3	3·034	1	99 1 48·9	19·73	2	pB; L; E0°±; gbM	3*
2412	3341	.....	.....	11 18 20·4	2·956	1	115 58 29·2	19·74	1	F; vL; gvlbM; *7 s 6′	1
2413	887	I. 194	.....	11 18 26·4	3·301	2	45 38 32·2	19·74	2	vB; cL; vmE0°±; vsmbMN; st p.	4
2414	888	.....	.....	11 18 34·5	3·328	2	42 14 27·2	19·74	2	eF; S; R; vsbM*; 2 st 11 nf.	2
2415	.....	II. 886	.....	11 18 36·9	3·442	1	32 6 42·5	19·75	1	pF; iF	1
2416	889	.....	.....	11 18 47·7	3·199	1	61 21 44·5	19·75	1	vF; S; R; psbM; *12 nf ...	1
2417	.....	III. 112	.....	11 18 51·5	3·051	2?	95 4 52·5	19·75	2?	eF; cL; R; r (v near vB*)...	3*
2418	3342	.....	Δ. 481	11 18 56·6	2·858	2	132 27 50·5	19·75	2	Cl; cL; pRi; lC; st 10...14...	2
2419	891 = 3343	II. 159	.....	11 19 10·3	3·145	4	72 22 2·5	19·75	4	B; pS; R; bM	5
2420	890	I. 262	.....	11 19 19·3	3·618	1	22 38 33·8	19·76	1	cB; S; iR; spmbMN	2
2421	892	I. 246	.....	11 19 32·8	3·431	1	32 20 57·8	19·76	1	cB; pL; E	3
2422	893	.....	.....	11 19 52·5	3·144	2	72 12 19·8	19·76	3	pB; pL; E; vgbM	3
2423	894	II. 160 = III. 28	.....	11 20 23·8	3·144	2	72 0 27·1	19·77	2	pB; L; vlE; vgbM; r.....	5
2424	895	II. 770	.....	11 20 32·3	3·202	5	59 42 52·1	19·77	5	pB; pS; R; lbM; r.....	6
2425	896	I. 247	.....	11 20 44·8	+3·441	1	30 40 47·4	+19·78	2	pB; pS; vlE80°±; pgbM; Sst sf nr.	4

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	h.	H.		h m s	s		° ′ ″	″			
2426	897	II. 339	.....	11 20 45·7	+3·182	1	63 34 36·4	+19·78	1	pB; pL; lE; bM	2
2427	898	II. 54	.....	11 20 49·6	3·142	2	72 18 40·4	19·78	2	F; pS; lE; r	4
2428	.....	II. 152	.....	11 20 59·6	3·111	1	79 41 44·4	19·78	1	F; mE; r.....	1
2429	3334	III. 532	.....	11 21 9·0	3·023	1	102 24 55·4	19·78	1	cF; S; E; gbM	2
2430	899	.....	.....	11 21 22·8	3·231	1	53 48 40·7	19·79	1	cF; S; R; sbM*?	1
2431	900	.....	.....	11 21 30·0	3·158	1	68 25 51·7	19·79	1	eF; vS; E 90°	1
2432	3345	.....	.....	11 21 33·5	2·706	1	149 11 3·7	19·79	1	B; pL; iR; pgpmbM	1
2433	901	II. 349	.....	11 22 5·3	3·171	1	65 7 52·0	19·80	1	pF; pL; lE	2
2434	902	II. 13	.....	11 22 53·7	3·109	1	79 57 4·3	19·81	1	pF; pL; R; vsmbM; r	4
2435	3346	.....	.....	11 22 53·9	2·920	3	125 37 34·3	19·81	3	pB; cS; R; psmbM	3
2436	903	.....	.....	11 23 0·3	3·109	1::	79 52 19·3	19·81	1	pB; cS; E 90°	1
2437	904	II. 350	.....	11 23 43·7	3·161	1	66 27 39·6	19·82	1	F; S; *7·8 nf 5′	2
2438	905	.....	.....	11 24 15·2	3·185	1	60 44 5·6	19·82	1	F; vS; R; smbM	2
2439	906	II. 367	.....	11 24 17·1	3·183	3	61 4 23·6	19·82	3	F; cS; R; sbMN	4
2440	907	III. 353	.....	11 24 28·7	3·183	3	60 52 0·9	19·83	3	F; S; R; psbM	5*
2441	3347	II. 562	.....	11 24 29·0	3·024	2	103 27 38·9	19·83	2	pF; S; R; vgvlbM	5
2442	3348	.....	.....	11 24 36·6	2·958	2	119 29 4·9	19·83	2	pB; S; mE; * 13 att	2
2443	908	I. 221	.....	11 24 46·4	3·342	2	36 9 21·9	19·83	2	pB; vL; R; vglbM	4
2444	909	II. 836	.....	11 25 43·2	3·442	2	27 21 32·2	19·84	2	cF; S; R; gvlbM; r	3
2445	910	II. 730	.....	11 25 44·5	3·284	2	42 10 57·2	19·84	2	pB; vL; lE 0°; vsmbM*15; *11 n.	3†
2446	912	II. 351	.....	11 26 2·1	3·162	1	64 46 58·5	19·85	1	F; S; R; bM	2
2447	911	I. 222	.....	11 26 2·3	3·333	1	36 5 47·5	19·85	1	pB; pL; lE 0° ±; gbM; *12 nr	3
2448	.....	III. 80	.....	11 27 5·9	3·115	1	76 43 50·8	19·86	1	vF; vS; R	1
2449	913	II. 552	.....	11 27 8·0	3·042	2	99 3 46·8	19·86	2	F; S; R; psbM; *14 sp 225°	3
2450	.....	III. 771	.....	11 27 10·4	3·340	1	34 23 50·8	19·86	1	eF; S; iR; L * in field	1
2451	3349	III 935	.....	11 27 37·1	3·038	1	103 19 8·1	19·87	1	eF; S; R; gbM	2
2452	914	I. 287	.....	11 27 44·4	3·602	1	18 41 33·1	19·87	1	pB; L; mE 130°·4; mbM ...	2
2453	.....	III. 772	.....	11 27 44·9	3·340	1	34 15 51·1	19·87	1	vF; stellar	1
2454	.....	II. 783	.....	11 28 6·8	3·331	1	34 41 52·1	19·87	1	pB; pL; bM	1
2455	915	III. 847	.....	11 28 23·8	3·387	1	29 15 14·4	19·88	1	vF; vS; R; vgbM	2
2456	916	.....	.....	11 28 33·7	3·255	1	43 56 23·4	19·88	1	vF; S; R; vgbM	1
2457	3350	.....	.....	11 28 37·1	2·938	2	127 10 35·4	19·88	2	pF; pL; vlE; glbM	2
2458	.....	III. 969	.....	11 28 56·6	3·748	1	14 14 50·7	19·89	1	eF; S	1
2459	3351	.....	.....	11 28 59·4	2·939	2	127 12 45·4	19·88	2	F; cS; lE; gvlbM	2
2460	917	II. 905	.....	11 29 3·2	3·784	1	13 56 57·4	19·88	1	pB; pL	2
2461	918	II. 784	.....	11 29 4·5	3·319	1	34 55 43·7	19·89	1	pF; L; lE	2*
2462	920	.....	.....	11 29 4·7	3·203	1	52 49 3·7	19·89	1	eF; pL; pmE; gbM	1
2463	919	III. 843	.....	11 29 8·5	3·360	1	30 49 18·7	19·89	1	vF; R; stellar; vS * 1 d sf ...	1
2464	.....	.....	D'Arrest, 78	11 29 16	3·14	[1]	67 24 12	19·88	[1]	B; pS; mbMN = *13; *11 p 4ˢ, s 175″.	0
2465	921	II. 837	.....	11 29 29·6	3·398	1	27 29 1·7	19·89	1	F; vlE; gbM	2
2466	.....	.....	D'Arrest, 79	11 29 39	3·13	[2]	71 20 42	19·89	[2]	F; S; R	0
2467	922	.....	.....	11 29 41·9	3·150	1	65 7 26·7	19·89	1	vF; S; R	1
2468	3352	.....	Δ. 289	11 29 42·0	2·764	2	150 49 29·7	19·89	2	Cl; pL; pRi; pC; st 8...13 ..	2
2469	923	III. 29	.....	11 29 54·8	2·128	1	71 23 48·7	19·89	1	vF; eS; stellar.....	2
2470	924	.....	.....	11 29 55·8	3·125	1	72 20 37·7	19·89	1	vF; S; bM	1
2471	925	II. 731	.....	11 30 10·0	3·262	2	41 19 6·0	19·90	2	pB; S; pmE	4
2472	926	II. 838	.....	11 30 13·1	3·364	2	29 36 37·0	19·90	2	pF; S; R; gbM; r	3
2473	927	II. 352	.....	11 30 27·9	3·143	2	66 32 34·0	19·90	2	vF; S; E; r	4
2474	928	III. 81	.....	11 30 58·4	3·109	1	77 6 36·3	19·91	1	cF; cS; R; psbM	4
2475	3353	.....	.....	11 31 34·0	2·881	1	139 55 51·3	19·91	1	eF; S; R; am 50 S st	1
2476	929	I. 227	.....	11 31 41·7	3·315	2	32 57 27·3	19·91	2	pF; L; vlE; vgbM; r	4
2477	930	II. 732	.....	11 32 1·9	3·241	1	42 45 34·6	19·92	1	F; S; att to *15; another * cont.	2
2478	3354	.....	.....	11 32 6·8	2·954	1	126 57 46·6	19·92	2	cB; R; sbMN*; *9 sf	2
2479	931	.....	.....	11 32 18·7	3·171	3	57 18 46·6	19·92	3	pB; pL; pmE; gbM: p of 2...	3
2480	932	.....	.....	11 32 21·7	3·171	3	57 17 20·6	19·92	3	cB; pL; pmE 0°; pgbM	3
2481	933	III. 109	.....	11 32 29·4	3·123	2	71 31 5·6	19·92	2	cF; vS; pmE; sbM; 2 S st f; 1st of 3.	3
2482	935	III. 609	.....	11 32 35·2	+3·048	1	98 35 14·6	+19·92	1	vF; vS; R; gbM; *8 s 6′ ...	2

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	h.	H.		h m s	s		° ′ ″	″			
2483	.....	III. 773	.....	11 32 45·1	+3·305	1	32 59 54·6	+19·92	1	cF; pS; vS*v nr	1
2484	.....	III. 844	.....	11 32 47·4	3·327	1	30 36 24·9	19·93	1	vF; S; mE	1
2485	937	II. 839	.....	11 32 47·9	3·345	2	28 56 14·9	19·93	2	F; cS; R; mbM	3
2486	934 = 3355	.....	.....	11 32 54·0	3·116	2	73 53 41·9	19·93	3	cF; R; p of 2	3†
2487	938	II. 340	.....	11 32 54·5	3·144	1	64 31 35·9	19·93	1	F; cS; lE; stellar; r	3
2488	936 = 3356	II. 103	.....	11 32 57·8	3·116	4	73 52 36·9	19·93	6	F; pS; E; pglbM; r; f of 2...	8†
2489	936, *a*	.....	R. nova	11 33 ±	.....	...	73 52 ±	.....	...	Smaller than h. 936	0
2490	939	II. 161	.....	11 33 0·4	3·122	3	71 29 46·9	19·93	3	pF; pL; R; bM; r; 2nd of 3	4
2491 2492 5069	939, *a* 939, *b*	.....	R. 3 novæ	11 33 ±	.....	...	71 29 ±	.....	...	No description (for 939, *c*, see No. 5069).	0
2493	940	III 30	.....	11 33 5·0	3·122	3	71 27 36·9	19·93	2	vF; pS; r; 2 vB st p; 3rd of 3	4
2494	.....	II. 830	.....	11 33 23·7	3·300	1	32 58 24·9	19·93	1	pB; E	1
2495	941	III. 375	.....	11 33 26·1	3·129	1	68 53 9·9	19·93	1	cB; cS; R; bM; r	3
2496	.....	.....	D'Arrest, 80	11 33 29	3·12	[1]	71 25 42	19·93	[1]	F; pL; *9·10, s 5′	0
2497	.....	III. 338	.....	11 33 35·4	3·135	1	66 46 41·9	19·93	1	vF; vS.....	1
2498	942	II. 737	.....	11 33 45·6	3·237	2	41 30 46·9	19·93	2	F; S; vlE; glbM	4
2499	943	I. 21	.....	11 33 45·7	3·104	3	77 45 10·9	19·93	4	B; L; vlE	8
2500	944	III. 320	.....	11 33 48·3	3·142	1	64 24 10·9	19·93	1	cF; vS; R; p of 2; * 6 sf 3′..	3
2501	945	I. 94	.....	11 33 53·4	3·183	3	52 40 24·2	19·94	3	cB; pL; pmE 90° ±; bM ...	5*
2502	946	III. 339	.....	11 34 20·2	3·140	1	64 25 31·2	19·94	1	cF; S; f of 2	2
2503	947	.....	.....	11 34 40·4	3·099	1	78 55 43·2	19·94	1	F; 1st of 4	1
2504	948	III. 284	.....	11 34 47·6	3·058	1	95 23 14·2	19·94	1	F; pS; R; psbM.....	3
2505	950	.....	.....	11 34 51·9	3·099	1	78 54 43·2	19·94	1	vF; 2nd of 4	1
2506	949	III. 376	.....	11 34 52·5	3·126	2	68 54 26·5	19·95	2	vF; cS; R; bM; bet 2 st.....	5
2507	951	II. 153	.....	11 34 58·4	3·099	1	78 57 13·5	19·95	1	pF; pS; 3rd of 4.....	2
2508	3357	.....	.....	11 35 9·4	3·039	1	103 4 35·5	19·95	1	F; cS; lE; pslbM	1
2509	952	III. 774	.....	11 35 10·2	3·258	1	36 26 51·5	19·95	1	vF; cS; pmE	3
2510	953	II. 154	.....	11 35 11·4	3·099	1	78 58 3·5	19·95	1	pF; pS; 4th of 4	2
2511	954	II. 341	.....	11 35 14·4	3·143	3	62 44 1·5	19·95	3	pF; S; R; psbM; stellar ...	4
2512	.....	.....	D'Arrest, 81	11 35 21	3·12	[1]	70 22 42	19·94	[1]	F; S; lbM	0
2513	955	III. 775	.....	11 35 51·3	3·253	1	36 29 51·5	19·95	1:	vF; vS.....	2
2514	956	.....	.....	11 35 56·5	3·141	1	62 43 32·5	19·95	1	eF	1
2515	957	.....	.....	11 36 11·6	3·043	1	102 5 22·8	19·96	1	F; vS; R; bM	1
2516	.....	III. 340	.....	11 36 15·0	3·130	1	66 24 56·8	19·96	1	vF; pL; 2 suspected neb nr ..	1
2517	.....	III. 102	.....	11 36 15·9	3·097	1	79 6 56·8	19·96	1	eF; pS.....	1
2518	.....	.....	D'Arrest, 82	11 36 21	3·12	[1]	70 7 42	19·95	[1]	vF; vS; slbMN*13 m	0
2519	958	.....	.....	11 36 24·4	3·306	2	29 6 47·8	19·96	2	pB; E; gbM; *8 nf 5′	1
2520	959	II. 831	.....	11 36 29·2	3·286	2	31 16 21·8	19·96	2	pB; cS; E; psbM*12.....	3
2521	960	.....	.....	11 36 32·6	3·121	2	69 15 52·8	19·96	2	cF; S; R; 1st of 5	1
2522 2523 2524 2525	960, *a*	.....	R. 4 novæ	11 36 ±	.....	...	69 15 ±	.....	...	8 "knots" (vide h. 960, 1, 2, 3)	0
2526	961	.....	.....	11 36 39·1	3·120	2	69 20 12·8	19·96	2	cF; S; R; 2nd of 5.....	1
2527	962	III. 377	.....	11 36 44·2	3·120	3	69 17 13·8	19·96	3	F; S; R; vglbM; 3rd of 5 ...	5
2528	963	.....	.....	11 36 46·7	3·120	1	69 14 9·8	19·96	1	vF; pS; 4th of 5	1
2529	964	.....	.....	11 36 53·3	3·264	1	33 34 40·8	19·96	1	F; pL; R; vgbM	1
2530	965	.....	.....	11 36 53·6	3·159	1	55 42 18·8	19·96	1	F; S; R; psbM	1
2531	.....	III. 35	.....	11 36 57·9	3·098	1	78 55 57·8	19·96	1	eF; vS	1
2532	.....	III. 776	.....	11 37 2·1	3·265	1	33 19 56·8	19·96	1	eF; pL; lE	1
2533	966	III. 378	.....	11 37 6·3	3·120	1	69 15 33·8	19·96	1	eF; vS; R; 5th of 5	3
2534	.....	III. 36	.....	11 37 11·9	3·098	1	78 55 57·8	19·96	1	eF; vS.....	1
2535	.....	III. 386	.....	11 37 37·2	3·118	1	69 27 57·1	19·97	1	vF; vS; r	1
2536	970	.....	.....	11 37 45·7	3·118	1	69 14 20·1	19·97	1	F; S; R; bM (?).....	1
2537	.....	III. 385	.....	11 37 53·2	3·117	1	69 35 57·1	19·97	1	vF; vS; r.....	1
2538	971	.....	.....	11 38 30·2	+3·096	2	78 23 56·4	+19·98	2	F; S; iR; psbM	1

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	h.	H.		h m s	s		° ′ ″	″			
2539	972	III. 833	.....	11 38 34·3	+3·218	3	39 1 19·4	+19·98	3	cF; cS; R; psbM	4
2540	967	.....	.....	11 38 34·6	3·152	1?	56 6 59·4	19·98	1?	eF; R; gbM; 1st of 4	1*
2541	973	II. 104	.....	11 38 35·6	3·102	3	75 27 32·4	19·98	3	B; S; R; smbM*	5
2542	.....	III. 104	.....	11 38 36·0	3·091	1	80 40 29·4	19·98	1	vF; vS; suspected	1
2543	.....	III. 387	.....	11 38 37·2	3·116	1	69 27 58·4	19·98	1	vF; vS; r	1
2544	.....	III. 103	.....	11 38 37·6	3·093	1	80 1 58·4	19·98	1	vF; r	1
2545	.....	I. 201	.....	11 38 55·9	3·202	2	41 43 58·4	19·98	2	B; L; mE 25°±	2
2546	974	.....	.....	11 38 56·4	3·150	1	56 1 20·4	19·98	1	vF; R; 2nd of 4	1
2547	.....	II. 881	.....	11 39 0·8	3·391	1	19 49 57·4	19·98	1	F; pL; mE 105°±	1
2548	968 = 975	.....	.....	11 39 1·4	3·150	2	56 3 20·4	19·98	2	vF; R; gbM; 3rd of 4	2
2549	969 = 976	.....	.....	11 39 14·9	3·149	2	56 7 5·4	19·98	2	vF; R; gbM; 4th of 4	2
2550	3358	.....	.....	11 39 16·6	2·903	2	145 36 20·4	19·98	2	vF; lE; 2 st inv	1
2551	.....	III. 372	.....	11 39 21·8	3·112	1	68 35 58·4	19·98	1	vF; cL	1
2552	977	III. 388	.....	11 39 30·9	3·116	1	68 49 39·4	19·98	1	cF; S; iR; gbM; r; *7 sp 6′	4
2553	3359	III. 828	.....	11 39 45·1	3·014	2	117 8 33·7	19·99	2	cF; vS; vlE; bM; vF*sf ...	2
2554	979 = 3360	I. 120	.....	11 39 56·8	3·040	2	106 4 52·7	19·99	2	pB; L; iR; vgpmbM	3
2555	978	II. 785	.....	11 40 6·3	3·238	2	33 15 24·7	19·99	2	pB; S; lE; pgbM	3
2556	980	II. 723	.....	11 40 45·5	3·136	3	58 51 30·7	19·99	3	pB; S; bM	4
2557	981 = 3361	II. 553	.....	11 40 53·3	3·053	2	100 10 27·7	19·99	2	pB; pL; R; gbM; r	4
2558	.....	III. 940	.....	11 40 54·2	3·462	1	14 52 59·0	20·00	1	vF; S; R; bM	1
2559	982	II. 738	.....	11 41 12·9	3·192	1	40 30 26·0	20·00	1	B; pL; R; mbM	2†
2560	983	I. 248	.....	11 41 18·7	3·250	2	29 48 43·0	20·00	2	B; pL; iR; pgmbM; p of 2 ..	4
2561	984	II. 832	.....	11 41 29·7	3·248	1	29 47 51·0	20·00	1	pF; pL; vlE; gbM; f of 2 ...	3
2562	.....	II. 739	.....	11 41 36·1	3·189	1	40 30 59·0	20·00	1	F; vS	1
2563	986	II. 408	.....	11 41 41·5	3·144	3	54 11 35·0	20·00	3	F; S; R; bM	5
2564	985	I. 228	.....	11 41 45·6	3·224	4	33 8 26·0	20·00	4	B; pL; lE; svmbM	6
2565	987	.....	.....	11 41 51·5	3·123	1	62 46 31·0	20·00	1	pB; R; smbM	1
2566	988	I. 82	.....	11 41 53·3	3·124	5	62 11 43·0	20·00	5	B; pL; vlE 0°±; bMN	8
2567	.....	III. 970	.....	11 41 58·8	3·564	1	11 7 57·0	20·00	1	pF; pL; r	1
2568	989	III. 321	.....	11 42 1·2	3·122	2	63 5 50·0	20·00	2	F; pS; lE; vglbM	3
2569	3362	.....	.....	11 42 1·4	2·998	2	126 44 21·0	20·00	2	pB; cS; vlE; lbM	2
2570	3363	II. 864	.....	11 42 9·2	3·019	1	118 32 27·0	20·00	1	pB; S; R; mbM	2
2571	.....	III. 715	.....	11 42 11·9	3·185	1	40 48 0·0	20·00	1	eF; pL	1
2572	990	.....	.....	11 42 19·8	3·065	1	90 19 7·0	20·00	1	eF; S; psbM	1
2573	3364	.....	.....	11 42 34·3	2·967	1	137 29 23·0	20·00	1	Cl; vL; lC; st 9...14	2
2574	991	III. 341	.....	11 42 42·2	3·117	(1)	64 17 48·0	20·00	1:	vF; S; p of 2	2
2575	992	II. 342	.....	11 42 49·0	3·120	3	62 44 0·3	20·01	3	F; pL; R; pgbM	4
2576	.....	II. 786	.....	11 43 0·7	3·209	1	33 53 0·3	20·01	1	F; E	1
2577	.....	III. 113	.....	11 43 4·8	3·066	1	94 21 0·3	20·01	1	eF; eS; bet 2 st	1*
2578	993	II. 787	.....	11 43 20·3	3·206	1	34 4 32·3	20·01	1	eF; R; gbM	2
2579	994	.....	.....	11 43 20·4	3·190	1	37 23 43·3	20·01	1	F; L; vmE; vgbM	1
2580	995	III. 90	.....	11 43 20·5	3·084	2	82 38 55·3	20·01	3	F; vS; R; lbM; *13 np 80″.	4
2581	3365	.....	.....	11 43 23·9	2·934	4	146 24 8·3	20·01	5	○; !; S; R; blue; =*7m; 1ˢ·5=d.	6
2582	996	.....	.....	11 43 33·5	3·115	1::	64 17 48·3	20·01	1	Neb; f of 2	1
2583	.....	II. 824	.....	11 43 36·9	3·193	1	36 21 30·3	20·01	1	pB; L; mE	1
2584	997	II. 788	.....	11 43 37·1	3·203	1	34 8 32·3	20·01	1	pF; S; R; pspmbM	2
2585	.....	III. 716	.....	11 43 47·7	3·180	1	39 1 0·3	20·01	1	vF; vS	1
2586	3366	I. 259	.....	11 43 57·8	3·025	2	118 3 5·3	20·01	2	B; pL; lE; gmbM; r; vS*sp inv.	3
2587	.....	II. 825	.....	11 43 59·4	3·189	1	39 8 0·3	20·01	1	pB; S; iF; bM	1
2588	.....	.....	D'Arrest, 83	11 44 6	3·11	[1]	67 19 48	20·01	[1]	vF; vS	0
2589	998	III. 379	.....	11 44 11·2	+3·108	1	67 12 20·3	+20·01	1	eF; eS; vlE; er; st nr	4

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	h.	H.		h m s	s		° ′ ″	″			
2590	999	II. 740	.....	11 44 24·7	+3·170	1	40 31 56·6	+20·02	1	pF; S; R; pspmbM	2
2591	1000	III. 616	.....	11 44 29·7	3·139	2	51 13 20·6	20·02	2	eF; cL; iF; glbM; *6n5′; *7f	4*
2592	.....	III. 769	.....	11 44 39·8	3·182	1	37 16 0·6	20·02	1	eF; S	1
2593	.....	.....	D'Arrest, 84	11 44 49	3·17	[1]	40 35 48	20·01	[1]	vF; v diffic; H. II. 740 np ...	0
2594	1001	.....	.....	11 45 8·9	3·124	3	56 48 50·6	20·02	3	pF; S; lE; psbM	3
2595	3367	.....	.....	11 45 19·8	3·033	1	116 7 21·6	20·02	1	vF; cL; vmE 59°·3	1
2596	1003	III. 389	.....	11 45 28·9	3·103	1	68 35 6·6	20·02	1	vF; cS; R	2
2597	1002	I. 203	.....	11 45 30·5	3·150	2	45 5 35·6	20·02	2	B; vL; R; bMpBN; er	3†*
2598	.....	III. 971	.....	11 45 31·1	3·378	1	14 7 0·6	20·02	1	eF; vS; R	1
2599	1004	III. 380	.....	11 45 34·2	3·103	1	68 14 0·6	20·02	1	vF; cS; R	3
2600	1005	I. 173	.....	11 45 38·3	3·132	3	52 13 50·6	20·02	3	vB; pL; R; smbM*9	4
2601	1007	III. 322	.....	11 45 50·3	3·111	3	63 0 39·6	20·02	3	pF; pS; R; psbM	4
2602	1006	I. 251	.....	11 45 50·5	3·211	2	28 33 14·6	20·02	2	B; pL; R; gmbM; r; *f.....	3
2603	1008	II. 403	.....	11 46 7·9	3·101	1	68 28 0·6	20·02	2	F; pS; iE; lbM; *p	5
2604	1009	I. 202	.....	11 46 21·7	3·155	2	41 21 59·9	20·03	2	cB; pL; pmE; vgbM	4*
2605	1010	III. 342	.....	11 46 22·4	3·105	1	65 49 28·6	20·02	1	vF; cS; vlE.....	2
2606	1011	V. 45	.....	11 46 27·4	3·169	1	36 53 3·9	20·03	1	cB; L; E 0°±; vsbMLrN ...	3†
2607	1012	III. 612	.....	11 46 28·1	3·068	2	93 13 23·9	20·03	2	cF; cS; lE 90°±; bM; r ...	4
2608	1013	III. 381	.....	11 46 30·0	3·101	1	68 20 44·9	20·03	1	eF; R	2*
2609	.....	II. 623	.....	11 46 53·7	3·043	2	112 24 0·9	20·03	2	cF; S; E 170°±; lbs	2
2610	3368	III. 290	.....	11 46 56·8	3·047	1	109 47 29·9	20·03	1	cF; pL; pmE 56°·8.....	2
2611	.....	II. 294	.....	11 46 58·4	3·048	1	108 47 0·9	20·03	1	F; S; E; r	1
2612	1014	II. 833	.....	11 47 1·8	3·188	2	30 51 20·9	20·03	2	pF; pS; pmE; vgbM	3
2613	1015	IV. 67	.....	11 47 27·9	3·184	2	30 43 51·9	20·03	2	pF; cL; R; vg, sbM	3
2614	3369	.....	Δ. 349	11 47 29·3	2·976	1::	144 56 21·9	20·03	1	Cl; pL; pRi; gplmbM; st 13	3
2615	.....	III. 905	.....	11 47 31·4	3·254	1	19 54 0·9	20·03	1	eF; vS.....	1
2616	3370	I. 67	.....	11 47 32·4	3·056	2	103 11 30·9	20·03	2	cB; pL; iR; gmbM; Δ 2 st...	6
2617	1016	.....	.....	11 47 39·1	3·108	2	60 57 8·9	20·03	2	vF; S; E; *10nf att	3
2618	.....	II. 789	.....	11 48 4·2	3·166	1	33 54 0·9	20·03	1	pB; E	1
2619	.....	II. 790	.....	11 48 4·2	3·166	1	33 54 0·9	20·03	1	F; S.....	1
2620	1017	IV. 62	.....	11 48 6·5	3·165	1	34 6 0·9	20·03	1	B; pL; R; g, sbM disc	2
2621	1018	II. 162	....	11 48 16·5	3·086	2	77 15 16·9	20·03	2	pB; L; iR: bM; *10, 25°, 5′	4
2622	1018, *a*	.....	R. nova	11 48 +	.....	...	77 15 —	.....	...	nf h. 1018	0
2623	1020	.....	.....	11 48 18·9	3·060	1	101 15 54·9	20·03	1	F; S; R; psbM; p of 2	1
2624	1019	II. 724	.....	11 48 20·0	3·109	1	59 13 39·9	20·03	1	pF; vS; R; bM	2
2625	1021	.....	.....	11 48 32·4	3·060	1	101 12 44·9	20·03	1	vF; S; R; bM; f of 2.....	1
2626	1022	II. 132	.....	11 48 45·9	3·079	3	82 28 4·2	20·04	3	B; pL; cE 30°; vsmbMN ...	4
2627	1023	II. 840	.....	11 48 54·9	3·178	2	28 42 30·2	20·04	2	cF; S; lE; bM; *8, 90°, 6′...	3
2628	.....	III. 274	.....	11 49 3·7	3·052	1	109 7 1·2	20·04	1	vF; pL; iF	1
2629	1024	III. 343	.....	11 49 10·1	3·098	1	65 20 55·2	20·04	1	cF; cS; R; psbM	2
2630	1026	.....	.....	11 49 23·3	3·104	1	60 13 26·2	20·04	1	eF; S; R; bM.....	1
2631	1025	III. 707	.....	11 49 23·7	3·136	1	40 52 57·2	20·04	1	vF; cS; another suspected ...	3
2632	1027	.....	.....	11 49 30·3	3·107	3	57 11 59·2	20·04	3	pF; S; pmE 90°±; *11 nr...	1
2633	1028	.....	.....	11 50 9·6	3·100	1	61 20 43·2	20·04	1	vF; S; R; bM*; p of 2	2
2634	1029	II. 791	.....	11 50 14·3	3·147	1	33 46 31·2	20·04	1	pF; S; lE; pslbM	2
2635	1030	IV. 61	.....	11 50 15·6	3·142	1	35 50 34·2	20·04	1	cB; vL; pmE; sbMBrN	3
2636	1032	.....	.....	11 50 34·2	3·085	3	74 55 29·2	20·04	2	vF; pL; R; 2 st f.....	3
2637	1031	I. 229	.....	11 50 34·3	3·145	1	33 46 21·2	20·04	1	cB; pS; R; vg, smbM	2
2638											
2639	1033, *a*	.....	R. 3 novæ	11 50 ±	.....	...	63 57 ±	.....	...	one S, R; the other two E ...	0
2640											
2641	1033	III. 323	.....	11 50 36·1	3·095	1	63 57 34·2	20·04	1	pF; vS; E 25° bet 2 st	2
2642	1040, *a*	.....	R. nova	11 50 44·7	3·121	::	41 54 13·2	20·04	::	S; R; 7′ np h. 1040.....	0
2643	1034	III. 344	.....	11 50 45·6	3·093	1	66 0 39·2	20·04	1	vF; vS; R; n of 2	2
2644	1035	III. 345	.....	11 50 45·6	3·093	1	66 4 59·2	20·04	1	vF; vS; R; s of 2	2
2645	1036	III. 354?	.....	11 50 52·9	3·097	2	61 20 22·2	20·04	2	F; vS; R; *12 near	3
2646	.....	III. 324	.....	11 50 53·4	3·095	1	63 53 51·2	20·04	1	eF; suspected	1
2647	1037	.....	.....	11 50 56·3	3·070	1	91 21 8·2	20·04	1	F; S; R; bM; *11 nf	1
2648	.....	III. 325	.....	11 50 57·6	3·087	1	66 6 2·2	20·04	1	eF; vS.....	1
2649	1038	II. 368	.....	11 51 3·0	3·097	4	61 1 33·2	20·04	3	pB; pS; R; psbM; r	5
2650	1039	.....	.....	11 51 4·6	+3·097	1	61 10 ± ?	+20·04	0	vB; mE; mbM (?P.D.)	1*

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	h.	H.		h m s	s		° ′ ″	″			
2651	1040	.....	.....	11 51 14·4	+3·121	1	41 59 10·2	+20·04	1	F; pL; mE; vglbM	1
2652	1041	II. 733	.....	11 51 19·2	3·116	2	45 17 9·2	20·04	2	B; cL; mE 62°·3; vsvmbM*10	3*†
2653	1042	.....	.....	11 51 24·9	3·086	2	73 2 32·2	20·04	2	pB; pS; R; psbM	2*
2654	1043, *a*	.....	R. nova	11 51 33	3·095	:	61 39 50	20·04	:	vF	0
2655	1043	II. 369	.....	11 51 33·0	3·095	(1)	61 44 50·2	20·04	2	F; L; E; gbfM	4
2656	1044	.....	.....	11 51 42·8	3·083	1	75 0 46·2	20·04	1	eF; *9 sf 5′	1
2657	1045	II. 725	.....	11 51 43·9	3·097	1	58 47 57·5	20·05	1	pB; pL; E 19°·5; biN	2
2658	.....	II. 295	.....	11 51 56·2	3·059	1	107 35 2·5	20·05	1	F; vS; iF; bM	1
2659	1046	III. 617	.....	11 51 57·7	3·104	1	51 24 39·5	20·05	1	eF; pL; R	3
2660	1047	I. 223	.....	11 52 6·8	3·122	1	38 15 44·5	20·05	1	vB; cL; mE 160°±; vsvmbMBN.	3
2661	3371	II. 296	.....	11 52 23·1	3·059	1	108 29 25·5	20·05	1	⊕; pF; pL; R; rr; st 16 ...	2
2662	.....	III. 3	.....	11 52 45·0	3·083	2	73 0 1·5	20·05	2	vF; vS; vlE; r	2
2663	1048	I. 121	.....	11 53 12·3	3·072	2	90 19 7·5	20·05	2	cB; L; vlE; psmbM; B st nr	4
2664	1049	II. 404	.....	11 53 21·0	3·084	6	69 8 34·5	20·05	6	pF; pL; R; gbM; * 12 nf...	7
2665	.....	II. 508	.....	11 53 21·4	3·062	1	107 3 2·5	20·05	1	pB; S; lE; bM	1
2666	.....	III. 903	.....	11 53 45·4	3·155	1	19 52 1·5	20·05	1	eF; S; iF; gvlbM	1
2667	3372	III. 279	.....	11 53 50·5	3·064	1	105 10 13·5	20·05	1	eF; pL; *945°±	2
2668	1050	I. 253	.....	11 54 12·4	3·125	1	27 19 59·5	20·05	1	{H. vb; vL; E / h. pB; 25″; R}	2*
2669	1051	III. 77	.....	11 54 13·1	3·079	2	75 49 13·5	20·05	2	eF; pL; R; r	3
2670	1052	IV. 28·1	.....	11 54 43·7	3·064	1	108 5 11·5	20·05	1	pB; cL; R; vgbM	2†
2671	1053	IV. 28·2	.....	11 54 43·7	3·064	1	108 7 11·5	20·05	1	pF; pL	2†
2672	1054	I. 252	.....	11 54 58·6	3·117	2	27 5 10·5	20·05	2	B; cL; R; g, psvmbMrN ...	3
2673	1055	.....	.....	11 55 10·9	3·074	1	84 52 38·5	20·05	2	pF; S; R; psbM; * f 30′ ...	2
2674	1056	III. 491	.....	11 55 18·9	3·072	1	89 25 53·5	20·05	1	eF; cS; R; bM	3
2675	1057	II. 276	.....	11 55 32·9	3·072	1	87 14 48·5	20·05	1	pF; L; R; sbM; * sf	4
2676	1058	II. 741	.....	11 55 36·5	3·095	1	40 35 7·5	20·05	1	pB; pS; R	2
2677	1059	.....	.....	11 55 38·9	3·079	2	71 12 12·5	20·05	2	vF; vS; R; psbM	2
2678	1060	III. 390	.....	11 55 41·8	3·079	1	70 28 21·5	20·05	3	eF; pS; R; glbM	4
2679	.....	II. 509	.....	11 55 47·7	3·066	1	105 36 2·5	20·05	1	F; cL; iR; lbM	1
2680	1061	IV. 56	.....	11 55 58·3	3·089	4	44 41 3·5	20·05	4	B; vL; E; vg, vsmbM * 11...	5†
2681	3373	.....	.....	11 55 59·6	3·039	1	152 24 13·5	20·05	1	Cl; pRi; lC	1
2682	.....	III. 794	.....	11 56 8·6	3·099	1	31 18 2·5	20·05	1	eF; S	1
2683	1062	.....	.....	11 56 32·1	3·078	1	68 10 1·5	20·05	1?	pB. P.D. very doubtful ...	1*
2684	1063	.....	.....	11 56 36·6	3·078	1::	68 8 1·5	20·05	1?	pB. P.D. very doubtful ...	1*
2685	1064	.....	.....	11 56 40·6	3·078	1::	67 55 1·5	20·05	1?	pB. P.D. very doubtful ...	1*
2686	1065	.....	.....	11 56 51·4	3·077	3	68 59 39·5	20·05	3	vF; S; R; D neb pos 70° ...	3*
2687	1066	I. 174	.....	11 56 53·2	3·080	4	57 19 32·5	20·05	4	pB; vL; mE 97°; vgbM.....	5
2688	.....	.....	D'Arrest, 85	11 56 57	3·07	[1]	70 46 42	20·06	[1]	B; E; gbM * 17 p, 82″ dist..	0
2689	1067	.....	.....	11 56 57·5	3·077	2	68 59 58·5	20·05	2	pF; R	2*
2690	1068	.....	.....	11 56 59·7	3·076	4	68 51 54·5	20·05	4	pB	4*
2691	1069	III. 37	.....	11 57 1·0	3·074	5	78 21 53·5	20·05	5	F; pS; R; gbM	6
2692	.....	II. 781	.....	11 57 1·6	3·087	2	36 40 2·5	20·05	2	pF; S; stellar	2
2693	1070	III. 392	.....	11 57 1·7	3·076	1	68 53 38·5	20·05	1	vF; vS	2*
2694	1071	III. 391	.....	11 57 2·0	3·076	2	68 49 13·5	20·05	2	F; vS	2*
2695	3374	.....	.....	11 57 4·9	3·046	1	156 31 32·5	20·05	1	vF; vS; R; bM*; am st ...	1
2696	1072	II. 277	.....	11 57 17·2	3·072	4	87 19 26·5	20·05	4	F; pS; R; pgbM; np of 2 ...	7
2697	1073	III. 393	.....	11 57 20·8	3·076	1	68 54 1·5	20·05	1	eF; vS	2*
2698	1074	.....	.....	11 57 20·9	3·072	1	87 9 8·5	20·05	1	F; S; R	1
2699	1075	III. 394	.....	11 57 24·7	3·076	1	69 3 31·8	20·06	1	vF; vS	2*
2700	1076	III. 258	.....	11 57 29·5	3·072	1	87 26 4·8	20·06	1	cF; cS; vlE; bM; sf of 2 ...	3
2701	.....	III. 395	.....	11 57 32·3	3·075	2?	69 7 1·8	20·06	2?	vF; vS	1*
2702	.....	III. 396	.....	11 57 32·3	3·075	2?	69 7 1·8	20·06	2?	vF; vS	1*
2703	1077	.....	.....	11 57 38·1	3·072	1	91 36 8·8	20·06	1	F; L; R; * 10 n 60″	1
2704	1078	III. 355	.....	11 57 42·0	3·076	4	62 13 27·8	20·06	4	cF; pS; E; gbM.....	5
2705	.....	.....	D'Arrest, 86	11 58 13	3·08	[1]	38 54 7	20·06	[1]	F; lE; I. 206 nr	0
2706	3375	III. 754	.....	11 58 24·4	3·070	1	115 44 43·8	20·06	1	pB; S; R; bM	2
2707	.....	I. 224	.....	11 58 40·3	3·074	2	38 56 2·8	20·06	2	B; pL; pmE; vsbM	2
2708	.....	I. 206	.....	11 58 42·2	3·074	3	38 42 22·8	20·06	3	B; cL; pmE 135°±; lbM ...	3
2709	3376	.....	.....	11 58 44·2	+3·072	1	103 45 28·8	+20·06	1	eF; L; pmE; vgbM; 2 st 11 nr	1

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	h.	H.		h m s	s		° ′ ″	″			
2710	1079	III. 382	.....	11 58 45·3	+3·072	1	68 38 1·8	+20·06	2	vF; vS	4
2711	1081	I. 207	.....	11 58 51·9	3·072	1	41 44 34·8	20·06	1	pB; vL; mE 32°·0	4
2712	1080	III. 400	.....	11 58 53·1	3·072	2	52 21 4·8	20·06	2	eF; vS; R; stellar; *10 sp 2′	6
2713	1082	III. 383	.....	11 58 54·0	3·072	2	68 36 5·8	20·06	3	eF; eS; R; bM	5
2714	.....	III. 384	.....	11 58 57·0	3·072	1	68 35 2·8	20·06	1	eF; eS	2
2715	1084	III. 717	.....	11 58 59·8	3·072	1	39 38 47·8	20·06	1	pB; vL; vmE 166°·5; vgvlbM	3
2716	1083	III. 326	.....	11 59 0·1	3·072	2	63 39 44·8	20·06	2	eF; vS; R; vgbM	3
2717	1085	I. 225	.....	11 59 15·4	3·070	1	36 30 34·8	20·06	1	B; pS; R; bMBrN; *12sp,v,nr	3
2718	3377	.....	Δ. 291	11 59 28·0	3·077	3	150 27 56·8	20·06	3	Cl; pL; pC; iR; st 10...14...	3
2719	1086	II. 370	.....	11 59 28·8	3·070	6	61 2 37·8	20·06	6	pB; pS; lE; bM	7
2720	3378	II. 865	.....	11 59 29·4	3·074	2	119 0 26·8	20·06	2	pF; pS; R; psbM; r; p of 2	3
2721	3379	II. 866	.....	11 59 34·4	3·074	2	119 0 41·8	20·06	2	pF; pS; R; pgbM; f of 2 ...	3
2722	1087	.....	.....	11 59 39·8	3·062	1	22 3 42·8	20·06	1	B; S; R; gbM.....	1
2723	1088	I. 195	.....	11 59 52·9	3·067	2	46 9 26·8	20·06	2	vB; pS; mE 151°·0.....	4
2724	3380	.....	.....	11 59 55·8	3·077	2	129 25 18·8	20·06	2	F; S; vlE; glbM; 3B st nr...	2
2725	1089	.....	.....	12 0 0·5	3·068	1	55 13 46·8	20·06	1	eF	1
2726	3381	III. 533	.....	12 0 0·9	3·074	1	102 24 23·8	20·06	1	cF; S; iR; gbM.....	2
2727	1090	.....	.....	12 0 1·7	3·070	1	74 49 13·8	20·06	1	eF; suspected	1
2728	1092, *a*	.....	R. nova	12 0 19·8	3·072	...	86 30 33·5	20·06	...	Hook-shaped; h. 1092 is nf 45°; 14′ dist.	0
2729	1091	III. 708	.....	12 0 26·9	3·064	1::	46 12 1·8	20·06	1::	vF; vS.....	2
2730	.....	II. 14	.....	12 0 42·1	3·070	1	79 41 2·5	20·05	1	lE	1*
2731	.....	III 904	.....	12 0 56·3	3·040	1	19 38 2·5	20·05	1	eF; vS; E	1
2732	1093	.....	.....	12 0 59·2	3·064	1	56 13 7·5	20·05	1	eF; vS; R; mbM	1
2733	1092	V. 4	.....	12 0 59·4	3·072	2	86 20 39·5	20·05	2	cF; vL; E 90°±; bM *16...	4†
2734	1094	I. 33 = II.60	.....	12 1 1·2	3·070	2	78 50 36·5	20·05	3	pB; pL; mE 120°; bM; r ...	5
2735	.....	.....	Auw. N. 28	12 1 3·1	3·045	...	24 2 50·6	20·05	...	pB; pL; cE; mbMN (Hind, Jan. 5, 1850).	0
2736	1095	III. 68	.....	12 1 28·2	3·067	1	73 5 11·5	20·05	1	vF; S; R; pslbM; bet 2 vS st	2
2737	1096	I. 279	.....	12 1 29·2	3·005	2	12 25 10·5	20·05	2	F; pL; vlE; glbM	4
2738	.....	I. 263	.....	12 1 33·2	3·032	1	20 25 2·5	20·05	1	cB; lE; bM.....	1
2739	1097 = 3382	II. 548	.....	12 1 42·3	3·074	3	98 15 19·5	20·05	3	F; pL; pmE 95°±; vglbM	4
2740	1098	III. 356	.....	12 1 47·9	3·063	2	59 56 7·5	20·05	2	cF; S; R; 1st of 3	3
2741	1099	III. 357	.....	12 1 52·9	3·063	3	59 58 57·5	20·05	3	cF; S; iR; 2nd of 3	4
2742	1100	I. 278	.....	12 1 59·4	3·003	2	14 19 20·5	20·05	2	pB; cL; R; gmbM.....	3
2743	1101	II. 371	.....	12 2 1·4	3·062	2	60 3 7·5	20·05	2	pF; pL; lE; 3rd of 3	4
2744	1108	II. 321	.....	12 2 6·7	3·061	1	59 18 5·5	20·05	1	F; vL; vgmbM	3
2745	.....	I. 196	.....	12 2 23·2	3·053	2	45 32 32·5	20·05	2	B; pL; lE; vgbM; * np.....	2
2746	1102	III. 795	.....	12 2 29·8	3·037	1	30 22 0·5	20·05	1	vF; pS; lE; gbM; r	3
2747	1103	III. 814	.....	12 2 31·4	3·044	1	36 6 6·5	20·05	1	vF; S; iF; vglbM; er.....	2*
2748	1104	IV. 54	.....	12 2 43·5	3·051	1::	46 44 3·5	20·05	1	cB; R; vg, vsbMN.....	2
2749	1107	II. 747	.....	12 2 54·1	3·047	2	42 46 19·5	20·05	2	pF; cL; vmE 109°·0; vgbM..	3
2750	1105	I. 169	.....	12 2 54·5	3·053	1	49 20 37·5	20·05	1	B; vL; vglbM.....	2
2751	1106, *a*	.....	R. nova	12 2 ±	.....	...	70 40 ±	.....	...	S; prec h. 1106	0
2752	1106	I. 19	.....	12 2 55·5	3·064	3	70 40 17·5	20·05	3	⊕; vB; pL; R; gbM; rrr ...	4
2753	.....	III. 327	.....	12 2 56·8	3·060	1	62 48 2·5	20·05	1	vF; pS.....	1
2754	1109	II. 802	.....	12 3 22·6	3·030	1	30 56 13·5	20·05	1	F; S; E	2
2755	1110	I. 73	.....	12 3 26·7	3·057	1	58 49 5·5	20·05	1	B; S; R; pgmbM	3
2756	1111	I. 165	.....	12 3 27·0	3·050	2	49 49 31·5	20·05	2	vB; S; R; vsmbMBN; p of 2	4†
2757	1112	II. 83	.....	12 3 28·7	3·064	3	73 11 28·5	20·05	3	pB; pL; R; pgmbM; r	4
2758	.....	I. 11	.....	12 3 36·9	3·063	1	70 52 2·5	20·05	1	B; pL; E; bM	1
2759	.....	III. 845	.....	12 3 42·6	3·026	1	30 53 2·5	20·05	1	vF; S; E 90°±	1
2760	1113	II. 642	.....	12 3 46·5	3·049	2:	49 45 45·5	20·05	2:	pF; S; E; vgbM; f of 2.....	4†
2761	1114	I. 208	.....	12 4 0·9	3·036	1	38 43 54·5	20·05	1	pF; cL; vmE 60°±	4
2762	1115	II. 405	.....	12 4 4·2	3·061	1	69 2 58·5	20·05	1	F; pS; lE; bM; pB* nf.....	3
2763	1116	III. 941	.....	12 4 4·7	2·945	1	13 5 48·5	20·05	1	eF; pS; R; Δ 2 st	2
2764	.....	II. 803	.....	12 4 39·4	+3·018	2	31 27 2·5	+20·05	2	F; S; R	2

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	h.	H.		h m s	s		° ′ ″	″			
2765	1117	II. 353	.....	12 4 46·9	+3·057	1	65 5 49·5	+20·05	1	B; L; iE; bM	2
2766	.....	III. 399	.....	12 4 56·4	3·046	2	53 2 2·5	20·05	2	vF; pL; vlE; er	2
2767	1118	.....	.....	12 5 4·5	3·045	1	52 43 3·5	20·05	1	F; pL; R; vgbM; * sp 10′	1
2768	1119	II. 105	.....	12 5 8·6	3·063	1	76 1 5·5	20·05	1	pB; pL; iF; psbM; r; * inv	3
2769	1120	III. 358	.....	12 5 14·5	3·051	2	60 3 17·5	20·05	2	F; S; 1st of 4	4
2770	1123	II. 792	.....	12 5 16·6	3·016	1	33 2 58·5	20·05	1	F; S; lE; gbM	2
2771	1121	II. 372	.....	12 5 17·2	3·051	2	60 0 1·5	20·05	1::	F; S; 2nd of 4	4*
2772	1122	III. 359	.....	12 5 18·7	3·051	2	60 5 31·5	20·05	2	F; S; 3rd of 4	4
2773	1124	III. 360	.....	12 5 27·2	3·050	2	60 3 31·5	20·05	2	F; eS; 4th of 4	4*
2774	3383	III. 534	.....	12 5 30·9	3·081	1	103 14 38·5	20·05	1	vF; pL; R; vgbM	2
2775	1125	.....	.....	12 5 35·2	2·993	1	78 22 7·5	20·05	2	vF; vL; E 45°±; *7 f	2
2776	1126	I. 9	.....	12 5 42·9	3·070	1	87 55 28·5	20·05	1	pB; pS; pmE 135°±; bMN	5
2777	1127	II. 133	.....	12 5 53·0	3·067	3	82 11 3·5	20·05	3	pF; S; lE 0°±; r	5
2778	.....	III. 777	.....	12 6 4·8	3·016	1	36 20 2·5	20·05	1	eF; S; stellar	1
2779	1128	III 697	.....	12 6 13·1	3·031	2	45 32 36·5	20·05	2	vF; cL; mE 170°±	5
2780	3384	.....	.....	12 6 14·4	3·152	1	151 56 12·2	20·04	1	Cl; mC; st eS	1
2781	1129	II. 373	.....	12 6 15·1	3·048	3	60 42 57·2	20·04	3	cF; L; R; gbM	5
2782	.....	II. 813	.....	12 6 28·8	3·018	1	38 30 2·2	20·04	1	pB; S; lE	1
2783	1131	II. 106	.....	12 6 38·7	3·061	1	75 48 11·2	20·04	1	F; L; lE; vglbM; r	3
2784	1133	II. 409	.....	12 6 39·4	3·038	1	52 35 28·2	20·04	1	cF; pS; R; vglbM; r	3
2785	1130	.....	.....	12 6 39·6	3·066	4	82 1 3·2	20·04	4	cF; R; bM; near S*	4
2786	1132	.....	M. 98	12 6 40·0	3·060	3	74 19 1·2	20·04	4	B; vL; vmE 152°·1; vsvmbM	7
2787	1134	II. 163	.....	12 6 44·6	3·061	1	76 3 5·2	20·04	1	vF; pL; E; vgbM	2
2788	1135	II. 867	.....	12 7 6·6	3·004	1	34 40 46·2	20·04	1	pB; vS; vsbM *12	2
2789	.....	III. 796	.....	12 7 8·8	2·988	1	29 34 2·2	20·04	1	eF	1
2790	1136	II. 374	.....	12 7 26·4	3·045	4	60 48 15·2	20·04	4	pB; S; R; vsmbM *	5
2791	1137	II. 134	.....	12 7 28·5	3·066	1	83 24 54·2	20·04	1	pF; pmE; vgbM	2
2792	1139	II. 793	.....	12 7 29·7	2·997	1	33 12 18·2	20·04	1	pF; pS; lE; gbM	3
2793	.....	III. 797	.....	12 7 32·0	2·983	2	29 16 2·2	20·04	2	vF; S	2
2794	1138	II. 164	.....	12 7 32·7	3·061	2	77 3 13·2	20·04	2	cF; { H. vmE / h. R, 2 obs. } lbM	3
2795	.....	II. 165	.....	12 7 44·7	3·060	1	76 4 2·2	20·04	1	F; vmE	1
2796	1140	I. 175	.....	12 8 1·5	3·037	2	56 1 26·2	20·04	2	vB; S; R; psmbM	3
2797	1141	III. 397	.....	12 8 8·0	3·051	1	68 33 36·2	20·04	2	vF; cL; iR; vgbM	4
2798	.....	.....	D'Arrest, 87	12 8 9	2·96	[1]	25 25 42	20·04	[1]	pB; pS; R; *12 f; ln	0
2799	1142	II. 107	.....	12 8 19·4	3·058	1	75 19 25·2	20·04	1	vF; pL; R; gbM	2
2800	.....	II. 375	.....	12 8 21·7	3·041	1	60 43 22·2	20·04	1	F; pS	1
2801	1143	III. 850	.....	12 8 23·4	2·945	1	23 14 29·2	20·04	1	pF; pS; R; vgbM	2
2802	1144	II. 108	.....	12 8 31·3	3·057	2	75 19 1·2	20·04	2	B; L; E 90°±; g, sbM; r	3
2803	1145	II. 354	.....	12 8 31·6	3·047	1	65 13 59·2	20·04	1	cF; vS; R	2
2804	1146	I. 95	.....	12 8 36·0	3·030	1	52 54 3·2	20·04	1	cB; cL; iE; biN	3†
2805	1147	II. 135	.....	12 8 44·8	3·065	3	82 49 9·2	20·04	3	B; pS; E; sbM *11	4
2806	1148	I. 35	.....	12 8 46·7	3·058	2	76 4 2·2	20·04	3	vB; vL; vmE 17°±; sbMN	5†
2807	1149	II. 748	.....	12 8 49·1	3·009	4	42 8 55·2	20·04	5	pF; L; mE 45°·0; * n, p of 2	6†
2808	.....	III. 718	.....	12 8 55·0	3·006	1	41 5 2·2	20·04	1	vF; vS	1
2809	3385	.....	.....	12 9 7·3	3·126	4	132 32 44·2	20·04	4	pF; pL; pmE; vglbM	4
2810	1150	.....	.....	12 9 9·1	2·931	1	22 59 24·2	20·04	1	pB; S; R; psbM	1
2811	1151	I. 209	.....	12 9 12·9	3·005	1	41 20 34·2	20·04	1	cB; pL; pmE 134°·4; psbM	3
2812	1152	II. 137	.....	12 9 17·5	3·065	1::	82 31 31·9	20·03	1	pF; pL; R; r (? R.A. 10ᵐ)	3
2813	1153	II. 136	.....	12 9 21·7	3·063	2	81 45 38·9	20·03	2	pB; pS; lE; gb, *not* M; r	4
2814	.....	II. 109	.....	12 9 23·0	3·057	1	76 8 1·9	20·03	1	r	1*
2815	1154	.....	.....	12 9 25·1	3·084	1	101 31 49·9	20·03	1	F; eS; R; *170°, 60″	1
2816	1155	.....	.....	12 9 28·9	3·005	1	42 12 32·9	20·03	1	F; S; lE; f of 2	1
2817	1156	II. 518	.....	12 9 31·4	3·030	2	55 42 6·9	20·03	2	F; vS; vlE; psbM; sp of 2	4
2818	1157	.....	.....	12 9 32·3	3·026	1	52 53 41·9	20·03	1	vF; L; R; gbM	1
2819	1158	II. 519	.....	12 9 36·9	3·030	2	55 39 37·9	20·03	2	cF; vS; lE; psbM; nf of 2	4
2820	3386	.....	.....	12 9 41·0	3·160	1	144 31 20·9	20·03	1	Cl; F; pL; iF; st 13...15	1
2821	1159	II. 17	.....	12 9 58·6	3·063	2	82 1 40·9	20·03	2	pB; pL; pmE; lM; p of 2	5
2822	1160	.....	.....	12 9 59·5	3·067	1	85 32 30·9	20·03	1	pB; L; R; gbM	1
2823	1161	II. 496	.....	12 9 59·5	3·063	1	81 35 59·9	20·03	1	pF; R; vsbMSN	2
2824	1162	II. 11	.....	12 10 3·8	+3·054	2	73 54 23·9	+20·03	2	pB; pL; lE; vgbM; r	5

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	h.	H.		h m s	s		° ′ ″	″			
2825	1163	V. 51	.....	12 10 4·1	+2·894	1	19 48 0·9	+20·03	1	vF; eL; mE 160°±; vgbM..	3
2826	1164	III. 851	.....	12 10 5·7	2·939	1	25 48 56·9	20·03	1	vF; pS; iR; vglbM.....	2
2827	.....	III. 719	.....	12 10 13·6	2·999	1	41 44 31·9	20·03	1	vF; vS; n of D neb	1
2828	.....	III. 720	.....	12 10 13·6	2·999	1	41 45 31·9	20·03	1	vF; vS; s of D neb.....	1
2829	1165	III. 480	.....	12 10 17·5	3·063	2	82 32 50·9	20·03	2	vF; L; vgbM; *7 s	3
2830	1166	III. 725	.....	12 10 20·5	3·003	2	43 35 49·9	20·03	2	vF; eL; iR; vgbM; r.....	4
2831	1167	V. 41	.....	12 10 27·9	3·019	2	51 24 39·9	20·03	2	pB; vL; eE 43°·2; vgbM ...	3
2832	1168	I. 74	.....	12 10 32·5	3·033	3	59 36 54·9	20·03	3	cB; pL; vlE; smbM; r	5
2833	.....	III. 91	.....	12 10 43·7	3·063	1	82 6 1·9	20·03	1	eF	1
2834	1169	II. 742	.....	12 10 48·8	2·995	2	41 49 7·9	20·03	2	vF; S; pmE; psbM.....	4
2835	1170	I. 264	.....	12 10 57·2	2·864	1	18 25 17·9	20·03	1	pB; S; R; pgbM	2
2836	1171	I. 89	.....	12 11 3·5	3·034	2	61 2 42·9	20·03	3	vB; S; E; vsvmbMN; *6·7 f 90°.	4
2837	1172	III. 702	.....	12 11 30·9	3·029	1::	59 23 0·9	20·03	1::	vF; vS; R	2
2838	1173	.....	M. 99	12 11 41·8	3·052	3	74 48 7·6	20·02	4	!!; {(H. h.)B; L; R; gbM; r} {(L) 3-branched spiral}	6†
2839	1174	II. 846	.....	12 11 56·0	2·898	1	23 19 23·6	20·02	1	pB; L; cE 38°·2; bMBN ...	2
2840	.....	.....	D'Arrest, 88	12 12 1	3·06	[1]	83 29 42	20·02	[1]	vF pS; R; *18 s 2′	0
2841	1175	V. 43	.....	12 12 1·7	2·988	3	41 55 40·6	20·02	4	vB; vL; vmE 0°; sbMBN...	8†
2842	1176	II. 139	.....	12 12 4·6	3·063	1	83 23 51·6	20·02	1	F; pS; R; gbM	4
2843	1177	II. 138	.....	12 12 12·9	3·063	2	83 9 22·6	20·02	2	pB; E; psbM	5
2844	1178	.....	.....	12 12 13·0	3·064	1	83 53 0·6	20·02	1	neb; "1st of 5"	1
2845	1179	II. 110	.....	12 12 22·0	3·051	1	74 20 51·6	20·02		B; S; R; r	3
2846	.....	III. 535	.....	12 12 26·0	3·090	1	101 28 31·6	20·02	1	vF; pL; iF	1*
2847	1180	II. 140	.....	12 12 26·3	3·063	1	83 22 30·6	20·02	1	F; pS; R; gbM	4
2848	1181	II. 166	.....	12 12 38·0	3·053	2	76 26 0·6	20·02	2	pB; vS; R; vsmbM.....	3
2849	.....	.....	D'Arrest, 89	12 12 41	3·06	[2]	83 12 42	20·02	[2]	pF; S; R; *9 f 1ˢ·7, n 85″...	0*
5070	.....	.....	.....	12 12 41	.....	...	83 46 42	.....	...	See No. 5070	0
2850	1182	III. 299	.....	12 12 45·0	3·024	1	58 52 49·6	20·02	1	cF; S; iR; gmbM	3
2851	1185	I. 75	.....	12 12 47·4	3·025	1	59 36 15·6	20·02	1	vB; vL; E 90°±; mbMN ...	3
2852	1183	II. 568?	.....	12 12 48·2	3·064	1	83 53 1·6	20·02	1	B; L; E; gbM	1*
2853	.....	II. 804	.....	12 12 48·3	2·946	1	32 29 1·6	20·02	1	pB; pL; iF	1
2854	1184	II. 376	.....	12 12 49·1	3·029	1	61 36 0·6	20·02	2	F; S; vlE; gbM; *15 nr ...	3
2855	1186	I. 90 = II. 322	.....	12 13 3·4	3·025	2	59 56 25·6	20·02	2	vB; pL; R; mbM; r; p of 2	5*
2856	.....	II. 571??	.....	12 13 8·7	3·062	1	82 51 1·6	20·02	1	4 neb sc about. Place of the last (see note).	1*
2857	1187	II. 573 = II. 569?	.....	12 13 12·5	3·063	1	83 50 34·6	20·02	1	vB; vL; R; pgbM; "3 more seen."	3*
2858	1188	II. 323	.....	12 13 18·6	3·024	2	59 54 20·6	20·02	2	B; S; R; bM; 2nd of 3	4
2859	.....	II. 377	.....	12 13 23·0	3·025	1	60 0 39·6	20·02	1	.....	1*
2860	.....	III. 798	.....	12 13 25·7	2·933	1	31 6 1·6	20·02	1	cF; lE; p of 2.....	1
2861	.....	III. 300	.....	12 13 35·7	3·023	2	59 51 31·3	20·01	2	vF	2
2862	1189	II. 570?	.....	12 13 35·9	3·063	1::	83 54 0·6	20·02	1::	vF; S	1*
2863	1188, *a*	.....	R. nova?	12 13 38·6	3·024	...	59 51 20·6	20·02	...	Most probably = H. III. 300	0?
2864	1191	III. 726	.....	12 13 41·0	2·980	3	42 56 17·3	20·01	3	vF; pS; R; vgbM; r	5
2865	1190	II. 571?	.....	12 13 46·0	3·063	1	83 52 34·3	20·01	1	vB; R; central of 4.....	1*
2866	1193	II. 805	.....	12 13 48·1	2·930	1	31 7 37·3	20·01	1	pB; L; R; gmbM	2
2867	1195	V. 5	.....	12 14 4·2	3·042	2	70 50 17·3	20·01	2	F; vL; E; lbM; r	3
2868	1192	I. 275	.....	12 14 4·8	2·720	3	13 51 7·3	20·01	4	pB; vS; R; lbM; 3 st f	6
2869	1194	.....	.....	12 14 6·1	3·063	2	83 49 57·3	20·01	2	B; pL; lE; bM; 4th of 4.....	3*
2870	1196	.....	.....	12 14 6·1	3·064	1	84 38 4·3	20·01	2	F; S; R; vglbM; B*340°, 60″	2†
2871	1197	II. 61	.....	12 14 8·4	3·053	4	77 42 56·3	20·01	4	F; L; mE 135°±; bi-N; p of 2	6
2872	.....	III. 92	.....	12 14 23·6	3·061	2	82 34 1·3	20·01	2	vF; vS.....	2
2873	.....	III. 93	.....	12 14 23·6	3·061	2	82 34 1·3	20·01	2	eF; eS	2
2874	1198	II. 111	.....	12 14 24·9	3·048	2	74 36 52·3	20·01	2	F; L; E 0°±; vgbM, p of 2	4
2875	1200	II. 62	.....	12 14 32·7	3·053	2	77 43 1·3	20·01	2	F; L; lE; vgbM; f of 2	4
2876	1201	II. 572	.....	12 14 33·1	3·063	1	83 50 23·3	20·01	1	F; lE; vgbM	2
2877	1199	II. 112	.....	12 14 33·2	+3·047	2	74 36 53·3	+20·01	2	L; vmE 0°±; f of 2	4

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	h.	H.		h m s	s		° ′ ″	″			
2878	1202	I. 139	M. 61	12 14 45·1	+3·064	2	84 44 55·3	+20·01	2	vB; vL; vsbM*; biN	5*†
2879	3387	.....	.....	12 14 51·8	3·132	1	122 41 54·3	20·01	1	vF; vL; R; vgvlbM; r	1
2880	1203	.....	.....	12 14 56·7	3·050	1	76 29 35·3	20·01	1	vF; R	1
2881	1204	I. 76	.....	12 15 23·5	3·016	1	59 19 46·0	20·00	1	cB; L; E 150°±; sbM; * np	3
2882	1205	II. 378	.....	12 15 24·5	3·017	1::	60 0 34·0	20·00	2	B; cL; lE; np of 2	3
2883	1206	.....	.....	12 15 24·5	3·017	1	60 1 8·0	20·00	1	F; sf of 2	1
2884	1202, *a*	.....	R. nova?	12 15 30	3·06	...	84 35 40	20·00	...	F; E; 10′ nf h. 1202	0†*
2885	1207	II. 63	.....	12 15 30·2	3·051	2	77 26 25·0	20·00	2	vF; L; E 135°±; r	4
2886	1209	II. 628	.....	12 15 31·6	3·044	(1)	73 40 57·0	20·00	1	pB; cL; E; gbM	2
2887	.....	II. 324	.....	12 15 34·9	3·011	1	58 11 0·0	20·00	1	F; S	1
2888	1210	I. 276	.....	12 15 36·3	2·686	3	13 53 59·0	20·00	3	pB; pS; vlE; sbM	5
2889	1208	.....	.....	12 15 37·4	3·057	1	81 1 20·0	20·00	1	eF; *8 n 5′	1
2890	1211	.....	M. 100	12 15 50·6	3·043	3	73 23 54·0	20·00	4	!!; {(H, h) pF; vL; R; vg, psbMrN / (L) 2-branched spiral}	5
2891	1212	II. 85	.....	12 16 1·2	3·041	1	72 30 5·0	20·00	1	pB; S; R; psbM	2
2892	.....	.....	D'Arrest, 90	12 16 2	3·06	[4]	83 58 42	19·99	[4]	pB; R or lE; bM	0*
2893	1213	II. 141	.....	12 16 2·0	3·060	1	83 8 51·0	20·00	1	vF; S; R; bM; 1st of 3	2
2894	.....	II. 84	.....	12 16 4·6	3·043	1	73 25 0·0	20·00	1	F; S; R; r	1
2895	1216	II. 847	.....	12 16 6·6	2·843	1	23 22 43·0	20·00	1	pF; S; vlE; vgbM	2
2896	1214	.....	.....	12 16 8·6	3·093	1	101 45 29·0	20·00	1	vF; vS; R; bMN	1
2897	1217	II. 806	.....	12 16 8·9	2·905	2	30 47 2·0	20·00	2	pB; S; E; gbM	3
2898	1220	III. 942	.....	12 16 11·2	2·637	1	13 3 7·0	20·00	1	eF; E 0°±	2
2899	1215	II. 142	.....	12 16 12·5	3·060	1	83 11 1·0	20·00	1	F; pS; R; bM; 2nd of 3	2
2900	1218	.....	.....	12 16 16·0	3·058	1	81 45 7·0	20·00	1	pF; S; R; *v nr	1
2901	1219	II. 406	.....	12 16 21·1	3·035	2	69 48 9·0	20·00	2	vF; pL; iR; biN?	4
2902	3388	.....	.....	12 16 23·3	3·231	1	147 20 30·0	20·00	1	Cl; pRi; lC; st 12...14	1
2903	1221	II. 86	.....	12 16 23·7	3·040	1	72 31 5·0	20·00	1	cB; vS; mE; vsbM	2
2904	1222	II. 143	.....	12 16 26·6	3·059	3	83 8 10·0	20·00	3	B; pL; R; bM; 3rd of 3	4
2905	.....	III. 95	.....	12 16 29·8	3·058	2	82 14 31·0	20·00	2	eF; vS; R	2
2906	.....	III. 96	.....	12 16 29·8	3·058	2	82 14 31·0	20·00	2	eF; vS; R	2
2907	1223	III. 94	.....	12 16 30·1	3·060	1	82 16 59·0	20·00	1	pF; S; E; ?D	3
2908	1224	III. 31	.....	12 16 32·7	3·038	1	71 41 1·0	20·00	1	vF; pS; R; vglbM; Δ 2 st	2
2909	1200, *a*	.....	R. nova	12 16 34·7	3·053	::	77 43 1·3	20·00	::	vF; vmE	0
2910	1225	I. 210	.....	12 16 34·8	2·960	5	42 14 8·0	20·00	6	vF; S; mE100°±; vsmbMBN	8†
2911	1226	II. 625	.....	12 16 43·1	3·077	1	92 40 18·0	20·00	1	F; pL; E 70°±; vlbM	4
2912	3389	.....	Δ. 292	12 16 49·2	3·262	3	151 7 11·0	20·00	3	Cl; vB; vL; lC; st 12...14	3
2913	.....	III. 481	.....	12 17 3·3	3·055	1	80 42 0·7	19·99	1	vF	1
2914	1230	III. 799	.....	12 17 9·0	2·896	1	30 50 31·7	19·99	1	cF; cS; lE (?18^m R.A.)	2
2915	1228	I. 123	.....	12 17 9·3	3·061	1	84 17 31·7	19·99	1	B; S; *8·9 sf 3′	3
2916	1229	III. 648	.....	12 17 10·3	3·006	1	57 42 34·7	19·99	1	cF; pmE 90°; vlbM	2
2917	1231	I. 65	.....	12 17 16·6	3·107	1	108 0 3·7	19·99	1	vB; L; R; vsmbMn; r	2
2918	1233	III. 800	.....	12 17 17·0	2·895	1	30 51 31·7	19·99	1	vF; cS; R; r	2
2919	.....	III. 938	.....	12 17 17·6	2·659	1	14 17 0·7	19·99	1	eF; pL; iF	1
2920	.....	III. 801	.....	12 17 18·5	2·894	1	30 48 59·7	19·99	1	cF; cS; R	1
2921	1232	I. 30	.....	12 17 21·3	3·057	2	81 54 17·7	19·99	3	cB; pL; vlE; gl, smbM	5
2922	.....	III. 97	.....	12 17 23·3	3·057	1	81 50 0·7	19·99	...	eF	2
2923	.....	III. 38	.....	12 17 35·0	3·050	1	78 37 59·7	19·99	1	vF; vS	1
2924	1234	I. 166	.....	12 17 40·3	2·981	2	49 51 4·7	19·99	2	cB; S; R; mbMN; r	4
2925	1235	I. 22	.....	12 17 45·8	3·048	3	77 31 34·7	19·99	3	B; pS; R; gbM	6
2926	1236	II. 144	.....	12 17 46·2	3·057	2	81 46 52·7	19·99	2	pF; pS; lE; bM	3
2927	3390	.....	Δ. 67??	12 17 50·1	3·412	1	161 53 19·7	19·99	1	⊕; pF; L; R; st 12...16	2
2928	3391	.....	.....	12 17 55·9	3·162	1	128 58 12·7	19·99	1	pB; S; R; pgvmbM	1
2929	1227	II. 64	.....	12 17 56·9	3·050	1	77 59 51·7	19·99	2	cF; cS; lE	3
2930	1237	.....	M. 84	12 17 57·6	3·045	1	76 20 8·7	19·99	1	vB; pL; R; psbM; r	2
2931	1238	II. 379	.....	12 17 59·0	2·994	2	60 40 3·7	19·99	2	F; S; R; bM; * nf 90″	3
2932											
2933											
2934	1237, *a*	.....	R. 9 novæ	12 18 ±	+3·045	...	76 20 ±	+19·99	...	"Twelve knots exam." (see h. 1237, 1244, 1250).	0
2935											
2936											

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	h.	H.		h m s	s		° ′ ″	″			
2937											
2938	1237, *a*	.....	R. 9 novæ (continued)	12 18 ±	+3·045	...	76 20 ±	+19·99	...	"Twelve knots exam." (see h. 1237, 1244, 1250).	0
2939											
2940											
2941	.....	II. 530	.....	12 18 2·6	3·060	1	83 29 59·7	19·99	1	F; S	1
2942	1239	I. 12	.....	12 18 7·3	3·041	1	74 27 43·7	19·99	1	B; S; R; smbM	4
2943	1240	II. 87??	.....	12 18 13·0	3·039	1	73 35 30·7	19·99	1	pS; R; psbMN	2
2944	1241	.....	.....	12 18 17·0	3·051	1	79 13 0·4	19·98	1	vF; pL; R; lbM	1
2945	.....	II. 743	.....	12 18 19·0	2·940	1	40 23 59·4	19·98	1	F; S	1
2946	1242	.....	M. 85	12 18 19·5	3·033	2	71 2 10·4	19·98	2	vB; pL; R; bM; * np	3
2947	1243	III. 879	.....	12 18 22·3	2·910	2	34 43 1·4	19·98	2	cF; S; iR	3
2948	1247	I. 277	.....	12 18 36·7	2·609	2	13 42 3·4	19·98	2	B; cL; lC; psmbM	4
2949	1244	.....	.....	12 18 41·2	3·045	1	76 34 33·4	19·98	1	vF; E; p of 2	1
2950	1245	II. 749	.....	12 18 41·2	2·950	3	43 32 16·4	19·98	3	pB; pL; iE; vglbM	5†
2951	.....	II. 67	.....	12 18 43·3	3·039	1	73 41 59·4	19·98	1	S; bM; r	1*
2952	1248	III. 852	.....	12 18 44·3	2·819	2	24 17 14·4	19·98	2	cF; S; R; sbM; ** sp	3
2953	1249	III. 729	.....	12 18 48·4	2·951	1	43 25 20·4	19·98	1	cF; S; R; vgbM	2
2954	1246	III. 361	.....	12 18 48·5	3·010	1:	61 39 49·4	19·98	1	vF; vL; iF; B * p	2
2955	1250	II. 167	.....	12 18 51·3	3·044	1::	76 29 1·4	19·98	1	Northern of 2; no description	2
2956	1250	II. 168	.....	12 18 51·3	3·044	1::	76 29 1·4	19·98	1	Southern of 2; E	2
2957	1251	II. 55	.....	12 18 52·0	3·032	2	71 0 52·4	19·98	2	pB; lE; bM	3
2958	1252	V. 29·1	.....	12 18 52·0	2·993	1	55 40 35·4	19·98	1	eF; vL; np of D neb	3†
2959	1252, *a*	.....	R. 2 novæ	12 18 ±	2·993	...	55 40 ±	19·98	...	.....	0
2960											
2961	1253	.....	M. 86	12 19 0·2	3·044	1	76 17 9·4	19·98	1	vB; L; R; gbMN; r	5*
2962	1252	V. 29·2	.....	12 19 1·1	2·993	2	55 42 28·4	19·98	2	vF; vL; pvlbM; sf of D neb	3†
2963	.....	III. 755	.....	12 19 2·5	3·086	1	96 54 29·4	19·98	1	vF; vS; E	1
2964	.....	III. 756	.....	12 19 2·5	3·086	1	96 54 29·4	19·98	1	vF; vS; E	1
2965	.....	.....	Auw. N. 30	12 19 2·6	3·041	A	76 6 32·4	19·98	A	F; L; mE 90° (Auwers, Mar. 5, 1862).	0
2966	1254	II. 88	.....	12 19 3·4	3·037	1	73 3 10·4	19·98	1	pF; S; R; vsbM; r	2
2967	.....	III. 39	.....	12 19 5·0	3·050	1	78 42 59·7	19·98	1	vF; B * nr	1
2968	1255	.....	.....	12 19 11·1	3·044	1	76 34 59·4	19·98	1::	f of 2 neb	1
2969	1256	.....	.....	12 19 14·6	3·052	1	80 12 44·4	19·98	1	eF; vL; R; gbM	1
2970	.....	III. 17	.....	12 19 17·0	3·065	1	86 43 59·4	19·98	1	vF; pS; r	1
2971	1257	II. 34	.....	12 19 26·2	3·063	2	85 15 53·4	19·98	2	F; pL; R; gbM; r	6
2972	1258	I. 77	.....	12 19 29·4	2·997	1	57 30 19·4	19·98	2	vB; L; E; g, vsmbM *	5†
2973	.....	III. 482	.....	12 19 30·1	3·053	1	80 47 0·4	19·98	1	eF	1
2974	1259	II. 169	.....	12 19 32·4	3·044	1	76 39 31·4	19·98	1	cF; S; gbM; 2 st n, np	2
2975	1260	.....	.....	12 19 37·2	3·054	1	81 18 20·1	19·97	1	vF; L; R; * sp 5′	1
2976	1261	III. 492	.....	12 19 44·6	3·072	1	90 6 39·1	19·97	2	{H. vF; cL; mE / h. F; S; R; * nr}	3*
2977	1262	II. 113	.....	12 19 49·3	3·038	1	74 10 51·1	19·97	1	B; pmE 135°±; sbM	3
2978	1263	II. 23	.....	12 19 50·7	3·065	2	86 43 44·1	19·97	2	F; pL; lE; r: (?=III. 17)	4
2979	.....	II. 155	.....	12 19 56·1	3·052	1	79 37 0·7	19·97	1	F; pL; E; lbp	1
2980	1265	III. 114	.....	12 19 59·7	3·083	2	95 3 10·1	19·97	2	F; vS; R; psbM; 2S st nr	5
2981	1264	II. 89	.....	12 19 59·8	3·037	2	73 45 10·1	19·97	2	pB; pL; pgbM; B * np	5
2982	1266	II. 145	.....	12 20 1·6	3·058	1	83 20 42·1	19·97	1	vF; vS; E	3
2983	1267	II. 170	.....	12 20 5·0	3·043	2	76 30 10·1	19·97	2	pF; S; R; bM	3
2984	1268	II. 171	.....	12 20 8·2	3·044	1	76 55 44·1	19·97	1	vF; vS; cE; gbM	2
2985	1269	.....	.....	12 20 16·0	3·088	1	97 24 14·1	19·97	1	vF; pL	1
2986	1270	II. 146	.....	12 20 19·4	3·057	2	82 58 0·1	19·97	2	cF; L; R; gbM	3
2987	1271	II. 65	.....	12 20 20·7	3·046	2	78 7 49·1	19·97	2	B; L; cE; psbM; * 10 nf	3
2988	1272	II. 172	.....	12 20 22·2	3·043	1	76 53 54·1	19·97	1	cF; S; gbM	2
2989	.....	II. 497	.....	12 20 25·0	3·053	1	81 0 59·1	19·97	1	pF; vS	1
2990	1273	.....	.....	12 20 26·1	3·089	1	97 30 49·1	19·97	1	pF; pL; lE	1
2991	1274	I. 28, 1	.....	12 20 33·7	3·041	2	76 9 14·1	19·97	3	vB; cL; R; p of 2	2
2992	1274, *a*	.....	R. nova	12 20 ±	3·041	...	76 9 ±	19·97	...	See note	0*
2993	1276	II. 173	.....	12 20 35·2	3·043	1	76 55 49·1	19·97	1	B; pS; R; bM; r	2
2994	1275	I. 28, 2	.....	12 20 36·7	3·041	3	76 13 17·1	19·97	3	B; cL; vlE; r; f of 2	5
2995	1275, *a*	.....	R. nova	12 20 ±	+3·041	...	76 13 ±	+19·97	...	See note	0*

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	h.	H.		h m s	s		° ′ ″	″			
2996	1277	.....	.....	12 20 39·3	+3·070	1	89 5 41·1	+19·97	1	F; eE 75°; *10 nf; place... that of *).	1
2997	3392	.....	Δ. 300?	12 20 45·1	3·287	1	149 19 6·8	19·96	1	Cl; S; st 11...12	1
2998	.....	II. 848	.....	12 20 48·0	2·795	1	24 25 19·8	19·96	1	F; S; iR; bM	2
2999	1279	II. 156	.....	12 20 58·0	3·048	1	79 24 53·8	19·96	1	vb; pL; R; smbM	2*
3000	3393	.....	.....	12 21 7·5	3·191	1	132 29 6·8	19·96	1	eF; L; R; vgbM.....	1
3001	1280	I. 91	.....	12 21 15·0	2·999	3	60 36 32·8	19·96	4	B; L; E 90°; sbM	6
3002	1281	I. 213	.....	12 21 17·5	2·944	4	45 8 8·8	19·96	4	vB; cL; mE 15°; rrr; *9, 5′	5
3003	1282	II. 56 = II. 90	.....	12 21 24·9	3·030	6	72 8 33·8	19·96	7	B; L; R; gvmbM*; r; B* nr	10*
3004	1283	II. 26	.....	12 21 39·0	3·055	1	82 42 49·8	19·96	1	F; pS; bM; r	2
3005	1284	II. 180	.....	12 21 40·2	3·075	1	91 10 10·8	19·96	1	F; L; R; gbM; er	5
3006	1285	II. 355	.....	12 21 41·6	3·014	2	66 24 25·8	19·96	2	F; L; E; gbM; 2 B st nf.....	3
3007	3394	.....	.....	12 21 43·2	3·147	1	119 19 41·8	19·96	1	eeF; vS; * 13 att	1
3008	.....	I. 23	.....	12 21 49·1	3·043	2	77 32 29·8	19·96	2	pB; S; vmE	2*
3009	1286	II. 35	.....	12 21 50·2	3·063	3	85 39 10·8	19·96	3	cB; pS; R; smbMN	5
3010	1287	II. 121	.....	12 21 51·6	3·039	1	75 59 6·8	19·96	1	pB; S; R; bM; p of 2	2
3011	1289	I. 212 = II. 750	.....	12 21 52·8	2·936	1	44 20 29·8	19·96	1	B; pL; E 45°±; psbM	4*
3012	1288	I. 161	.....	12 21 54·1	3·037	2	75 14 55·5	19·95	2	pB; pL; iR; bM; r; * 8 sf 2′	3
3013	1290	II. 122 = II. 174	.....	12 21 57·1	3·039	1	76 1 41·5	19·95	2	pF; S; R; bM; f of 2.....	4*
3014	3396	III. 764	.....	12 22 2·0	3·128	2	112 23 40·5	19·95	2	pB; pS; E 130°; vbM	3
3015	3395	.....	.....	12 22 3·2	3·350	1	154 1 1·5	19·95	1	Cl; P; vlC	1
3016	1291	.....	.....	12 22 4·3	2·778	1	24 25 41·5	19·95	1	pB; R; gbM	1
3017	.....	II. 630	.....	12 22 15·1	3·037	1	75 15 58·5	19·95	1	cL	1
3018	1292	III. 483	.....	12 22 15·4	3·051	1	81 4 3·5	19·95	1	F; vS; R; pgbM.....	2
3019	.....	II. 157	.....	12 22 25·8	3·049	1	80 23 58·5	19·95	1	pF; pL; mE; bM; r	1
3020	1293	II. 18 = II. 498	.....	12 22 30·4	3·049	2	81 24 5·5	19·95	2	F; pL; iR; bM	6
3021	1294	.....	M. 49	12 22 39·3	3·051	4	81 13 44·5	19·95	5	vB; L; {H. E / h. R}; mbM.....	6*
3022											
3023	1294, *a*	.....	R. 3 novæ	12 22 ±	3·051	...	81 13 ±	19·95	...	"Four found" (one being h. 1294).	0
3024											
3025	.....	II. 115	.....	12 22 43·3	3·016	2	75 36 0·5	19·95	2	vB; cL.....	2
3026	1295	II. 117 = II. 629	.....	12 22 48·2	3·036	1	75 9 20·5	19·95	1	pF; R; r	3*
3027	1297	III. 362	.....	12 22 48·7	2·998	1	61 58 28·5	19·95	2	eF; pL; R	5
3028	1296	II. 123	.....	12 22 51·8	3·040	2	76 54 3·5	19·95	2	F; S; R; bM; 1st of 3	3
3029	.....	II. 116	.....	12 22 58·9	3·037	2	75 39 0·5	19·95	2	pB; pL.....	2*
3030	.....	II. 114	.....	12 23 1·6	3·037	2	75 48 33·5	19·95	2	vF; r	2
3031	1298	II. 124	.....	12 23 11·1	3·040	4	76 54 41·2	19·94	5	pB; S; R; psbM; 2nd of 3...	7
3032	1299	II. 531	.....	12 23 17·7	3·060	1	84 58 43·2	19·94	1	pF; pS; E; bs	3
3033	.....	III. 40	.....	12 23 33·4	3·043	3	78 28 58·2	19·94	3	eF; pL.....	1
3034	1300	.....	.....	12 23 37·1	3·100	1	100 51 52·2	19·94	1	pF; S; R; gbM	1
3035	1301	.....	M. 87	12 23 44·0	3·039	4	76 50 39·2	19·94	4	vB; vL; R; mbM	7
3036	.....	II. 776	.....	12 23 44·2	3·091	1	97 18 28·2	19·94	1	F; vL; er.....	1
3037	1302	III. 484	.....	12 23 44·6	3·049	1	80 51 38·2	19·94	1	vF; vS; lE	2
3038	1303	II. 91	.....	12 23 48·1	3·027	3	72 27 55·2	19·94	3	pF; cS; R; gbM.....	4
3039	1304	III. 41	.....	12 23 50·0	3·041	1	77 45 3·2	19·94	1	F; L; R	2
3040	1305	II. 499	.....	12 23 53·2	3·050	1	81 9 14·2	19·94	1	pF; pL; vglbM; 2 st nr	2
3041	1306	I. 197	.....	12 24 17·8	2·938	1	47 36 37·9	19·93	1	B; pS; iR; p of 2	2†
3042	1308	I. 198	.....	12 24 23·6	2·938	1	47 39 25·9	19·93	1	vB; vL; mE 130°; rr	2†
3043	1307	I. 83	.....	12 24 24·3	2·998	1	63 26 55·9	19·93	1	vB; pL; R; vsmbMN.....	2*
3044	1310	III. 301	.....	12 24 26·4	+2·987	1	60 5 7·9	+19·93	2	pF; cS; R; pslbM	3

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	h.	H.		h m s	s		° ′ ″	″			
3045	1309	II. 26	.....	12 24 29·8	+3·060	3	85 17 47·9	+19·93	3	F; cL; biN or D neb	6
3046	.....	III. 42	.....	12 24 33·4	3·040	1	77 37 57·9	19·93	1	vF	1
3047	3397	.....	.....	12 24 40·2	3·195	2	129 12 18·9	19·93	2	vF; L; R; vglbM	2
3048	1311	I. 234	.....	12 24 41·5	2·827	1	31 16 14·9	19·93	1	B; cS; E; pgbM; * 9 f 30″..	3
3049	1312	.....	M. 88	12 24 54·5	3·031	3	74 48 26·9	19·93	3	B; vL; vmE; p of D neb.....	8
3050	.....	II. 118	.....	12 24 +	3·031	...	74 48 —	19·93	...	F; S; f of D neb (not obs by h.).	
3051	.....	III. 69	.....	12 24 57·5	3·024	1	72 25 57·9	19·93	1	vF; vS.....	1
3052	1313	II. 66	.....	12 24 58·5	3·040	2	78 3 15·9	19·93	2	pB; S; R; gbM	3
3053	1314	II. 92	.....	12 24 59·4	3·025	1	72 32 23·9	19·93	1	vF; S	2
3054	3398	II. 771	.....	12 25 4·1	3·090	1	96 46 40·6	19·92	1	pB; cL; iE; gvlbM; er	3
3055	1315	III. 18	.....	12 25 6·8	3·060	1::	85 14 53·6	19·92	1	vF; cL; r; f of 2.....	2
3056	1316	II. 631	.....	12 25 6·8	3·034	1	75 48 23·6	19·92	1	cF; pmE 90°±; gbM; *9 f 8ˢ	2
3057	3399	.....	.....	12 25 9·9	3·197	2	129 8 6·6	19·92	2	pB; S; R; psmbM * 16	2
3058	1317	.....	.....	12 25 9·9	3·055	1	83 24 1·6	19·92	1	vS; R; sbM * 13	1
3059	1318	.....	.....	12 25 14·6	2·974	1	57 7 59·6	19·92	1	vF; S; R; lbM	1
3060	1196, *a*	.....	R. nova	12 25 30	3·058	???	84 47	19·92	???	Query R.A.; vF; 10′s of scarlet *.	0
3061	1319	III. 834	.....	12 25 33·9	2·833	1	32 45 54·6	19·92	1	pF; vS; iR; vgbM	2
3062	1321	.....	.....	12 25 45·5	2·748	1	25 29 50·6	19·92	1	pB; S; R; psbM.....	1
3063	1320	III. 302	.....	12 25 50·1	2·980	2	59 30 52·6	19·92	2	eF; vS; R; bM	3
3064	1322	.....	.....	12 26 3·1	3·049	1	81 22 31·6	19·92	1	F; S; R; bM	1
3065	1323	III. 78	.....	12 26 3·1	3·029	1	74 38 42·6	19·92	1	F; pS; R; r.....	3
3066	.....	IV. 5	.....	12 26 3·3	3·070	3	89 8 56·6	19·92	3	cB; vL; vmE 95°±; B * in cont.	3
3067	1324	II. 93	.....	12 26 4·0	3·024	1	72 56 23·6	19·92	1	F; vS; bM*	2
3068	.....	II. 158	.....	12 26 20·2	3·046	3	80 33 36·3	19·91	3	F; pL; R; bM; r	3
3069	.....	II. 849	.....	12 26 23·0	2·732	1	25 12 55·5	19·91	1	pB; vS; lE; sbMSN	1
3070	.....	II. 757	.....	12 26 24·2	3·091	2	96 36 57·3	19·91	2	vF; S; 2 vS st inv	2
3071	1326	.....	.....	12 26 26·9	2·741	1	25 37 18·3	19·91	1	pB; S; pmE; pgbM; * 9 inv	1
3072	1325	.....	.....	12 26 32·9	3·044	1	80 2 47·3	19·91	1	eF; pL; lE; vlbM	1
3073	1327	.....	.....	12 26 38·0	3·104	1	101 14 26·3	19·91	1	vF; iF; bM.....	1
3074	1328	II. 325	.....	12 26 53·3	2·975	1::	58 57 57·3	19·91	1::	F; pL; iR; bM	3
3075	1329	I. 31 = I. 38	.....	12 26 56·3	3·048	3	81 31 57·3	19·91	3	vB; vL; mE 120°±; psmbM; L * f; * 9 p.	5*
3076	1330	II. 37	.....	12 27 0·4	3·063	2	86 34 26·3	19·91	2	pB; L; pmE 60°±; mbM ...	4
3077	1331	II. 67	.....	12 27 2·1	3·037	3	77 54 52·3	19·91	4	pF; cS; R; bM; * 9 f 30ˢ ...	5
3078	.....	III. 26	.....	12 27 2·2	3·009	1	68 41 56·3	19·91	1	eF; L	2*
3079	1332	.....	8 Canum	12 27 7·7	2·925	4	47 52 34·0	19·90	4	Nebulous *	4*
3080	.....	II. 500	.....	12 27 8·5	3·047	1	81 1 56·0	19·90	1	vL; er	1
3081	1333	II. 175	.....	12 27 10·6	3·032	2	76 9 20·0	19·90	2	F; pL; R; vgbM	3
3082	1334	II. 147	.....	12 27 11·7	3·051	1	82 46 13·0	19·90	1	pB; pL; pmE; vgbM; r	2
3083	1336	II. 410	.....	12 27 13·1	2·952	2	53 42 9·0	19·90	2	cF; L; lE; vglbM; r	4
3084	1335	II. 94 = II. 119	.....	12 27 14·9	3·024	2	73 40 25·0	19·90	2	F; pS; bM; r	5
3085	1337	V. 2	.....	12 27 19·6	3·064	1	87 2 47·0	19·90	1	B; vL; mE 110°; sbM; er ...	5†
3086	1338	.....	.....	12 27 32·8	3·015	1	71 1 23·0	19·90	1	pB; pmE	1
3087	1341	.....	.....	12 28 6·8	2·860	1	38 25 19·7	19·89	1	eF; pL; R	1
3088	1340	.....	.....	12 28 12·2	3·052	1	83 6 37·7	19·89	1	pF; cS; R; bM	1
3089	1346	II. 850	.....	12 28 13·8	2·721	1	25 42 2·7	19·89	1	F; L; iR; vgbM; S * nf.....	2
3090	1342	III. 493	.....	12 28 15·1	3·071	1::	89 28 3·7	19·89	1:	eF; S; R; gbM	3
3091	1344	III. 802	.....	12 28 15·7	2·783	2	30 19 21·7	19·89	2	vF; pS; E; vgbM; * 9 f 2′: p of 2.	4
3092	1339	I. 160	.....	12 28 17·8	3·081	4	93 1 7·7	19·89	4	vB; cL; pmE 63°±; vsmbMN.	6
3093	1345	II. 120	.....	12 28 22·7	3·026	3	74 43 45·7	19·89	3	B; L; lE; lbM	5
3094	1347	III. 807	.....	12 28 23·5	2·781	2	30 17 43·7	19·89	2	eF; pS; E; f of 2	3
3095	1343	I. 36	.....	12 28 24·2	3·033	2	77 0 46·7	19·89	3	pB; S; vlE; sp of 2.....	4
3096	1349	I. 37	.....	12 28 32·3	+3·033	2	76 58 38·7	+19·89	2	pB; S; R; bM; nf of 2	3

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	h.	H.		h m s	s		° ′ ″	″			
3097	1348	.....	M. 89	12 28 35·2	+3·032	1	76 40 32·7	+19·89	4	pB; pS; R; gmbM	5*
3098	3400	.....	.....	12 28 36·9	3·211	1	128 39 49·7	19·89	1	F; vlE; glbM	1
3099	1350	II. 343	.....	12 28 44·3	2·983	2	62 42 18·7	19·89	2	B; pS; iR; vsmbM * 12	3
3100	1351	II. 380	.....	12 28 50·3	2·981	1	62 18 47·7	19·89	2	F; pL	3
3101	1352	I. 92	.....	12 28 59·6	2·980	3	61 16 7·4	19·88	3	vB; vL; mE 150°; gbM; 3 st f	4†
3102	1354	.....	.....	12 29 0·3	2·980	1	62 16 6·4	19·88	1	vF; nf of 2 or ?3	1
3103	1353	I. 119	.....	12 29 0·4	3·046	1::	81 33 21·4	19·88	1:	cB; pL; R; gbM	2*
3104	1355	II. 407	.....	12 29 5·7	3·008	2	69 54 20·4	19·88	2	pB; pL; vlE; lbM; r	4
3105	1356	II. 68	.....	12 29 21·6	3·034	2	77 47 21·4	19·88	2	pB; S; lE; psbM	4
3106	1357	V. 24	.....	12 29 22·9	2·993	4	63 14 30·4	19·88	4	B; eL; eE 136°·1; vsbMN = *10, 11.	5†
3107	1360	III. 880	.....	12 29 26·1	2·821	1	35 0 1·4	19·88	1	pF; S; iR; gbM	2
3108	1358 = 1363	IV. 8	.....	12 29 26·5	3·035	4	77 59 26·4	19·88	4	vF; L; np of D neb	6*†
3109	1359 = 1363	IV. 9	.....	12 29 28·0	3·035	2	78 0 26·4	19·88	2	pos 160° ± vF; L; sf of D neb	6*†
3110	1361	I. 32	.....	12 29 45·6	3·047	5	81 59 3·1	19·87	5	cB; pS; mE 0° ±; sbMrN ...	9
3111	.....	.....	M. 90	12 29 52·8	3·028	2	76 4 18·1	19·87	2	pL; bMN	2*
3112	1364	III. 939	.....	12 29 55·6	2·392	1	14 59 52·8	19·86	1	eF; S	2
3113	1362	III. 602	.....	12 29 59·1	3·024	1	74 58 8·1	19·87	1	vF; L; E; vgbM; cB * att...	2†
3114	3401	.....	.....	12 30 6·6	3·241	1	132 51 14·1	19·87	1	vF; S; * 10 n 30″	1
3115	3402	.....	.....	12 30 17·6	3·199	1	124 44 3·1	19·87	1	vF; L; lE; vglbM	1
3116	3403	.....	.....	12 30 19·4	3·224	1	129 45 59·1	19·87	1	F; S; pmE; 2 st p	1
3117	.....	III. 13	.....	12 30 23·9	3·051	1	83 9 55·8	19·86	12	vF; vS	1
3118	1365	II. 15	.....	12 30 26·2	3·039	1	79 40 5·8	19·86	1	pF; pS; R; sbMN; * np ...	3
3119	1366	.....	.....	12 30 26·7	3·039	1	79 45 21·8	19·86	1	F; R; bM (?=II.15+5′P.D.)	1
3120	1367	.....	M. 91??	12 30 30·8	3·025	1?	75 26 55·8	19·86	1?	np this place is a F neb; *not* M. 91, whose existence?.	1
3121	1368	.....	M. 58	12 30 36·6	3·031	3	77 24 52·8	19·86	3	B; L; iR; vmbM; r	6
3122	1369	I. 124	.....	12 30 40·5	3·053	1	83 51 55·8	19·86	1	pB; L; vgbM	3
5071	.....	.....	.....	12 31 0·5	.....	...	89 2 46·5	.....	...	See No. 5071.	
3123	1370	III. 495	.....	12 31 14·1	2·945	2	55 46 15·8	19·86	2	cF; S; lE; bM	3
3124	.....	.....	D'Arrest, 91	12 31 17	3·02	[3]	76 7 12	19·85	[3]	vF; S; R	0
3125	1371	I. 125	.....	12 31 18·5	3·056	2	84 54 40·5	19·85	2	pB; L; E; psbM	4
3126	.....	III. 98	.....	12 31 45·7	3·047	1::	82 25 53·5	19·85	1::	vF; eS	1
3127	1374	I. 273	.....	12 31 53·3	2·369	3	15 2 24·5	19·85	4	cB; L; lE; pgmbM.....	7*
3128	3404	.....	M. 68	12 32 5·1	3·166	1	115 58 45·2	19·84	1	⊕; L; eRi; vC; iR; rrr; st 12, red.	4
3129	1372	III. 504	.....	12 32 6·7	3·050	1	83 12 29·2	19·84	1	vF; cS	3
3130	1373	II. 31	.....	12 32 8·0	3·072	1	89 16 17·2	19·84	1	F; L; E 90° ±; vgbM	4
3131	1375	II. 183	.....	12 32 26·6	3·088	2	94 34 23·2	19·84	2	pB; cL; E; sbMN = *	4
3132	1376	I. 43	.....	12 32 44·2	3·110	1	100 50 14·2	19·84	1	!; vB; vL; eE 92°; vsmbMN.	3†
3133	1377	II. 632	.....	12 32 49·6	3·016	3	73 56 8·2	19·84	4	pF; pL; R; gbM	5
3134	1378	I. 24	.....	12 32 50·8	3·034	5	79 2 56·2	19·84	5	B; pS; R; gmbM; r; 3 st f...	7
3135	.....	II. 636	.....	12 32 53·7	3·089	1	95 2 22·9	19·83	1	F; vL; bM	1
3136	.....	III. 105	.....	12 33 11·7	3·040	2	80 51 21·9	19·83	2	eF; L; R; vlbM	2
3137	.....	III. 509	.....	12 33 13·9	3·065	1	88 0 51·9	19·83	1	vF; vS	1
3138	1379	II. 577	.....	12 33 14·1	3·059	2	86 6 33·9	19·83	2	F; S; R; 2 st 8 f	3*
3139	3405	.....	.....	12 33 23·5	3·242	1	130 8 57·9	19·83	1	eF; L; R; pslbM; p of 2.....	1
3140	1380	II. 184	.....	12 33 26·5	3·088	1	94 21 50·9	19·83	1	F; L; E; vglbM	3
3141	3406	.....	.....	12 33 31·0	3·242	1	130 12 2·6	19·82	1	F; L; R; vgbM; r	1
3142	1381	I. 254	.....	12 33 42·8	2·689	1	27 36 49·6	19·82	1	B; L; vmE 118°·6; glbM ...	2
3143	1382	III. 43	.....	12 33 53·3	3·027	2	77 20 9·6	19·82	3	vF; pS; E; 2 or 3 vS st inv ..	5
3144	1383	II. 69	.....	12 34 10·3	3·033	2	79 3 58·6	19·82	2	pB; pL; R; psbM; r; * 12 np 1′.	4
3145	3407	.....	Δ. 272	12 34 13·2	3·463	1	152 12 8·6	19·82	1	Cl; pL; pC; cE; st 10... ...	1
3146	.....	I. 7	.....	12 34 16·3	3·042	1::	81 24 51·6	19·82	1::	vB; vL (no doubt a comet) ..	1
3147	.....	II. 19	.....	12 34 20·3	3·042	1	81 30 51·6	19·82	1	F; vL	2
3148	1384	II. 148	.....	12 34 23·9	+3·043	3	81 55 10·3	+19·81	3	pB; S; R; psmbM	6*

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	h.	H.		h m s	s		° ′ ″	″			
3149	3408	.....	.....	12 34 44·6	+3·247	1	129 54 10·3	+19·81	1	eF; vS; R; * att nf; p of 2...	1
3150	.....	II. 744	.....	12 34 46·0	2·815	2	38 48 50·3	19·81	2	pF; S; iR; er	2
3151, 3152	1385	I. 178, I. 179	.....	12 34 48·0	2·886	4	48 4 47·3	19·81	4	B; L; R; mbM; pb ..... D neb; pos 160°	5†
3153	1387	.....	.....	12 34 56·3	3·021	1	76 17 9·3	19·81	1	vF; S; R; vgbM.....	1
3154	1388	II. 411	.....	12 34 56·5	2·922	3	54 9 54·3	19·81	3	F; pS; R; lbM; * 8·9 f	5
3155	1386	.....	M. 59	12 34 56·9	3·026	3	77 34 1·3	19·81	3	B; pL; lE; vsvmbM; 2 st p ..	5
3156	3409	.....	.....	12 35 3·9	3·249	1	129 58 30·3	19·81	1	pF; S; R; pslbM; f of 2.....	1
3157	1389	II. 149	.....	12 35 3·9	3·041	1	81 33 55·3	19·81	1	cF; pL; E; pslbM; r	5
3158	1390	.....	.....	12 35 7·3	3·059	1	86 10 20·3	19·81	1	B; E	1
3159	1391	II. 659	.....	12 35 8·7	2·935	1	56 39 40·3	19·81	1	F; S; R; np of 2.....	2
3160	1392	II. 660	.....	12 35 9·8	2·883	2	47 56 36·3	19·81	2	pF; S; R.....	3
3161	1393 = 3410	II. 772	.....	12 35 10·4	3·095	2	96 16 10·3	19·81	2	vF; cS; lE; glbM	4
3162	1394 = 3411	II. 773	.....	12 35 11·3	3·095	2	96 11 25·3	19·81	2	cF; S; E; gbM	4
3163	.....	.....	D'Arrest, 92	12 35 21	3·07	[1]	91 2 12	19·80	[1]	pB; pL; E; lbM; ?biN	0
3164	1395	II. 532	.....	12 35 21·7	3·055	1	85 16 24·0	19·80	1	cF; S; R; lbM	3
3165	1397	V. 42	.....	12 35 22·0	2·934	2	56 41 21·0	19·80	2	!; vB; vL; eE 70°±; bMN; B * nr.	3†
3166	1396	I. 14	.....	12 35 23·8	3·070	1	89 18 56·0	19·80	1	pB; L; E 45°±	4
3167	1398	III. 603	.....	12 35 38·1	3·015	2	74 55 47·0	19·80	2	vF; L; mE 135°±; vgbM ...	3
3168	1400	.....	.....	12 35 39·8	2·992	2	69 17 27·0	19·80	2	vF; L; vglbM.....	2
3169	1399	II. 38	.....	12 35 41·1	3·060	2	86 32 30·0	19·80	2	B; L; iR; vgvmbM; r	4
3170	1401	.....	.....	12 35 41·9	3·055	1	85 32 15·0	19·80	1	vB; cS; R; smbM	1*
3171	1402	II. 70 = II. 176	.....	12 35 43·8	3·026	1::	77 49 6·0	19·80	1	F; R; gbM	3
3172	1402, *a*	.....	R. nova	12 35 43±	.....	...	77 49 ±	.....	...	Makes a D or biN neb with h. 1402.	
3173	1403	II. 125	.....	12 35 49·4	3·019	1	75 58 44·0	19·80	1	pB; S; E; r; * 12 sf 1′	2
3174	.....	II. 20	.....	12 35 56·9	3·043	1	81 53 10·3	19·79	1	vS	1*
3175	.....	III. 494	.....	12 36 3·7	3·072	2	89 53 20·7	19·79	2	vF; cS; E	2
3176	1402	I. 10	.....	12 36 12·1	3·062	1	87 14 46·7	19·79	1	cB; pS; lE; mbM	5
3177	1406	II. 794 No. 1	.....	12 36 15·9	2·754	1	34 4 23·7	19·79	1	vF; S; R; gbM	1*
3178	3412	.....	.....	12 36 21·6	3·262	1	130 58 46·7	19·79	1	pB; S; psbM	1
3179	1407	II. 794 No. 2	.....	12 36 23·0	2·756	1	34 22 23·7	19·79	1	F; S; 4 vS st sp	2*
3180	1405	III. 44	.....	12 36 25·5	3·025	4	77 39 25·7	19·79	3	vF; pL; lE 115°±; np of D neb	6*†
3181	1410	I. 274	.....	12 36 33·0	2·258	4	14 48 37·7	19·79	5	pB; cS; R; gbM; * p	8
3182	1408	.....	M. 60	12 36 34·8	3·025	5	77 40 38·4	19·78	6	vB; pL; R; f of D neb	8†
3183	3413	.....	.....	12 36 41·2	3·256	1	129 57 35·4	19·78	1	vF; R; bM; r.....	1
3184	1409	II. 12	.....	12 36 42·3	3·005	3	72 50 28·4	19·78	4	cB; L; E 90°; gbM; r	6
3185	1413	.....	.....	12 36 48·8	2·698	1	30 16 19·4	19·78	1	pF; pL; gbM; 2 B st f	1
3186	.....	III. 662	.....	12 36 50·2	3·072	1	89 47 49·4	19·78	1	vF; pL	1
3187	1411	II. 126	.....	12 36 54·0	3·018	2	76 7 8·4	19·78	2	F; vL; pmE; ?D; 3 st nr ...	4
3188	1412	II. 661	.....	12 36 54·5	2·876	2	48 12 25·4	19·78	3	vF; vS; stellar; * 15, 16 f ...	3
3189	1414	I. 176	.....	12 37 7·8	2·929	4	57 3 48·4	19·78	5	!; pB; L; vmE 34°·3; sp of 2	6*†
3190	1415	I. 177	.....	12 37 16·6	2·929	3	57 1 24·1	19·77	3	!; pF; L; E 90° ±; nf of 2 ...	6*†
3191	3414	II. 558	.....	12 37 23·1	3·109	1	99 18 53·1	19·77	1	vF; L; E; * 16 att; * 9 p ...	2
3192	1416	II. 127	.....	12 37 27·8	3·016	1	75 43 35·1	19·77	1	F; cS; R; bM; r	3
3193	1417	II. 71	.....	12 37 29·4	3·025	1	78 2 34·1	19·77	1	vB; S; vsvmbMN	2
3194	3415	.....	.....	12 37 37·9	3·264	1::	130 19 53·1	19·77	1::	F; pL; R; gbM	1
3195	1418	II. 643	.....	12 37 42·5	2·898	1	52 5 58·1	19·77	1	pF; pL; R; gbM; r	2
3196	.....	II. 39	.....	12 37 46·2	3·057	1	86 0 49·1	19·77	1	pB; 2 S st in M; S * p	1
3197	1419	I. 142	.....	12 37 58·3	3·057	2	86 11 14·8	19·76	2	B; pL; iR; mbM; * 10 sp ...	3
3198	1420	I. 15	.....	12 37 59·0	3·072	1	89 41 29·8	19·76	1	B; vL; mE 45°±; psbM ...	4
3199	1421	.....	.....	12 38 12·3	+3·023	1	77 47 31·8	+19·76	1	B; S; R; psbM	1

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	h.	H.		h m s	s		° ′ ″	″			
3200	.....	III. 663	.....	12 38 15·2	+3·072	1	89 46 47·8	+19·76	1	vF; S; iF	1
3201	1422	III. 328	.....	12 38 23·9	2·952	3	62 6 37·8	19·76	4	pF; cS; R; bM; r; p of 2	6
3202	1423	II. 774	.....	12 38 32·4	3·098	1	96 18 3·8	19·76	1	pF; S; R; psmbM	3
3203	3416	.....	.....	12 38 36·0	3·273	1	130 56 55·5	19·75	1	eF; S; R; vgbM	1
3204	1424	III. 329	.....	12 38 43·7	2·951	1	62 10 24·5	19·75	2	F; vS; R; sbM*10; f of 2	4
3205	3417	.....	.....	12 38 47·3	3·104	1	97 52 44·5	19·75	1	vF; cS; R; glbM	1
3206	.....	III. 778	.....	12 39 11·1	2·733	2	34 28 43·5	19·75	2	cF; S; lE	2*
3207	1425	II. 326	.....	12 39 17·7	2·928	1	58 30 6·2	19·74	1	vF; pmE; ?biN	3
3208	3418	.....	.....	12 39 18·0	3·274	1	130 49 55·2	19·74	1	eF; lE; vgbM	1
3209	3419	.....	.....	12 39 36·0	3·263	1	128 48 5·2	19·74	1	eeF; pL; R	1
3210	3420	.....	.....	12 39 36·4	3·118	1	100 52 34·2	19·74	1	eF; S; 1 or 2 st inv	1
3211	3421	.....	.....	12 39 45·5	3·291	1	132 34 50·2	19·74	1	pF; S; R; gbM	1
3212	3423	III. 523	.....	12 39 58·2	3·111	1	99 17 29·9	19·73	1	cF; L; E 45°±; gvlbM	2
3213	3422	.....	.....	12 40 2·9	3·279	1	130 47 24·9	19·73	1	eF; pS; R; vgbM; S * sp	1
3214	1426	II. 181	.....	12 40 6·3	3·081	1	91 58 8·9	19·73	1	B; pL; pmE 25°	5*
3215	1427	III. 398	.....	12 40 13·3	2·984	3	69 46 52·9	19·73	3	F; S; R; sbM*; rr	4
3216	1428	II. 795	.....	12 40 16·6	2·728	1	34 41 11·9	19·73	1	pF; vS; vmE; vsmbM	3*
3217	1430	.....	.....	12 40 39·3	2·897	1	53 52 53·6	19·72	1	vF; vS; R; psbM	1
3218	1429	III. 543	.....	12 40 43·4	3·051	1	84 53 57·6	19·72	2	eF; pL; *9·10 p 10^s	3
3219	1431	II. 128	.....	12 40 44·5	3·010	3	75 28 34·6	19·72	3	pB; vL; E; vglbM; r	5
3220	.....	III. 664	.....	12 40 48·3	3·076	1	90 55 44·6	19·72	1	vF; S	1
3221	1432	II. 182	.....	12 40 58·2	3·081	1	92 33 48·6	19·72	1	pB; pL; E 90°±; mbM	5
3222	1433	II. 381	.....	12 41 2·8	2·943	2	62 0 41·6	19·72	3	F; cS; R; bM	4
3223	.....	III. 906	.....	12 41 5·5	2·332	1	18 3 44·6	19·72	1	vF; pL; E	1
3224	1435	II. 796	.....	12 41 9·5	2·731	1	34 51 21·6	19·72	1	cF; pS; vlE; mbMN	3*
3225	1434	II. 72	.....	12 41 11·2	3·021	6	78 14 47·6	19·72	6	pF; S; vlE	7
3226	3424	.....	Δ. 510?	12 41 12·2	3·282	1	130 32 29·3	19·71	1	pB; L; R; gbM; r	1
3227	1436	I. 39	.....	12 41 21·8	3·094	2	95 2 2·3	19·71	2	vB; L; lE 45°±; smbMrN	5
3228	.....	I. 8 = III. 6	.....	12 41 28·1	3·032	6	80 44 53·3	19·71	6	cB; pL; iR; bM; r	6*
3229	1437 = 3425	I. 129	.....	12 41 46·4	3·107	2	97 54 3·3	19·71	2	vB; R; vmbM rN; r	3
3230	1438 = 3426	III. 524	.....	12 41 49·6	3·119	2	100 38 16·3	19·71	2	F; L; mE40°; vlbM; B*p	4
3231	.....	II. 578	.....	12 42 2·1	3·054	1	85 50 43·0	19·70	1	F; S	1
3232	.....	III. 514	.....	12 42 5·8	3·109	2	98 21 44·0	19·70	2	eF; cS; pmE	2
3233	1439	II. 662	.....	12 42 8·9	2·842	2	47 18 39·0	19·70	2	cF; S; R; gbM	3
3234	3427	.....	.....	12 42 15·5	3·288	1	130 31 49·0	19·70	1	vF; vS; R; psbM	1
3235	.....	III. 815	.....	12 42 19·7	2·753	1	38 2 43·0	19·70	1	S; stellar	1
3236	.....	III. 722	.....	12 42 22·8	3·118	1	100 20 43·7	19·69	2	eF; S	1
3237	3428	.....	Δ. 511	12 42 26·6	3·289	1	130 36 13·7	19·69	1	pB; cS; R; gbM	1
3238	1440	III. 610	.....	12 42 29·3	3·092	1	94 26 6·7	19·69	1	cF; pL; lE	2
3239	1451, *a*	.....	R. nova	12 42 35·9	2·95	::	63 45 13·4	19·69	::	E	0
3240	1441	II. 95	.....	12 42 39·1	3·000	2	74 4 17·7	19·69	2	cB; pL; vmE 28°·5; sbMN	4†
3241	1442	.....	.....	12 42 39·4	2·948	1	63 45 43·7	19·69	1	vF; pL	1
3242	1443	II. 412	.....	12 42 40·1	2·888	1	53 54 17·7	19·69	1	F; S; E; glbM; er	4
3243	1444	I. 140	.....	12 42 51·5	3·045	4	83 55 22·7	19·69	4	pB; L; vlE; glbM	6
3244	1445	III. 536	.....	12 43 1·6	3·130	2	102 33 51·7	19·69	2	F; pS; R; gbM	3
3245	1446	.....	.....	12 43 19·9	3·093	1	94 30 56·4	19·68	1	eF; vS; bet 2 st	1
3246	1448	III. 424	.....	12 43 22·9	2·900	1	56 4 35·4	19·68	1	vF; stellar	2
3247	1475, *a*	.....	R. nova	12 43 26	2·92	::	60 23 ±	19·68	::	E; bMN	0
3248	1447	III. 611	.....	12 43 26·4	3·088	1	93 23 9·4	19·68	1	eF; S; bM	2
3249	1451	I. 84	.....	12 43 32·0	2·945	1	63 44 13·4	19·68	1	vB; vL; E; vg, vsvmbMeBN	2†
3250	1449	III. 280	.....	12 43 34·1	3·135	1	103 34 27·1	19·67	1	F; vS; R; stellar; np of 2	2
3251	1450	II. 298	.....	12 43 37·5	3·135	1	103 34 57·1	19·67	1	F; pL; R; lbM; sf of 2	2
3252	3430	.....	.....	12 43 38·8	3·293	1::	130 19 50·1	19·67	1::	neb; 1st of 3	1
3253	3431	.....	.....	12 43 38·8	3·293	1::	130 19 50·1	19·67	1::	2nd of 3	1
3254	1452	I. 41	.....	12 43 45·4	+3·098	1	95 38 6·1	+19·67	1	vF; pL; E	3

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	h.	H.		h m s	s		° ′ ″	″			
3255	.....	II. 814	.....	12 43 53·8	+2·720	1	36 20 41·1	+19·67	1	F; S; vsmbM	1
3256	1453	II. 73	.....	12 44 3·4	3·019	4	78 19 45·1	19·67	5	cF; pL; {R / mE 90°} r; *12p.	6*
3257	1454	.....	.....	12 44 5·1	3·047	1	84 23 15·1	19·67	1	vF; vS; R	1
3258	1456	.....	M. 94	12 44 17·2	2·838	5	48 6 31·8	19·66	5	vB; L; iR; vsvmbMBN; r...	10†
3259	1457	III. 496	.....	12 44 18·7	2·890	1::	55 5 14·8	19·66	1	eF; vS; pmE	2
3260	1455	III. 515	.....	12 44 20·7	3·108	1	97 39 9·8	19·66	1	F; pL; lE; pglbM	2
3261	1458	III. 721	.....	12 44 30·1	2·776	1	41 33 55·8	19·66	1	vF; S; R; psbM	2
3262	3432	I. 133	.....	12 44 30·5	3·118	1	99 41 33·8	19·66	1	cB; vS; vbMN=*9; *10 sf	2
3263	3429	.....	.....	12 44 31·3	3·300	1	130 37 52·8	19·66	1	F; R; gbM	1
3264	3433	.....	.....	12 44 37·2	3·297	1	130 18 42·8	19·66	1	F; L; E; gbM; 3rd of 3	1
3265	1460	.....	.....	12 44 52·3	3·012	1	77 9 54·5	19·65	1	pB; mE; r	1
3266	.....	II. 344	.....	12 44 54·5	2·940	1	63 28 40·5	19·65	1	F; pL; lE	1
3267	1459	III. 537	.....	12 44 55·1	3·132	1	102 38 47·5	19·65	1	F; vS; iR; gbM	2
3268	.....	III. 907	.....	12 44 55·5	2·244	1	17 36 39·8	19·66	1	vF; cL; E 135°±	1
3269	1451, *b*	.....	R. nova	12 45 0·0	2·95	::	63 23 0·4	19·65	::	E 0°	0
3270	1463	IV. 78	.....	12 45 0·2	2·175	1	16 21 38·5	19·65	1	pB; L; R; vg, vsbM	2
3271	3434	.....	.....	12 45 6·7	3·313	1	131 54 27·5	19·65	1	B; pS; R; vg, vsmbM	1
3272	.....	III. 82	.....	12 45 10·2	3·005	1	75 44 40·5	19·65	1	vF; S; E; r	1
3273	1461	I. 16	.....	12 45 11·6	3·075	1	90 26 26·5	19·65	1	cB; L; vlE; vglbM	5
3274	1462	I. 25 = II. 74	.....	12 45 15·0	3·015	5	77 55 36·5	19·65	5	B; pL; R; psbM; p of 2	7
3275	3435	.....	Δ. 301	12 45 22·2	3·533	2	149 35 20·2	19·64	3	Cl; vL; st vB (ε Crucis)	3†
3276	1464	III. 281	.....	12 45 35·3	3·143	1::	104 38 49·2	19·64	1::	vF; pS; r	2
3277	1465	III. 70	.....	12 45 46·1	2·992	3	73 23 18·2	19·64	3	vF; pL; E?	4
3278	1466	II. 75	.....	12 45 53·4	3·015	4	78 0 38·2	19·64	4	pB; vmE 34°·0; 3B st s; f of 2	6†
3279	.....	III. 489	.....	12 45 55·7	3·152	1	106 13 39·9	19·63	1	vF; S; lbM	1
3280	1467	III. 544	.....	12 46 6·4	3·048	1	84 46 58·9	19·63	1	F; cS; R; gbM	2
3281	3436	.....	.....	12 46 11·3	3·295	2	128 58 3·9	19·63	2	B; pS; lE; mbM	3
3282	.....	III. 525	.....	12 46 12·7	3·115	1	98 45 39·9	19·63	1	vF; vS	1
3283	1468	II. 535	.....	12 46 13·2	3·063	1	87 58 25·9	19·63	1	F; pL; mE; *9 p 90°	2
3284	.....	III. 516	.....	12 46 22·4	3·111	1	97 54 38·9	19·63	1	vF; S	1
3285	1469	II. 24	.....	12 46 22·4	3·058	2	87 3 50·9	19·63	2	pF; pS; R; mbM	5
3286	1471	III. 618	.....	12 46 26·5	2·862	1	52 25 5·9	19·63	1	eF; cS; R; bM	2
3287	1470	II. 186	.....	12 46 29·7	3·101	1	95 51 34·9	19·63	1	F; cL; R; vglbM; r	3
3288	3437	II. 559	.....	12 46 46·5	3·114	1	98 26 38·6	19·62	1	F; S; R; vlbM; p of D neb...	2
3289	.....	III. 517	.....	12 46 47·5	3·112	1	98 1 38·6	19·62	1	vF; S	1
3290	3438	.....	.....	12 46 47·5	3·114	1	98 26 17·6	19·62	1	vF; S; R; vlbM; f of D neb	1
3291	1472	III. 106	.....	12 46 48·1	3·020	2	79 31 37·0	19·60	2	vF; pL; R; r	3
3292	.....	I. 134	.....	12 47 4·9	3·120	1	99 46 38·3	19·61	1	cB; vL; mE	1
3293	.....	I. 135	.....	12 47 15·1	3·131	2	101 49 8·3	19·61	2	pF; pS; R; mbM; p of D neb	2
3294	.....	I. 136	.....	12 47 16·1	3·131	2	101 50 8·3	19·61	2	pF; pS; R; mbM; f of D neb	2
3295	.....	III. 526	.....	12 47 16·9	3·121	1	99 51 38·3	19·61	1	eF; eS	1
3296	3439	.....	.....	12 47 17·2	3·384	1	137 58 54·3	19·61	1	vF; S; R; glbM	1
3297	.....	II. 187	.....	12 47 21·4	3·102	2	96 6 8·3	19·61	2	pB; pS; mbM; r	2
3298	1473	II. 345	.....	12 47 29·9	2·925	3	62 9 58·3	19·61	2	F; R; *9 att 1′n	4
3299	.....	II. 560	.....	12 47 31·8	3·120	1	99 28 38·3	19·61	1	pF; pS; iR	1
3300	1475	I. 93	.....	12 47 54·0	2·911	2	60 17 53·0	19·60	2	pB; pS; lE; *8nf 1′	4
3301	.....	II. 538	.....	12 47 55·2	3·132	2	101 52 8·0	19·60	2	vF; S; 2 or 3 st near	2
3302	1474	II. 21	.....	12 47 59·1	3·029	3	81 10 55·0	19·60	3	pF; pL; R; bM; r	7
3303	1477	II. 382	.....	12 48 6·7	2·921	2	61 49 20·0	19·60	2	pF; pS; gbM	3
3304	1476	III. 548	.....	12 48 7·8	3·054	1	86 20 18·0	19·60	1	cF; S; vS* att	2
3305	1478	I. 211	.....	12 48 9·1	2·765	1	42 43 7·0	19·60	1	pB; cS; R; psbM; *14 p	5
3306	1479	III. 816	.....	12 48 26·6	2·683	1	36 8 27·7	19·59	1	eF; S; lE	2
3307	.....	IV. 40	.....	12 48 33·9	3·136	1	102 17 37·7	19·59	1	S; att to pB*	1
3308	3440	.....	.....	12 48 39·2	3·230	1	118 45 0·7	19·59	1.	F; cS; R; gvlbM	1
3309 3310	1509, *a*	.....	R. 2 novæ	12 48 45	3·05	::	86 42 ±	19·58	::	{F; D neb; E at right angles to each other.	0
3311	1480	I. 141	.....	12 48 53·4	+3·047	1::	84 56 47·4	19·58	1::	{H. vB / h. pF}; cL; E135°± ...	3

No. of Catalogue.	References to: Sir J. H.'s Catalogues of Nebulæ.	Sir W. H.'s Classes and Nos.	Other Authorities.	Right Ascension for 1860, Jan. 0.	Annual Precession in Right Ascension for 1880.	No. of Obs. used.	North Polar Distance for 1860, Jan. 0.	Annual Precession in N.P.D. for 1880.	No. of Obs. used.	Summary Description from a Comparison of all the Observations, Remarks, &c.	Total No. of times of Obs by h. and H
	h.	H.		h m s	s		° ′ ″	″			
3312	3441	.....	.....	12 49 6·0	+3·326	1	131 2 20·4	+19·58	1	eF; cS; R; gbM; p of 2.....	1
3313	3442	.....	.....	12 49 6·1	3·326	1	131 3 50·4	19·58	1	eF; S; R; gbM; f of 2	3
3314	1481	II. 383	.....	12 49 9·7	2·915	1	61 29 48·4	19·58	1	vF; pL.....	2
3315	1483	I. 243	.....	12 49 10·9	2·590	2	30 54 17·4	19·58	2	B; pS; vlE; vgbM	2
3316	1482	II. 777	.....	12 49 20·0	3·104	1	96 3 28·1	19·57	1	F; S; R; bM	2
3317	3443	.....	.....	12 49 23·7	3·680	3	154 11 48·1	19·57	3	Cl; pL; pRi; iF; st 10 ...18	3
3318	1484 = 3445	II. 549	.....	12 49 33·0	3·112	2	97 46 5·1	19·57	2	pB; L; pmE 0°; gbM	3
3319	1485	II. 384	.....	12 49 48·9	2·917	1	62 3 50·8	19·56	1	F; cL	2*
3320	.....	II. 563	.....	12 49 51·1	3·140	1	102 54 35·8	19·56	1	pB; iF; bM.....	1
3321	1486	.....	M. 64	12 49 51·8	2·951	3	67 33 15·8	19·56	3	!; vB; vL; vmE 120°±; bMSBN=⁂ ?.	10†
3322	3447	.....	.....	12 50 5·6	3·220	1	116 32 13·8	19·56	1	F; S; R; gbM	1
3323	3446	.....	.....	12 50 6·4	3·321	1	129 59 36·8	19·56	1	pF; vS; R; sbM *17; *10, 70°·3	1
3324	1487	II. 346	.....	12 50 6·5	2·917	1	62 14 32·8	19·56	1	vF; pL; iF	3
3325	3444	.....	Δ. 164	12 50 7·9	3·899	2	160 6 53·5	19·55	2	⊕; B; L; R; g, vsbM; st 12	2
3326	1488	III. 817	.....	12 50 11·1	2·680	1	36 56 44·8	19·56	1	vF; S; iR; bM	2
3327	3448	.....	.....	12 50 15·0	3·375	2	135 30 1·5	19·55	3	F; pL; mE; vgbM	3
3328	1489	.....	.....	12 50 23·4	2·725	1	40 26 12·5	19·55	1	Neb; ?.....	1
3329	1490	.....	.....	12 50 42·3	3·138	1	102 17 56·2	19·54	1	vF; 3Sst sp	1
3330	1491	II. 536	.....	12 50 42·5	3·060	1	87 40 23·5	19·55	1	pF; pL; pmE; vgbM; *nf 30°	2
3331	1493	II. 387	.....	12 50 45·5	2·906	2	60 46 1·2	19·54	2	pF; pL; R; vS* att	3
3332	1492	III. 613	.....	12 50 47·5	3·087	1	92 51 26·2	19·54	1	cF; E; er; *sf 30″	2
3333	1494	II. 386	.....	12 50 55·4	2·912	1::	61 49 52·2	19·54	1	F; pL; R.....	2
3334	1495	.....	.....	12 51 9·4	2·837	1	51 52 3·2	19·54	1	eF	1
3335	3449	.....	Δ. 311	12 51 45·5	3·571	2	148 50 34·2	19·54	2	Cl; L; pRi; iR; st 10... ...	2
3336	1496	II. 385	.....	12 51 48·6	2·908	2	61 38 24·6	19·52	2	F; S; R; pslbM	3
3337	1497	I. 68	.....	12 51 59·8	3·151	1	104 17 25·6	19·52	2	B; R; psmbM; *13 np	3*
3338	.....	II. 299	.....	12 52 1·7	3·152	1	104 31 34·6	19·52	1	pB; pL; mbM.....	1*
3339	.....	III. 908	.....	12 52 1·7	2·172	1	19 1 32·6	19·52	1	eF; vS; iR; vlbM	1
3340	1499	IV. 30	.....	12 52 22·9	2·852	2	54 23 0·3	19·51	2	vF; pL; vmE 30°±; bet 2 st	5†
3341	.....	II. 644	.....	12 52 24·2	2·832	1	51 56 32·3	19·51	1	pB; S; R; mbM.....	1
3342	1498	I. 162	.....	12 52 28·6	2·990	6	75 4 23·3	19·51	6	B; pL; mE 90°; sbMN; S* inv.	7
3343	1500	.....	.....	12 52 41·1	2·903	1::	61 16 45·3	19·51	1::	1st of 5; *7 n	1
3344	1501	II. 388	.....	12 52 49·6	2·903	2	61 17 56·0	19·50	3	eF; S; R; *7 n; 2nd of 5 ...	4
3345	.....	III. 758	.....	12 52 58·9	3·102	1	95 20 33·0	19·50	1	vF; vS; p of 2.....	1
3346	.....	III. 759	.....	12 52 58·9	3·102	1	95 20 33·0	19·50	1	vF; vS; F of 2	1
3347	1502	II. 389	.....	12 53 0·1	2·902	1::	61 16 45·0	19·50	1::	3rd of 5	2
3348	1503	III. 83	.....	12 53 9·2	2·999	2	76 46 17·0	19·50	2	cF; pL; R; vglbM; r.....	3
3349	1504	.....	.....	12 53 17·4	3·106	1	96 5 50·7	19·49	1	vF; S; E	1
3350	1505	II. 778	.....	12 53 20·0	3·102	1	95 19 0·7	19·49	1	pF; cS; E; psbM; ⁂ np.....	2
3351	1507	II. 391	.....	12 53 24·0	2·901	2	61 15 23·7	19·49	2	pB; pmE; bM; *7 n; 4th of 5	3
3352	1506	III. 614	.....	12 53 24·1	3·094	1	93 50 3·7	19·49	1	cF; S; iR; bM	2
3353	1508	II. 390	.....	12 53 28·3	2·908	1	62 21 3·7	19·49	1	vF	2
3354	1510	III. 363	.....	12 53 29·7	2·900	1	61 17 14·7	19·49	2	pF; S; R; *7 n; 5th of 5 ...	3
3355	.....	II. 300	.....	12 53 33·9	3·147	2	103 11 32·7	19·49	2	.....	2
3356	1509	I. 143	.....	12 53 33·9	3·055	2	86 45 0·7	19·49	3	cB; cE; *10 att 135°±	4*†
3357	1512	.....	.....	12 53 35·2	2·724	1	42 1 50·7	19·49	1	pF; S; R; gbM	1
3358	1511	I. 69	.....	12 53 37·9	3·150	1	103 45 56·7	19·49	1	pB; pL; iR; st nr	2*
3359	3450	.....	.....	12 53 44·3	3·257	1	120 12 2·4	19·48	1	vF; cS; R; * att; p of 2.....	1
3360	3451	.....	.....	12 53 51·3	3·257	1	120 10 2·4	19·48	1	vF; vS; R; slbM; f of 2.....	1
3361	.....	II. 517	.....	12 53 51·5	3·069	2	89 18 31·4	19·48	2	pB; pS; R; bM	2
3362	3452	.....	.....	12 54 9·0	3·361	1	132 0 55·1	19·47	1	eF; 3 or 4 st 11, 12, f	1
3363	.....	V. 3	.....	12 54 9·5	3·060	1	87 35 32·4	19·48	1	eF; vL; rr	1*
3364	.....	II. 392	.....	12 54 10·0	2·899	1::	61 23 44·4	19·48	1::	1st of 3	1
3365	1514	II. 645	.....	12 54 10·5	2·823	2	51 54 16·4	19·48	2	pB; cS; R; smbM; *17 np ..	3
3366	1513	IV. 47	.....	12 54 12·7	3·094	1	93 47 23·4	19·48	1	pB; S; R; bM; stellar?.....	3
3367	1515	.....	.....	12 54 26·8	2·719	1	42 1 52·1	19·47	1	eF; S; E; bM.....	1
3368	1516	II. 393	.....	12 54 39·4	+2·897	1	61 21 47·1	+19·47	2	F; pL; 2nd of 3	3

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	h.	H.		h m s	s		° ′ ″	″			
3369	1518	II. 394	.....	12 54 42·9	+2·897	1	61 24 48·1	+19·47	1	vF; 3rd of 3	2
3370	1517	.....	.....	12 54 50·7	3·154	2	104 13 10·8	19·46	2	cF; L; vlE 45°±	4
3371	1519	II. 779	.....	12 54 51·3	3·112	1	96 57 43·8	19·46	1	cF; S	2
3372	.....	III. 364	.....	12 55 1·9	2·895	1	61 12 29·8	19·46	1	vF	1
3373	3453	II. 190	.....	12 55 43·0	3·115	1	97 19 31·2	19·44	1	F; pS; vlE; glbM	4
3374	.....	III. 760	.....	12 55 51·7	3·115	1	97 22 30·2	19·44	1	cF; vS; R	1
3375	3454	.....	.....	12 56 14·8	3·358	1	130 39 45·9	19·43	1	vF; R; Δ2st 8, 9, f	1
3376	.....	III. 818	.....	12 56 20·2	2·663	1	38 47 27·9	19·43	1	cF; S; R; vglbM	1
3377	.....	II. 191	.....	12 56 27·9	3·136	1	100 44 59·9	19·43	1	pB; pL; iR	2
3378	3456	.....	.....	12 56 38·5	3·263	2	119 46 26·6	19·42	2	pB; S; R; bM; *f 6s	1
3379	3455	.....	.....	12 56 42·6	3·425	1	136 28 2·6	19·42	1	eeF; S; R; p of 2	1
3380	1521	.....	.....	12 56 48·3	2·646	1	37 55 20·6	19·42	1	eF; R; psbM	1
3381	3458	II. 561	.....	12 56 56·5	3·129	1	99 35 40·6	19·42	1	pB; L; R; gmbM	2
3382	3457	.....	.....	12 56 58·2	3·426	1	136 29 22·3	19·41	1	F; S; R; f of 2	1
3383	1520	I. 40	.....	12 56 59·1	3·101	2	94 48 23·6	19·42	2	pF; L; E; gbMBN; r	3
3384	.....	III. 761	.....	12 56 59·5	3·113	1	96 55 28·6	19·42	1	vF; S	1
3385	1522	II. 395	.....	12 57 6·0	2·887	1	61 3 42·6	19·42	1	F; S; R; bM; *9 nf 1′	2
3386	3459	.....	Δ. 411	12 57 14·1	3·455	1	138 32 6·3	19·41	1	B; vL; vmE 38°·7	1
3387	3460	.....	.....	12 57 32·1	3·388	2	132 50 51·0	19·40	2	B; pS; R; gpmbM; p of 2	2
3388	3461	.....	.....	12 57 34·1	3·306	1	124 35 6·0	19·40	1	F; pL; R; vglbM	1
3389	3462	.....	.....	12 57 40·2	3·387	2	132 45 46·0	19·40	2	eF; S; R; pslbM; f of 2	2
3390	1523	II. 188	.....	12 57 43·2	3·107	(2)	95 45 18·0	19·40	2	F; pL; lE; r	3
3391	1524	II. 396	.....	12 58 15·4	2·877	4	60 7 28·7	19·39	5	F; S; R; psbM*11	6
3392	3463	.....	.....	12 58 18·4	3·329	1	126 48 31·4	19·38	2	vF; pS; am 3S st	2
3393	1527	.....	.....	12 58 23·9	1·656	2	13 50 36·4	19·38	2	vF; S; R; vgbM	2*
3394	3464	.....	.....	12 58 26·1	3·263	1	119 0 14·4	19·38	1	F; cS; R; gbM	1
3395	1525	II. 413	.....	12 58 26·5	2·825	2	54 4 20·7	19·39	2	pB; cS; R; smbM	4
3396	1526	II. 397	.....	12 58 27·1	2·888	1	61 40 48·4	19·38	1	F; S; R	2
3397	3465	I. 130	.....	12 58 31·6	3·116	1	97 15 49·4	19·38	1	vB; pS; E 0°±; bMBN	3
3399	1528	.....	.....	12 59 2·4	2·840	1	56 4 6·1	19·37	2	eF; S; R	2
3400	1529	II. 398	.....	12 59 4·5	2·885	1	61 30 58·1	19·37	1	F; S; iF	2
3401	.....	III. 303	.....	12 59 9·8	2·874	1	60 10 26·1	19·37	1	eF; vS	1
3402	1530	II. 663	.....	12 59 27·3	2·754	2	47 31 10·8	19·36	2	F; vS; R; stellar; vS*s	3
3403	1532	III. 779	.....	12 59 28·4	2·537	1	32 55 57·8	19·36	1	eF; S; lE	3
3404	3466	.....	.....	12 59 33·6	3·255	2	117 28 37·8	19·36	2	vF; vL; cE; vgbM	2
3405	1531	III. 304	.....	12 59 35·3	2·873	2	60 12 10·8	19·36	3	vF; vS; vlE; vglbM; ** sp	4
3406	1533	III. 783	.....	12 59 35·4	2·588	1	35 40 40·8	19·36	1	vF; S; E; * att	2
3407	3467	.....	.....	12 59 37·3	3·221	1	112 55 45·8	19·36	1	F; pL; R; glbM	1
3408	.....	III. 765	.....	12 59 57·7	3·224	1	113 15 24·5	19·35	1	vF; pL; iF	1
3409	.....	III. 937	.....	13 0 17·3	1·670	1	13 57 22·5	19·35	1	vF; S; iR; bM	1
3410	.....	III. 781	.....	13 0 18·4	2·582	1	35 38 40·2	19·34	1	vF; S	1
3411	.....	III. 782	.....	13 0 32·3	2·580	1	35 36 40·2	19·34	1	vF; S	1
3412	1534	.....	.....	13 0 36·8	3·099	1	94 16 0·9	19·33	1	vF; vS; R; psbM	1
3413	3468	.....	.....	13 0 40·4	3·480	1	138 45 23·9	19·33	1	B; pL; R; gmbM	1
3414	.....	III. 780	.....	13 0 41·9	2·540	1	33 34 22·2	19·34	1	cF; S	1
3415	1535	.....	.....	13 0 57·8	2·948	2	70 50 8·9	19·33	2	F; vS; R; sbM; stellar	2*
3416	.....	III. 346	.....	13 1 8·2	2·902	1	64 29 21·6	19·32	1	eF; pL; lE	1
3417	3469	.....	.....	13 1 29·8	3·264	1	117 53 57·3	19·31	1	eF; cS; R	1
3418	1537	II. 189	.....	13 1 32·2	3·111	1	96 1 35·3	19·31	1	B; pL; R; *9 sf	4
3419	.....	III. 365	.....	13 1 32·5	2·873	1	60 56 21·3	19·31	1	vF	1
3420	1536	II. 301	.....	13 1 33·1	3·168	2	104 45 42·3	19·31	2	B; pL; R; psmbM	3*
3421	.....	II. 185	.....	13 1 40·9	3·102	1	94 36 21·3	19·31	1	F; S; iF; pB*nr	1*
3422	1539	III. 654	.....	13 1 50·4	2·743	1	47 34 57·3	19·31	1	vF; vS; R; lbM	2
3423	1538	III. 401	.....	13 1 51·4	2·811	2	54 3 8·3	19·31	2	vF; S; R; stellar	3
3424	1542	II. 815	.....	13 1 54·5	2·599	1	37 18 52·3	19·31	1	vF; vS; stellar	2
3425	3470	.....	.....	13 1 54·7	3·404	1	132 21 15·0	19·30	1	vF; S; E; r	1
3426	.....	.....	Auw. N. 31	13 2 1·0	3·099	...	94 38 51·0	19·30	...	A neb (Markree Obs. Apr. 9, 1852).	0*
3427	1541	.....	.....	13 2 6·3	2·993	1	77 37 1·0	19·30	1	vF; S; lE; 2Sst s	1
3428	.....	III. 766	.....	13 2 11·9	3·225	1	112 38 21·7	19·29	1	vF; vS	1
3429	3471	.....	.....	13 2 15·9	+3·219	1	111 48 8·7	+19·29	1	pF; cS; R; slbM; am st	1

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	h.	H.		h m s	s		° ′ ″	″			
3430	1540 = 3472	I. 42	.....	13 2 23·2	+3·118	2	97 5 2·7	+19·29	2	pB; pL; R; vgpmbM; *8 np	6
3431	.....	III. 819	.....	13 2 29·4	2·616	1	38 34 19·7	19·29	1	vF	1
3432	1543	II. 537	.....	13 2 32·9	3·057	1	87 35 35·7	19·29	1	cF; pL; R; lbM; er	2
3433	1544	III. 366	.....	13 3 5·6	2·863	1	60 20 39·4	19·28	1	cF; pS; lE	2
3434	1545	.....	.....	13 3 37·6	2·558	1	35 44 28·1	19·27	1	pF; S; iR; gbM	1
3435	.....	III. 655	.....	13 4?15·2	2·704	1	47 27 18·5	19·25	1	vF; pS; lbM	1
3436	1546	III. 305	.....	13 4 20·5	2·852	1	59 36 40·5	19·25	2	vF; vS; vlE.....	3
3437	1547	I. 96	.....	13 4 28·5	2·781	2	52 11 9·2	19·24	2	vB; vL; vmE 25°; vsbMN...	4
3438	.....	III. 848	.....	13 4 34·7	2·340	1	27 7 16·5	19·25	1	vF; vS.....	1
3439	.....	.....	D'Arrest, 93	13 4 37	3·05	[1]	63 51 42	19·24	[1]	pF; pL; R	0
3440	1550	III. 820	.....	13 4 45·5	2·610	1	39 9 53·2	19·24	1	vF; R; bet 2 vS st	2
3441	1549	I. 85	.....	13 4 48·8	2·907	2	66 20 21·9	19·23	2	pF; cL; E 17°·0; biN; *9 f	3
3442	1548	.....	.....	13 4 50·5	3·175	1	105 3 9·9	19·23	1	vF; R; bM; *10 np 5′	1
3443	3473	.....	.....	13 4 51·7	3·419	3	132 21 4·9	19·23	3	pB; cS; R; am 4 st.....	3
3444	1551	II. 414	.....	13 5 2·2	2·787	1	52 58 43·9	19·23	1	pF; S; E; psbM.....	2
3445	1552	II. 637	.....	13 5 7·5	3·097	(1)	93 36 2·6	19·22	1	F; cL; iR; lbM	2
3446	.....	II. 356	.....	13 5 7·9	2·897	1	65 12 15·6	19·22	1	pB; S	1
3447	1553	III. 669	.....	13 5 28·3	3·183	1	106 0 52·6	19·22	1	vF; R; bM	2
3448	1554	II. 746	.....	13 5 30·7	3·203	1	108 46 4·3	19·21	1	cB; S; R; mbMpBN	2
3449	1555	III. 545	.....	13 5 36·5	3·036	1	84 31 7·3	19·21	1	eF; vS; R; er	2
3450	1556	II. 129	.....	13 5 42·5	2·982	3	76 39 28·3	19·21	3	cF; cL; vlE; lbM	4
3451	1557	.....	.....	13 5 46·2	2·663	1	43 4 1·3	19·21	1	pF; cS; R; *12 nf 90″	1
3452	1559	II. 664	.....	13 5 55·8	2·692	2	45 12 45·3	19·21	2	pF; L; mE 20°; vlbM	4
3453	1558	.....	M. 53	13 6 2·0	2·941	5	71 5 3·0	19·20	5	⊙; ⊕; B; vC; ir; vvmbM; st 12...	12
3454	1560	III. 649	.....	13 6 10·1	2·826	3	57 26 40·0	19·20	2	vF; S; lE; *13 n	4
3455	3474	.....	.....	13 6 13·8	3·425	3	132 12 57·0	19·20	3	pB; pL; R; gbM; *7 nf ...	3
3456	1561	.....	.....	13 6 16·8	3·027	2	83 11 34·0	19·20	2	vF; S; R; pgbM.....	2
3457	1562	.....	.....	13 6 27·1	2·646	1	42 10 39·0	19·20	1	F; vS; R; gbM	1
3458	1563	III. 367	.....	13 6 45·9	2·861	2	61 27 30·7	19·19	2	vF; pL; iR	3
3459	1564	I. 97	.....	13 6 59·7	2·775	2	52 39 40·4	19·18	2	vB; pl; E 166°·8; smbMvBN; *np.	3
3460	.....	III. 909	.....	13 7 19·4	1·918	1	18 36 12·4	19·18	1	vF; vS; R	1
3461	1565	II. 510	.....	13 7 33·0	3·185	2	105 51 1·8	19·16	2	cF; pS; vlE; bM	3
3462	.....	II. 816	.....	13 7 49·8	2·568	1	37 58 10·8	19·16	1	F; S; ir; vgmbM	1
3463	3477	.....	.....	13 7 55·8	3·243	1	113 14 29·5	19·15	1	F; L; R; vgvlbM; *9 p ...	1
3464	3476	.....	.....	13 7 56·4	3·744	1	149 19 9·5	19·15	1	Cl; P; E; sc st 11...	1
3465	1566	II. 511	.....	13 7 56·9	3·184	1	105 38 49·5	19·15	1	pB; pL; R; bM	3
3466	3475	.....	.....	13 7 59·4	3·845	1	152 40 25·2	19·14	1	Cl; vL; vRi; st 11...	1
3467	3478	.....	.....	13 8 26·1	3·283	1	117 40 52·2	19·14	1	pF; R; sp of 2	1
3468	.....	III. 670	.....	13 8 26·7	3·185	1	105 43 13·2	19·14	1	vF	1
3469	.....	II. 512	.....	13 8 31·7	3·185	2	105 37 43·2	19·14	2	cF; S	2
3470	3479	.....	.....	13 8 46·5	3·283	1::	117 35 33·9	19·13	1::	Neb; nf of 2	1
3471	1567	.....	.....	13 9 0·0	2·837	1	59 33 42·9	19·13	1	vF	1
3472	1569	VI. 7	.....	13 9 30·5	2·938	1	71 35 10·3	19·11	2	Cl; vF; pL; iR; vgbM; st 15...	3
3473	1568	II. 513	.....	13 9 31·1	3·188	1	105 53 46·3	19·11	1	F; pS; iR	3
3474	1570	.....	M. 63	13 9 31·9	2·699	1	47 13 45·3	19·11	1	vB; L; pmE 120°±; vsmbMBN.	3
3475	1571	III. 306	.....	13 9 38·0	2·823	1	58 18 9·3	19·11	1	cF; cS; R; p of 2	2
3476	1572	III. 307	.....	13 9 52·3	2·821	1	58 13 16·0	19·10	1	cF; cS; R; f of 2	2
3477	3480	I. 138	.....	13 10 27·4	3·274	1	116 6 47·7	19·09	1	vB; S; R; vsmbM; *10 f...	4
3478	3482	.....	.....	13 10 33·7	3·358	1::	124 41 30·4	19·08	1	eF; vS; E; r	1
3479	3481	.....	.....	13 10 33·9	3·357	1	124 35 15·4	19·08	1	eF; vS; R; *nr	1
3480	3483	.....	.....	13 10 46·3	3·519	1	137 10 22·1	19·07	1	B; S; R; pslbM	1
3481	1573	III. 308	.....	13 10 57·3	2·817	1	58 10 2·4	19·08	1	vF; cS.....	3
3482	.....	III. 312	.....	13 11 14·2	3·227	1	110 22 7·8	19·06	1	F; L; iR; bM.....	1
3483	1574	III. 282	.....	13 11 54·7	3·178	1	104 6 53·5	19·05	1	vF; pL; pmE 135°±	2*
3484	1575	III. 309	.....	13 11 55·9	+2·810	1	57 47 16·5	+19·05	1	eF; vS	3

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	h.	H.		h m s	s		° ′ ″	″			
3485	1576 = 3489	III. 117	.....	13 12 6·9	+3·162	2	102 0 4·2	+19·04	2	vF; cS; R; 1st of 3	5
3486	1577 = 3490	II. 193	.....	13 12 9·0	3·161	2	101 55 11·2	19·04	2	pB; S; vlE; sbM; 2nd of 3...	5
3487	3484	II. 566	.....	13 12 9·6	3·285	1	116 50 8·2	19·04	1	pB; pS; cE; psbM; *7·8 f...	3
3488	1578 = 3491	III. 118	.....	13 12 14·9	3·162	2	101 57 46·0	19·04	2	cF; pS; vlE; 3rd of 3.....	5
3489	1578, *a*	.....	R. nova	13 12 ±	3·162	...	101 57 ±	19·04	...	No description, one of a group of *four*.	0
3490	3485	.....	.....	13 12 26·3	3·285	1	116 40 17·9	19·03	1	vF; S; R; 1st of 4	1
3491	1579	II. 313	.....	13 12 42·4	3·236	1	111 4 37·6	19·02	1	cB; cS; vlE 90°±; bf	2
3492	.....	II. 780	.....	13 12 44·0	3·258	1	113 40 5·6	19·02	1	F; L; R; vglbM.....	1
3493	3486	.....	.....	13 12 55·4	3·469	1	132 59 25·6	19·02	1	eF; vS; R; 2nd of 4	1
3494	.....	III. 724	.....	13 12 55·9	3·226	1	109 52 4·6	19·02	1	cF; vS; iF	1
3495	1580	II. 327	.....	13 13 2·1	2·818	2	59 1 33·6	19·02	2	pF; pL; gbM	3
3496	3487	.....	.....	13 13 4·2	3·470	2	132 58 39·3	19·01	2	pB; pL; R; 3rd of 4	2
3497	3488	.....	.....	13 13 8·5	3·470	2	132 59 51·3	19·01	2	cF; S; vlE; 4th of 4	2
3498	1583	III. 633	.....	13 13 20·1	2·702	1	48 51 23·3	19·01	1	vF; S; R; lbM	2
3499	1581	III. 539	.....	13 13 22·1	3·174	1	103 20 52·0	19·00	1	cF; vS; R; gbM.....	2
3500	1582	.....	.....	13 13 24·5	3·085	1	91 34 7·0	19·00	1	vF; iR; *11 sp	1
3501	1584	III. 650	.....	13 13 39·1	2·787	1	56 11 1·0	19·00	1	vF; cS; R; bM; sp of 2.....	3
3502	1585	.....	.....	13 13 46·8	2·786	1	56 7 15·0	19·00	2	vF; S; bet 2 st; nf of 2	2
3503	3493	II. 567	.....	13 14 3·7	3·289	2	116 41 36·7	18·99	2	cB; pS; lE; psbM *	4
3504	3492	.....	.....	13 14 4·5	3·385	1	125 54 9·7	18·99	1	vB; pS; R; svmbM	1
3505	.....	II. 665	.....	13 14 9·9	2·660	1	46 10 1·7	18·99	1	pB; cS; E	1
3506	.....	II. 22	.....	13 14 34·0	3·002	1	80 46 29·4	18·98	??	vF; vS.....	1*
3507	1586	III. 619	.....	13 15 6·1	2·717	1	50 42 22·8	18·96	1	vF; S; cE 0°±	2
3508	3494	.....	.....	13 15 12·3	3·342	1::	121 36 35·5	18·95	1	eeF; p of 2	1
3509	1588	III. 808	.....	13 15 14·4	2·367	1	31 37 0·8	18·96	1	cF; S; cE	2
3510	1587	III. 119	.....	13 15 32·9	3·168	2	102 14 3·2	18·94	2	cF; cS; iR; glbM	2
3511	1589	II. 646	.....	13 15 38·3	2·712	1	50 31 29·5	18·95	1	F; L; iR; vglbM	2†
3512	.....	II. 826	.....	13 16 2·4	2·359	1	31 34 28·2	18·94	1	F; S; E	1*
3513	3495	.....	.....	13 16 12·7	3·345	1	121 36 34·6	18·92	1	F; lE; psbM; f of 2	1
3514	1590	III. 368	.....	13 16 19·0	2·841	2	62 17 27·6	18·92	2	pF; pS; pmE; glbM; r	3
3515	1592	.....	.....	13 16 19·0	2·827	1	60 56 38·6	18·92	1	vF; L; Δ 2 st 11 np.....	1
3516	1591	III. 925	.....	13 16 24·5	3·018	1	82 52 33·6	18·92	1	vF; S; R; gbM	3
3517	3497	.....	.....	13 16 35·7	3·164	1	101 33 30·3	18·91	1	pB; S; lE	1
3518	3496	.....	.....	13 16 37·7	3·939	1	152 40 50·0	18·90	1	Cl; eR; mC; st 12...16	1
3519	3498	.....	.....	13 16 46·4	3·409	2	126 57 18·3	18·91	2	cB; P; R; psmbM; r.....	2
3520	1594	II. 666	.....	13 16 59·8	2·646	1	46 10 43·3	18·91	1	pF; S; R; gmbM	2
3521	3499	.....	.....	13 17 1·9	3·327	2	119 34 56·0	18·90	2	vF; S; vlE	2
3522	1593	.....	.....	13 17 2·8	2·990	1	79 33 7·0	18·90	1	pF; S; R; gbM	1
3523	3500	.....	.....	13 17 5·0	3·333	1	119 36 57·0	18·90	1	vF; vS.....	1
3524	1596	II. 328	.....	13 17 15·0	2·790	2	57 42 15·0	18·90	3	pB; pL; R; gmbM; ⁂p.....	5
3525	3501	.....	Δ. 482	13 17 15·1	3·481	4	132 17 10·7	18·89	4	!!; vB; vL; vmE 122″·5; bifid	4†
3526	1595	II. 653	.....	13 17 15·9	2·955	3	75 17 16·7	18·89	3	pB; vS; R; gmbM; ⁂f.....	4
3527	1597	II. 314	.....	13 17 43·5	3·240	1	110 23 21·4	18·88	1	F; pS; lE; vgbM	2*
3528	3502	.....	.....	13 17 56·3	3·325	1	119 6 14·4	18·88	1	pB; S; E.....	1
3529	1598	III. 84	.....	13 17 59·6	2·953	1	75 31 20·4	18·88	1	eF; vS; R; psbM	3
3530	3503	.....	Δ. 312?	13 18 19·5	3·811	2	148 16 44·8	18·86	2	Cl; Ri; lC; st 11...	2
3531	3504	.....	Δ. 440	13 18 24·0	3·554	2	136 34 49·8	18·86	2	!!; ⊕; ω Centauri	2†
3532	3505	.....	.....	13 18 27·3	3·370	2	123 9 1·8	18·86	2	vF; S; R; glbM.....	2
3533	1599	III. 402	.....	13 18 29·8	2·730	2	52 53 5·8	18·86	2	cF; cS; R; vsmbM *; *12 sp; sp of 2.	3
3534	1600	III. 403	.....	13 18 39·8	2·729	2	52 50 44·8	18·86	2	F; cS; R; vsmbM *; n of 2	3
3535	1600, *a*	.....	R. nova	13 18 39·8	2·729	::	52 49 ±	18·86	:::	vF	0
3536	.....	IV. 70	.....	13 18 48·6	1·743	2	18 45 22·8	18·86	2	○?; cB; S; R; g, sbM.....	2
3537	1602	II. 667	.....	13 19 4·9	+2·632	1	46 0 37·5	+18·85	1	pB; vS; vlE; glbM	2

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	Sir J. H.'s Catalogues of Nebulæ.	Sir W. H.'s Classes and Nos.	Other Authorities.								
	h.	H.		h m s	s		° ′ ″	″			
3538	.....	III. 115	.....	13 19 8·3	+3·167	2	101 35 25·2	+18·84	2	vF; vS; stellar	
3539	1601	II. 25	.....	13 19 11·5	3·050	2	87 9 53·2	18·84	2	pB; pL; vlE; vsmbM * 12...	
3540	1604	III. 404	.....	13 19 47·8	2·730	2	53 19 49·9	18·83	2	cF; pS; E; bM; sp of 2.....	
3541	1603	.....	.....	13 19 49·1	2·926	2	72 23 55·6	18·82	2	vF; S; R; * nf	
3542	3507	.....	.....	13 19 51·7	3·328	2	118 50 27·6	18·82	2	cF; S; R; pslbM; * f 2'.....	
3543	3508	.....	.....	13 20 2·9	3·329	1::	118 54 24·3	18·81	1::	vF; S; R; p of D neb.....	
3544	3509	.....	.....	13 20 4·1	3·329	1	118 53 52·3	18·81	1	pF; S; f of D neb	
3545	1605	III. 405	.....	13 20 7·4	2·728	2	53 16 40·6	18·82	2	vF; pL; R; nf of 2.....	
3546	3506	.....	.....	13 20 8·6	3·977	1	152 41 27·0	18·80	1	Cl; vRi	
3547	3510	.....	.....	13 20 17·7	3·594	2	138 10 46·0	18·80	2	pB; cS; iE; glbM; r	
3548	1606	III. 651	.....	13 20 49·5	2·773	3	57 17 26·7	18·79	3	F; pS; vlE; bM	
3549	1607	.....	.....	13 20 59·9	2·916	1	71 29 31·4	18·78	1	vF; R	
3550	.....	.....	D'Arrest, 94	13 21 13	3·02	[2]	83 16 42	18·78	[2]	pF. See note	
3551	3511	.....	.....	13 21 19·2	3·373	1	122 26 25·1	18·77	1	pF; L; vmE; pgbM; rr	
3552	.....	III. 821	.....	13 21 34·6	2·438	1	36 28 48·1	18·77	1	cF; stellar	
3553	1609	III. 784	.....	13 21 38·4	2·371	1	33 47 3·1	18·77	1	cF; S; iR.....	
3554	1608	.....	.....	13 21 47·4	2·770	3	57 14 35·8	18·76	3	pF; pL; lE; lbM; f of 2.....	
3555	3512	.....	.....	13 22 3·3	3·898	2	150 12 3·1	18·77	2	Cl; vF; S; vRi; st 15.....	
3556	1611	.....	.....	13 22 8·6	2·560	1	42 38 21·5	18·75	1	vF; pS; R	
3557	1610	V. 22	.....	13 22 17·6	3·221	2	107 14 29·2	18·74	2	cF; L; mE 128°·8; pgbM ...	
3558	1613	.....	.....	13 22 28·5	2·920	2	72 13 18·2	18·74	2	F; pL; R; gbM	
3559	1614	III. 672	.....	13 22 28·5	2·558	2	42 41 26·2	18·74	2	F; vS; R; stellar.....	
3560 3561	1612	III. 45 46	.....	13 22 29·1	2·974	2	78 16 4·2	18·74	2	vF; pL / vF; pL D neb	
3562	1615	III. 71	.....	13 22 37·1	2·922	1	72 26 57·9	18·73	2	vF; S; R; am 3 st; * 7 nf...	
3563	1616	.....	.....	13 22 49·1	2·953	2	75 58 15·9	18·73	2	vF; S; R.....	
3564	3513	.....	.....	13 22 51·6	3·321	2	117 25 21·6	18·72	2	vF; pL; vlE; * 7 nf 10'.....	
3565	1617	II. 679	.....	13 22 54·8	3·081	1	90 59 58·6	18·72	1	F; cS; lE; gbM; p of 2.....	
3566	1618	II. 680	.....	13 22 59·8	3·081	1	90 56 3·6	18·72	1	pF; pL; iR; bM; f of 2.....	
3567	1619	III. 642	.....	13 23 9·3	2·952	1	75 54 40·6	18·72	1	vF; S; iR	
3568	1620	III. 652	.....	13 23 21·2	2·774	1	58 8 37·3	18·71	2	vF; vS; R; glbM	
3569	3515	.....	.....	13 23 31·3	3·400	2	124 3 45·0	18·70	2	F; pL; vlE; vglbM	
3570	3514	.....	Δ. 252?	13 23 41·0	4·129	1	155 15 11·7	18·69	1	!; B; pL; cE; bM curved axis; 4 st inv.	
3571	1621	.....	.....	13 23 50·0	2·908	2	71 8 20·0	18·70	2	cF; S; R; bM; ** f	
3572	1622	.....	M. 51	13 23 55·4	2·539	5	42 5 4·0	18·70	4	!!!; nucl & ring (h); spiral (R)	1
3573	3516	.....	.....	13 23 57·1	3·382	1	122 30 27·7	18·69	1	pB; S; R; g, psbM.....	
3574	1623	I. 186	.....	13 24 4·4	2·536	4	42 0 50·7	18·69	3	B; pS; R; vgbM; f of 2.....	
3575	1625	IV. 63	.....	13 24 12·2	2·264	1	30 51 32·7	18·69	1	pB; cL; iR; gmbM; r	
3576	.....	II. 689	.....	13 24 14·0	2·546	3	42 35 13·7	18·69	2	pB; pL; R; mbM	
3577	1624	III. 406	.....	13 24 21·5	2·726	2	54 26 31·4	18·68	2	vF; vS; lE	
5072	.....	.....	.....	13 24 32·0	.....	...	89 18 29·7	.....	...	See No. 5072.	
3578	.....	II. 797	.....	13 24 39·9	2·409	2	36 12 12·4	18·68	2	pF; cS; R; vglbM	
3579	3517	III. 507	.....	13 24 52·2	3·142	1	98 3 15·8	18·66	1	vF; cS; R; gbM; r	
3580	3518	.....	.....	13 25 18·7	3·610	1	137 24 41·2	18·64	1	F; pL; R; vgbM	
3581	1626	III. 643	.....	13 25 21·9	2·945	1	75 22 53·5	18·65	1	F; S; cE; *11 att np.....	
3582	1627	III. 9	.....	13 25 26·6	3·003	3	81 57 44·2	18·64	4	F; vS; R; psbM; p of 2.....	
3583	1628	III. 10	.....	13 25 42·8	3·003	2	81 57 21·2	18·64	2	F; vS; R; stellar; f of 2.....	
3584	1629	III. 99	.....	13 25 48·2	3·004	1	82 6 15·9	18·63	1	F; S; R; psbMN	
3585	1630	.....	.....	13 25 54·1	3·076	1	90 18 50·9	18·63	1	pB; S; R; psmbM	
3586	1631	.....	.....	13 26 21·9	3·003	1	81 59 5·6	18·62	1	eF	
3587	1632	III. 656	.....	13 26 44·5	2·615	1	47 24 36·3	18·61	1	vF; S; R; lbM	
3588	1633	III. 926	.....	13 27 7·3	3·009	1	82 47 49·7	18·59	1	vF; S; *9 nf inv? (?28^{m}R.A.)	
3589	3519	.....	.....	13 27 10·2	3·397	1	122 45 39·4	18·58	1	eF; eS; * S and * p	
3590	1635	II. 841	.....	13 27 14·9	2·075	1	26 33 53·7	18·59	1	pB; S; vlE	
3591	1634	.....	.....	13 27 18·2	2·904	1	71 25 25·4	18·58	1	vF; S; R; bM.....	
3592	1636	II. 842	.....	13 27 21·3	2·072	1	26 30 43·7	18·59	1	pB; pL; R; gbM	
3593	3520	.....	.....	13 27 47·5	3·583	1?	135 11 16·8	18·56	1::	vF; S; R; * n, nr	
3594	3521	.....	.....	13 27 59·8	3·399	1	122 44 13·8	18·56	1	vF; S; R; * 10 f.....	
3595	1637	III. 86	.....	13 28 4·5	2·942	2	75 27 49·8	18·56	2	vF; S; vlE; 1st of 3	
3596	1638	III. 85	.....	13 28 4·9	+2·943	3	75 32 20·8	+18·56	3	cF; S; R; bM; 2nd of 3.....	

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	h.	H.		h m s	s		° ′ ″	″			
3597	1639	III. 87	.....	13 28 5·2	+2·943	1	75 37 21·8	+18·56	2	cF; pL; R; glbM; 3rd of 3..	4
3598	1640	III. 407	.....	13 28 6·2	2·713	3	54 34 50·8	18·56	3	F; cS; R; * 10 p; p of 2 ...	5
3599	.....	III. 822	.....	13 28 9·6	2·422	1	37 46 37·8	18·56	1	cF; pS; iR; lbM.....	1
3600	1641	III. 928	.....	13 28 15·0	3·054	(1)	87 53 16·5	18·55	1::	vF; S; R.....	2
3601	1642	III. 408	.....	13 28 16·7	2·711	2	54 29 21·8	18·56	2	vF; vS; R; f of 2	4
3602	1643	.....	.....	13 28 31·7	2·941	1	75 35 24·2	18·54	1	F; L; E; vgbM	1
3603	1645	III. 425	.....	13 28 51·6	2·711	1	54 36 47·9	18·53	1	F; S; R; vS * nr	2
3604	3522	.....	.....	13 28 52·3	3·666	1	139 6 59·6	18·52	1	eeF; S; lE	1
3605	1644	III. 100	.....	13 28 58·3	3·008	3	82 41 27·9	18·53	3	vF; pS; vlE; * 9 sp	4
3606	3523	.....	M. 83 = Δ. 628	13 29 9·0	3·360	4	119 9 31·6	18·52	4	!!; (H, h) vB; vL; E 55°·1; esbMN (L) 3-branched spiral.	6†
3607	3524	.....	.....	13 29 20·8	3·539	4	132 8 2·3	18·51	4	F; pL; cE; vglbM	4
3608	1646	III. 101	.....	13 29 27·9	3·000	1	81 54 44·3	18·51	1	vF; pL; R; er.....	4
3609	.....	III. 823	.....	13 29 26·9	2·410	1	37 39 33·6	18·52	1	cF; pL; R; vlbM	1
3610	.....	III. 409	.....	13 29 29·9	2·696	1	53 43 3·3	18·51	1	vF; pL; R; lbM.....	1
3611	1647	.....	.....	13 30 0·9	3·041	1	86 30 48·0	18·50	1	eF; eL.....	1
3612	1648	III. 620	.....	13 30 4·6	2·654	2	50 55 41·0	18·50	2	cF; pL; E 65°; biN?	3
3613	3525	.....	.....	13 30 17·1	3·591	2	135 9 0·4	18·48	2	vF; S; R; vglbM; * 13 att...	2
3614	1649	II. 297	.....	13 30 30·2	3·234	2	107 10 3·1	18·47	2	!!; (H, h) cF; vL; vg, psmbMLN (L) 2-branched spiral.	4†
3615	1650	I. 34	.....	13 30 35·1	2·985	1	80 23 32·1	18·47	1	B; L; E 150°; psbMrN	3
3616	1651	III. 72	.....	13 30 48·6	2·916	3	73 18 27·1	18·47	3	vF; S; R; bM.....	4
3617	.....	II. 817	.....	13 30 49·8	2·409	1	38 1 30·1	18·47	1	pB; S; R; vgbM	1
3618	1652	III. 369	.....	13 30 53·0	2·795	1	61 51 45·1	18·47	1	vF; S; vlE	2
3619	1653	III. 505	.....	13 31 11·6	3·025	(1)	84 46 14·8	18·46	1	vF; S; R; bM.....	4
3620	3526	II. 638	Δ. 623	13 31 59·9	3·390	1	120 55 34·6	18·42	1	B; pL; E 45°±; psmbM ...	2
3621	3527	.....	.....	13 32 12·4	3·174	1	100 46 55·6	18·42	1	pB; L; pmE; glbM	1
3622	.....	III. 803	.....	13 32 21·9	2·236	2	32 10 56·6	18·42	2	vF; vS.....	2
3623	1656	III. 673	.....	13 32 32·9	2·465	1	40 59 35·6	18·42	1	eF; vS; R; gbM.....	2
3624	1654	II. 895	.....	13 32 45·5	3·059	1	88 26 55·0	18·40	1	vF; S; R; bM; p of D neb...	2
3625	1655	II. 896	.....	13 32 49·9	3·058	1	88 27 15·0	18·40	1	F; S; iR; f of D neb	2
3626	1657	.....	.....	13 33 13·6	3·019	2	84 13 5·7	18·39	2	vF; R; am pB st.....	2
3627	1660	.....	.....	13 33 14·4	0·995	1	14 14 14·0	18·40	1	eF; S	1
3628	1658	III. 370	.....	13 33 26·7	2·775	1	60 53 12·4	18·38	1	cF; S; mE 0°±; * 9 sp.....	2
3629	3528	.....	.....	13 33 43·5	3·374	1	119 12 28·8	18·36	1	vF; pL; R; vlbM	1
3630	1659	III. 410	.....	13 33 58·5	2·660	2	52 25 32·8	18·36	2	F; cS; vlE; er.....	3
3631	3529	.....	.....	13 34 27·7	3·665	2	137 27 41·9	18·33	2	B; pL; vlE; vglbM; 3 st nr..	2
3632	1661	.....	.....	13 34 32·8	2·628	4	50 30 0·2	18·34	4	F; S; R; gbM; S * np	4
3633	.....	.....	Auw. N. 32	13 34 43·9	3·196	...	103 9 3·6	18·31	...	A nebula (Markree Obs. 1855)	0
3634	3530	.....	.....	13 35 3·6	4·112	2	152 11 47·3	18·31	2	Cl; P; L; iF; st 12.....	2
3635	1662	.....	.....	13 35 5·5	3·026	1	85 1 44·6	18·32	1	eF; S; bet 2 st.....	1
3636	1663	.....	M. 3	13 35 40·8	2·769	5	60 55 6·0	18·30	5	!!; ⊕; eB; vL; vsmbM; st 11..	14
3637	1664	I. 98	.....	13 35 56·1	2·670	3	53 37 45·7	18·29	3	cB; pL; R; g, psmbM	4
3638	1664, *a*	.....	R. nova	13 36 8·6	2·670	::	53 37 45·7	18·29	::	F; S.....	0
3639	1665	II. 798	.....	13 36 24·8	2·248	2	33 37 25·4	18·28	2	F; E 73°·0; D or biN; B * nf	3
3640	3531	.....	Δ. 273	13 36 54·7	4·131	2	152 11 45·2	18·24	2	Cl; B; S; pC; iR; st 10...12	2
3641	3532	.....	.....	13 37 15·3	3·985	1	148 29 24·2	18·24	1	Cl; L; vRi; st 7...16	1
3642	3533	.....	Δ. 388	13 37 37·5	3·757	2	140 40 6·6	18·22	2	⊕; vB; pL; R; rrr; st 15...	2
3643	3534	.....	.....	13 38 48·2	4·237	2	153 59 16·1	18·17	2	Cl; S; C; iR; st 14.....	2
3644	1666	II. 668	.....	13 39 9·3	2·561	1	47 47 33·4	18·18	1	vF; vS; lE 90°±; sbM	2
3645	.....	I. 170	.....	13 39 17·9	2·556	2	47 33 53·1	18·17	2	cB; pL; E 90°±; bMN.....	2
3646	3535	.....	.....	13 39 25·8	3·397	1	119 41 12·8	18·16	1	vF; R; vlbM; * p	1
3647	3536	.....	.....	13 39 41·2	3·405	1	120 13 12·2	18·14	1	pF; S; R; 2 st nr	1
3648	.....	V. 6	.....	13 39 55·7	2·899	1	72 59 14·2	18·14	1	eF; vL; r.....	1
3649	1667	III. 785	.....	13 39 57·1	+2·232	1	34 0 24·5	18·15	1	eF; 2 st att or inv	2
3650	.....	III. 946	.....	13 40 20·5	−0·151	1	9 52 6·7	18·09	1	vF; vS; R	1*
3651	1668, *a*	.....	R. nova	13 40 ±	+2·511	::	45 28 ±	18·13	::	R; bM; is sp h. 1668	0
3652	1668	I. 180	.....	13 40 31·6	2·511	1	45 27 31·9	18·13	1	cB; L; pmE 142°; gbM.....	2
3653	3538	.....	.....	13 40 39·5	+3·401	1	119 44 21·3	+18·11	1	F; S; R; gbM.....	1

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	h.	H.		h m s	s		° ′ ″	″			
3654	3537	.....	.....	13 40 51·7	+4·064	1	149 14 42·0	+18·10	1	Cl; vL; vRi.....	1
3655	1669	II. 533	.....	13 41 9·9	3·026	2	85 21 35·0	18·10	2	vF; vL; lE; vgbM	4
3656	1670	II. 688	.....	13 41 13·7	2·456	1::	43 9 25·1	18·07	1	cF; L; vmE	3
3657	3539	.....	.....	13 41 22·7	3·405	1	119 47 20·4	18·08	1	F; S; R; gbM.....	1
3658	1672	III. 681	.....	13 41 40·0	2·605	1	51 0 17·4	18·08	1	pF; cS; lE; F * inv	2
3659	1673	III. 621	.....	13 41 51·2	2·612	2	51 28 9·4	18·08	1	eF; S; R	3
3660	1671 = 3540	II. 306	.....	13 41 51·7	3·139	2	96 31 46·8	18·06	2	vF; vS; R; r	3
3661	3541	.....	.....	13 42 11·8	3·782	1	140 30 34·2	18·04	1	○, or vF; eS; D neb	1†
3662	1674	I. 255	.....	13 42 19·9	1·999	1	28 18 58·8	18·06	1	B; pL; mE 57°·4; psbMBEN	2*
5073	.....	.....	.....	13 42 38·3	.....	...	89 14 2·4	.....	...	See No. 5073.	
3663	1675	II. 710	.....	13 42 57·5	2·571	1	49 19 5·9	18·03	1	cF; cS; R; sbM; p of 2	3
3664	1676	III. 422	.....	13 43 37·6	2·671	2	55 41 13·3	18·01	2	vF; R; stellar; 1st of 3	3*
3665	1677	II. 711	.....	13 43 45·0	2·567	2	49 19 42·0	18·00	2	pB; pS; vlE; glbM; f of 2 ...	3
3666	3542	.....	Δ. 282	13 44 7·0	4·155	1	151 9 39·1	17·97	1	Cl; pL; pC; st 11...	1
3667	1678	.....	.....	13 44 8·2	3·014	1	84 18 29·4	17·98	1	vF; vL; R; vgbM	1
3668	1679	III. 423	.....	13 44 22·4	2·667	1	55 36 31·1	17·97	2	F; S; R; psbM; 2nd of 3 ...	3*
3669	1682	II. 669	.....	13 44 27·1	2·539	1	47 56 13·1	17·97	1	cF; pL; R; gbM	2
3670	1680	.....	.....	13 44 28·9	2·668	1	55 39 38·1	17·97	1	eF; pL; R; svmbM*	2
3671	1684	I. 256	.....	13 44 33·4	2·012	1	29 6 16·1	17·97	1	vB; pL; iR; psmbM	2
3672	1689	II. 899	.....	13 44 38·6	0·426	1	12 28 21·7	17·99	1	vF; pS; lE 0°+	2
3673	1681	II. 307	.....	13 44 43·6	3·129	1	95 21 14·5	17·95	1	cF; L; iR; bM	3
3674	1685	II. 712	.....	13 44 51·4	2·570	2	49 44 8·8	17·96	3	cF; S; vlE; sbM	4
3675	1683	II. 685	.....	13 44 52·1	3·089	1	91 30 32·5	17·95	1	F; pS; R; 2 st p	3
3676	3543	III. 923	.....	13 44 56·4	3·388	2	117 46 54·5	17·95	2	pB; S; R; slbM	3
3677	1686	III. 549	.....	13 45 5·2	3·042	1	86 58 26·2	17·94	1	F; vS; R; psbM.....	2
3678	1687	III. 929	.....	13 45 8·1	3·044	1	87 12 15·2	17·94	1	vF; S; E 0°; rr	3
3679	3544	.....	.....	13 45 39·7	3·737	1	137 48 33·6	17·92	1	vF; vS; R; *8 f	1
3680	.....	III. 665	.....	13 45 44·8	3·078	2	90 25 29·6	17·92	2	cF; vL; R ; lbM; r.....	2
3681	1688	.....	.....	13 45 49·7	3·036	1	86 28 58·6	17·92	1	F; iR	1
3682	1690	II. 670	.....	13 46 20·2	2·494	1	46 3 51·0	17·90	1	cF; pL; R; psbM	2
3683	1691	III. 698	.....	13 46 26·0	2·561	1	49 37 37·0	17·90	1	vF; S; iR; B * p.....	3
3684	1694	III. 849	.....	13 46 43·8	2·006	1	29 25 55·7	17·89	1	eF; vS	2
3685	1692	II. 308	.....	13 46 50·5	3·147	1	96 54 11·4	17·88	1	vF; S; R; lbM	3
3686	1693	II. 686	.....	13 47 2·3	3·081	1	90 44 38·1	17·87	1	F; S; R; bM	3
3687	1695	II. 424	.....	13 47 6·9	2·661	1	55 49 32·1	17·87	1	pF; cL; R; lbM.....	2
3688	1696	II. 713	.....	13 47 25·5	2·544	2	48 56 20·8	17·86	2	cF; pL; bM; B * p; 1st of 4.	5
3689	1697	II. 697	.....	13 47 26·3	2·588	2	51 23 43·8	17·86	2	cF; L; lE 90°; vgbM	3
3690 3691	1697, *a*	.....	R. 2 novæ	13 47 ±	.....	...	51 23 ±	.....	...	2 neb in a line with h. 1697; bM.	0
3692	1700	II. 415	.....	13 47 32·2	2·617	2	53 10 5·5	17·85	2	cF; S; R; lbM; * nf 90″ ...	3
3693	1698	II. 714	.....	13 47 32·9	2·545	3:	49 2 24·5	17·85	1	pB; S; R; 2nd of 4	5
3694	1699	II. 715	.....	13 47 33·2	2·545	3:	49 1 24·8	17·86	1	pF; S; R; 3rd of 4	5
3695	1702	III. 699	.....	13 47 45·1	2·543	2	48 57 33·2	17·84	3	vF; pS; 4th of 4	3
3696	1701	III. 506	.....	13 47 56·1	3·008	5	83 58 28·9	17·83	5	F; pL; vmE 15°; r	7
3697	3546	.....	.....	13 47 58·1	3·422	1	119 38 52·6	17·82	1	pF; S; R; glbM; bet 2 st 10.	1
3698	1703, *a*	.....	R. nova	13 48 4·7	3·009	::	84 2 32·4	17·81	::	F; S; E (nisi=III. 506).....	0
3699	3545	.....	.....	13 48 30·8	4·752	2	159 43 18·7	17·79	2	Cl; vL; lRi; lC; st 11... ...	2
3700	.....	III. 682	.....	13 48 38·9	2·574	1	50 52 52·3	17·81	1	eF; cS; E	1
3701	.....	II. 671	.....	13 48 58·8	2·520	1	48 3 22·0	17·80	1	pB; pL; E	1
3702	1703	I. 6	.....	13 49 5·3	3·009	4	84 3 32·4	17·78	4	B; pL; R; psbM; *8 nf.....	8
3703	1703, *b*	.....	R. nova	13 49 5·3	3·009	:	84 17 32·4	17·78	:	vF; L	0
3704	1705	II. 534	.....	13 49 12·0	3·011	(1)	84 18 20·4	17·78	2	cF; L; R; gbM	4
3705	3547	.....	.....	13 49 15·5	3·657	2	133 14 39·1	17·77	2	pB; cS; R; pgbM; am st ...	2
5074	.....	.....	.....	13 49 18·6	.....	...	89 31 9·0	.....	...	See 5074.	
3706	3548	.....	.....	13 49 20·9	3·581	3	129 17 44·1	17·77	4	!; vB; vL; vl, vsmbM * ...	6†
3707	1706	III. 786	.....	13 49 24·0	2·192	2	34 58 35·4	17·78	2	F; cS; R; stellar; *16 nf ...	3
3708	1704	III. 285	.....	13 49 33·3	3·125	1	94 48 28·8	17·76	1	vF; vS; R	2
3709	1708	II. 843	.....	13 49 38·6	1·943	1	28 37 31·4	17·78	1	F; S	2
3710	1707	II. 716	.....	13 49 46·8	+2·531	1	48 49 39·8	+17·76	1	pB; L; R; bMFN	3

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	h.	H.		h m s	s		° ′ ″	″			
3711	1709	III. 809	.....	13 49 48·6	+2·031	1	30 39 35·1	+17·77	1	cF; S; E; ?* inv	2
3712	1710	II. 889	.....	13 50 29·0	2·999	4	83 12 55·9	17·73	4	cF; pL; R; vgbM; *11 np...	5
3713	1711	.....	.....	13 50 36·8	2·715	3	60 8 59·9	17·73	3	pB; pL; R; lbM	3
3714	.....	II. 844	.....	13 50 38·7	1·987	1	29 47 45·9	17·73	1	pB; cL	1
3715	.....	I. 238	.....	13 50 40·4	1·986	3	29 48 15·9	17·73	3	cB; pL; vlE; vgmbM.....	3
3716	1712	I. 187	.....	13 50 41·1	2·382	4	42 4 55·9	17·73	4	B; L; mE 40°·4; smbMN ...	5
3717	1713	.....	.....	13 50 47·4	2·576	1	51 31 33·6	17·72	1	pB; lE; vglbM	1†
3718	1714	II. 698	.....	13 50 56·6	2·579	3	51 42 17·3	17·71	3	F; cS; R; smbM.....	4
3719	3549	.....	.....	13 50 57·8	4·119	2	148 54 29·7	17·69	2	Cl; Ri; vC; pL; st 11...12...	2
3720	.....	I. 239	.....	13 51 6·5	1·973	1	29 35 14·3	17·71	1	pB; pS; E; mbM	3
3721	1715	III. 546	.....	13 51 15·6	2·996	1	83 3 41·7	17·69	2	vF; vS; r; stellar	3
3722	1715, *a*	.....	R. nova	13 51 ±	.....	...	83 0 ±	.....	...	F; S; R	0
3723	1717	I. 181	.....	13 51 17·9	2·496	1	47 28 19·0	17·70	1	cB; cL; R; gbM	2
3724	1721	.....	.....	13 51 19·2	0·414	1	13 7 58·9	17·73	1	Cl; P; S	1
3725	1716	III. 547	.....	13 51 22·6	2·996	1	82 58 36·7	17·69	2	vF; vS; biN; r; stellar	3
3726	1719	I. 240	.....	13 51 30·0	1·968	1	29 33 27·0	17·70	1	pB; pL; E; mbMN	3
3727	1718	.....	.....	13 51 31·1	2·524	1	48 52 36·7	17·69	1	F; L; vgbM; *9 nf.....	1
3728	1720	III. 666	.....	13 52 10·9	3·101	1	92 31 21·8	17·66	1	vF; cS; R; gbM.....	2*
3729	3550	.....	.....	13 52 33·0	3·414	1	118 11 17·2	17·64	1	vF; S; R; glbM	1
3730	1722	I. 191	.....	13 52 34·9	2·575	2	51 52 3·5	17·65	2	cF; S; np of 2	3
3731	1723	I. 190	.....	13 52 38·2	2·575	3	51 53 52·5	17·65	3	cF; cL; E 15°·0; lbM; sf of 2	4
3732	.....	III. 125	.....	13 52 39·4	2·709	1	60 11 32·5	17·65	1	vF; S; iR; sbM*	1
3733	3551	.....	.....	13 52 55·7	3·492	1	123 16 22·6	17·62	1	vF; S; R; gbM	1
3734	3552	.....	.....	13 53 10·9	3·479	1	122 23 20·3	17·61	1	pB; pL; R; vgbM	1
3735	1724	III. 411	.....	13 53 24·5	2·618	2	54 32 37·3	17·61	2	eF; vS; pmE 90°	3
3736	.....	III. 667	.....	13 53 31·9	3·097	2	92 10 41·0	17·60	2	vF; cS	2
3737	1725	III. 412	.....	13 53 39·8	2·592	1	53 4 6·0	17·60	1	cF; cS; E	2
3738	1727	III. 810	.....	13 53 41·9	1·944	1	29 28 38·3	17·61	1	vF; vS; R	2
3739	1726	III. 683	.....	13 53 51·9	2·557	1	51 8 1·0	17·60	2	vF; pL; iF	4
5075	.....	.....	.....	13 53 58·0	.....	...	89 13 53	.....	...	See No. 5075.	
3740	1728	II. 699	.....	13 54 24·3	2·541	2	50 24 2·1	17·57	2	F; pS; R; lbM	5
3741	1732	III. 684	.....	13 54 50·2	2·535	(1)	50 9 17·8	17·56	1	vF; vS; R; bM; in Cl	2
3742	3553	.....	.....	13 54 50·7	3·632	1	130 44 6·2	17·54	1	eF; E bet 2 vS st.....	1
3743	1729	II. 672	.....	13 55 0·0	2·498	1	48 19 36·5	17·55	1	pF; pS; bM.....	2
3744	.....	III. 56	.....	13 55 0·2	2·958	1	79 54 37·2	17·54	1	eF; vS; E; r	1
3745	1733	.....	.....	13 55 10·5	1·647	1	24 24 32·5	17·55	1	pF; pS; R; pslbM	1
3746	1730	III. 11	.....	13 55 17·4	2·974	4	81 17 11·9	17·53	4	cF; S; R; psbM; *p	5
3747	1731	.....	.....	13 55 20·0	2·978	1	81 38 22·9	17·53	1	vF; R; bM	1
3748	3554	.....	.....	13 55 24·3	3·501	3	123 17 44·6	17·52	3	pB; pL; R; gpmbM	3
3749	1736	I, 230	.....	13 55 44·4	2·117	2	34 9 20·6	17·52	2	pB; S; pmE 45° ±; vsvmbMN.	4
3750	1734	II. 309	.....	13 55 59·7	3·134	1	95 18 37·0	17·50	1	pF; cL; R; gmbM; np of 2 ..	3†*
3751	1735	II. 310	.....	13 56 3·7	3·134	1	95 21 25·7	17·49	1	pF; cL; R; sf of 2	3*
3752	1738	II. 827	.....	13 56 14·1	1·945	1	29 58 35·3	17·51	1	pB; S; iE; mbM.....	2
3753	1737	III. 653	.....	13 56 26·8	2·646	2	56 49 5·4	17·48	2	vF; cS; lE 0°; bM	3
3754	1739	II. 416	.....	13 56 57·7	2·606	1	54 33 31·8	17·46	1	pF; cS; lE; bM; *11 sp.....	3
3755	1740	.....	.....	13 57 18·2	2·607	1::	54 40 40·5	17·45	1	vF; S	3
3756	1741	II. 417	.....	13 57 19·7	2·598	3	54 11 30·5	17·45	3	pB; pL; ivlE; vsmbM	4
3757	1742	III. 413	.....	13 57 25·7	2·599	1	54 18 33·2	17·44	1	F; *13 p.....	2
3758	.....	II. 799	H. O. N.	13 57 26·0	2·080	1	33 30 33·5	17·45	1	pF; L; E.....	2
3759	.....	III. 57	.....	13 57 30·0	2·953	1	79 42 30·9	17·43	1	eF; eS	1
3760	1744, *a*	III. 787?	R. nova?	13 57 30·5	2·137	...	35 5 18·3	17·44	...	B; S; R; gmbM; conn with M. 101.	0
3761	1743	II. 691	.....	13 57 30·6	2·293	1	40 9 16·2	17·44	1	pB; cL; vmE 90° ±; smbMN	2
3762	1744, *b*	.....	R. nova	13 57 32·8	2·134	...	35 0 28·3	17·44	...	vF; pL; gvlbM } all conn	0*
3763	1744, *c*	.....	R. nova	13 57 33·0	2·137	...	35 5 51·3	17·44	...	F; pS; iR; glbM } with	0*
3764	1744, *d*	.....	R. nova	13 57 41·7	+2·131	...	34 57 41·3	17·44	...	vF; pL; iR; vlbM } M. 101.	0*
3765	1747	III. 947	.....	13 57 43·7	−0·245	1::	11 5 51·1	17·47	1	vF; pL; iR; vgvlbM	2
3766	.....	III. 787	.....	13 57 50·1	+2·133	1	35 3 26·9	17·43	1	vF; vS	1*†
3767	1744, *e*	.....	R. nova	13 57 59·7	2·131	...	35 2 3·3	17·43	...	F; pL; lE; vlbM } conn with	0*
3768	1744, *f*	.....	R. nova	13 58 2·8	+2·134	...	35 8 16·3	+17·43	...	pB; pS; R; psbM } M. 101.	0*

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	h.	H.		h m s	s		° ′ ″	″			
3769	../...	.....	D'Arrest, 95	13 58 8	+2·92	[2]	77 27 4	+17·40	[2]	F; pS	0
3770	1744	.....	M. 101	13 58 12·9	2·127	1	34 57 22·3	17·41	1	pB; vL; iR; g, vsmbMBSN..	5*†
3771	1744, *g*	.....	R. nova	13 58 14·1	2·131	...	35 2 42·3	17·41	...	vF; pL; R; vlbM; conn with M. 101.	0*
3772	3555	.....	Δ. 431	13 58 39·9	3·807	3	137 38 52·1	17·37	3	Cl; vL; vlC; st 8...	3
3773	1744, *h*	III. 788?	R. nova?	13 58 49·8	2·125	...	34 59 40·3	17·39	...	B; pS; R; psbM } conn with	0*
3774	1744, *i*	III. 789?	R. nova?	13 58 53·9	2·122	...	34 56 57·3	17·38	...	pB; pL; iR; gbM } M. 101.	0*
3775	3556	.....	.....	13 59 1·0	3·449	1	119 20 28·8	17·36	1	pF; S; R; pslbM	1
3776	1746	VI. 9	.....	13 59 8·7	2·700	2	60 48 11·1	17·37	2	Cl; L; vRi; vmC; st 11... ...	4
3777	1745	III. 286	.....	13 59 14·1	3·129	1	94 46 56·5	17·35	1	F; L; R; vgbM	3
3778	.....	III. 788	.....	13 59 19·3	2·120	1	34 59 23·1	17·37	1	vF; vS; 2nd of 3 } inv in	1†
3779	.....	III. 789	.....	13 59 26·2	2·118	1	34 57 22·8	17·36	1	vF; vS; 3rd of 3 } M. 101.	1†
3780	.....	III. 58	.....	13 59 30·1	2·955	1	79 57 25·5	17·35	1	eF; S; lE.....	1
3781	1745, *a*	.....	R. nova	13 59 30·2	3·129	::	94 46 56·5	17·36	::	pB; S; E.....	0
3782	1748	I. 231	.....	13 59 50·7	2·096	1	34 25 50·5	17·35	1	pB; S; R; gbM	3
3783	.....	I. 214	.....	13 59 59·3	2·149	2	35 40 25·5	17·35	2	pB; L; bM	2
3784	1750	II. 800	.....	14 0 20·7	2·061	1	33 35 24·6	17·32	1	pB; S; pmE; bM	2
3785	1749	.....	.....	14 0 34·6	2·994	1	83 17 26·0	17·30	1	F; mE; vglbM	1
3786	1751	III. 287	.....	14 0 49·1	3·138	(2)	95 25 38·7	17·29	1::	F; pS; iR	3
3787	.....	III. 790	.....	14 0 54·3	2·104	1	34 52 19·0	17·30	1	vF; pL	1
3788	.....	III. 762	.....	14 0 55·8	3·085	1	91 1 21·4	17·28	1	vF; vS.....	1
3789	.....	II. 692	.....	14 1 24·6	2·225	1	38 37 18·1	17·27	1	F; pS; vgbM; np of 2	1
3790	.....	II. 693	.....	14 1 42·5	2·223	1	38 37 47·8	17·26	1	F; vS; smbM; stellar; sf of 2	1
3791	.....	III. 59	.....	14 1 43·2	2·958	1	80 24 17·5	17·25	1	eF; S	1
3792	3557	.....	.....	14 1 46·3	3·704	1	132 39 20·2	17·24	1	pF; vL; R; vgbM	1
3793	.....	III. 791	.....	14 2 26·5	2·073	1	34 19 14·9	17·23	1	vF; S; R; p of 2.....	1
3794	.....	I. 232	.....	14 2 26·5	2·073	1	34 19 14·9	17·23	1	cB; R; vgbM; f of 2	1
3795	.....	II. 801	.....	14 2 34·8	2·071	2	34 16 45·6	17·22	2	F; pL	2
3796	3558	.....	.....	14 2 45·6	3·520	1::	122 58 35·7	17·19	1::	F; R; *8 s nr	1
3797	3559	.....	.....	14 3 10·0	3·775	2	135 25 33·1	17·17	2	vF; S; R; bM.....	2
3798	1752	III. 32	.....	14 3 17·4	2·846	1	71 47 18·4	17·18	2	cF; cS; R; sbMF **	4
3799	1753	II. 890	.....	14 3 59·6	2·988	3	82 58 10·5	17·15	3	pB; pS; R; gbM; r	5
3800	1754	II. 876	.....	14 4 1·8	2·817	1	69 43 45·5	17·15	1	pB; vS; E	3
3801	1755	IV. 46	.....	14 4 12·2	3·126	1	94 22 49·9	17·13	1	pB; vS; R; psmbM*; *18 inv.	2
3802	3560	.....	.....	14 4 16·2	3·475	1	119 59 46·6	17·12	1	pB; L; R; gbM; rr	1
3803	3561	.....	.....	14 4 23·5	3·419	1	116 26 51·6	17·12	1	vF; S; R; bM; * sf	1
3804	.....	III. 674	.....	14 5 5·6	2·265	2	40 46 9·3	17·11	2	cF; cS; iR	1
3805	1756	.....	.....	14 5 13·3	3·050	1	88 5 4·7	17·09	1	vF; S; rr.....	1
3806	1757	II. 687	.....	14 5 59·1	3·105	1	92 32 43·5	17·05	1	pB; L; E20°±; lbM	3
3807	1757, *a*	.....	R. nova	14 6 ±	3·105	...	92 33 ±	17·05	...	3′ dist from h. 1757	0
3808	1758	IV. 49	.....	14 6 5·9	3·104	1	92 29 28·5	17·05	1	cF; S; R; stellar.....	3
3809	1759	II. 877	.....	14 6 36·4	2·801	1	68 54 40·9	17·03	1	pB; pL; iR	2
3810	1760	III. 685	.....	14 6 51·3	2·482	3	50 1 53·6	17·02	3	vF; S; vlE	5
3811	3562	.....	.....	14 6 54·8	3·848	2	137 27 28·0	17·00	2	pF; S; R; psbM; S ** nf ...	2
3812	.....	III. 676	.....	14 7 49·9	2·196	2	38 59 31·4	16·98	2	F; S; lE; stellar	2
3813	1761	.....	.....	14 8 20·7	3·010	1	84 56 4·5	16·95	1	F; S; R; bM	1
3814	.....	III. 644	.....	14 8 23·6	2·871	1	74 13 59·5	16·95	1	vF; vS; E; a D neb	1
3815											
3816	1762, *a*	.....	R. 3 novæ	14 8 ±	2·725	...	64 0 ±	16·94	...	3 "knots" near h. 1762	0
3817											
3818	1762	III. 134	.....	14 8 31·0	2·725	3	64 0 55·2	16·94	3	F; pL; pmE90°; *10 np ...	5
3819	1764, *a*	.....	R. nova	14 8 47·0	2·53	::	52 56 57·7	16·93	::	eeF	0
3820	1763	III. 804 = III. 835	.....	14 9 17·5	1·899	1	31 34 24·3	16·91	1	vF; S; E; r	3*
3821	1764, *b*	.....	R. nova	14 9 18·9	2·53	::	53 6 33·7	16·89	::	vF	0
3822	1764	III. 414	.....	14 9 40·1	2·533	1	53 7 33·7	16·89	1	cF; pL; vmE110°·3; vgvmbM.	2
3823	3563	.....	.....	14 9 41·8	3·742	1	132 43 31·1	16·87	1	!; vF; pmE; esvmbM*12 ...	1
3824	.....	.....	D'Arrest, 96	14 9 53	2·92	[2]	78 28 0	16·87	[2]	F; S; R; III. 47 f 10ˢ·4	0
3825	1765	III. 47	.....	14 10 2·1	+2·926	1	78 32 18·1	+16·87	1	vF; vS; R; gbM; r	3

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	h.	H.		h m s	s		° ′ ″	″			
3826	1766	II. 418	.....	14 10 10·3	+2·549	3	53 59 51·1	+16·87	3	pB; R; vsmbM; 2 or 3 st inv	4
3827	1768	III. 731	.....	14 10 40·3	2·462	1	49 51 34·2	16·84	1	cF; vS; R; p of 2	2
3828	1767	.....	.....	14 10 43·5	2·960	1	81 10 12·2	16·84	1	F; pL; iF; gbM	1
3829	.....	III. 805	.....	14 10 44·8	1·789	3	29 20 6·5	16·85	3	eF; vS; R; stellar	3
3830	1770, *a*	.....	R. nova	14 10 45·3	2·968	::	81 39 52·2	16·85	::	vF	0
3831	1769	III. 732	.....	14 10 48·4	2·459	3	49 45 41·2	16·84	4	cF; S; R; gbM	5
3832	1770, *b*	.....	R. nova	14 10 53·9	2·968	:	81 46 46·3	16·83	:	vF	0
3833	1771	II. 419	.....	14 11 8·5	2·521	2	52 46 41·6	16·82	3	F; pS; E80°; D or biN	4
3834	1771, *a*	.....	R. nova	14 11 ±	2·521	...	52 46 ±	16·82	...	Makes D or biN neb with h. 1771.	0
3835	1770	.....	.....	14 11 13·9	2·968	2	81 46 56·3	16·81	2	pB; cS; gbM	2
3836	.....	III. 551	.....	14 11 29·6	+2·970	2	81 59 ±	16·80	2	....	2*
3837	.....	III. 948	.....	14 11 36·1	−0·747	1	10 44 46·7	16·79	1	eF; vS; E0°±	1
3838	1773	II. 194	.....	14 11 38·1	+2·720	2	64 12 39·0	16·80	2	cF; pS; R; vsvmbM*	4
3839	1772	III. 552	.....	14 11 43·6	2·970	1	81 58 40·7	16·79	1	vF; vS; R	2
3840	1774	.....	.....	14 11 43·8	2·897	1	76 27 52·7	16·79	1	vF; cS; pmE	1
3841	1775	.....	.....	14 12 12·9	2·701	1	63 4 49·8	16·76	1	vF; S; lE	1
3842	3564	.....	.....	14 12 24·5	3·475	1	118 36 20·5	16·75	1	eF; L; S * inv.....	1
3843	1776	I. 99	.....	14 12 32·5	2·517	2	52 51 11·8	16·76	2	cB; S; R; vsbM*	4
3844	1777	III. 347	.....	14 12 50·8	2·723	1	64 32 41·9	16·73	1	vF; S; vlE; bM	2*
3845	1778	II. 579	.....	14 13 1·0	3·013	2	85 21 16·6	16·72	2	pF; cL; E; gbM	3
3846	1779	I. 144	.....	14 13 16·5	3·014	3	85 25 7·3	16·71	3	B; pL; R; psbM; r; *12 nf .	4*
3847	1780	.....	.....	14 13 20·8	2·541	1	54 13 56·6	16·72	1	pF; R	1
3848	1779, *a*	.....	R. nova	14 13 28·5	3·014	...	85 24 7·3	16·72	...	Place from MS.	0
3849	1781	III. 12	.....	14 13 31·7	2·967	(1)	81 50 21·0	16·70	2	F; S; iR	4
3850	1782	I. 145	.....	14 13 52·1	3·023	1	86 6 53·4	16·68	1	pF; pS; lE; p of 2	2
3851	1783	I. 146	.....	14 14 1·1	3·022	1	86 5 8·4	16·68	1	B; S; R; vsmbM; f of 2.....	2
3852	1784	III. 415	.....	14 14 31·5	2·536	2	54 9 46·8	16·66	2	vF; cL; p of 2.....	3
3853	1785	.....	.....	14 14 45·4	2·535	1	54 8 52·2	16·64	1	pB; S; f of 2	1
3854	1786	II. 754	.....	14 15 1·5	2·440	3	49 39 28·2	16·64	3	pB; pS; R; bMFN; * sp ...	5
3855	1783, *a*	.....	R. nova	14 15 5·4	3·02	...	85 53 50	16·64	...	L; F; vmE	0
3856	1790	I. 235	.....	14 15 18·1	1·909	1	32 38 5·9	16·63	1	pF; L; iR; vgmbM; r	3
3857	1787	III. 110	.....	14 15 30·3	2·879	1	75 26 38·0	16·60	1	F; cS; vlE; *8 sf	3
3858	1789	.....	.....	14 15 30·7	2·534	1	54 13 57·3	16·61	1	vF; R; gbM; *8 sf	1*
3859	1788	III. 416	.....	14 15 30·8	2·531	2	54 5 13·3	16·61	2	vF; S; R; np of 2	3*
3860	1791	III. 417	.....	14 15 43·3	2·532	3	54 9 17·0	16·60	3	cF; S; R; bM*; sf of 2	4*
3861	3565	III. 924	.....	14 15 47·9	3·474	1	118 1 55·4	16·58	1	F; S; E; gvlbM; r	2
3862	3566	.....	Δ. 357	14 16 13·4	4·121	1	144 9 51·1	16·55	1	Cl; vlRi; vlC; st 10	1
3863	.....	III. 135	.....	14 16 25·3	2·689	1	62 58 37·8	16·56	1	eF; vS; stellar.....	1*
3864	1792	III. 121	.....	14 16 32·5	3·291	1	106 5 6·5	16·55	2	F; pL; R; vgbM; p of 2 ...	4
3865	1795	III. 418	.....	14 16 41·3	2·489	1	52 14 23·5	16·55	1	eF; S; R; stellar.....	2
3866	1793	III. 122	.....	14 16 46·6	3·292	1	106 7 34·2	16·54	2	vF; L; vlE; vglbM; f of 2 ...	4
3867	1796	III. 733	.....	14 16 49·7	2·419	1	49 2 30·5	16·55	1	F; vS; R; bM	3
3868	1794	III. 927	.....	14 16 53·9	2·978	4	82 46 50·2	16·54	4	F; S; lE	5
3869	1797	II. 177	.....	14 17 7·8	2·866	1	75 43 22·6	16·52	1	pB; pS; gbM	3
3870	.....	II. 694	.....	14 17 17·0	2·134	1	38 49 32·9	16·53	1	pF; pS; lE; mbM	1
3871	1800	III. 734	.....	14 17 24·4	2·414	2	48 58 44·6	16·52	2	cF; pS; R; gbM.....	3
3872	1799	III. 668	.. ..	14 17 28·1	3·107	1	92 34 12·0	16·50	1	F; pS; R; vgbM*; r	2
3873	1798 = 3569	III. 120	.....	14 17 32·1	3·243	2	102 32 27·0	16·50	2	vF; pL; R; vgbM	3
3874	3568	.....	Δ. 313	14 17 36·5	4·345	1	148 59 58·4	16·48	1	Cl; S; pC; st L & S	1
3875	.....	II. 331	.....	14 17 43·9	0·726	2	17 47 31·9	16·53	2	pF; cS; iR; bM; er	2
3876	1801	II. 673	.....	14 17 48·1	2·380	1	47 35 13·0	16·50	1	F; pL; lE; vglbM	2
3877	1802	III. 136	.....	14 18 3·6	2·714	1	64 45 34·4	16·48	1	vF; S; pmE 0°±; *9 f	4
3878	1803	.....	.....	14 18 6·3	2·566	1	56 18 59·4	16·48	1	F; S; R; bM	1
3879	3567	.....	.....	14 18 9·9	6·643	1	167 46 0·3	16·41	1	vF; E; gbM; r	1
3880	1804	II. 420	.....	14 18 12·4	2·530	2	54 29 56·4	16·48	2	pB; S; R; smbM	3
3881 3882 3883	1804, *a*	.....	R. 3 novæ	14 18 ±	+2·530	...	54 30 ±	+16·48	...	h. 1804 is D; 2 others near ..	0

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	Sir J. H.'s Catalogues of Nebulæ.	Sir W. H.'s Classes and Nos.	Other Authorities.								
	h.	H.		h m s	s		° ′ ″	″			
3884	1805	III. 419	.....	14 18 31·3	+2·496	1	52 54 5·8	+16·46	1	vF; S; cE; vgbM; er.....	2
3885	3570	.....	Δ. 302	14 19 23·2	4·417	3	150 5 16·7	16·39	3	Cl; L; pRi; pCM; st 8... ...	3
3886	.....	III. 763	.....	14 20 1·3	3·095	1	91 37 28·4	16·38	1	eF; S	1
3887	1806	.....	.....	14 20 15·9	3·000	1	84 33 53·8	16·36	1	vF; S; R; vgbM	1
3888	.....	III. 319	.....	14 20 17·6	0·680	1	17 44 24·0	16·40	1	eF; vS.....	1*
3889	1807	III. 14	.....	14 20 54·8	2·952	1	81 7 26·2	16·34	1	eeF; L; r.....	2
3890	1809	III. 677	.....	14 21 3·9	2·177	1	40 48 47·2	16·34	1	vF; pS; vlE; vglbM	2
3891	1808	II. 329	.....	14 21 12·5	2·552	1	56 7 10·9	16·33	1	cF; S; R; vsmbM; r	4
3892	1810	.....	.....	14 21 25·6	2·408	1	49 24 57·6	16·32	1	vF; S; R; gbM	1
3893	3571	.....	.....	14 21 35·0	3·508	1	119 7 31·7	16·29	1	eF; S; R	1
3894	1811	.....	.....	14 21 47·6	2·907	1	77 59 10·7	16·29	1	vF; vS; R; *9 sp	1
3895	1812	.....	.....	14 21 59·6	2·685	2	63 31 30·7	16·29	2	pF; S; R; gbM	2
3896	1814	II. 674	.....	14 22 4·2	2·374	4	48 6 50·7	16·29	4	F; S; E 90°±; gbM	5
3897	1820	I. 236	.....	14 22 10·2	1·865	2	32 47 47·7	16·29	2	B; S; R; psbMrN	5
3898	.....	.....	Auw. N. 33	14 22 12·0	3·068	...	89 49 7·8	16·26	...	Neb *11f 150s (Bond, May, 1853).	0
3899	1818	I. 185	.....	14 22 14·2	2·243	2	43 13 13·4	16·28	2	cB; pS; R; pglbM.....	4
3900	1813	I. 70	.....	14 22 14·9	3·146	1	95 20 26·8	16·26	1	⊕; vB; cL; R; gbM; rrr; st 19; *17 sf.	3
3901	1815	III. 132	.....	14 22 20·8	2·657	1	61 57 59·1	16·27	1	F; S; E; sbM.....	2
3902	1816	II. 580	.....	14 22 34·6	3·020	1	86 5 58·2	16·24	1	eF; cL; R; np of 2.....	2
3903	1819	II. 357	.....	14 22 35·7	2·728	2	66 11 4·5	16·25	2	vF; S; R; vgbM	3
3904	1817	II. 581	.....	14 22 36·8	3·020	2	86 8 14·2	16·24	2	cB; pL; R; sf of 2	3
3905	1817, *a*	.....	R. nova	14 23 ±	3·020	...	86 8 ±	16·24	...	Makes a BD neb with h. 1817	0
3906	1821	.....	.....	14 22 41·4	+2·602	1	58 58 19·5	16·25	1	vF; R; *7 p; *11s.....	1
3907	.....	III. 949	.....	14 23 2·9	−1·635	1	9 18 14·0	16·30	1	eF; S; lE	1
3908	1822	III. 126	.....	14 23 11·4	+2·608	2	59 21 35·9	16·23	2	cF; S; * inv; *12 nf	3
3909	3572	.....	Δ. 469	14 23 40·3	3·826	2	133 34 30·1	16·17	2	pB; L; R; vglbM; st inv ...	2
3910	1823	II. 150	.....	14 23 43·8	2·964	2	82 5 56·7	16·19	2	cF; pL; iR; gbM	5
3911	1824	III. 645	.....	14 23 54·1	2·867	1	75 22 18·4	16·18	1	eF; vS; np of 2	2
3912	.....	.....	Auw. N. 34	14 24 3·0	3·066	...	89 42 5·1	16·17	...	Neb R (Bond, May, 1853)...	0
3913	1825	II. 891	.....	14 24 4·0	2·982	2	83 23 45·1	16·17	2	pB; pL; vlE; bM	3
3914	1826	II. 330	.....	14 24 7·8	2·583	1	58 9 43·1	16·17	1	pF; pS; R; bM	2
3915	1828	III. 420	.....	14 24 14·9	2·478	1	53 0 46·8	16·16	1	F; S; E?; * inv?	2
3916	1827	.....	.....	14 24 17·5	2·868	1	75 27 56·8	16·16	1	eeF; sf of 2	1
3917	1829	II. 421	.....	14 24 34·5	2·499	3	54 2 59·5	16·15	4	pF; pL; R; mbM; r	5
3918	.....	.....	Auw. N. 35	14 24 48·0	3·067	...	89 45 4·8	16·16	...	Neb; F; E (Bond, May, 1853)	0
3919	1831	.....	.....	14 24 52·7	2·686	1	63 59 8·9	16·13	1	eF	1
3920	1832	II. 695	.....	14 24 53·3	2·122	1	39 45 49·2	16·14	1	pB; L; iR; vgbM	2*
3921	1830	II. 892	.....	14 24 59·9	2·977	2	83 7 34·6	16·12	2	vF; pS; iE	3
3922	3573	.....	Δ. 342	14 25 7·9	4·256	2	145 56 31·0	16·10	2	Cl; L; pRi; lC; st 9...	2*
3923	1833	II. 27	.....	14 25 31·6	2·951	2	81 18 15·0	16·10	2	pB; pL; R; gbM; r	5
3924	1834	.....	.....	14 26 19·7	2·916	1	78 51 33·5	16·05	1	vF; vS; R; stellar	1
3925	.....	II. 807	.....	14 26 22·6	1·686	1	29 54 6·1	16·07	1	pB; pS; E 0°	1
3926	1835	II. 574	.....	14 26 22·9	3·002	2	84 55 54·5	16·05	2	F; pS; vlE; *14 inv	3
3927	.....	II. 79	.....	14 26 28·2	2·924	1	79 28 9·2	16·04	1	F; L; R; lbM; r.....	1
3928	3574	.....	.....	14 26 28·4	3·887	2	135 20 29·9	16·03	2	vF; S; cE; bet 2 st.....	2
3929	.....	III. 882	.....	14 26 35·4	0·855	1	19 44 5·4	16·08	1	vF; pL; R; bM	1
3930	1836	III. 310	.....	14 26 39·7	2·563	1	57 43 21·2	16·04	1	vF; vL; iR; lbM; ** p	3
3931	1838	II. 696	.....	14 26 42·1	2·100	1	39 26 14·5	16·05	1	F; S; cE; *15 np	2
3932	1837	II. 893	.....	14 26 53·5	2·988	4	83 55 1·9	16·03	4	cF; pS; R; gbM.....	5
3933	1839	II. 422	.....	14 26 53·6	2·470	1	53 4 35·9	16·03	1	F; pS; E; bM.....	2
3934	1843	I. 237	.....	14 27 51·2	1·758	1	31 27 43·7	15·99	1	B; L; lE 0°; vgmbM	3
3935	1842	I. 189	.....	14 27 51·3	2·110	1	39 55 14·7	15·99	1	B; L; E 45°±; pgbM; r ...	2
3936	1840	III. 283	.....	14 27 55·2	2·678	1	63 54 56·1	15·97	1	vF; vS; R; r; 3 st 9, 10 np...	2
3937	1841	II. 894	.....	14 28 8·6	2·988	2	84 1 3·8	15·96	4	vF; S; R; *12 att	6
3938	1844	III. 421	.....	14 30 6·5	2·454	4	52 50 57·8	15·86	4	F; cS; R; bM; p of 2.....	5
3939	1845	.....	.....	14 30 18·9	2·454	1	52 53 2·5	15·85	1	vF; S; R; f of 2	2
3940	1849	II. 808	.....	14 30 26·8	1·902	1	34 53 55·5	15·85	1	pF; S; iF; r; *10 f	2
3941	3575	.....	.....	14 30 28·4	3·880	1	134 25 46·3	15·81	1	F; S; vgbM; am st.....	1
3942	1848	I. 188	.....	14 30 29·8	+2·120	1	40 38 43·5	+15·85	1	cB; S; E 90°±; psmbM ...	3

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	h.	H.		h m s	s		° ′ ″	″			
3943											
3944	1848, *a*	.....	R. 3 novæ	14 30 ±	+2·120	...	40 38 ±	+15·85	...	3 novæ, one mottled	0
3945											
3946	1846	II. 582	.....	14 30 39·7	3·032	1	87 6 6·6	15·82	3	vF; mE or biN 140°±; *6·7 p	4
3947	1847	II. 681	.....	14 30 42·5	3·070	1	89 46 46·6	15·82	1	pB; pS; lE; gbM	3
3948	1851	II. 423	.....	14 31 38·1	2·448	2	52 49 33·4	15·78	3	pB; cS; R; bM; r	4
3949	1851, *a*	.....	R. 2 novæ	14 32 ±	2·488	...	52 50 ±	15·78	...	No description	0
3950											
3951	1850	II. 648	.....	14 31 38·2	2·321	(2)	47 36 0·4	15·78	1	cF; cS; R; lbM; r	3
3952	1853	II. 675	.....	14 31 38·8	2·325	1::	47 45 53·4	15·78	1::	F; vS; R; bM; 4B st p	2
3953	1852	II. 700	.....	14 31 38·9	2·404	2	50 55 57·4	15·78	3	cF; cS; lE; in Δ of st	4
3954	3576	II. 196	.....	14 32 4·2	3·477	1	115 55 37·2	15·74	1	cB; cS; R; psbM; r; * nr ...	3
3955	.....	III. 127	.....	14 32 12·5	2·594	1	59 53 49·2	15·74	1	eF; vS	1
3956	1854	II. 575	.....	14 32 12·8	2·986	4	84 1 23·2	15·74	4	cB; pS; R; mbM; *15 p ...	5
3957	.....	III. 894	.....	14 32 20·6	2·754	2	68 53 19·9	15·73	2	vF; vS	1
3958	.....	III. 128	.....	14 32 26·5	2·593	1	59 53 48·9	15·73	1	vF; vS; iR	1
3959	1855	II. 649	.....	14 32 26·6	2·351	1	48 52 33·2	15·74	1	F; cS; lE 0°±	4
3960	1859	.....	.....	14 32 46·2	2·351	2	48 56 49·6	15·72	2	F; pL; E 0°±; gbM	2
3961	1856	III. 895	.....	14 32 50·2	2·760	1	69 21 2·0	15·70	1	vF; S; vgbM; * f; p of 2 ...	2
3962	1858	.....	.....	14 32 55·7	+2·761	1	69 24 52·0	15·70	1	eF; vS; * att; f of 2	1
3963	.....	III. 950	.....	14 32 57·9	−1·318	1	10 33 44·4	15·78	1	vF; S; R; S Cl p	1
3964	1857	I. 182	.....	14 32 59·9	+3·068	1	89 40 43·0	15·70	1	cB; pL; R; psmbM; r	3
3965	1861	III. 675	.....	14 33 2·8	2·175	1	42 44 30·0	15·70	1	vF; pS; iE; * n; 1st of 3 ...	2
3966	3577	.....	Δ. 333	14 33 15·1	4·353	1	146 56 49·8	15·66	1	Cl; L; pRi; CM; st 11...13...	1
3967	.....	VI. 8	.....	14 33 16·5	3·198	1??	98 30 48·4	15·68	1??	Cl; pL; eRi; vmC	1*
3968	1860	III. 671	.....	14 33 19·0	3·326	2	106 52 1·1	15·67	2	vF; pL; R	3
3969	1864	.....	.....	14 33 29·2	2·172	2	42 42 29·7	15·69	1	vF; S; R; * nr; 2nd of 3 ...	2
3970	1862	III. 550	.....	14 33 39·6	3·014	1	85 56 1·8	15·66	2	vF; S; R; vglbM; *8·9 nf ...	3
3971	1863	II. 682	.....	14 33 44·9	3·069	1	89 42 24·5	15·65	1	pF; S; lE; bM	3
3972											
3973	1865, *a*	.....	R. 3 novæ	14 34 ±	2·170	...	42 41 ±	15·67	...	h. 1865 is quadruple; ? F neb connecting.	0
3974											
3975	1865	.....	.....	14 33 49·6	2·170	1	42 40 59·1	15·67	1	vF; S; R; psbM; 3rd of 3 ...	1
3976	.....	.....	D'Arrest, 97	14 33 53	3·03	[1]	87 12 42	15·64	[1]	○?; vF; S; disc; *15 n 95″ ...	0
3977	1866	I. 184	.....	14 34 38·1	3·325	2	106 38 34·0	15·60	2	pF; pL; pmE 45°±; mbM; *10s.	3*
3978	3578	III. 508	.....	14 34 40·0	3·197	2	98 24 7·0	15·60	2	F; pL; E; r	3
3979	1867	III. 657	.....	14 34 41·8	2·281	1	46 36 11·3	15·61	1	vF; cS; E 90°±	2
3980	1868	III. 658	.....	14 34 51·9	2·281	1	46 37 41·0	15·60	1	vF; eS; lE	2
3981	1869	III. 686	.....	14 35 2·8	2·387	2	50 45 12·7	15·59	2	vF; S; R; lbM	3
3982	1870	III. 133	.....	14 36 29·1	2·598	1	60 40 46·3	15·51	1	vF; L; iR; lbM	2
3983	1871	III. 896	.....	14 36 42·8	2·773	1	70 31 5·7	15·49	1	vF; cS; R; vglbM	2
3984	1873	I. 171	.....	14 37 12·6	2·297	1	47 34 26·1	15·47	1	pB; S; R; smbM; r; * nr ...	3
3985	1872	II. 538	.....	14 37 17·6	3·039	1	87 43 15·8	15·46	1	pB; L; iR; gbM; r	2
3986	3579	.....	.....	14 37 23·1	3·276	1	103 20 50·5	15·45	1	vF; S; E; pslbM	1
3987	1874	I. 126	.....	14 37 48·7	3·035	1	87 26 59·9	15·43	1	B; L; vmE; bMBN	2
3988	.....	III. 48	.....	14 38 25·5	2·880	1	77 18 32·0	15·40	1	eF; S	1
3989	3580	.....	Δ. 356	14 38 57·4	4·258	1	143 56 9·2	15·34	1	Cl; pL; pRi; lC; st 10...11...	1
3990	1875	I. 183	.....	14 39 9·0	3·068	1::	89 38 40·5	15·35	1::	pF; pS; vlE; r	3
3991	1877	II. 809	.....	14 39 24·3	1·892	1	35 59 5·8	15·36	1	F; S; vlE; Δ 2 st 10.11 ...	2
3992	1878	III. 687	.....	14 39 47·5	2·368	3	50 40 19·9	15·33	3	cF; cS; R; bM	4
3993	3581	.....	.....	14 39 54·0	3·293	1	104 15 56·3	15·31	1	pB; pL; pmE; gpmbM	1
3994	1876	III. 690	.....	14 39 54·2	3·362	1	108 29 45·3	15·31	1	vF; S; iR; lbM	2
3995	1879	III. 885	.....	14 41 13·2	2·773	1	70 54 33·2	15·24	1	vF; vS; cE 90°; vglbM	2
3996	3582	.....	.....	14 43 44·7	4·208	1	142 5 25·1	15·07	1	Cl; vF; vS; vC	1
3997	1880	.....	.....	14 43 52·3	2·985	1	84 17 59·7	15·09	1	D neb; both eF	1
3998	.....	III. 373	.....	14 44 58·6	3·104	3	91 57 9·6	15·02	3	F; R; bMFN; S* s	3*
3999	1881	II. 576	.....	14 46 13·3	3·003	1	85 27 35·5	14·95	1	cF; S; vlE; bM; ?biN	4*
4000	1882	III. 129	.....	14 46 16·8	2·551	1	59 35 3·5	14·95	1	vF; S; R; pgbM	2
4001	1883	.....	.....	14 46 17·5	2·295	3	48 49 8·8	14·96	3	pB; pL; lE; pslbM; *8 np ...	3
4002	1884	III. 130	.....	14 46 34·3	+2·551	1	59 37 52·9	+14·93	1	vF; S; R; pgbM	2

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	h.	H.		h m s	s		° ′ ″	″			
4003	1885, *a*	.....	R. nova	14 46 50·9	+3·009	::	85 53 7·0	+14·91	:	eF; 2′ p h. 1885	0
4004	1885	III. 554	.....	14 46 58·9	3·009	1	85 53 7·0	14·90	1	F; pS; vmE 148°·4; gvlbM	4
4005	.....	.....	D'Arrest, 98	14 47 33	3·02	[1]	86 27 8	14·87	[1]	vF; pL; vlbM; *8·9p; 225″ s	0
4006	.....	III. 806	.....	14 47 33·0	1·555	1	30 26 56·7	14·89	1	vF; vS; lE	1
4007	1886	.....	.....	14 48 52·2	3·344	1	106 40 4·7	14·79	1	F; S; R; bM; *16 sp	1
4008	1887	II. 676	.....	14 49 5·8	2·229	2	46 52 39·0	14·80	2	pB; S; R; smbM; stellar	3
4009	3583	.....	.....	14 49 57·8	3·877	1	131 27 21·3	14·71	1::	F; mE; L* sf	1
4010	1888	II. 677	.....	14 50 2·4	2·227	1	46 56 4·2	14·74	1	F; cS; R; pslbM	2
4011	1890	III. 976	.....	14 50 41·1	2·532	1	59 12 55·0	14·70	1	eF; pS; iF	2
4012	1889	III. 691	.....	14 50 51·7	3·382	1	108 42 27·1	14·67	1	pF; S; R; stellar	2
4013	.....	II. 683	.....	14 51 12·5	3·081	1	90 31 47·8	14·66	1	pB; pL; R; mbM; cB*npatt	1
4014	1891	.....	.....	14 51 21·5	1·979	1	39 44 42·1	14·67	1	pF; S; vsbM*13; 1st of 3	1
4015	1893	III. 678	.....	14 51 46·4	1·977	1	39 44 55·2	14·64	1	F; S; vsbM*13; 2nd of 3	2
4016	1892	III. 131	.....	14 51 48·3	2·534	1	59 28 16·9	14·63	2	F; S; R; vgbM; *nf (? var)	4*
4017	3584	.....	.....	14 51 49·4	5·894	1	161 52 27·1	14·57	1	eF; S; R; bM	1
4018	3585	.....	.....	14 52 5·8	4·224	1	141 21 29·4	14·58	1	Cl; pL; pRi; lC	1
4019	1895	III. 679	.....	14 52 31·1	1·973	1	39 45 19·0	14·60	1	vF; vS; vsmbM*13; *6 nr; 3rd of 3.	2
4020	1895, *a*	.....	R. nova	14 52 ±	1·973	...	39 45 ±	14·60	...	S	0
4021	1894	II. 539	.....	14 52 53·9	+3·034	1	87 32 48·8	14·56	1	cB; cL; E 165° ±; sbMN	2
4022	.....	III. 311	.....	14 53 0·6	−0·023	1	16 24 35·3	14·61	1	vF; S; iR; bet 2 st	1
4023	3586	.....	.....	14 53 11·2	+3·296	1	103 36 47·9	14·53	1	vF; S; E; glbM	1
4024	3587	I. 71	.....	14 53 28·2	3·185	2	96 53 29·6	14·52	2	cB; S; R; svmbM	4
4025	.....	II. 756	.....	14 53 51·4	1·781	2	35 37 32·1	14·48	2	pF; pS; iE; r	2*
4026	1896	I. 127	.....	14 54 5·4	3·037	1	87 44 16·7	14·49	1	B; pS; R; psmbM	2
4027	1897	.....	.....	14 54 15·4	3·038	1	87 49 46·1	14·47	1	vF; vS; R	1
4028	.....	III. 811	.....	14 54 22·9	1·784	1	35 35 32·7	14·49	1	vF; S; E	1
4029	1898	II. 756?	.....	14 54 29·9	1·781	1	35 32 4·1	14·47	1	B; R; sbM; splendid * f	1*
4030	1898, *a*	.....	R. nova	14 54 50·6	1·781	::	35 32 4·1	14·47	::	vF	0
4031	3588	.....	.....	14 55 2·0	4·347	1	143 47 24·0	14·40	1	Cl; vL; Ri; lC; st 9...12	1
4032	3589	.....	.....	14 55 20·2	4·409	1	145 2 17·4	14·38	1	Cl; cL; Ri; lCM; st 13...14	1
4033	1899	II. 540	.....	14 57 2·4	3·045	(1)	88 14 41·0	14·30	1	pB; S; mbM	2
4034	.....	II. 332	.....	14 57 32·3	0·165	2	17 45 19·6	14·32	1	pB; cL; iR; bp; r	2
4035	3590	.....	.....	14 57 32·5	6·045	3	162 19 4·3	14·21	3	F; cS; lE; glbM; am st	3
4036	1900	.....	.....	14 57 46·9	+3·675	1	122 34 35·2	14·24	1	eeF(?)	1
4037	.....	III. 312	.....	14 57 54·8	−0·262	1	15 36 18·3	14·31	1	eF; vS; lE; 2 st inv	1
4038	.....	II. 542	.....	14 58 21·5	+3·030	1	87 21 21·6	14·22	1	pB	1
4039	.....	II. 541	.....	14 58 21·9	3·037	1	87 49 21·6	14·22	1	F	1
4040	3592	.....	.....	14 58 41·7	3·755	2	125 47 8·4	14·18	2	vF; S; lE; vlbM; r	2
4041	3591	.....	.....	14 58 51·0	5·033	2	154 8 9·5	14·15	2	pB; pL; R; vgvlbM	2
4042	.....	III. 511	.....	14 59 1·9	3·036	1	87 46 20·4	14·18	1	vF; R; p of 2	1
4043 } 4044 }	1901, *a*	.....	R. 2 novæ?	14 59 ±	3·038	...	87 51 ±	14·16	...	2 of 6	*
4045	1901	I. 128	.....	14 59 23·5	3·038	1	87 50 41·3	14·16	1	vB; pL; R; psbMN; f of 2	2
4046	.....	.....	D'Arrest, 99	14 59 29	3·03	[1]	87 26 48	14·15	[1]	eF; S; v close * f 7′	0
4047	1902	II. 543	.....	15 0 2·6	3·039	1	87 54 47·6	14·12	1	cF; S; lE; psbM	2
4048	.....	III. 886	.....	15 0 16·5	2·848	1	76 36 4·3	14·11	1	eF; vS; np of 2	1*
4049	.....	III. 887	.....	15 0 16·5	2·848	1	76 36 4·3	14·11	1	eF; vS; sf of 2	1*
4050	1903	II. 544	.....	15 0 44·0	3·021	3	86 53 20·4	14·08	3	pB; S; vlE; lbM; am st	5
4051	1905	II. 751	.....	15 1 1·8	2·725	(3)	69 54 1·8	14·06	1::	cF; cS; E; p of D neb	4*†
4052	1905	II. 752	.....	15 1 9·2	2·725	(3)	69 56 1·8	14·06	1::	pF; pS; E; f of D neb	4†
4053	1904	IV. 71	.....	15 1 14·4	2·746	1::	71 1 0·5	14·05	1	*6 in vL neb	2
4054	1906	.....	.....	15 1 29·3	2·179	2	46 49 50·5	14·05	2	F; S; R; psbM	2
4055	.....	II. 192	.....	15 1 37·4	3·255	2	100 46 50·6	14·02	2	F; L; E; r	2
4056	1907	II. 585	.....	15 2 30·8	3·013	3	86 24 19·8	13·96	3	pF; cS; ilE; gbM; *14 f	4
4057	.....	II. 684	.....	15 2 36·1	3·057	1	89 0 5·5	13·95	1	pB; S; iE	1
4058	1909	I. 215	.....	15 2 36·3	1·639	1	33 41 39·4	13·98	1	vB; cL; pmE 146°·0; gbM	2†
4059	1909, *a*	.....	R. nova	15 2 ±	1·639	...	33 42 ±	13·98	...	vS	0
4060	.....	.....	D'Arrest, 100	15 2 41	3·05	[1]	88 55 48	13·95	[1]	eF; H. II. 545, s 3′ 15″	0
4061	1908	II. 545	.....	15 2 41·0	3·057	1	88 59 25·5	13·95	1	pF; S; E; psbM	5
4062	.....	II. 755	.....	15 5 10·7	+1·792	1	36 55 21·6	+13·82	1	pB; pL; lE	1

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	h.	H.		h m s	s		° ′ ″	″			
4063	3593	III. 736	.....	15 6 3·3	+3·312	1	103 44 18·9	+13·73	1	pB; pL; pmE0°; psmbM; *inv	2
4064	1910	II. 757	.....	15 6 9·4	1·548	1	32 27 30·8	13·76	1	cB; S; E; mbMRN; r	4
4065	.....	II. 818	.....	15 6 27·0	1·128	1	26 30 47·5	13·75	1	pF; cS; R; vgbM	1*
4066	3594	.....	.....	15 7 19·4	4·059	2	135 7 30·2	13·64	2	○; vS; R; quite sharp	2†
4067	3595	III. 116	.....	15 7 30·1	3·238	1	99 33 7·2	13·64	1	F; cL; R; vgbM.....	2
4068	1911	.....	.....	15 7 38·4	2·199	1	48 14 58·2	13·64	1	F; vS; R; bM.....	1
4069	1912	III. 659	.....	15 7 58·6	2·198	1	48 12 57·2	13·64	1	cF; vS; R; bM; r	2
4070	1912, *a*	.....	R. nova	15 8 18·6	2·198	...	48 8 27·2	13·62	...	vF; place from MS.	0
4071	1913	II. 678	.....	15 8 29·8	2·175	1	47 31 15·0	13·60	1	F; S; R; r; 3 st nr.....	2
4072 4073	1913, *a*	.....	R. 2 nova	15 8 ±	2·175	...	47 31 ±	13·60	...	2 nova apparently connected..	0
4074	.....	II. 763	.....	15 8 37·8	1·353	2	29 40 9·0	13·60	2	pF; pS; E 0°±	2
4075	3596	VI. 19	.....	15 9 22·4	3·443	1	110 29 44·6	13·52	1	⊕; pF; L; viR; vgbM; rrr	2
4076	3597	III. 138	.....	15 9 53·3	3·504	1	113 31 44·7	13·49	1::	F; S; R; gbM	4
4077	1914	II. 650	.....	15 10 0·6	2·167	2	47 26 25·3	13·51	2	cB; pL; pmE; smbMN	5
4078	1915	III. 660	.....	15 10 2·9	2·162	2	47 16 49·0	13·50	2	vF; S; vlE; gbM	3
4079	1915, *a*	.....	R. nova	15 10 2·9	2·162	...	47 17 ±	13·50	...	Close to 1915 pos 0°	0
4080	.....	III. 737	.....	15 10 15·1	1·863	1	39 12 3·0	13·50	1	vF; vS; stellar.....	1
4081	3598	III. 139	.....	15 10 24·3	3·505	2	113 31 3·5	13·45	2	cF; S; R; gpmbM	5
4082	.....	II. 758	.....	15 10 56·2	1·606	1::	34 0 29·5	13·45	1::	pF; pS; iR	1
4083	1916	.....	M. 5	15 11 27·2	3·028	1	87 23 8·7	13·39	1	!!; ⊕; vB; L; eCM; st 11...15	11†
4084	.....	.....	R. nova	15 11 39	1·568	::	33 51 55	13·39	::	One of 2, 15′ apart np & sf...	0
4085	.....	II. 760	.....	15 11 57·2	1·606	1::	34 6 25·7	13·39	1::	pF; pS; R	1
4086	1917, *a*	.....	R. nova	15 12 ±	15·52	...	32 10 ±	13·38	...	A ray, vmE, par. to h. 1917	0
4087	1917	II. 759	.....	15 12 11·7	1·552	2	33 10 5·4	13·38	2	cB; vL; vmE 155°·0; vg, psbMN.	3†
4088	.....	.....	R. nova	15 12 53	+1·568	::	34 2 31	13·39	::	One of 2, 15′ apart np & sf...	0
4089	.....	III. 943	.....	15 13 10·9	−0·870	1	14 7 6·1	13·37	1	vF; vS.....	1
4090	.....	II. 400	.....	15 13 15·7	+2·681	2	68 36 53·4	13·28	2	vF; S; er.....	2
4091	.....	III. 944	.....	15 13 35·7	−0·876	1	14 7 4·9	13·33	1	vF; vS.....	1
4092	1915 = 3599	III. 374	.....	15 13 38·5	+3·109	2	92 4 2·5	13·25	2	vF; pL; vlE; r	3
4093	3600	.....	.....	15 13 51·6	3·297	1	102 34 48·6	13·22	1	B; S; R; glbM; p of 2	1
4094	3601	.....	.....	15 13 56·2	3·299	1	102 39 13·6	13·22	1	F; S; lE; glbM; f of 2	1
4095	3602	.....	.....	15 14 3·2	3·194	1	96 51 8·3	13·21	1	eF; vS; psbM	1
4096	1920	.....	.....	15 14 36·6	2·018	2	43 36 42·0	13·20	2	cF; L; pmE; glbM; ** s.....	2
4097	1919	I. 148	.....	15 14 59·9	2·975	4	84 25 34·8	13·16	4	cB; cL; iR; vsbM *12; am st	5
4098	1922	III. 661	.....	15 16 12·3	2·158	(2)	47 50 32·7	13·09	1::	eF; S	2
4099	1921	.....	.....	15 16 13·2	2·156	4	47 46 29·7	13·09	4	vF; pL; vlE; vgbM	4
4100	3603	.....	Δ. 357	15 17 15·2	4·480	3	144 1 39·4	12·98	3	Cl; vL; vRi; lC; st 11...14..	3
4101	3604	.....	Δ. 389	15 17 55·5	4·300	2	140 10 47·2	12·94	2	⊕; cB; L; R; vgbM; rrr; st 15	2
4102	1923	II. 874	.....	15 19 40·8	2·729	1	71 25 32·5	12·85	1	pB; cS; R; psbM; *7 n.....	2
4103	1924	.....	.....	15 21 5·7	2·141	1	47 50 27·1	12·77	1	vF; vS; sp of D neb	1
4104	1925	II. 651	.....	15 21 8·7	2·141	4	47 50 15·1	12·77	4	pF; pS; R; nf of D neb.....	6
4105	.....	II. 130	.....	15 23 5·1	2·825	2	76 33 15·6	12·62	2	F; pL; iR; vgbM; r	2
4106	1926 = 3606	II. 401	.....	15 23 29·0	3·116	2	92 20 47·7	12·59	2	pB; pS; R; vgbM; 3 st f.....	3
4107	3605	.....	.....	15 23 30·4	5·466	1	156 22 34·9	12·53	1	F; S; am st	1
4108	3607	.....	.....	15 25 20·2	4·334	2	140 11 14·9	12·43	2	⊕; cB; pL; R; vglbM; rrr; st 16.	2
4109	.....	II. 906	.....	15 26 3·2	0·808	1	24 45 29·8	12·46	1	F; S; lE 45°±; vglbM	1
4110	.....	II. 654	.....	15 27 17·7	2·782	1	74 32 25·2	12·34	1	F; pS; E 150°±.....	1
4111	1927	II. 178	.....	15 28 2·2	2·777	1	74 20 50·4	12·28	1	pB; cS; p of D neb	4
4112	1927	II. 179	.....	15 28 2·2	2·777	1	74 20 50·4	12·28	1	pB; cS; f of D neb.....	4
4113	.....	II. 399	.....	15 28 57·7	2·483	1	60 51 21·6	12·22	1	pF; pL; iR; bM; r.....	1
4114	.....	II. 761	.....	15 29 26·4	1·445	1	33 1 16·3	12·21	1	pF; pS; iF	1
4115	1931	II. 762	.....	15 29 57·4	1·431	(1)::	32 50 58·1	12·17	1	cF; cL; lE	2
4116	1928	II. 96	.....	15 30 6·8	2·746	1	72 55 36·2	12·14	1	pF; pL; ilE; gbM	2
4117	1931, *a*	.....	R. nova	15 30 31·4	+1·431	::	32 46 22·1	+12·14	::	No description.....	0

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	h.	H.		h m s	s		° ′ ″	″			
4118	1929	.....	.....	15 30 38·0	+2·953	1	83 33 9·7	+12·09	1	⊕; vF; vL; R; vgbM; rrr...	1†
4119	1930	III. 634	.....	15 30 48·4	2·172	2	49 46 12·3	12·11	2	vF; S; R; gbM; 2 st 8 f.....	3
4120	3608	.....	.....	15 31 12·7	7·159	1	165 13 11·1	11·97	1	F; pL; R; vgbM	1
4121	3609	.....	.....	15 31 20·1	3·694	1	120 5 47·2	12·04	1	vF; L; R; gbM; r	1
4122	.....	II. 76	.....	15 32 10·2	2·834	1	77 24 9·7	11·99	1	pF; pL; R; rr.....	2
4123	1932	.....	.....	15 33 25·5	2·396	1	57 46 40·6	11·92	1	vF; vS; R; bM	1
4124	1934, *a*	.....	R. nova?	15 34 29·2	1·214	...	30 6 57·2	11·76	...	R; psbM (by diagram)	0
4125	3610	.....	.....	15 34 53·7	5·014	2	150 46 24·5	11·75	3	!; ○; pF; vS; R; r? am 150 st	3†
4126	1933	II. 655	.....	15 35 0·3	2·759	1	73 45 35·7	11·79	1	F; pS; E 0°.....	2
4127	1934, *b*	.....	R. nova?	15 35 33·7	1·214	...	30 8 46·2	11·77	...	F; mE	0
4128	1934	II. 764	.....	15 36 18·6	1·214	1	30 11 55·2	11·74	1	cB; S; R; psbM; r.....	2
4129	.....	II. 656	.....	15 36 21·3	2·790	1	75 20 47·7	11·69	1	pB; S; E 135°±; bM	1
4130	.....	II. 765	.....	15 36 24·1	1·306	1	31 29 46·9	11·73	1	pF; cS.....	1
4131	.....	II. 766	.....	15 36 32·5	1·215	1	30 13 46·6	11·72	1	pB; cL; iE; r	1*
4132	3611	.....	Δ. 552	15 36 53·4	3·904	2	127 19 24·9	11·63	2	!; ⊕; vB; L; R; vgbM; st 13...15.	2
4133	1934, *c*	.....	R. nova	15 37 18·3	1·214	...	30 14 28·0	11·62	...	(? if not =II. 766).....	0
4134	.....	III. 378	.....	15 38 47·1	1·169	1	29 47 35·8	11·56	1	vF; vS.....	1
4135	1935	II. 425	.....	15 39 16·4	3·019	2	87 8 54·4	11·48	2	vF; vS; R; gbM	5
4136	1936	III. 635	.....	15 39 29·9	2·103	2	48 26 39·7	11·49	2	vF; vS; R; bM; sp of 2.....	3
4137	1937	III. 636	.....	15 39 33·0	2·102	1	48 26 5·4	11·48	1	cF; vS; R; bM; nf of 2.....	2
4138	3613	.....	.....	15 40 38·9	3·334	1	103 19 13·4	11·38	1	eF; S; R; vS * p	1
4139	1938	II. 97	.....	15 40 39·7	2·709	2	71 40 24·0	11·40	2	pF; cS; R; r; bet 2D st.....	4
4140	.....	VII. 29	.....	15 40 56·1	3·664	1	118 10 31·5	11·35	1	Cl; pL; pRi; st vS	1
4141	3612	.....	Δ. 343	15 41 7·4	4·716	1	146 2 39·3	11·31	1	Cl; L; pRi; st 12...14	1
4142	3614	.....	.....	15 41 11·3	3·684	1	118 57 17·9	11·33	1	vF; S; R; sbM	1
4143	.....	III. 371	.....	15 42 3·8	2·459	1	60 54 51·7	11·29	1	vF; S; R.....	1
4144	3615	.....	Δ. 334	15 44 34·9	4·795	3	147 0 57·8	11·06	3	Cl; pS; pRi; mC; st 16 ...	3
4145	1939	II. 583	.....	15 47 11·0	+3·054	1	89 1 54·3	10·91	1	pF; S; E 90° ±; gbM; r ...	3
4146	.....	III. 313	.....	15 47 35·7	−0·483	2	17 24 55·8	10·96	2	vF; S; E 90°±; vS * f	2
4147	.....	II. 657	.....	15 47 49·1	+2·772	1	74 59 59·1	10·87	1	F; bet 2 B st	1
4148	1940	.....	.....	15 49 3·7	2·948	1	83 39 30·4	10·78	1	pB; pL; E	1
4149	.....	III. 739	.....	15 49 24·0	0·892	1	27 15 50·0	10·80	1	vF; pL; R; vgbM	1
4150	1941	.....	.....	15 50 19·6	2·946	2	83 35 40·4	10·68	2	!; vF; vS; R; g, smbM	2
4151	1942	III. 646	.....	15 51 5·5	2·742	1	73 42 40·9	10·63	1	vF; S; lE; p of 2	2
4152	1943	III. 73	.....	15 51 8·4	2·741	1	73 37 40·9	10·63	1	eF; vS; lE; f of 2	3
4153	3516	.....	Δ. 304	15 51 50·9	5·056	4	150 6 0·6	10·52	4	Cl; B; vL; pRi; lC; st 7...	4
4154	3617	.....	.....	15 52 18·5	3·846	1	124 8 38·0	10·50	1	F; S; R; gpmbM; Δ of st np	1
4155	3618	.....	Δ. 359	15 56 43·3	4·641	1	143 38 28·8	10·16	1	Cl; S; mC; st 11...14	1
4156	1944	III. 622	.....	15 57 35·3	2·182	2	52 15 33·5	10·15	2	vF; S; R; * 10 sf	4
4157	.....	III. 33	.....	15 58 43·2	+2·658	1	70 16 11·9	10·14	1	eF; (?)	1
4158	.....	II. 873	.....	15 58 43·5	−0·284	1	18 55 6·9	10·13	1	F; R; bM	1
4159	1945	.....	.....	15 58 49·9	+2·901	1	81 31 23·2	10·04	1	* 7 in photosphere	1
4160	1946	III. 637	.....	15 59 36·9	2·065	2	48 55 52·0	10·00	2	pF; vS; R; stellar	3†
4161	.....	III. 140	.....	16 0 51·0	2·629	1	69 4 1·0	9·90	1	vF; vS; r; pB * sf	1
4162	3619	.....	Δ. 360	16 2 19·2	+4·675	2	143 50 42·2	9·74	3	Cl; vB; vL; vRi; lC; st 10...	3
4163	.....	III. 973	.....	16 2 40·3	−3·081	1	10 38 44·0	9·90	1	vF; vS; lE 0°; r	1
4164	1947	III. 553	.....	16 2 48·9	+3·051	1	88 55 4·2	9·74	1	F; L; pmE; vgbM; r.....	2
4165	.....	III. 883	.....	16 3 32·5	−0·266	1	19 13 44·8	9·76	1	eF; vS.....	1
4166	3620	.....	.....	16 3 44·7	+3·922	1	125 52 42·5	9·65	1	pF; R; vgvlbM; r	1
4167	1948	III. 74	.....	16 4 5·4	+2·713	1::	72 55 51·5	9·65	1	vF; S; r	2*
4168	.....	III. 884	.....	16 5 50·0	−0·147	1	19 59 34·4	9·58	1	vF; vS.....	1
4169	3621	.....	.....	16 6 33·5	+3·866	1	123 53 2·9	9·43	1	eF; S; E; lbM	1
4170	3622	.....	Δ. 326	16 7 16·0	4·936	2	147 32 42·5	9·35	2	Cl; B; L; lC; st 7...10 ...	2
4171	.....	III. 812	.....	16 7 18·1	1·199	1	32 8 30·2	9·44	1	vF; vS; lE	1
4172	1949	III. 889	.....	16 7 18·4	2·293	1	56 35 35·9	9·33	1	vF; S; R; bM.....	2
4173	3624	.....	M. 80	16 8 41·9	+3·567	2	112 37 34·1	9·27	2	!!!; ⊕; vB; L; vmbM(var *); rrr; st 14.	2*
4174	.....	III. 314	.....	16 8 49·3	−0·740	2	17 10 21·4	9·38	2	vF; vS; lE	2
4175	3623	.....	Δ. 68	16 9 54·3	+6·720	3	161 51 51·0	+ 9·10	3	⊕; pF; L; iR; vgbM; rrr; st 14...	3

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	h.	H.		h m s	s		° ′ ″	″			
4176	1950	III. 888	.....	16 10 18·4	+2·222	2	57 41 3·1	+9·17	2	vF; S; R; vglbM	3
4177	1951	III. 688	.....	16 11 21·9	2·206	2	53 56 19·0	9·10	2	vF; S; iR	3
4178	1952	II. 151	.....	16 11 58·8	2·911	1	82 15 5·9	9·03	1	F; pL; lE; vgbM; r	2
4179	3625	.....	.....	16 13 42·5	4·589	1	141 36 46·8	8·86	1	Cl; eL; eRi.....	1
4180	1953	II. 402	.....	16 14 31·8	3·114	1	91 56 56·9	8·83	1	vF; cL; cE 45°±; r	2
4181	1954	.....	.....	16 14 43·9	2·132	1	51 52 57·9	8·83	1	vF; eS; R	1
4182	1955	III. 623	.....	16 14 50·5	2·133	2	51 54 7·9	8·83	2	vF; vS; R; ** nf.....	4
4183	.....	.....	M. 4= B.A.C.5455	16 15 3·6	3·665	...	116 11 11·1	8·77	...	Cl; 8 or 10 L st in line, with 5 st; rrr.	4
4184	3626	.....	Δ. 514	16 16 1·3	4·097	1	130 20 6·7	8·69	1	Cl; B; L; pRi; lCM; st 9...11	2
4185	.....	II. 810	.....	16 16 4·4	1·154	1	32 2 48·5	8·75	1	pF; pS; lE	1
4186	.....	III. 891	.....	16 16 46·1	2·121	1	51 40 47·1	8·67	1	eF; vS; R; lbM.....	1
4187	3627	.....	Δ. 412	16 17 20·5	4·456	2	138 49 29·1	8·57	2	Cl; cL; pRi; lCM; st 13...15	2
4188	1956	III. 624	.....	16 18 3·7	2·121	2	51 44 50·1	8·57	2	F; S; iR; bM	4
4189	3628	.....	Δ. 536	16 18 14·8	4·037	3	128 30 59·3	8·51	4	B; pL; R; psbM; rr	4
4190	.....	III. 740	.....	16 18 19·3	0·401	1	24 17 36·7	8·59	1	cF; pL; iR	1
4191	.....	III. 892	.....	16 18 23·5	2·144	1	52 26 49·2	8·54	1	eF; S; bM	1
4192	.....	II. 811	.....	16 18 42·4	1·320	1	34 34 35·2	8·54	1	pB; iR; vgvlbM.....	1
4193	3629	VI. 10	.....	16 18 43·0	3·657	1	115 43 5·4	8·48	1	Cl; cL; mC; gbM; rrr	2
4194	1957	.....	.....	16 20 20·8	2·009	1	48 44 41·0	8·40	1	F; R; bM	1
4195	1958	III. 638	.....	16 20 27·2	2·010	2	48 47 10·4	8·38	2	cF; vS; R; bM	3
4196 4197	1958, *a*	.....	R. 2 novæ	16 20 ±	2·010	...	48 47 ±	8·38	...	2 novæ, one eF; one S	0
4198	1959	III. 639	.....	16 21 10·4	2·025	1	49 13 2·9	8·33	1	vF; vS; R	2
4199	3630	.....	.....	16 21 41·1	7·067	1	162 57 2·8	8·16	1	vF; vS; *9 nr.....	1
4200	3631	.....	.....	16 21 49·9	4·654	1	142 18 59·3	8·21	1	Cl; L; lC; st L	1
4201	.....	III. 680	.....	16 22 6·9	1·623	2	39 48 49·8	8·26	2	vF; S; R; lbM; er	2
4202	.....	II. 690	.....	16 22 34·5	1·687	2	41 17 48·6	8·22	2	F; pS; iF; gbM	2
4203	3632	.....	.....	16 22 36·1	5·219	2	150 18 1·9	8·13	2	pF; pL; vlE; gbM	2
4204	1960	II. 652	.....	16 23 0·8	2·004	2	48 45 15·4	8·18	2	cF; pL; R; gbM; r	3
4205	.....	II. 647	.....	16 23 2·7	2·057	2	50 13 17·4	8·18	2	F; S; iF	2
4206	3633	.....	.....	16 23 22·7	4·423	1::	137 48 2·7	8·09	1::	eF; (?); * f nr	1
4207	3634	.....	.....	16 23 39·8	4·426	1	137 51 20·8	8·06	1	F; cS; lE; vglbM; * p	1
4208	1961	II. 875	.....	16 23 50·4	2·053	1	50 8 9·6	8·12	1	pF; S; vlE; vgmbM	2
4209	3635	.....	Δ. 400	16 23 50·9	4·506	1	139 27 48·5	8·05	1	Cl; L; lC; iF	1
4210	3636	.....	.....	16 24 7·3	4·246	1	133 44 18·2	8·04	1	Cl; *μ Normæ* inv	1
4211	3637	VI. 40	Mechain	16 24 43·0	3·350	1	102 44 17·3	8·01	1	⊕; L; vRi; vmC; R; rrr ...	2
4212	1962	III. 640	.....	16 24 58·0	2·004	1	48 52 16·6	8·02	2	cF; vS; R; bM	3
4213	1962, *a*	.....	R. nova	16 25 ±	2·004	...	48 52 ±	8·02	...	No description; near h. 1962	0
4214	1963	III. 641	.....	16 25 18·7	2·010	1	49 3 57·0	8·00	1	vF; vS; R	3
4215	1964	III. 890	.....	16 25 34·0	2·203	1	54 38 1·1	7·97	2	vF; pL; iE; rr; * nr	3
4216	3638	.....	.....	16 25 36·3	4·316	2	135 19 19·6	7·92	2	Cl; B; S; st pL	2
4217	1964, *a*	.....	R. nova	16 25 47·9	2·203	...	54 35 11·1	7·91	...	No description; 4′ nf 1964...	0
4218	.....	II. 753	.....	16 26 37·0	2·624	2	69 55 19·4	7·88	3	pB; pL; vlE; pgmbM	2
4219	.....	III. 813	.....	16 26 50·0	1·264	1	34 9 56·7	7·89	1	vF; vS; iR	1
4220	3639	.....	.....	16 26 50·4	6·305	1	159 4 52·8	7·76	1	vF; eS; R; gbM.....	1
4221	1965	.....	.....	16 28 15·0	2·190	1	54 21 40·8	7·76	1	F; S; R; gbM; * 11 np.....	1
4222	.....	III. 730	.....	16 28 18·6	2·579	1	68 9 52·2	7·74	1	eF; vS; E	1
4223	3640	.....	.....	16 29 14·5	4·483	1::	138 43 48·6	7·62	1::	!; F; vL; viE; B * inv	1
4224	3641	.....	Δ. 483	16 30 29·3	4·233	2	133 5 18·9	7·53	2	Cl; cL; pRi; iR; st 11...14..	2†
4225	3642	.....	Δ. 413	16 30 52·1	4·475	1	138 29 3·7	7·49	1	Cl; vL; lRi; lC; rrr; F neb inv.	1
4226	1966	III. 893	.....	16 31 43·6	2·058	2	50 41 28·4	7·48	2	vF; S; R; gbM; bet 2 st ...	4
4227	1967	.....	.....	16 32 19·0	2·155	1	53 31 20·9	7·43	1	vF; vS; sbM * 12	1
4228	3643	.....	.....	16 33 50·3	4·420	1	137 11 50·2	7·24	1	Cl; (in M. Way).....	1
4229	3644	.....	Δ. 442	16 36 6·6	4·404	2	136 45 36·8	7·06	2	Cl; pRi; eiCM; st 11...12 ...	2†
4230	1968	.....	M. 13, Halley	16 36 41·2	2·140	3	53 16 19·4	7·08	3	!!; ⊕; eB; vRi; vgeCM; st 11...20.	14†
4231	1969	II. 701	.....	16 38 12·4	2·125	(1)	52 54 7·5	6·95	1	pB; pL; E 45°±; vgmbM...	2
4232	3646	.....	Δ. 364	16 38 18·4	4·776	3	143 33 29·1	6·87	3	Cl; L; Ri; lCM; st 9...12 ...	2
4233	3645	.....	.....	16 38 23·8	+7·032	1	162 20 32·0	+6·80	1	vF; pL; vgvlbM.....	2

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	h.	H.		h m s	s		° ′ ″	″			
4234	1970	.....	Σ.5 = Lal. 30510	16 38 36·0	+2·513	1	65 56 10·0	+6·90	1	{ ○; vB; vS; R; disc and border. }	1†*
4235	3647	.....	.....	16 39 3·5	+5·147	1	148 44 47·7	6·79	1	pF; R; vglbM; *5 p 79^s ...	1
4236	.....	I. 280	.....	16 39 16·1	−3·036	3	11 33 21·3	7·01	3	B; cL; lE; slbM	3
4237	3648	.....	Δ. 454	16 39 19·8	+4·308	3	134 28 15·7	6·79	3	Cl; pS; pRi; pC; st 12...15..	3
4238	1971	.....	M. 12	16 39 58·1	3·110	1	91 41 47·4	6·78	2	!!; ⊕; vB; vL; iR; gmbM; rrr; st 10...	7
4239	3649	.....	.....	16 40 39·6	5·171	2	148 58 2·1	6·67	2	⊕; pB; cL; R; glbM; rr ...	3
4240	3650	.....	Δ. 456?	16 40 41·4	4·311	1	134 28 33·4	6·68	1	Cl; vL; vRi; lbM; st 12...13	1
4241	.....	.....	D'Arrest, 101	16 41 24	0·72	[2]	28 9 18	6·72	[2]	F; S; R; mbM	0
4242	.....	.....	D'Arrest, 102	16 41 47	0·68	...	27 46 0	6·69	...	F; S; makes Δ with 2 S st 12 and 14 m.	0
4243	3651	.....	.....	16 41 51·9	4·170	1	130 58 41·7	6·59	1	Cl; eL; eRi (in M. Way) ...	1
4244	.....	IV. 50	.....	16 43 6·4	1·678	1	42 8 38·8	6·56	1	vB; L; R; Disc+F, r, border	1
4245	3652	.....	Δ. 499	16 44 14·5	4·197	1	131 33 37·7	6·39	1	Cl; B; cL; pRi; st 10...13 ..	1
4246	3653	II. 584	.....	16 45 1·0	3·584	1	111 55 47·5	6·35	1	pB; cL; iR; rrr; st 14...16 ..	2
4247	.....	III. 727	.....	16 45 54·8	1·932	1	48 1 25·6	6·32	1	cF; S; E90°	1*
4248	.....	III. 735	.....	16 46 0·4	1·775	1	44 20 25·3	6·31	1	eF; pS	1
4249	3654	.....	Δ. 520	16 46 3·5	4·112	2	129 16 12·2	6·24	2	Cl; B; L; Ri; st 8...11	3
4250	.....	.....	D'Arrest, 103	16 47 1	0·56	...	26 47 5	6·26	...	F; pS; irr	0
4251	3655	.....	.....	16 47 33·9	4·327	2	134 33 17·6	6·12	2	Cl; pRi; vlC; iF; st L & S...	2
4252	3656	.....	.....	16 47 40·8	+4·378	2	135 42 21·0	6·10	2	Cl; L; lRi; lC; st 8...12	2
4253	.....	III. 974	.....	16 47 55·2	−6·988	1	7 9 0·3	6·41	1	cF; S; bM; p of 2	1
4254	.....	III. 975	.....	16 47 58·3	−7·058	1	7 5 59·7	6·39	1	vF; vS; f of 2	1
4255	3657	.....	Δ. 374?	16 48 3·0	+4·734	1	142 28 51·8	6·06	1	Cl; S; Δ ar; st 13	1
4256	1972 = 3659	.....	M. 10	16 49 47·6	3·159	3	93 52 6·8	5·96	3	!; ⊕; B; vL; R; gvmbM; rrr; st 10...15.	7
4257	1973	III. 689	.....	16 49 47·6	2·121	1	53 16 46·7	5·99	1	eF; cL; E90°	2
4258	3658	.....	.....	16 50 8·6	4·032	2	126 53 32·3	5·91	2	⊕; vF; vL; iR; vgbM; rrr; st 20.	2
4259	1974	.....	.....	16 50 11·5	2·008	1	50 9 37·8	5·96	1	vF(?)	1*
4260	3660	.....	Δ. 456	16 50 37·1	4·326	3	134 26 53·8	5·86	3	!; Cl; B; vL; vRi; st 11...	2
4261	3661	.....	M. 62 = Δ. 627	16 52 18·7	3·810	5	119 53 42·9	5·73	5	!; ⊕; vB; L; gmbM; rrr; st 14...16.	5†
4262	.....	III. 123	.....	16 52 22·2	2·523	1	66 46 53·8	5·76	1	vF; pL; R; lbM	1
4263	3662	.....	Δ. 521	16 52 26·0	4·130	2	129 30 46·3	5·71	2	Cl; B; pL; cRi; st 10	2
4264	1975 = 3663	.....	M. 19	16 53 59·2	3·701	3	116 3 12·0	5·60	2	⊕; vB; L; R; vCM; rrr; st 16... red.	7
4265	3664	.....	Δ. 556	16 55 16·3	4·067	1	127 40 56·4	5·48	1	Cl; L; pRi; lC; st 9...11 ...	1
4266	.....	III. 124	.....	16 55 22·1	2·521	1	66 46 39·3	5·51	1	vF; stellar	1
4267	.....	III. 728	.....	16 55 52·8	1·534	1	39 51 36·0	5·50	1	vF; cS; iR	1
4268	1976 = 3665	VI. 11	.....	16 55 55·3	3·661	2	114 33 37·9	5·43	2	⊕; B; L; R; gCM; rrr; st 16.	3
4269	3666	II. 195	.....	16 56 43·5	3·606	1	112 30 9·8	5·36	1	⊕; cB; L; R; gpmCM; rrr; st 16.	3
4270	1977 = 3667	VI. 12	.....	17 1 28·2	3·716	2	116 23 13·1	4·97	2	⊕; vB; L; R; psbM; rrr; st 16; F neb f.	4
4271	1978	.....	.....	17 1 34·2	3·715	1	116 22 33·5	4·95	1	F; S; vgbM; ⊖ p	1
4272	.....	.....	D'Arrest, 104	17 3 40	0·57	[1]	27 21 54	4·86	[1]	vF; vS; R	0
4273	3668	.....	.....	17 3 51·8	5·588	2	152 39 3·3	4·71	2	F; vL; vlE; am st; 2 st inv...	2
4274	.....	IV. 57	.....	17 4 10·8	1·883	2	47 29 24·4	4·78	2	F; stellar	2
4275	3670	I. 147	.....	17 5 40·2	3·803	2	119 17 18·0	4·60	2	⊕; B; cL; R; s, vglbM; rrr; st 16...17.	3
4276	3669	.....	.....	17 5 46·4	5·242	1	149 0 21·5	4·55	1	vF; vS; R; glbM	1
4277	.....	.....	D'Arrest, 105	17 6 3	0·73	[1]	29 3 54	4·59	[1]	pF; vS; R; *13 nr	0
4278	.....	.....	D'Arrest, 106	17 6 15	+0·71	[1]	28 49 54	+4·58	[1]	F; pL; lE	0

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	h.	H.		h m s	s		° ′ ″	″			
4279	3671	I. 45	.....	17 7 49·0	+3·765	2	117 58 27·9	+4·43	2	⊕; cB; pS; R; gvmbM; rrr; st 16...17.	4
4280	3672	.....	Δ. 522	17 8 4·2	4·140	1::	129 17 11·4	4·38	1::	Cl; pL; Ri; R; gbM; st 12...14.	1
4281	3673	.....	.....	17 8 45·0	+4·279	2	132 43 29·9	4·33	2	Cl; vL; pRi; lC (* nf taken)	2
4282	.....	III. 945	.....	17 9 14·5	−2·000	1	14 23 21·1	4·47	1	vF; S; E; S * s	1
4283	3676	.....	.....	17 9 30·9	+3·643	1	113 35 51·4	4·28	1	pF; L; R; rr	1
4284	3675	.....	.....	17 9 41·0	4·722	2	141 35 30·9	4·23	2	!!!; ○; pB; vS; R	3†
4285	3674	.....	.....	17 9 57·7	+5·861	2	154 51 25·4	4·18	2	vF; vS; vlE; glbM	2
4286	.....	III. 951	.....	17 10 45·4	−3·497	...	11 12 41·4	4·38	1	eF; S	1
4287	1979 = 3677	.....	M. 9	17 10 57·6	+3·507	2	108 22 59·8	4·16	2	⊕; B; L; R; eCM; rrr; st 14	6
4288	3678	.....	.....	17 11 31·9	4·021	2	125 54 52·0	4·10	2	cF; vL; icE; vglbf; * 8 inv.	2
4289	3679	.....	.....	17 11 35·8	3·828	1::	120 0 3·0	4·10	1::	Diffused neb in patches	1
4290	3680	.....	.....	17 12 40·1	4·109	3	128 20 0·0	4·00	3	!!!; ◎; eF; S; am St	3†
4291	.....	II. 812	.....	17 12 40·7	+1·011	1	32 24 7·4	4·08	1	F; S; R; vglbM	1
4292	1980	II. 767	.....	17 12 44·1	−1·062	1	17 32 6·2	4·14	1	cF; pL; R; vgmbM	2
4293	.....	I. 149	.....	17 12 47·8	+3·535	1	109 25 12·0	4·00	1	cB; pS; lE; er	1
4294	.....	.....	M. 92	17 12 56·9	1·840	...	46 43 31·2	4·04	...	⊕; vB; vL; eCM; rrr; st S..	8*
4295	3681	I. 46	.....	17 15 16·2	3·719	1	116 12 43·4	3·78	1	cF; L; R; gbM; rrr	2
4296	3683	I. 48	.....	17 15 23·2	3·491	1	107 40 23·4	3·78	1	⊕; vB; cL; vgvmbM; rrr; st 20.	3
4297	3682	.....	.....	17 15 28·0	3·960	1	124 3 6·8	3·76	1	F; L; E; vglbM; * inv	1
4298	.....	.....	D'Arrest, 107	17 16 23	0·61	[1]	28 4 54	3·77	[1]	pB; S; R; bMN=*12	0
4299	3685	.....	.....	17 16 28·0	3·827	1	119 51 37·1	3·67	1	Neb in patches (M. Way) ...	1
4300	3684	.....	Δ. 225	17 17 23·3	6·165	2	156 55 47·9	3·53	2	⊕; cB; L; vgmbM; rrr; st 14...17.	2
4301	.....	.....	Auw. N. 36	17 20 19·2	3·184	...	94 57 2·0	3·37	...	F; L; vlbM (Winnecke, April 12, 1860).	0
4302	1981 = 3686	IV. 11	.....	17 20 50·4	3·650	2	113 37 47·3	3·21	3	!!; ©; pB; S; R	5*†
4303	.....	III. 137	.....	17 22 2·6	2·412	1	63 25 22·2	3·24	1	vF; pL; iF	1
4304	3687	.....	.....	17 22 58·1	3·913	1	122 28 48·3	3·11	1	Cl; S; P; B * inv	1
4305	3688	.....	.....	17 24 47·4	4·142	1	128 58 1·5	2·95	1	eF; pS; lE; * 9 att	2†
4306	3689	.....	.....	17 25 34·1	3·915	3	122 28 38·7	2·89	3	Cl; st 6·7, 13	2
4307	3690	.....	Δ. 457	17 26 3·2	4·380	2	134 38 32·2	2·84	2	⊕; vB; L; R; pg, psvmbM; rrr; st 17...	2
4308	.....	II. 901	.....	17 26 3·6	2·680	1	73 29 2·4	2·88	1	F; S; iF; er	1
4309	3691	.....	.....	17 27 57·9	6·657	2	159 41 19·0	2·60	2	cF; S; R; glbM; * 13 sp ...	2
4310	3693	.....	.....	17 28 51·0	3·998	1	124 54 49·0	2·60	1	Cl; pL; lRi; lC	1
4311	3692	.....	Δ. 366	17 29 17·3	4·871	2	143 35 5·2	2·54	2	⊕; B; vL; Ri; st 13	3
4312	3694	.....	.....	17 29 48·6	5·527	1	151 36 5·1	2·47	1	eF; S; R; p of 2	1
4313	3696	.....	Δ. 568	17 30 1·9	4·067	1	126 51 8·0	2·50	1	Cl; pL; pRi; iR; st 9...10...	1
4314	1982 = 3697	I. 44	.....	17 30 6·9	3·658	4	113 48 55·0	2·50	4	pB; pL; R; *12 f inv	6
4315	1983 = 3698	.....	M. 14	17 30 16·0	3·146	2	93 9 25·0	2·50	2	!; ⊕; B; vL; R; eRi; vgmbM; rrr; st 15...16.	7
4316	3695	.....	.....	17 30 18·8	5·528	1::	151 36 3·9	2·43	1	eeF; f of 2	1
4317	4020	h. o. n.	.....	17 30 26·3	3·939	1	123 9 16·8	2·46	1	Cl; F; L; pRi; lC; st 13...15	1
4318	3699	.....	M. 6	17 30 55·8	3·905	1	122 7 4·9	2·43	1	Cl; L; iR; lC; st 7, 10... ...	4
4319	3700	.....	.....	17 32 15·0	5·436	1	150 39 39·1	2·27	1	eF; S; R; 3 st nr	2
4320	.....	.....	D'Arrest, 108	17 33 56	+0·69	[2]	29 6 12	2·26	[2]	vS; gbM	0
4321	.....	VI. 41	.....	17 34 7·6	−2·177	1	14 11 11·9	2·33	1	⊕; cL; R; vgbM; rr.....	1
4322	3701′	.....	.....	17 35 0·1	+4·002	1::	124 56 32·1	2·07	1	Nebulous portion of M. Way	1
4323	3702	.....	Δ. 612	17 35 9·3	3·912	2	122 17 0·5	2·05	2	Cl; vL; Ri; lC	2
4324	3702′	.....	.....	17 36 30·1	3·957	1	123 37 33·2	1·94	1	Cl; vL; pRi; st 8...12	1
4325	.....	II. 587	.....	17 37 53·6	+2·997	1	86 44 25·5	+1·85	1	F; cL; iF	1

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	h.	H.		h m s	s		° ′ ″	″			
4326	3703	.....	.....	17 37 56·4	+3·887	1	121 27 58·6	+1·82	1	Cl; pS; lRi; lC; st 10...12 ..	1
4327	1984	.....	.....	17 38 46·0	+3·689	1	114 49 51·5	1·75	1	Cl; st vS	1
4328	1987	III. 741	.....	17 39 11·8	−1·069	1	17 49 22·7	1·69	1	vF; vS; R; stellar; *8 s.....	2
4329	3704	.....	.....	17 39 39·5	+4·019	1::	125 22 49·8	1·66	1::	Cl; F; eL; vS st+neb	1
4330	3701	.....	.....	17 39 43·4	19·744	1	175 24 24·0	1·20	1	pB; R; vgbM.....	1
4331	1985	I. 150	.....	17 40 32·5	3·565	1	110 18 21·0	1·60	1	pB; pL; R; bM	3
4332	3705	.....	Δ. 557	17 40 41·6	4·077	2	127 0 0·1	1·57	2	⊕; vB; pL; R; vgmbM; rrr; st 18...20.	2
4333	1986	II. 586	.....	17 40 54·7	3·557	2	109 58 3·8	1·56	2	pB; pS; R; gbM; r; *15 np	3
4334	3706	.....	Δ. 597?	17 40 55·0	3·999	1::	124 48 46·5	1·55	1::	Cl; vL; vRi; st 12...13	1
4335	3707	VI. 13	.....	17 41 40·5	3·847	2	120 10 12·7	1·49	2	Cl; pL; pRi; bifid; st 12...	3†
4336	3708	.....	.....	17 41 59·7	3·991	1::	124 34 43·8	1·46	1::	cL; iR; pmbM; r	1
4337	3709	.....	.....	17 42 37·5	4·018	1::	125 20 42·0	1·40	1::	Cl; rr; st eS+neb	1
4338	1988	.....	.....	17 44 16·8	3·705	1	115 21 32·1	1·27	1	eF; S; (?)	1
4339	3711	.....	.....	17 44 29·7	3·620	1	112 18 23·5	1·25	1	Cl; pRi (in M. Way)	1
4340	3710	.....	M.7 (Lacaille)	17 44 39·6	3·999	1	124 46 37·9	1·23	1	Cl; vB; pRi; lC; st 7...12 ...	3
4341	3712	.....	.....	17 44 54·5	3·815	1::	119 5 36·3	1·21	1::	Neb or nebulous patch of M. Way.	1
4342	3713′	.....	.....	17 45 36·6	3·855	1	120 23 56·5	1·15	1	Neb or nebulous patch of M. Way.	1†
4343	1989	.....	.....	17 45 57·6	2·502	1	66 53 15·5	1·15	1	!; vF; S; R; vsvmbMvSRN.	1†
4344	3713	.....	.....	17 46 1·3	5·767	1	153 38 2·5	1·05	1	F; S; E; bM; bet 2 st 10 ...	1
4345	3714	.....	.....	17 48 31·2	6·132	1	156 24 42·9	0·83	1	pF; S; pmE 90°; *12 f, att...	1
4346	1990	.....	M. 23	17 48 40·9	3·532	3	108 59 43·7	0·89	3	Cl; B; vL; pRi; lC; st 9·10, 11...13.	6
4347	3715	.....	Δ. 460?	17 48 51·4	4·372	2	134 13 52·2	0·84	2	Neb+Cl; pL; mE; gvlbM...	2
4348	.....	III. 957	.....	17 49 25·1	2·631	1	71 42 59·5	0·85	1	vF; vS; p of 2	1
4349	.....	III. 958	.....	17 49 31·1	2·629	1	71 38 58·5	0·85	1	vF; vS; f of 2	1
4350	3716	.....	.....	17 50 20·0	+5·991	2	155 23 58·1	0·67	2	vF; vS; f * of * inv	2
4351	.....	.....	Auw. N. 37	17 50 54·1	−0·638	...	19 49 12·3	0·81	...	pF; L; mE (Auwers, July 22, 1854).	0
4352	3717	.....	.....	17 51 10·6	+3·685	1	114 38 24·1	0·67	1	Cl; Ri; eL; vlC	1
4353	.....	VIII. 53	.....	17 51 30·0	3·491	1	107 23 18·2	0·64	1	Cl; pS; lRi; lC	1
4354	.....	.....	D'Arrest, 109	17 53 43	0·49	[2]	27 20 24	0·53	[2]	vF; R; 1st of 3	0
4355	1991 = 3718	IV. 41 V. 10, 11, 12	M. 20	17 53 51·8	3·640	3	113 1 39·9	0·43	3	!!!; vB; vL; trifid; * inv ...	8 Mon.†
4356	.....	.....	D'Arrest, 110	17 54 9	0·48	[2]	27 18 30	0·50	[2]	vF; vS; 2nd of 3.....	0
4357	3719	II. 199	.....	17 54 13·9	3·282	2	98 56 37·3	0·41	2	pB; pL; R; rr.....	3
4358	3721	VII. 7	.....	17 54 36·4	3·779	1	117 53 32·8	0·36	1	Cl; pS; Ri; lC; st 9...13 ...	3
4359	3720	I. 49	.....	17 54 37·2	3·845	2	120 1 29·8	0·36	2	⊕; B; pL; R; gvmbM; rrr; st 16...17.	3
4360	.....	.....	D'Arrest, 111	17 54 38	0·49	[2]	27 22 0	0·46	2	F; pL; 3rd of 3	0
4361	3722	.....	M. 8	17 55 17·9	3·677	3	114 21 15·3	0·31	3	!!!; vB; eL; eiF; with LCl...	8 Mon.†
4362	1992	.....	.....	17 55 27·9	2·811	1	78 57 6·6	0·32	1	.....	1
4363	.....	V. 9	.....	17 55 39·8	3·652	1	113 27 28·4	0·28	1	F; L; cE.....	1
4364	3723	II. 200	.....	17 55 51·7	3·846	2	120 3 24·5	0·25	2	⊕; pF; cS; R; gbM; rrr; st 16...17.	3*
4365	3724	.....	Δ. 569	17 56 1·6	4·054	1::	126 18 6·9	0·23	1::	Cl (in M. Way)	1
4366	3725	.....	.....	17 56 6·0	3·677	2	114 19 58·9	0·23	2	Cl; B; L; pRi; vL neb p ...	2
4367	1993	.....	M. 21	17 56 13·8	3·626	1:	112 30 8·6	0·22	1	Cl; pRi; lC; st 9...12.....	2
4368	.....	V. 13	.....	17 56 32·3	3·692	1	114 53 23·7	0·19	1	eL; eiF; st f	1*
4369	.....	.....	Auw. N. 38	17 56 38·5	3·076	...	90 17 44·9	0·20	...	pF; vS; vS neb * p (Hind, Ap. 1852).	0
4370	.....	.....	Auw. N. 39	17 57 15·0	3·247	...	97 34 58·4	0·15	...	(Brorsen, 1856.) No description.	0
4371	.....	II. 198	.....	17 57 27·3	3·778	1	117 49 20·6	0·12	1	pF; S; iE; er or Cl	1
4372	3726	.....	Δ. 473	17 57 50·9	+4·350	2	133 43 25·8	0·06	2	⊕; B; R; eC; gbM; rrr; st 15...16.	2*
4373	.....	IV. 37	.....	17 58 20·0	−0·023	1	23 22 9·5	+0·15	1	○; vB; pS; sbMvSN.....	1
4374	1994	II. 197	.....	17 58 42·4	+3·696	1	115 0 52·0	0·00	1	cF; pL; iR; r	2

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	h.	H.		h m s	s		° ′ ″	″			
4375	3727	.....	.....	17 58 45·8	+5·788	1	153 47 28·2	−0·06	1	eeF; eeS; R	1†
4376	3729	.....	.....	17 58 47·5	3·646	1::	113 14 0·0	0·00	1::	Cl; vL; vRi	1
4377	.....	III. 555	.....	17 59 39 1	2·624	1	71 27 7·8	−0·04	1	cF; S; lE; r	1
4378	3730	IV. 12	.....	18 0 44·2	3·722	1	115 56 17·6	0·18	1	⊕; F; L; lE; vglbM; rr; st 20.	3
4379	1995	.....	.....	18 0 50·8	3·518	1	108 26 46·6	0·18	1	Cl; pRi; vlC; st L & S	1
4380	3732	.....	.....	18 1 9·8	3·769	1	117 32 31·7	0·21	1	F; vL; cE; lbM; rr	1
4381	3728	.....	.....	18 1 11·4	8·690	1	166 36 39·2	0·36	1	vF; vS; R; glbM	1
4382	3731	.....	.....	18 1 12·2	3·900	3	121 46 50·4	0·22	3	⊕; pB; pL; R; glbM; rrr; st 16	3
4383	.....	II. 902	.....	18 1 18·7	2·649	1	72 25 54·3	0·19	1	F; L; R; vglbM	1
4384	1996 = 3733	.....	.....	18 1 23·9	3·671	2	114 7 30·1	0·23	2	vF; vL; lE; ⁂ inv	2
4385	1997	VIII. 54	.....	18 2 24·7	3·476	1	106 48 57·7	0·31	1	Cl; L; lC; st cL	3
4386	3734	.....	.....	18 2 47·5	3·970	1	123 53 29·2	0·36	2	○; F; L; cE; hazy border...	2
4387	.....	.....	D'Arrest, 112	18 3 51	1·34	[1]	37 44 0	0·38	[1]	eF; vS; R; ∗16 nr.....	0
4388	1998 = 3735	VII. 30	.....	18 4 20·6	3·602	2	111 37 33·6	0·48	2	Cl; vL; lC	3
4389	3736	II. 201	Δ. 619	18 4 33·3	3·902	3	121 51 0·7	0·51	3	⊕; cB; L; R; rrr; st 15.....	5
4390	2000	.....	Σ. 6	18 5 17·8	2·912	1	83 10 53·5	0·55	2	○; vB; vS; R; 1 hazy	3*
4391	1999	.....	.....	18 5 23·5	3·617	1:	112 10 47·6	0·58	1	Cl; st vS	1
4392	2001 = 3739	VII. 31	.....	18 7 24·1	3·616	2	112 10 21·5	0·75	2	Cl; pRi; pC; cE; st 13	3
4393	3737	.....	Δ. 376	18 7 24·6	4·797	2	142 15 13·3	0·79	2	⊕; cB; cL; R; gmbM; rrr; st 15	2
4394	3738	.....	.....	18 7 56·9	5·793	1	153 51 18·2	0·86	1	eF; S; ∗6, sp	1
4395	2002	.....	.....	18 8 47·2	3·529	1	109 55 8·6	0·88	3	F; pL; cE; ⁂ inv	3†
4396	2003	VIII. 55	.....	18 9 28·2	3·473	1	106 41 22·1	0·93	1	Cl; lC	2
4397	2004	.....	M. 24	18 10 13·7	3·518	2	108 28 7·3	0·99	2	!; Cl; vRi; vmC; R; st 15 (M. Way).	4*
4398	3740	VIII. 15	.....	18 10 14·2	3·363	1	102 17 10·3	0·99	1	Cl; lRi; lC	2
4399	2005	.....	.....	18 10 20·9	3·429	1	104 59 37·7	1·01	1	Cl; lRi; lC; st 10...12	1
4400	2006	.....	M. 16	18 10 57·0	3·401	1::	103 50 2·2	1·06	1	Cl; at least 100 st L & S ...	3
4401	2007	.....	M. 18	18 11 44·6	3·485	1::	107 11 8·1	1·13	1	Cl; P; vlC	4
4402	3741	.....	.....	18 11 45·3	5·724	2	153 17 47·0	1·20	2	vF; S; R; gvlbM; ∗9 p.....	2
4403	2008	.....	M. 17	18 12 33·1	3·460	2	106 13 36·0	1·20	2	!!!; B; eL; eiF; 2-hooked ...	9†
4404	3742	I. 50	.....	18 14 41·9	3·855	3	120 25 26·0	1·40	3	⊕; vB; pL; R; rrr; st 16 ..	4
4405	2009	.....	.....	18 15 20·7	3·358	1::	102 5 58·8	1·44	1	lC; lRi; lC; st 11...12	1
4406	2010 = 3743	.....	M. 28	18 15 55·4	3·692	2	114 56 30·0	1·50	2	!; ⊕; vB; L; R; geCM; rrr; st 14...16.	8
4407	3744	II. 204	.....	18 17 13·4	3·645	1	113 16 30·4	1·62	1	○ or ⊕; pB; eeS; R	2
4408	3745	.....	.....	18 19 12·0	5·726	1	153 22 22·5	1·85	1	pF; S; R; gbM	1
4409	3746	.....	.....	18 19 23·4	3·358	1	102 6 42·3	1·79	1	Cl; pL; pRi; st 12...15	1
4410	.....	VIII. 72	C. H.	18 20 43·1	2·921	1	83 31 15·3	1·89	1	Cl; lC; st L	3
5076	.....	.....	.....	18 20 44·6	.....	...	123 30 27·3	.....	...	See No. 5076	0
4411	.....	.....	M. 69 = Δ. 613	18 22 13·2	3·917	3	122 26 33·5	2·05	3	⊕; B; L; R; rrr; st 14...16	4*
4412	3748	I. 51	.....	18 22 16·6	3·708	1	115 34 55·5	2·05	1	⊕; B; S; R; rr	2
4413	2011	.....	.....	18 23 4·6	3·385	1	103 15 12·7	2·11	1	Cl (in M. Way)	1
4414	2012 = 3749	II. 205	.....	18 23 24·2	+3·651	3	113 33 57·5	2·15	3	⊕; pB; pL; iR; gpmbM; rrr; st 16.	4
4415	.....	.....	Auw. N. 40	18 23 35·4	−1·719	...	15 29 47·7	2·01	...	!!; pB; pL; E 50°; 2 st p *Var* (Tuttle.)	0*
4416	2013	VI. 23	.....	18 24 31·5	+3·477	1	106 59 3·8	2·24	1	Cl; pL; vRi; pC; st 11...15	2
4417	.....	II. 907	.....	18 24 55·8	1·967	1	50 14 52·8	2·24	1	F; S; iF	1
4418	2014	VIII. 14	.....	18 25 4·6	3·488	1::	107 26 2·3	2·29	1	Cl; L; Ri; lC; st vS	2
4419	.....	.....	Auw. N. 41	18 25 4·9	0·230	...	25 5 44·2	2·20	...	S; pmE; ⁂ inv (Σ. neb No. 7)	0
4420	3751	.....	.....	18 25 44·1	3·317	1	100 29 32·8	2·34	1	Cl; P; lC; pS; st 9·10, 12...13	1
4421	3752	.....	Δ. 607	18 26 32·0	+3·936	4	123 5 5·1	−2·43	4	B; S; lE; rrr; st 15	5

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	h.	H.		h m s	s		° ′ ″	″			
4422	3750	.....	.....	18 27 8·1	+7·511	1	163 22 49·3	−2·59	1	vF; S; lE; glbM.....	1
4423	.....	.....	Auw. N. 42	18 27 19·3	3·210	...	96 4 46·7	2·45	...	pF; vS; E (Winnecke, June 1855).	0
4424	2015 = 3753	.....	M. 22	18 27 52·1	3·662	4	114 0 25·8	2·54	4	!!; ⊕; vB; vL; R; vRi; vmC; st 11...15.	10
4425	2016	.....	.....	18 28 5·5	2·496	1	66 32 22·1	2·53	1	Cl; P; lC.....	1
4426	3754	VIII. 12	.....	18 29 5·1	3·266	1	98 20 0·1	2·63	1	Cl; L; pRi; vlC	2
4427	3755	.....	.....	18 32 2·0	5·603	2	152 25 36·5	2·95	2	pF; S; R; psbM; r.....	2
4428	3756	.....	M. 70 = Δ. 614	18 34 4·9	3·910	3	122 25 12·6	3·08	3	⊕; B; pL; R; gbM; st 14...17	4*
4429	2017	.....	.....	18 34 9·9	3·185	1	94 53 29·9	3·07	1	Cl; L; Ri; st 10...18	1
4430	2018	.....	.....	18 34 41·1	3·219	1	96 21 12·4	3·12	1	Cl; vRi; vlC (in M. Way)...	1
4431	3757	.....	.....	18 35 9·5	5·941	2	155 19 18·8	3·24	2	vB; pL; R; vg, psvmbM; *7 p	2
4432	3758	.....	M. 26	18 37 32·6	3·293	1	99 31 57·9	3·37	1	Cl; cL; pRi; pC; st 12...15..	6
4433	... ..	VI. 15	.....	18 39 37·8	3·715	1	116 3 40·2	3·56	1	Cl (?); vF; cL	1
4434	3759	.....	.....	18 40 6·8	5·131	1	147 27 46·8	3·64	1	pF; pS; lE 90°; pslbM	1
4435	.....	.....	Auw. N. 43	18 43 18·8	3·192	...	95 22 6·4	3·86	...	Cl; B; 60 st 13 (Winnecke, 1854).	0
4436	3760	.....	.....	18 43 36·6	5·679	1	153 19 39·2	3·96	1	Neb. No description.....	1
4437	2019	.....	M. 11	18 43 37·2	3·219	2	96 26 7·6	3·88	2	!; Cl; vB; L; iR; Ri; st 1 L, 11..	8†
4438	3761	.....	.....	18 44 2·1	4·873	2	143 58 46·9	3·97	2	F; S; vlE; gbM	3
4439	4021	h. o. n.	.....	18 44 18·1	4·866	2	143 53 19·3	3·99	2	pF; S; R; glMbM; last of gr	2
4440	2020	.....	.....	18 44 52·5	2·836	1	79 49 0·6	3·98	1	Cl; pRi; lC; iF	1
4441	3762	I. 47	.....	18 45 29·2	3·276	1	98 52 8·5	4·05	1	⊕; pB; vL; ir; vglbM; rrr	2
4442	3763	.....	M. 54 = Δ. 624	18 46 6·2	3·846	3	120 38 29·7	4·11	3	⊕; vB; L; R; g, smbM; rrr; st 15.	6
4443	2021	.....	.....	18 46 17·5	3·549	1	110 4 8·1	4·13	1	Cl; pRi; st 9...13	1
4444	2022 = 3766	III. 143	.....	18 46 39·8	3·623	2	112 52 17·2	4·16	2	F; S; rr Cl + neb	3
4445	3764	.....	.....	18 47 25·9	6·042	2	156 17 14·0	4·30	2	vF; S; R; glbM; *9 sp.....	2
4446	3765	.....	.....	18 48 2·6	6·430	1	158 47 1·2	4·36	2	vF; pL; R; vgvlbM	2
4447	2023	.....	M. 57 D'Arquier	18 48 20·1	2·228	2	57 8 57·2	4·26	3	!!!; ◎; B; pL; cE (in Lyra).	14†
4448	3767	.....	.....	18 48 51·4	5·153	1	147 56 49·3	4·39	1	pF; cS; R; vmbM	1
4449	3768	.....	.....	18 49 59·0	5·874	1	155 5 21·7	4·51	1	pF; S; E; glbM; 2 st 8 p ...	1
4450	3770	.....	Δ. 573	18 50 5·5	4·047	1	126 48 45·9	4·47	1	⊕; vL; vlE; vgbM; rrr; st 14...16.	1
4451	2024	.....	.....	18 50 25·1	2·838	1:	79 49 16·2	4·46	1	Cluster.....	1
4452	3769	.....	.....	18 50 26·1	4·871	1:	144 7 32·7	4·51	1	eF; pL; R	1
4453	.....	VIII. 13	.....	18 52 20·9	3·281	1	99 7 33·8	4·64	1	Cl; vL; P	1
4454	3771	.....	.....	18 52 32·0	6·472	1	159 6 45·8	4·74	1	vF; S; R; pmbM; * 7, 8 nf	1
4455	3772	.....	.....	18 53 15·0	5·552	1	152 23 37·6	4·78	1	eeF; vglbM; v difficult	1
4456	3773	.....	.....	18 53 29·2	5·938	1	155 39 40·7	4·81	1	vF; S; R; glbM; p of 2.....	1
4457	2025	.....	.....	18 53 33·1	3·086	1	90 39 5·1	4·73	1	Cl; vL; P; st 12...	1
4458	3774	.....	.....	18 53 44·6	5·934	1	155 38 10·4	4·82	1	eF; S; R; glbM; f of 2	1
4459	2026	.....	.....	18 53 59·2	3·512	1	108 44 8·6	4·78	1	Cl; pL; pRi; R; st 12...15...	1
4460	2027	.....	.....	18 54 50·0	2·810	1	78 35 18·1	4·83	1	Cl; P; lC.....	1
4461	3775	.....	.....	18 55 7·2	5·463	2	151 34 23·8	4·94	2	eF; vS; cE; psbM; 3 st p ...	2
4462	.....	III. 742	D'Arrest, 113	18 55 32·0	1·618	1	41 45 14·2	4·86	1	vF; stellar	1*
4463	2028	.....	.....	18 55 58·2	2·351	1	60 55 35·4	4·92	1	Cl; pL; P; st 11...12	1
4464	3776	.....	Δ. 262	18 56 26·8	5·730	2	154 3 58·5	5·05	2	cB; cL; R; vg, svmbM; r ...	2
4465	3777	.....	.....	18 57 31·7	5·518	1	152 10 36·1	5·13	1	eF; cS; R; glbM	1
4466	2029	.....	.....	18 57 56·6	3·035	1	88 25 11·0	5·10	1	Cl; L; lC; st L & S	1
4467	3778	.....	Δ. 295	18 58 28·0	5·324	5	150 11 49·7	5·21	5	⊕; B; vL; iR; rrr; st 11...16	5
4468	3779	.....	.....	18 59 37·5	5·085	1	147 15 30·0	5·30	1	pB; pL; R; gbM	1
4469	3780	.....	.....	19 0 33·6	4·653	2	140 51 32·9	5·37	2	pF; pL; mE 63°; vglbM.....	2
4470	2030	VII. 19	.....	19 0 50·5	2·981	3	85 59 17·5	5·35	3	Cl; vL; vRi; pC; st 12...14..	5
4471	2031	VII. 62	.....	19 1 46·5	2·971	2	85 32 43·1	5·43	1	Cl; S; Ri; lC; st 11...12 ...	5
4472	3781	.....	.....	19 2 15·9	5·014	1	146 32 24·1	5·53	1	pB; S; R	1
4473	.....	.....	Auw. N. 44	19 4 4·8	+3·051	Au	89 11 51	−5·62	Au	!!; pB; pL; gbM; *Var.*? (Hind)	0*

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	Sir J. H.'s Catalogues of Nebulæ.	Sir W. H.'s Classes and Nos.	Other Authorities.								
	h.	H.		h m s	s		° ′ ″	″			
4474	3782	.....	.....	19 4 14·3	+4·647	2	140 53 11·6	−5·68	2	vF; pS; iR	2
4475	3786	.....	.....	19 6 50·4	4·160	1	130 25 44·6	5·88	1	vF; S; R; pslbM	1
4476	3783	.....	.....	19 6 53·8	5·349	1	150 44 16·4	5·92	1	vF; S; R; lbM; 1st of 3.....	1
4477	3784	.....	.....	19 7 6·3	5·349	1	150 44 46·1	5·93	1	eF; vS; 2nd of 3.....	1
4478	3785	.....	.....	19 7 7·3	5·351	1	150 46 25·8	5·94	1	eF; S; 3rd of 3	1
4479	2032	IV. 14	.....	19 7 14·8	3·137	2	92 57 5·3	5·89	2	vF; L; R; vvlbM; r	3
4480	2033	.....	.....	19 8 3·7	2·968	1	85 22 9·5	5·95	1	Cl; P; lC.....	1
4481	2034	.....	.....	19 8 38·7	3·449	1	106 30 34·4	6·02	1	Cl; vL; lC	2
4482	2035	.....	.....	19 9 37·9	3·097	1	91 9 48·3	6·09	1	Cl; P; lC; st 10...11	1
4483	3787	.....	.....	19 10 22·9	5·690	1	154 8 23·1	6·23	1	pB; S; R; pgbM	1
4484	.....	.....	Lac. I. 13	19 10 45·5	6·917	...	161 45 35·7	6·21	...	Neb without st (Lac. Auw. 40)	0
4485	2036	.....	M. 56	19 11 7·2	2·339	4	60 3 41·6	6·18	6	⊕; B; L; iR; gvmCM; rrr; st 11...14.	14
4486	3788	.....	.....	19 11 17·6	4·954	1	146 1 45·6	6·28	1	vF; L; R; vglbM	1
4487	2037	III. 743	.....	19 11 37·3	2·931	1	83 42 46·5	6·25	1	○; F; L; R; vsbM disc; S∗ nf	3*†
4488	3789	.....	.....	19 11 39·2	5·283	3	150 10 43·4	6·32	3	cF; cS; R; lbM; ∗9 s	3
4489	3790	.....	.....	19 12 48·3	5·896	2	155 52 59·1	6·43	2	eeeF; pS; am S st	3
4490	2038	.....	.....	19 13 23·1	3·102	1:	91 21 22·0	6·40	1	eS; stellar	1
4491	3791	.....	.....	19 14 30·8	4·890	2	145 13 36·8	6·54	2	pB; S; mE; pslbM	2
4492	.....	.....	Auw. N. 45	19 15 55·9	2·098	...	52 28 32·1	6·53	...	vF (Winnecke, Dec. 1853)	0
4493	2039	VIII. 81	.....	19 17 13·9	2·565	3	68 6 5·0	6·70	3	Cl; P; lC.....	4
4494	3792	.....	.....	19 18 23·8	4·094	1	129 9 44·8	6·84	1	eF; pS; R; vgvlbM	1
4495	2040	.....	.....	19 19 6·7	3·000	1	86 44 46·9	6·87	1	Cl; Ri; bet 2 st 9	1
4496	3793	.....	.....	19 20 47·4	4·941	2	146 11 39·2	7·06	2	eF; vS; R; lbM; 3 vS st nr	2
4497	2041	VIII. 21	.....	19 21 22·5	2·491	1	65 8 23·8	7·04	1	Cl; vL; pRi; vlC; st 10...	3
4498	2042	VI. 14	.....	19 24 29·7	2·628	3	70 1 4·0	7·30	3	Cl; L; vC; E 0°; st 14...18	5
4499	2043	VI. 38	.....	19 24 53·0	2·875	4	81 3 37·8	7·34	4	cB; S; iR; rrr.....	5
4500	3796	.....	.....	19 27 18·0	4·068	1	128 51 32·9	7·57	1	eF; R; vgbM	1
4501	3795	.....	.....	19 27 18·9	4·209	1	132 36 18·9	7·57	1	eF; vS; ∗14 att	1
4502	3794	.....	.....	19 28 30·3	6·638	2	160 57 27·8	7·74	2	pB; E; biN; ∗8 f	2
4503	3798	.....	M. 55=Δ. 620	19 31 7·9	3·817	2	121 15 44·2	7·86	2	⊕; pB; L; R; vRi; vgbM; st 12...15.	5
4504	3797	.....	.....	19 31 43·0	5·109	2	148 58 44·5	7·95	2	pS; R; vgbM	2
4505	2044	.....	.....	19 33 58·6	1·790	2	43 44 48·8	8·04	2	Cl; L; pRi; lC; st 11...14 ...	2
4506	3799	.....	.....	19 34 7·2	4·858	1	145 40 17·8	8·14	1	pB; pS; pmE; glbM	1
4507	2045	III. 744	.....	19 35 0·0	3·300	...	100 38 29·9	8·17	...	pF; pL; R; bM; r	2
4508	2046	.....	.....	19 35 6·9	2·462	1:	63 30 55·5	8·15	1::	Cl; vL; pRi; lC; st 10...15	1
4509	3800	.....	.....	19 35 16·0	3·744	1	118 52 41·0	8·20	1	eF; pS; R; vlbM; ∗ np.....	1
4510	2047	IV. 51	.....	19 36 3·0	3·386	3	104 28 52·5	8·25	3	○; B; vS; R	8†
4511	2048	.....	Harding	19 36 24·3	2·053	1	50 7 59·5	8·25	1	Cl; vL; vRi; st 11...15 (Harding, 1827).	1
4512	2049	VII. 18	.....	19 37 13·6	2·555	1	67 1 48·4	8·32	1	Cl; cRi; E; st 11...12	2
4513	.....	II. 878	.....	19 40 47·3	1·298	1	34 18 29·2	8·56	1	pB; iF; bM.....	1
4514	2050	IV. 73	.....	19 41 7·5	1·622	1	39 49 41·7	8·61	1	⊙; B; pL; R; ∗11 M	2†
4515	2051	VIII. 73	.....	19 43 30·0	2·912	1	82 26 25·1	8·83	2	Cl; P; lC.....	3
4516	2052	VII. 9	.....	19 45 4·3	2·569	1	67 15 45·5	8·95	1	Cl; L; pRi; pC; st 11...12 ..	2
4517	2053	.....	.....	19 45 43·7	1·072	1	30 55 55·2	8·96	1	Cl; vL; lC; st 7, ...	1
4518	2054	VIII. 16	.....	19 46 33·8	2·408	1	60 57 6·5	9·05	1	Cl; P; lC; st 11...12	2
4519	2055	VIII. 18	.....	19 46 53·0	2·832	1:	78 40 27·3	9·09	1::	Cl; S; P	2
4520	2056	.....	M. 71	19 47 28·8	2·674	3	71 34 55·1	9·13	3	Cl; vL; vRi; pmC; st 11...16	13
4521	2057	VI. 16?	.....	19 48 13·9	2·696	1:	72 28 24·0	9·20	1::	Cl; vS; vC	3
4522	2058	VIII. 19	.....	19 48 41·7	2·824	1	78 15 35·1	9·23	1	Cl; P; lC.....	3
4523	3802	.....	.....	19 48 57·9	3·818	1	122 11 30·6	9·28	1	vF; S; R; psbM	1
4524	2059	.....	.....	19 49 31·7	2·823	1	78 12 33·0	9·30	1	Cl; S; P	1
4525	3801	.....	.....	19 49 42·9	5·672	1	155 36 45·6	9·38	1	eF; vS; R; psbM; ∗11 np...	1
4526	3803	.....	.....	19 50 49·6	4·355	1	137 27 28·8	9·44	1	vF; S; vlE; glbM	2
4527	.....	II. 202	.....	19 51 22·9	2·417	1	61 1 41·1	9·43	1	Neb; r	1
4528	3804	.....	.....	19 51 33·2	4·845	2	146 28 18·7	9·51	2	cF; cL; R; vglbM; 2 st f ...	2
4529	3805	.....	.....	19 51 47·6	4·079	1	130 35 26·7	9·51	1	pB; S; R; vS ∗ np	1
4530	3806	.....	.....	19 52 27·6	4·760	1	145 13 47·9	9·57	1	vF; S; R; bM.....	1
4531	3807	.....	.....	19 53 19·4	+4·402	1	138 39 10·1	−9·63	1	pF; S; vlE; psbM	1

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	Sir J. H.'s Catalogues of Nebulæ.	Sir W. H.'s Classes and Nos	Other Authorities.								
	h.	H.		h m s	s		° ′ ″	″			
4532	2060	.....	M. 27	19 53 29·3	+2·588	4	67 39 43·0	— 9·60	3	!!!; vB; vL; BiN; iE(Dumb-bell N).	13†
4533	3808	.....	.....	19 54 40·9	4·723	2	144 45 44·5	9·75	2	F; S; vlE; glbM	2
4534	3809	.....	.....	19 55 31·7	4·849	1	146 47 1·7	9·81	1	pF; S; R	1
4535	2063	.....	.....	19 56 8·8	1·354	1	34 15 9·9	9·77	1	Cl; pS; pmC; iR; st 12...16	1
4536	2062	III. 144	.....	19 56 23·1	2·309	3	56 50 48·7	9·81	3	F; am M. Way st	4*
4537	2061	.....	.....	19 56 23·6	2·847	1	79 7 24·4	9·82	1	Cl; cL; E; pRi; st 13... ...	1
4538	.....	.....	Auw. N. 46	19 56 39·0	3·068	...	89 56 49·0	9·85	...	F; *10 p 1s, s 1′ 29″ (Bond, Nov. 1852).	0
4539	3810	.....	.....	19 56 41·0	5·207	1	151 29 30·7	9·91	1	F; pS; gbM	1
4540	3811	.....	Δ. 425	19 57 5·0	4·395	2	138 46 5·7	9·91	2	B; S; cE; gpmbM	2
4541	3812	.....	.....	19 57 39·9	4·849	1	146 47 18·2	9·96	1	F; S; lE; glbM	1
4542	2065	.....	.....	19 57 46·5	3·151	1	93 57 0·8	9·94	1	Cl; S; vmC; st 19	1
4543	2064	.....	M. 75	19 57 49·1	3·547	3	112 18 47·5	9·95	3	⊕; B; pL; R; vmbMBN; rr	10
4544	2066	VII. 59	.....	19 59 11·2	1·967	1	46 23 49·7	10·01	1	Cl; L; vRi; cC	2
4545	3813	.....	.....	19 59 31·7	4·733	1	145 11 4·4	10·12	1	eeF; L; pmE	1
4546	3814	.....	.....	19 59 40·6	4·387	2	138 46 26·4	10·12	2	vB; S; R; pgvmbM	2
4547	3815	.....	.....	19 59 57·7	4·382	2	138 41 20·8	10·14	2	cF; cS; E 90°; gbM	2
4548	2067	.....	Σ. 2630	20 0 38·3	2·258	1	54 37 13·1	10·13	1	Cl; st L & S; ⁂ inv	1
4549	3816	.....	.....	20 2 2·9	6·426	2	161 11 51·8	10·34	2	F; pS; lE; glbM; *9 p $10^{s}·5$; 1st of 4.	2
4550	2068	.....	Σ. 2631	20 2 4·8	2·636	1	69 17 54·5	10·25	1	Cl; lC; st 10...13; ⁂ inv.....	1
4551	2069	VIII. 86	.....	20 2 44·4	2·179	1	52 9 34·3	10·29	1	Cl; P; lC	2
4552	3819	.....	.....	20 3 15·0	4·278	1	136 34 21·6	10·38	1	F; vS; R; vgmbM; *7 nf ...	1
4553	3817	.....	.....	20 3 27·6	6·429	2	161 17 6·5	10·45	2	pB; S; R; eS*sf; 2nd of 4...	2
4554	3818	.....	.....	20 3 44·5	6·428	2	161 17 10·6	10·48	2	vF; vS; R; 3rd of 4	2
4555	3821	.....	.....	20 4 2·8	4·209	1	134 56 31·8	10·44	1	vF; pL; R; glbM	1
4556	3820	.....	.....	20 4 40·6	6·419	2	161 17 3·8	10·54	2	F; S; R; r; vS*att; 4th of 4	2
4557	.....	VIII. 22	.....	20 5 58·2	2·509	1	63 42 34·8	10·54	1	Cl; P; lC	1
4558	2070	.....	.....	20 5 59·3	2·261	1	54 34 19·8	10·54	1	Cl; pRi; ⁂ inv.....	1
4559	2071	VIII. 20	.....	20 6 7·1	2·514	1	63 55 43·5	10·55	1	Cl; vB; vL; Ri; lC; st 6...11	2
4560	3822	.....	.....	20 6 37·5	4·584	1	143 12 32·8	10·64	1	pF; cL; pmE; glbM	1
4561	.....	IV. 72	.....	20 7 22·0	2·185	1	52 1 28·8	10·64	1	F; vL; vmE; ⁂ att	1
4562	3823	.....	.....	20 8 5·5	4·644	1	144 23 0·5	10·75	1	vF; L; lE	1
4563	3824	.....	.....	20 8 29·7	4·206	2	135 13 51·9	10·77	2	pF; S; R; vglbM	2
4564	3825	.....	.....	20 10 43·4	4·344	2	138 40 53·1	10·93	2	pF; S; R; svbM*12	2
4565	2072	IV. 13	.....	20 10 45·8	2·419	2	59 51 33·3	10·89	2	!!; ◎; F; S; vvlE	7†
4566	.....	VIII. 83	.....	20 12 23·7	1·746	1	40 12 6·0	11·00	1	Cl; pRi; lC	1
4567	.....	.....	D'Arrest, 114	20 12 26	2·42	[2]	59 47 42	11·01	[2]	Cl+neb; S; st vS	0
4568	3826	.....	[illegible]	20 14 4·0	4·433	1	140 52 0·6	11·18	1	F; S; R; glbM; am st.....	1
4569	3827	.....	[illegible]	20 14 52·7	4·143	1	134 5 51·8	11·24	1	F; cS; R; bM.....	1
4570	2073	.....	.....	20 15 40·2	3·468	3	109 45 13·6	11·28	3	cL; E; bM*17; *10 att.....	3*
4571	2074	.....	.....	20 15 46·1	2·547	1	64 41 32·2	11·26	1	Cl; S; vlC; st 10...11.....	1
4572	2075	IV. 16	.....	20 16 7·9	2·676	3	70 20 19·3	11·29	3	!!; ○; B; pS; R; 4Sst nr ...	6†
4573	2076	III. 141	.....	20 16 44·2	3·590	1	115 14 51·2	11·36	1	cF; cL; vlE; vglbM; r; 3st p	3
4574	3828	.....	.....	20 17 43·6	4·267	1	137 28 57·8	11·44	1	pB; pL; gbM; 2st 10 nr.....	1
4575	2077	VIII. 56	.....	20 18 5·5	2·137	2	49 40 14·4	11·42	2	Cl; pB; pS; P; pC; st 10...12	5
4576	2078	.....	M. 29	20 18 51·9	2·212	1	51 56 3·6	11·48	1	Cl; P; lC; st L & S.....	6
4577	3830	.....	.....	20 20 50·3	4·274	1	137 56 31·9	11·67	1	vF; *12 att sp	1
4578	3831	.....	.....	20 22 0·0	4·141	1	134 40 55·8	11·74	1	eF; pS; R; vgvlbM	1
4579	3829	.....	.....	20 22 36·0	9·441	1	170 28 50·4	11·92	1	pB; cS; R; psmbM	1
4580	3832	.....	.....	20 23 2·0	3·727	4	121 17 38·7	11·81	4	pF; cS; R; gbM; bet 2 st ...	4
4581	3834	.....	.....	20 25 35·6	3·752	3	122 26 56·3	11·99	3	cB; L; mE $6^{s}·0$; pslbM	3
4582	2079	III. 142	.....	20 25 52·1	3·118	2	92 29 44·3	11·99	2	vF; pL; E 0° or biN; p of 2	5
4583	2080	.....	.....	20 26 8·3	3·118	2	92 30 28·7	12·01	2	vF; vS; sf of 2	2
4584	3833	.....	.....	20 26 29·1	6·798	1	164 6 50·1	12·13	1	F; S; R; gbM; 5 st p.....	1
4585	.....	I. 103	.....	20 26 43·0	2·935	1	82 44 5·5	12·05	1	vB; L; gmbM; er	1
4586	2081	.....	.....	20 27 19·8	2·941	3	83 3 41·3	12·09	3	⊕; B; L; R; rrr; st 16...; *9 p	3*
4587	3835	.....	.....	20 27 59·4	4·457	2	142 35 10·9	12·17	2	pB; cL; R; glbM; r	2
4588	3836	.....	.....	20 28 25·0	4·458	2	142 38 11·7	12·21	2	vF; cS; R; slbM; f of 2	2
4589	2082	VIII. 17	.....	20 28 35·0	+2·646	1	68 13 54·9	—12·17	1::	Cl; vL; P; vlC	4

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	h.	H.		h m s	s		° ′ ″	″			
4590	2083	VI. 42	.....	20 28 36·4	+1·211	3	29 49 56·8	−12·14	3	Cl; pL; eRi; pCM; st 11...16	5
4591	.....	VII. 8	.....	20 28 42·5	2·510	5	62 9 51·9	12·17	5	Cl; vB; vL; vRi; eC; st pL..	5
4592	3837	.....	.....	20 30 3·7	4·563	1	144 47 44·4	12·32	1	pB; pL; R; pslbM	1
4593	3838	.....	.....	20 31 3·8	5·831	1	159 14 17·4	12·42	1	pF; L; mE; vglbMvS*	1
4594	2084	IV. 76	.....	20 31 57·3	1·269	3	30 20 17·9	12·37	3	vF; vL; vg, vsbM; rr.....	4†
4595	3839	.....	.....	20 32 30·6	3·750	1	122 58 55·9	12·47	1	vF; L; R; gbM	1
4596	3840	.....	.....	20 33 4·6	4·497	2	143 51 23·1	12·53	2	vF; pS; cE; lbM	2
4597	2085	VIII. 23	.....	20 34 40·7	2·769	1	73 50 36·0	12·60	1	Cl; P; vlC	2
4598	2086	III. 219	.....	20 37 14·2	2·852	1	77 59 34·9	12·77	1	vF; S; stellar; * att	2
4599	3841	.....	.....	20 39 39·2	3·882	1	128 30 26·2	12·96	1	B; cS; R; pgmbM; 4 st p ...	1
4600	2088	V. 15	.....	20 39 53·0	2·478	3	59 47 14·8	12·94	2	!!; pB; cL; eiF; *k* Cygni inv	6†
4601	2087	II. 426	.....	20 40 7·8	3·074	2	90 11 12·9	12·97	2	cF; S; R; bM.....	4
4602 4603 4604	2087, *a*	.....	R. 3 novæ	20 40 ±	3·074	...	90 11 ±	12·97	...	Group of 5 with many st ...	0
4605	2089	II. 427	.....	20 40 13·6	3·074	2	90 12 34·6	12·98	2	F; vS; R; bM.....	4
4606	3842	.....	.....	20 42 15·1	4·243	1	139 17 41·8	13·14	1	pB; S; lE; gbM	1
4607	.....	II. 206	.....	20 45 16·1	2·454	1	58 23 48·0	13·30	1	F; S; iE; r	1
4608	2090	.....	M. 72	20 45 44·9	3·302	3	103 3 35·8	13·34	3	⊕; pB; pL; R; gmCM; rrr..	10
4609	3843	.....	.....	20 47 8·1	4·356	2	142 24 21·2	13·46	2	vF; S; E; p of 2	2
4610	3844	.....	.....	20 47 18·9	4·043	1	134 30 30·2	13·46	1	eF; cS; R	1
4611	3845	.....	.....	20 47 48·0	4·353	3	142 24 12·7	13·51	3	F; pL; vlE; vgbM; f of 2 ...	3
4612	3846	.....	.....	20 48 20·9	4·211	2	139 10 13·8	13·54	2	pF; S; vlE; gpmbM; vB * p	2
4613	.....	VIII. 82	.....	20 49 13·4	2·092	1	45 15 32·5	13·55	1	Cl; cL; st pS	1
4614	3847	.....	.....	20 49 27·4	4·529	2	146 6 24·7	13·61	2	eeF; vS; vmE0°; *13 att, n	2
4615	2091	VIII. 76	.....	20 49 51·7	2·024	1	43 15 22·6	13·58	1	Cl; L; P; vlC	3
4616	2092	V. 14	.....	20 50 35·2	2·478	2	58 50 11·8	13·64	1	!!; eF; eL; eE; eiF; bifurcate	4†
4617	.....	.....	M. 73	20 51 16·0	3·299	...	103 10 31·0	13·70	...	Cl??; eP; vlC; no neb	3
4618	2093	.....	.....	20 51 19·8	2·490	1	59 19 15·3	13·69	1	F; eL; neb & st	1†*
4619	2094	.....	.....	20 51 30·9	2·095	1	45 3 59·3	13 69	1	Cl; P; lC.....	2
4620	.....	VIII. 58	.....	20 51 33·5	2·123	3	45 53 24·0	13·70	3	Cl; P; lC; st L	3
4621	2096	V. 37?	.....	20 53 48·2	2·142	(1)	46 13 4·8	13·84	1::	F; eeL; diff nebulosity	3
4622	2095	.....	.....	20 53 54·5	3·083	1	90 44 34·9	13·87	1	eF; S; E 0°.....	1
4623	3848	.....	.....	20 53 57·1	4·201	2	139 35 0·3	13·89	2	cF; cS; R; bM	2
4624	3849	.....	.....	20 54 13·9	4·203	1	139 40 27·7	13·91	1	eF; R; lbM; *11 f.....	1
4625	2097	I. 52	.....	20 54 43·8	2·801	(3)	74 21 51·7	13·91	1	B; pL; R; gbM	4
4626	3850	.....	.....	20 55 23·1	4·345	3	143 6 3·6	13·98	3	pB; S; R; psbM; am st.....	3
4627	2099	I. 192	.....	20 56 17·5	1·749	1	35 59 39·6	13·98	2	cB; L; E 45°±; r; * att ...	5†
4628	2098	IV. 1	Lal. 40765	20 56 31·2	3·273	4	101 55 4·8	14·04	4	!!!; ○; vB; S; elliptic	23*†
4629	2100	.....	.....	20 57 5·8	3·291	1	103 3 8·9	14·07	1	eF; pL; R; r	1
4630	2101	.....	.....	20 57 8·1	2·054	1	43 13 48·5	14·05	1	Cluster; no description	1
4631	3851	.....	.....	20 57 21·1	4·033	2	135 22 12·0	14·10	2	F; pL; E; vgvlbM; * p.....	2
4632	2102	II. 203	.....	20 57 38·9	2·535	2	60 39 30·3	14·09	2	pB; cS; R; psbM; pB*np...	4
4633	3852	.....	.....	20 58 18·4	4·111	1	137 44 44·2	14·16	1	pF; S; R; bM; 2 st 12 n ...	1
4634	.....	IV. 74	.....	20 59 22·9	0·771	1	22 26 51·2	14·16	1	eF; *7 m in neb (?)	1
4635	3853	.....	.....	20 59 38·5	5·136	1	154 35 45·2	14·26	1	pB; cS; lE; pgbM	1
4636	3854	.....	.....	20 59 39·2	5·000	1	154 5 34·2	14·26	1	pF; cS; R; psbM; *7·8 p ...	1
4637	3855	.....	.....	20 59 45·4	4·185	1	139 52 10·5	14·25	1	eeF; S; R; B ** sf	1
4638	2103	VIII. 57	.....	21 0 46·2	2·255	2	49 3 58·9	14·27	2	Cl; P; lC; st 10...	3
4639	3856	.....	.....	21 2 7·3	4·173	1	139 51 26·0	14·40	1	B; cS; R; pgmbM	1
4640	2105	VIII. 74	.....	21 2 45·7	1·948	(1)	39 43 13·3	14·39	1	Cl of triple st; lC	2
4641	3857	.....	.....	21 2 47·1	5·457	1	158 51 57·9	14·47	1	vF; cS; R; glbM	1
4642	2104	.....	.....	21 3 36·5	2·825	1	75 7 5·2	14·46	1	Cl; lC	1
4643	2106	.....	.....	21 5 3·4	2·471	1	56 50 48·0	14·60	1	Cl; pRi; iF; st 11...15	1
4644	3858	.....	.....	21 5 39·3	4·079	2	137 47 45·7	14·61	2	pB; pL; lE; gbM	2
4645	2107	.....	.....	21 6 14·3	2·150	1	44 53 32·7	14·61	1	Cl; vL; pRi; E; st 10... ...	1
4646	.....	III. 209	.....	21 6 52·3	2·860	1	76 58 16·2	14·66	1	vF; S; R.....	1
4647	3859	.....	.....	21 6 55·9	4·114	2	138 56 41·3	14·69	2	B; cS; cE; psmbM; *10 f...	2
4648	2110	VI. 24	.....	21 7 45·4	2·253	2	48 4 44·0	14·70	2	Cl; vF; pL; vRi; vC; st 15...18	4
4649	2108	.....	.....	21 7 48·6	3·008	1	86 3 33·4	14·72	1	eF	1
4650	2109	III. 858	.....	21 7 52·9	+3·035	2	87 44 17·4	−14·72	2	eF; pL; R; lbM.....	3

No. of Catalogue.	References to: Sir J. H.'s Catalogues of Nebulæ.	References to: Sir W. H.'s Classes and Nos.	References to: Other Authorities.	Right Ascension for 1860, Jan. 0.	Annual Precession in Right Ascension for 1880.	No. of Obs. used.	North Polar Distance for 1860, Jan. 0.	Annual Precession in N.P.D. for 1880.	No. of Obs. used.	Summary Description from a Comparison of all the Observations, Remarks, &c.	Total No. of times of Obs. by h. and H.
	h.	H.		h m s	s		° ′ ″	″			
4651	3860	.....	Δ. 406	21 9 26·5	+4·109	2	139 8 52·8	−14·84	2	vB; pS; E; mbM	2
4652	2111	.....	.....	21 9 33·0	2·424	1	54 23 16·7	14·81	1	Cl; no description	1
4653	2112	III. 145	.....	21 12 36·6	2·640	1	64 9 17·3	14·99	1	F; S; vlE; r	3
4654	2113	.....	.....	21 14 20·1	3·216	1	99 22 29·7	15·11	1	vF; R; gbM; ⁂ nr	1*
4655	2114	.....	.....	21 15 26·3	1·717	1	32 59 50·8	15·14	1	Cl; F; pS; P	1
4656	3861	.....	.....	21 15 58·1	3·884	1	133 3 41·7	15·21	1	eF; vS; R; p of 2	1
4657	2115	.....	.....	21 16 16·6	2·021	1	39 47 4·3	15·19	1	Cl; P; lC	1
4658	3862	.....	.....	21 16 41·6	4·607	1	150 37 16·9	15·27	1	B; pL; lC; gpmbM	1
4659	3863	.....	.....	21 16 53·5	3·879	1	133 0 26·2	15·26	1	vF; pS; R; f of 2	1
4660	3864	.....	.....	21 17 58·9	4·085	1	139 40 10·1	15·33	1	eeF; vS; R	1
4661	2116	VII. 51	.....	21 18 12·1	2·181	3	44 13 3·7	15·31	3	Cl; pS; pRi; pC; st 13...	4
4662	2117	.....	.....	21 18 44·9	2·447	1	54 5 44·1	15·33	1	Cl; P; st 10...	1
4663	3865	.....	.....	21 19 9·1	4·222	1	143 23 17·3	15·39	1	eF; pL; vmE 90°·8; ⁎s	1
4664	2118	VII. 50	.....	21 19 37·1	2·135	1	42 34 45·6	15·38	1	Cl; P; ? neb	2
4665	3866	.....	.....	21 21 26·5	3·879	2	133 41 50·4	15·52	2	F; cL; lE; gvlbM; p of 2	2
4666	2119	.....	.....	21 21 31·0	2·148	1	42 40 21·6	15·48	1	Cl; S; C; cE	1
4667	3867	.....	.....	21 21 37·5	3·880	2	133 45 57·1	15·53	2	F; S; R; vglbM; f of 2	2
4668	3868	.....	.....	21 22 49·4	3·757	1	129 14 1·3	15·59	2	cF; cS; R; pgbM	2
4669	.....	III. 936	.....	21 22 51·7	1·459	1	27 43 29·5	15·55	1	vB; er	1
4670	2120	.....	M. 15 = Lal. 40815	21 23 9·9	2·895	1	78 27 22·3	15·59	2	{!; ⊕; vB; vL; iR; vsmbM; rrr; st vS.}	16
4671	3869	.....	.....	21 23 31·9	3·898	1	134 40 55·1	15·63	1	B; R; cS; psbM	1
4672	2121	III. 859	.....	21 24 18·3	3·043	1	88 7 23·2	15·66	1	F; S; R; mbM; ⁎14s	2
4673	2122	VII. 52	.....	21 24 22·5	2·188	1	43 31 7·5	15·65	1	Cl; L; cRi; lC; st 10...13	2
4674	3870	.....	Δ. 263?	21 24 38·7	4·809	2	154 31 11·7	15·71	2	pF; cL; vlE; vgpmbM; r	2
4675	2123	.....	.....	21 25 11·3	2·819	1	73 11 28·0	15·70	1	Cl; lC	1
4676	2124	VI. 32	.....	21 25 42·8	2·044	2	39 1 55·7	15·71	2	Cl; cL; vRi; pC; st 11...16	3
4677	3871	.....	.....	21 25 44·2	3·800	2	131 26 32·5	15·75	2	cF; S; R; gbM	2
4678	2125	.....	M. 2 = Lal. 41928	21 26 12·5	3·091	2	91 26 37·2	15·76	3	{!!; ⊕; B; vL; g, pmbM; rrr; st eS.}	19†
4679	3872	.....	.....	21 26 36·3	4·251	1	145 10 46·0	15·80	1	pB; pL; vmE 127°·1; g, pslbM	1
4680	3873	.....	.....	21 26 51·0	3·699	1::	127 24 5·7	15·81	1::	eF; pL; vgbM; ⁎6 f 40s	1
4681	2126	.....	M. 39	21 27 12·6	2·160	1	42 10 58·0	15·80	1	Cl; vL; vP; vlC; st 7...10	3
4682	2127	.....	.....	21 29 5·1	2·244	1	44 37 6·0	15·90	1	Cl; P; lC	1
4683	3875	.....	.....	21 30 3·9	3·827	2	133 10 21·6	15·98	1	F; pL; R; vglbM; ⁎13 inv	2
4684	3874	.....	.....	21 30 20·1	4·755	1	154 32 2·4	16·02	1	vF; S; R; vS ⁂ nf	1
4685	3877	.....	.....	21 31 24·1	3·821	2	133 10 19·5	16·05	2	B; S; vlE; mbM	2
4686	3876	.....	.....	21 31 59·5	6·179	1	165 44 25·1	16·13	1	pF; R; g, psmbM; am st	1
4687	2128 = 3878	.....	M. 30	21 32 26·0	3·422	2	113 47 59·0	16·10	2	!; ⊕; B; L; lE; gpmbM; st 12...16.	3†
4688	3879	.....	.....	21 32 59·7	4·134	1	143 20 29·8	16·14	1	eF; cS; lE; vglbM	1
4689	3880	.....	.....	21 33 22·2	3·873	1	135 25 37·2	16·16	1	vF; cL; R; vglbM	1
4690	3881	.....	.....	21 33 31·6	3·626	1	125 4 56·2	16·16	1	eF; vS; am st	1
4691	3882	.....	.....	21 33 48·4	3·620	1	124 48 14·9	16·17	2	F; S; R; bM	2
4692	3883	.....	.....	21 36 32·5	3·965	2	139 3 59·4	16·32	2	F; S; R; glbM; p of 2	2
4693	3884	.....	.....	21 36 57·1	3·961	2	138 59 48·8	16·34	2	F; S; R; glbM; f of 2	2
4694	3885	.....	.....	21 37 10·8	3·904	1	137 9 38·5	16·35	1	F; S; R; gbM	1
4695	.....	.....	Auw. N. 47	21 38 22·8	3·296	...	99 28 19·2	16·36	...	Nebulous ⁎10·11 or vSCl (Cooper).	0
4696	3886	.....	.....	21 38 39·8	5·278	1	160 58 43·5	16·45	1	pB; S; R; vgbM; ⁎9 f	1
4697	3888	.....	.....	21 38 45·1	4·022	3	141 12 49·8	16·44	3	pB; L; pmE; vgbM	3
4698	3887	.....	.....	21 38 56·2	4·466	1	151 21 18·5	16·45	1	eF; pL; R; p of 2	1
4699	3889	.....	.....	21 38 58·8	4·460	1	151 15 13·5	16·45	1	pB; pS; lE; gbM; f of 2	1
4700	2129	.....	.....	21 39 8·8	2·013	1	36 1 22·4	16·42	1	Cl; S; P; lC	1
4701	2130	VII. 40	.....	21 39 21·8	2·049	1	36 56 49·1	16·43	1	Cl; S; pRi; has a ruby ⁎	2
4702	2131	IV. 75	.....	21 39 45·0	1·387	2	24 32 15·8	16·44	2	!; cF; pL; gbM ⁂	4
4703	3890	.....	.....	21 39 51·6	3·605	1	125 5 43·6	16·48	1	pB; S; R; glbM	1
4704	3891	.....	.....	21 41 22·0	3·609	2	125 31 43·2	16·56	2	pB; pL; R; vgbM; ⁎14 att p	2
4705	2132	II. 261	.....	21 41 44·2	2·773	2	68 29 7·2	16·56	2	F; pS; R; vglbM; r	3
4706	.....	III. 696	.....	21 42 15·3	+1·576	4	26 49 29·9	−16·57	4	vF; cS; R; r	4

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	h.	H.		h m s	s		° ′ ″	″			
4707	3892	.....	.....	21 42 28·6	+4·229	1	147 12 6·1	−16·63	1	pF; cS; R; bM	1
4708	3893	.....	.....	21 42 30·4	4·187	1	146 13 34·1	16·63	1	F; L; R; g, psmbM	1
4709	2134	VII. 66	.....	21 42 34·2	1·441	1	24 50 39·6	16·58	1	Cl; cL; cRi; pC; st 11...14	3
4710	2133	.....	.....	21 42 41·2	2·650	1	60 41 28·0	16·60	1	vF; ? a * inv in neb	1*
4711	3894	.....	.....	21 43 34·1	3·921	2	138 54 28·9	16·67	2	vB; pS; R; mbMN	2
4712	3895	.....	.....	21 44 13·2	3·907	1	138 32 26·0	16·70	1	B; S; R; in Δ of st 13.....	1
5077	.....	.....	.....	21 45 12·5	.....	...	40 53 46·4	.....	...	See No. 5077.	
4713	3896	.....	.....	21 45 46·0	3·984	3	141 19 11·6	16·78	3	vF; pL; lE; vgbM; r.....	3
4714	3897	.....	.....	21 45 50·0	3·493	1	119 56 36·9	16·77	1	eeF; vS	1*
4715	3898	.....	.....	21 46 30·0	3·486	1	119 41 30·0	16·80	1	eF; S; E towards eF *	1
4716	3900	.....	.....	21 46 58·7	3·588	2	125 28 21·1	16·83	2	B; pL; iR; glbM; r	2
4717	3899	.....	.....	21 46 59·2	3·940	2	140 10 49·8	16·84	2	pB; S; lE; mbM.....	2
4718	2135	III. 452	.....	21 47 29·0	3·042	3	87 42 49·8	16·84	3	F; pL; R; bM; r	4
4719	2136	VIII. 67	.....	21 49 48·4	1·722	1	28 3 3·1	16·93	1	Cl; P; vlC	2
4720	.....	.....	D'Arrest, 115	21 49 53	3·04	[2]	87 42 42	16·95	[2]	Cl; vS; st 19 m; bet 2 st 16...	0
4721	3901	.....	.....	21 50 58·1	3·752	1	133 58 28·4	17·02	1	cF; cL; cE; glbM	2
4722	3902	.....	.....	21 51 10·5	3·521	3	122 33 8·4	17·02	3	F; pL; vlE; vglbM	3
4723	2137	III. 930	.....	21 51 49·3	3·289	1	107 10 39·5	17·05	1	eF	2*
4724	3903	.....	.....	21 51 53·6	3·750	1	134 3 32·2	17·06	1	cB; S; vlE; svbMN	2
4725	3905	.....	.....	21 52 37·2	3·401	1	115 18 18·3	17·09	1	F; pS; R; vglbM; *10 f ...	1
4726	3904	.....	.....	21 52 54·3	3·975	3	142 25 3·4	17·12	3	pB; S; R; psbM.....	3
4727	3906	.....	.....	21 53 6·8	3·852	1	138 21 46·4	17·12	1	eF; S; R; *8 np.....	1
4728	2138	III. 692	.....	21 53 29·4	3·243	1	103 57 3·1	17·13	3	vF; cL; E 135°+; vgbM ...	4
4729	3908	.....	.....	21 53 52·3	3·513	4	122 32 38·5	17·15	4	pB; pL; lE; gbM; 1st of 4...	4†
4730	3909	.....	.....	21 53 53·1	3·514	4	122 38 8·5	17·15	4	cB; cS; R; slbM*; 2nd of 4	4†
4731	3910	.....	.....	21 53 55·3	3·515	2	122 39 58·5	17·15	2	eF; S; R; p of D neb; 3rd of 4	2†
4732	2141	.....	.....	21 53 55·9	2·106	1	35 50 51·1	17·13	1	Cl; vL; pRi; lC	1
4733	3911	.....	.....	21 53 59·0	3·514	6	122 39 31·5	17·15	6	B; pL; R; f of D neb; 4th of 4	6†
4734	2139	II. 247	.....	21 54 0·1	2·858	1	72 56 7·5	17·15	3	pB; pS; R; bMN; r; *sp...	4†
4735	3912	.....	.....	21 54 6·3	3·582	1	126 28 45·2	17·16	1	eF; S; R; *8 s 2′	1
4736	3907	.....	.....	21 54 21·4	4·525	2	154 43 13·6	17·18	2	cF; pS; vgbM.....	2
4737	2140	III. 693	.....	21 54 26·8	3·339	1	111 13 26·9	17·17	1	vF; S; R; lbM; p of 2	2
4738	2142	II. 595	.....	21 54 38·9	3·316	1	109 35 22·6	17·18	2	vF; pS; vlE 90°; lbM.....	4
4739	2143	II. 1	.....	21 54 51·2	3·341	1	111 28 50·3	17·19	1	pB; pL; mE 64°·3 bet 3 st; er	3
4740	2144	.....	.....	21 55 8·7	3·337	1	111 8 59·7	17·21	1	vF; pL; iR; vglbM; f of 2...	1
4741	.....	III. 165	.....	21 55 13·6	2·599	1	55 33 55·0	17·20	1	vF; am 5 or 6 st	1
4742	3913	.....	.....	21 56 20·4	4·543	1	155 19 8·9	17·27	1	vF; S; lE; vgbM	1
4743	3914	.....	.....	21 56 24·7	4·521	2	154 59 23·6	17·28	2	pB; S; R; pmbM	2
4744	2145	.....	.....	21 56 42·8	2·949	1	79 51 21·9	17·27	1	Cl; lRi; lC; st 9...10	1
4745	3915	.....	.....	21 56 50·6	3·900	3	140 47 57·3	17·29	4	cB; S; R; am st	4
4746	2146	II. 599	.....	21 57 7·6	2·493	1	49 37 29·6	17·28	1	F; cS; cE; vglbM; er	2
4747	3916	.....	.....	21 58 4·3	4·529	2	155 22 59·5	17·35	2	vF; S; R; pslbM; *11 p 3′...	2
4748	3917	.....	.....	21 58 7·9	3·839	1	140 40 49·5	17·35	1	pF; S; R; smbM	1
4749	3918	.....	.....	21 58 27·0	3·488	3	121 55 30·5	17·35	3	F; R; gbM; 1st of 4	3
4750	3920	.....	.....	21 58 39·2	3·486	1	121 51 49·2	17·36	1	eF; S; stellar; 2nd of 4	1
4751	3921	.....	.....	21 58 40·2	3·488	3	121 49 42·2	17·36	3	cF; R; stellar; 3rd of 4	3
4752	3922	.....	.....	21 58 47·8	3·484	1	121 43 31·9	17·37	1	pB; L; lE; gbM; 4th of 4 ...	1
4753	3919	.....	.....	21 58 53·7	4·140	1	148 6 29·6	17·38	1	pB; L; cE; gpslbM	2
4754	3923	.....	.....	21 59 24·6	3·451	1	119 43 57·3	17·39	1	vF; vS; R; almost a ○	1
4755	2147	VII. 53	.....	21 59 42·2	2·384	2	44 11 36·3	17·39	2	Cl; L; cRi; pC; st 9...12 ...	4
4756	2148	.....	.....	21 59 57·7	2·741	1	63 34 17·7	17·41	1	eF; R; bM; vF * np	1*
4757	3924	.....	.....	22 0 29·0	3·798	1	137 50 36·5	17·45	1	vB; pS; R; gbM.....	1
4758	3926	.....	.....	22 1 8·3	3·427	1	118 29 42·9	17·47	1	⊕; pL; iR; rr.....	1
4759	3925	.....	.....	22 1 30·8	4·794	1	159 20 46·7	17·51	1	pF; S; R; gbM	1
4760	2149	II. 207	.....	22 1 37·4	2·682	1	59 20 35·6	17·48	1	B; pL; gbM; er	2
4761	2150	II. 897	.....	22 2 34·9	3·273	1	107 19 55·1	17·53	1	pB; lE; r.....	2
4762	3927	.....	.....	22 2 47·3	4·487	2	155 32 6·2	17·56	2	pB; S; R; 2 st nr.....	2
4763	3928	.....	.....	22 3 13·8	3·462	4	121 14 22·2	17·56	4	F; S; R; gbM; r; 2vS st nr...	4
4764	2151	III. 862	.....	22 4 16·2	2·525	1	49 40 48·3	17·59	1	eF; pS; lE; r; am 3 st.....	2
4765	3929	.....	.....	22 5 15·4	3·392	1	116 50 37·8	17·64	1	pF; S; lE; bM	1
4766	3930	.....	.....	22 6 4·9	+3·436	4	120 4 3·9	−17·67	4	F; pL; R; vglbM	4

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	h.	H.		h m s	s		° ′ ″	″			
4767	2152	III. 931	.....	22 6 37·7	+3·272	1	107 45 40·3	−17·69	1	vF; S; R; bM	2
4768	2153	II. 606	.....	22 6 43·4	2·447	1	45 20 52·3	17·69	1	eF; S; er	4
4769	3931	.....	.....	22 6 57·4	3·731	1	136 32 31·7	17·71	1	pB; S; pmE; psbM; p of 2...	1
4770	3932	.....	.....	22 7 7·9	3·730	1	136 32 16·4	17·72	1	F; vS; R; *8 f; f of 2	1
4771	.....	VIII. 63	.....	22 7 8·2	2·127	1	33 42 56·0	17·70	1	Cl; S; P; lC	1
4772	2154	.....	.....	22 7 34·6	2·119	2	33 25 12·4	17·72	2	Cl; pC; has a ruby *10	2
4773	2155	VIII. 75	.....	22 9 41·1	2·358	1	40 48 55·7	17·81	1	Cl; L; P; lC; st vL	3
4774	2157	VI. 29	.....	22 10 2·5	2·236	1	36 22 2·4	17·82	1	Cl; C; st eS	2
4775	2156	III. 932	.....	22 10 8·7	3·249	1	106 16 47·8	17·84	1	vF; S; vlE; vgbM; *13n ...	2*
4776	.....	III. 863	.....	22 11 0·4	2·563	1	50 10 13·2	17·86	1	vF; vS; mbM	1
4777	3933	.....	.....	22 11 26·0	3·957	1	145 48 53·0	17·90	1	eeF; R; (?)	1
4778	.....	III. 864	.....	22 12 28·8	2·569	1	50 8 9·4	17·92	1	vF; S; mE 165°±	1
4779	2158	III. 933	.....	22 12 53·8	3·247	2	106 28 21·5	17·95	2	F; pS; R; gpmbM	4
4780	3934	III. 458	.....	22 12 57·6	3·353	1	115 22 44·5	17·95	1	F; S; R; er	2
4781	3935	.....	.....	22 15 6·5	3·395	1	119 3 25·8	18·04	1	vF; S; E; glbM; ?biN	1
4782	3936	.....	.....	22 15 10·0	3·403	1	119 39 16·8	18·04	1	eF; pL; R; vlbM	1
4783	2159	.....	.....	22 15 23·6	2·153	1	32 36 51·1	18·03	1	Cl; L; pRi; lC	1
4784	3937	.....	.....	22 15 26·0	3·450	1	123 3 31·5	18·05	1	eF; S; R; lbM	1
4785	3938	.....	.....	22 16 21·1	3·466	2	124 24 1·6	18·08	1	cB; pS; vlE; glbM; B ** sp	2
4786	3939	.....	.....	22 16 44·2	3·429	3	121 53 45·0	18·10	3	F; cS; vlE; p of 2	4
4787	3940	.....	.....	22 18 15·5	3·424	4	121 51 23·5	18·15	3	F; cS; vlE; f of 2	4
4788	3941	.....	.....	22 18 57·4	4·079	1	150 52 54·3	18·19	1	eeF; lE; vgvlbM; 3 st sf ...	1
4789	3942	.....	.....	22 19 7·4	3·478	2	125 51 19·3	18·19	2	vF; pS; R; vgvlbM	2
4790	2160	II. 248	.....	22 19 38·1	2·916	2	74 33 55·0	18·20	2	F; cS; R; gbMS*; 3 st nr...	4
4791	2161	.....	.....	22 19 39·4	2·198	1	32 52 26·3	18·19	1	Cl; L; pRi; lC; st 10...16 ...	1
4792	3943	II. 469	.....	22 20 50·7	3·336	2	115 34 20·5	18·25	2	cF; cS; lE; r; * inv	3
5078	.....	.....	.....	22 20 50±	.....	...	115 34 ±	.....	...	(See No. 5078)	0
4793	2162	.....	.....	22 20 52·2	2·770	1	61 36 48·8	18·24	1	vF; S; R; am st	1
4794	3944	.....	.....	22 21 12·0	3·474	1	126 10 21·2	18·26	1	vF; S; R; gbM	1
4795	.....	.....	Auw. N. 48	22 22 5·6	3·285	...	111 32 59·8	18·29	...	:; pF; vL; E or biN (Harding)	0
4796	2163	.....	.....	22 22 21·2	2·365	1	37 53 26·3	18·29	1	Cl; P; lC; st 12...13	1
4797	.....	VII. 41	.....	22 22 37·4	2·380	2	38 24 45·0	18·30	2	Cl; iR; lC; st vS	2
4798	3945	.....	.....	22 22 59·4	3·503	1	128 33 0·1	18·33	1	eF; S; R; p of 2	2
4799	2165, *a*	.....	R. nova	22 23 13·6	3·213	::	104 40 30·3	18·34	::	vF; E np to sf (nisi = h.2164)	0
4800	3946	.....	.....	22 23 23·8	3·501	1	128 32 9·8	18·34	1	eF; S; R; f of 2	2
4801	2164	.....	.....	22 23 28·3	3·213	2	104 44 11·8	18·34	2	vF; cS; vglbM	2
4802	2165	IV. 31	.....	22 24 53·0	3·213	4	104 50 30·3	18·39	4	F; pS; R; vsbMFSRN	5
4803	.....	.....	D'Arrest, 116	22 24 57	2·76	[1]	59 45 18	18·38	[1]	vF; pL; vlbM; h.2166 dist 2′	0
4804	2166	.....	.....	22 24 58·6	2·760	2	59 45 25·3	18·39	2	vF; S; R; gvlbM	2
4805	3948	.....	.....	22 25 28·5	3·352	1	117 58 4·4	18·42	1	vF; S; lE; *11 p	1
4806	3947	.....	.....	22 25 32·6	3·541	1	131 39 53·4	18·42	1	F; pL; pmE	1
4807	2167	II. 476	.....	22 26 55·7	3·173	5	101 4 53·2	18·46	5	vF; pL; R; glbM; r	6
4808	2168	II. 428	.....	22 27 3·9	3·027	2	85 9 17·9	18·47	2	pF; S; R; psbM; r	4
4809	2169	III. 180	.....	22 27 40·9	2·886	1::	70 23 45·6	18·48	1::	eF; vS; R; *9 s	2
4810	3949	.....	.....	22 28 2·3	3·331	2	116 45 55·0	18·50	3	cB; L; mE 0°; vlbM	3
4811	2170	III. 237	.....	22 29 46·2	2·877	1	69 5 50·5	18·55	1	F; S; iR; vgvlbM	2
4812	3950	.....	.....	22 29 46·2	3·466	2	127 57 13·5	18·55	2	vF; S; vlE; gbM	2
4813	2171	.....	.....	22 30 32·5	2·984	3	80 11 4·6	18·58	4	eF; pS; lE 90°; vglbM	4
4814	3951	.....	.....	22 30 37·2	4·257	1	157 12 16·0	18·60	1	pB; pS; mE 90°	1
4815	2172	I. 53	.....	22 30 39·5	2·736	1	56 20 5·6	18·58	3	B; pL; pmE 160°; smbM ...	4†
4816											
4817											
4818	2172, *a*	.....	R. 5 novæ	22 30 ±	2·736	...	56 20 ±	18·58	...	5 near; positions measured; no distances.	0*
4819											
4820											
4821	2173	II. 233	.....	22 30 44·0	2·857	2	66 55 34·6	18·58	2	cB; S; mE 163°·0; vsmbM *11; p of 2.	5
4822	3950	(No. 2?)	.....	22 30 50·5	3·466	1	127 55 48·4	18·62	1	eF; ??	1?
4823	2174	III. 166	.....	22 30 54·0	2·736	1	56 17 51·3	18·59	1	eF; vS; E	2
4824	2175	II. 234	.....	22 31 5·7	+2·858	2	66 55 58·3	−18·59	2	F; pS; mE 90°±; vglbM; f of 2.	5

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	h.	H.		h m s	s		° ′ ″	″			
4825	2176	.....	.....	22 32 57·9	+2·982	1	79 42 40·2	−18·66	1	eF; pL; E	2
4826	2177	.....	.....	22 34 15·4	2·333	1	33 20 2·3	18·69	1	Cl; vL; pRi; vlC	1
4827	2178	II. 705	.....	22 35 6·6	2·218	1	29 27 5·4	18·72	1	B; S; R; pgvlbM; er.....	2
4828	3952	.....	.....	22 35 26·3	3·451	1	128 36 27·8	18·74	1	eeF; S; R; ⁂ f 90°, 40ˢ	1
4829	3953	.....	Δ. 255?	22 36 9·6	4·117	1	155 51 19·9	18·77	1	F; S; R; bM	1
4830	3954	.....	.....	22 36 30·8	3·351	1	120 47 3·9	18·77	1	F; pL; vmE 0°; vgvlbM.....	1
4831	2179	II. 442	.....	22 37 14·0	3·079	2	90 53 42·0	18·80	2	F; S; R; psbM	5
4832	3955	.....	.....	22 37 30·5	3·475	1	130 4 35·7	18·81	1	F; cS; lE; glbM	1
4833	2180	II. 477	.....	22 38 40·4	3·166	4	101 44 29·8	18·84	5	vF; pL; R; lbM	6
4834	2181	II. 598	.....	22 40 12·8	3·262	3	113 2 10·3	18·89	3	pB; S; vlE; vgmbM; S ⁂ nr	4
4835											
4836											
4837											
4838	2181, *a*	.....	R. 7 novæ	22 40 ±	3·262	...	113 2 ±	18·89	...	No descriptions	0
4839											
4840											
4841											
4842	2182	VIII. 77	C. H.	22 41 23·2	2·374	2	32 39 8·7	18·91	2	Cl; pL; pRi; lC; st 9...13 ..	3
4843	3956	.....	.....	22 42 23·0	3·408	1	127 34 56·5	18·95	1	eF; vS; R; ⁂ 12 att np	1
4844	.....	.....	D'Arrest, 117 = R. nova	22 42 30	2·99	[2]::	79 10 30	18·94	[2]	vF; vS; R; III. 216 nf	0
4845	2183	III. 216	.....	22 42 56·0	2·988	1	79 7 46·2	18·96	2	cF; S; R; glbM; ⁂11 np ...	5
4846	2184	III. 217	.....	22 43 2·5	2·987	1	79 2 36·2	18·96	2	cF; S; R; pgbM; f of 2.....	5
4847	.....	.....	D'Arrest, 118	22 43 20	2·99	[2]	79 6 0	18·97	[2]	eF; vS; R; 2 st 11, s	0
4848	2184, *a*	.....	R. nova	22 43 22·5	2·99	...	79 8 2·2	18·96	...	One of 5. See h. 2183, 2184, D'Arrest, 117, 118.	0*
4849	2185	II. 443	.....	22 43 25·0	3·088	2	92 16 54·6	18·98	2	cF; cS; R; sbM ⁂13; ⁂ np ..	4
4850	2186	II. 702	.....	22 44 15·4	3·238	3	111 21 1·0	19·00	3	pB; pS; lE 120°±; mbM ...	4
4851	2187	II. 453	.....	22 44 21·1	3·118	2	96 18 6·0	19·00	2	vF; pL; lE; vgbM; r.....	3
4852	2188	.....	.....	22 44 36·2	2·534	1	38 33 54·0	19·00	1	Cl; vP	1
4853	2189	.....	.....	22 45 12·8	3·069	2	89 38 56·4	19·02	2	pF; pS; R; gbM	2
4854											
4855	2189, *a*	.....	R. 3 novæ	22 45 ±	3·069	...	89 39 ±	19·02	...	"A group of 4," incl h. 2189	0
4856											
4857	3957	.....	.....	22 45 42·2	3·506	1	136 5 36·8	19·04	1	pF; lE; glbM; vS ⁂ inv	1
4858	3958	.....	.....	22 46 23·9	3·420	1	130 3 30·2	19·06	1	vF; S; R	1
4859	3959	.....	.....	22 46 49·9	3·930	1	154 26 29·6	19·08	2	pB; pS; R; vglbM	1
4860	3960	.....	Δ. 518	22 47 2·8	3·421	2	130 24 35·6	19·08	2	cB; L; vmE 43°·3; mbM ...	2
4861	3961	.....	.....	22 47 45·7	3·456	1	133 23 49·0	19·10	1	eF; vL; ⁂7 nf.....	1
4862	3962	.....	.....	22 48 42·2	3·940	1	155 46 26·1	19·13	1	pB; cS; R; gpmbM	2
4863	3963	.....	.....	22 48 42·4	3·383	3	127 46 23·4	19·12	3	cB; vL; vlE; vglbM	3
4864	2190	VII. 43	.....	22 48 46·6	2·356	2	29 55 6·3	19·09	2	Cl; pRi; cC.....	3
4865	3964	.....	.....	22 49 1·9	3·385	3	128 5 31·1	19·13	4	cB; L; vlE; gpmbM; rr.....	4
4866	2191	III. 745	.....	22 49 18·9	2·466	1	33 38 14·1	19·13	1	vF; pL; iF; er	2
4867	3965	.....	.....	22 49 21·4	3·428	2	131 49 4·8	19·14	2	F; cL; vlE; vgmbM	2
4868	2192	III. 576	.....	22 49 28·5	2·784	1	54 22 38·8	19·14	1	vF; cS; R; stellar; ⁂ p	3
4869	2193	.....	.....	22 50 18·4	2·404	1	30 45 23·2	19·16	1	Cl; P; pC; st 9...11	1
4870	2194	III. 465	.....	22 51 3·9	2·986	1	77 37 14·6	19·18	1	eF; S; R	4
4871	2195	III. 243	.....	22 51 12·3	2·886	1	64 37 4·6	19·18	2	F; pS; E 90°; gbM; er	3
4872	2195, *a*	.....	R. 2 novæ	22 51 ±	2·886	...	64 37 ±	19·18	...	2 of a group of 3; inv in F neb.	0
4873											
4874	2196	.....	.....	22 51 36·5	2·543	1	36 23 55·3	19·19	1	Cl; vL; E	1
4875	.....	.....	D'Arrest, 119	22 52 32	2·97	[2]	75 12 12	19·21	[2]	pF; R; bet 2 st 16; ⁂13 nr...	0
4876	2197	II. 450	.....	22 52 46·6	3·163	2	103 33 10·4	19·22	2	F; vS; vlE; smbM; er; p of 2	4†
4877	2198	II. 451	.....	22 52 46·9	3·163	2	103 34 46·4	19·22	3	F; vS; vlE; smbM; er; f of 2	5†
4878	.....	.....	Auw. N. 49	22 53 6·3	3·144	...	101 16 41·1	19·23	...	⁂11·12 in neb (Markree Obs. Oct. 8, 1855).	0
4879	2199	II. 251	.....	22 53 8·0	2·968	2	74 46 10·1	19·23	2	pB; L; E 175°; vgbM	3
4880	.....	II. 249	.....	22 54 3·1	2·967	2	74 21 17·2	19·26	2	F; cS; lE; lbM; pB ⁂ p	2
4881	3966	.....	.....	22 54 13·6	+3·387	1	130 19 19·2	−19·26	1	F; L; mE 33°·8; vglbM	1

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	h.	H.		h m s	s		° ′ ″	″			
4882	3967	.....	.....	22 54 16·6	+3·387	1	130 20 14·9	−19·27	1	eF; vL; vlbM	1
4883	2201	II. 212	.....	22 54 17·6	2·861	1	60 36 32·2	19·26	1	cB; cL; lE; gmbM; r; 2S st n	2
4884	2200	II. 590	.....	22 54 20·5	3·065	2	88 59 35·2	19·26	2	cF; cS; psbM	3
4885	3968	.....	.....	22 54 55·7	3·397	2	131 34 57·6	19·28	2	cF; pS; vmE 5°±; *11 np...	2
4886	2202	III. 210	.....	22 54 56·3	2·971	1	74 46 22·6	19·28	1	vF; S; lE; p of 2.....	2
4887	2203	III. 211	.....	22 55 5·3	2·971	1	74 46 59·6	19·28	1	vF; vS; f of 2	2
4888	2204	III. 230	.....	22 56 12·2	3·020	1	81 52 19·7	19·31	1	vF; vS; vsmbM *12	2
4889	3969	.....	.....	22 56 13·3	3·514	1	140 52 10·7	19·31	1	eF; pL; R; glbM; *11 np ...	1
4890	.....	III. 202	.....	22 56 22·3	2·969	1	74 8 43·7	19·31	1	eF; vS.....	1
4891	3970	.....	.....	22 57 19·6	3·411	2	133 51 40·8	19·34	2	F; S; R; Δ with 2 st 7	2
4892	2205	I. 55	.....	22 57 56·4	2·999	4	78 25 53·5	19·35	4	pB; cL; mE 11°·9; bet 2 st...	7*†
4893	2206	.....	.....	22 58 40·4	3·055	1	87 12 42·2	19·36	1	vF; S; E; psbM	1
4894	3971 = 3972	.....	.....	22 59 21·2	3·330	4	127 1 37·6	19·38	4	pB; S; R; lbM; *8·9 att s...	4*
4895	2207	.....	.....	22 59 23·7	2·845	1	56 39 4·6	19·38	1	vF; S; R; bM; *10 p	1
4896	2208	III. 558	.....	23 1 2·4	3·169	1	106 22 33·4	19·42	1	eF; L; bet 2 D st	2
4897	3973	.....	.....	23 1 56·3	3·379	2	134 10 34·8	19·44	2	pB; cL; lE; vgbM *13	2
4898	2209	III. 203	.....	23 2 5·5	2·971	2	72 35 4·8	19·44	2	vF; L; pmE 45°; lbM.....	3
4899	2210	III. 184	.....	23 4 29·6	3·087	2	92 54 44·3	19·48	2	cF; vS; R; sbM *15	4
4900	2211 = 3974	II. 2	.....	23 4 33·6	3·247	2	119 17 53·3	19·49	2	pB; cS; R; psvmbM; *10 np	5
4901	2212	.....	.....	23 4 45·0	3·004	2	77 49 34·0	19·50	2	eF; bM*; (?)	2
4902	2213	VII. 44	.....	23 5 26·7	2·536	1	30 11 23·7	19·51	2	Cl; pRi; pC; fan-sh; st pB...	4
4903	2214	III. 220	.....	23 5 46·8	3·006	2	78 4 51·4	19·52	3	F; cS; R; vglbM; r	7
4904	.....	III. 470	.....	23 6 36·7	3·125	1	99 57 29·1	19·53	1	eF; vS.....	1
4905	3975	.....	.....	23 7 0·8	3·364	1	134 21 49·8	19·54	1	pB; S; lE; pgbM	1
4906	2215	II. 429	.....	23 7 28·8	3·052	2	86 15 44·5	19·55	2	vF; cS; R; bM; sp of 2	3
4907	.....	II. 706	.....	23 7 34·3	2·537	2	29 14 59·5	19·55	2	vF; L; 2 pB st inv	2
4908	2217	.....	.....	23 7 36·2	2·945	1	67 4 19·5	19·55	1	F; S; R; psbM	1
4909	2216	II. 430	.....	23 7 37·8	3·052	2	86 13 35·5	19·55	2	B; L; mE 97°·5 (2 est); mbM; nf of 2.	3
4910	3976	.....	.....	23 7 49·1	3·313	1	129 17 54·2	19·56	2	F; S; vlE; vgvlbM; *10 att .	2
4911	2218	.....	.....	23 8 5·0	2·975	1	71 46 56·2	19·56	1	np of 2 neb	1
4912 4913	2218, *a*	.....	R. 2 novæ	23 8 ±	2·975	...	71 47 ±	19·56	...	2 of 4 incl h. 2218, 2219 ...	0
4914	.....	.....	D'Arrest, 120	23 8 17	2·94	[2]	65 29 18	19·57	[2]	vF; vS; (d'Arrest) *16 p 11^s	0
4915	2219	III. 181	.....	23 8 17·5	2·975	1	71 47 55·9	19·57	1	cF; S; R; sf of 2.....	2
4916	3977	.....	Δ. 475?	23 8 25·2	3·346	1	133 21 29·9	19·57	1	B; S; mE 90°±; vsbM*13...	1
4917	2224, *a*	.....	R. nova	23 8 27·0	3·041	::	84 3 21·6	19·57	::	No description	0
4918	2221	.....	.....	23 8 30·3	3·010	1::	78 11 12·9	19·57	1::	F; R; bM	1
4919	2220	II. 235	.....	23 8 32·3	3·087	1	93 9 4·9	19·57	1	cF; pL; R; B * f	3
4920	2222	III. 221	.....	23 8 44·8	3·007	3	77 27 35·6	19·58	3	F; cS; R; bM*6; p of 2.....	6
4921	2224	II. 467	.....	23 8 51·2	3·041	1	84 4 21·6	19·58	1	cB; pS; iR; psbM	2
4922	2223	III. 222	.....	23 8 53·6	3·008	2	77 34 16·6	19·58	4	cF; cS; R; sbM*16	6*
4923	.....	III. 185	.....	23 9 8·7	3·087	2	93 6 55·6	19·58	2	vF; pS; E; er; 3S st inv.....	2
4924	.....	III. 238	.....	23 9 43·0	3·007	1	77 17 25·3	19·59	1	eF; eS	1
4925	.....	II. 454	.....	23 10 14·0	3·099	1	95 30 25·0	19·60	1	F; S; smbM	1
4926	2225	III. 182	.....	23 10 14·2	2·980	1	72 4 20·0	19·60	1	vF; am vS st	3
4927	3978	.....	Δ. 476?	23 10 39·7	3·330	1	132 52 58·7	19·61	1	pB; L; pmE; gbM	1
4928	2226 = 3979	II. 236	.....	23 10 47·0	3·098	2	95 24 42·7	19·61	2	pB; pS; iR; gbM	6
4929	3980	.....	Δ. 477, 1	23 11 9·4	3·329	1	132 59 53·4	19·62	1	pB; pL; pmE; gbM; p of 2..	1
4930	.....	III. 186	.....	23 11 21·9	3·097	1	95 12 23·4	19·62	1	eF; vS	1
4931	3981	.....	Δ. 477, 2	23 11 36·8	3·326	1	133 1 8·1	19·63	1	F; pL; pmE; gbM; f of 2 ...	1
4932	2227	II. 431	.....	23 11 38·9	3·112	1	98 19 42·1	19·63	2	cF; S; R; pspmbM.....	4
4933	2228 = 3982	I. 104	.....	23 11 49·7	+3·116	2	99 15 31·1	−19·63	2	pF; cL; pmE 0°±	3*

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	h.	H.		h m s	s		° ′ ″	″			
4934	.....	.....	D'Arrest, 121	23 12 30	+3·04	[2]	82 42 24	−19·64	[2]	F; S; R; Δ with 2 st 19, n ...	0
4935	2229	.....	.....	23 12 51·0	3·036	1	82 21 19·5	19·65	1	eF; eS	1
4936	2230	II. 439	.....	23 13 9·5	3·037	2	82 33 59·5	19·65	2	cB; pS; R; psbM	3
4937	3983	.....	.....	23 13 21·1	3·584	1	152 53 32·2	19·66	1	eF; eS; am 5 st; (?)	1
4938	2231	III. 435	.....	23 13 25·2	3·036	1	82 21 49·2	19·66	1	F; vS; R; psbM	2
4939	2232	II. 250	.....	23 13 27·2	2·994	2	73 32 34·2	19·66	2	pB; eS; R; smbM	4
4940	2233	II. 440	.....	23 13 38·0	3·037	2	82 32 58·2	19·66	1	cB; pS; R; psbM	3
4941	.....	.....	D'Arrest	23 14 5·8	2·998	[4]	74 12 23·9	19·67	[4]	cB; pS; bM* (D'Arrest, Resultate).	0*
4942	2231, *a*	.....	R. nova	23 14 13·7	3·036	::	82 21 49	19·67	::	E p and f	0
4943	.....	.....	D'Arrest, 122	23 14 22	3·04	[2]	82 33 6	19·67	[2]	vF; vS	0
4944	3985	.....	.....	23 14 21·5	3·314	2	133 14 52·6	19·68	2	F; S; R; lbM	2
4945	3986	.....	.....	23 14 30·5	3·717	2	158 25 49·6	19·68	2	F; vS; E 90°; psbM	2
4946	2234	II. 441	.....	23 14 36·4	3·035	1	81 52 38·6	19·68	1	F; S; F * att	2
4947	2235	IV. 52	.....	23 14 38·8	2·616	1	29 35 10·6	19·68	1	vF; *9 inv a l excentric	3
4948	3987	.....	.....	23 15 3·6	3·219	1	120 2 41·3	19·69	1	eF; S; R; sbM	1
4949	3984	.....	.....	23 15 6·0	4·986	1	172 40 19·0	19·70	1	vF; pL; R; vlbM; * nr	1
4950	2236	II. 600	.....	23 15 23·6	2·858	2	49 54 46·3	19·69	2	cF; L; mE 0°±; vlbM; r ...	4†
4951	3988	.....	.....	23 16 17·5	3·215	1	120 8 51·7	19·71	1	vF; S; R; glbM	1
4952	.....	III. 473	.....	23 16 47·9	3·002	1	74 0 18·4	19·72	1	eF; cL; sc st f; (?)	1
4953	.....	III. 218	.....	23 16 48·7	3·032	1	80 50 18·4	19·72	1	eF; pS; lE	1
4954	3989	.....	.....	23 17 17·8	3·464	2	148 33 48·1	19·73	2	pF; pS; R; glbM; p of 2 ...	2
4955	3990	.....	.....	23 17 37·9	3·462	1	148 39 59·1	19·73	1	eF; S; R; f of 2	1
4956	2237	.....	.....	23 17 51·8	3·010	1	75 29 12·1	19·73	1	vF; pS; R; gbM	2
4957	2238	.....	M. 52	23 18 3·2	2·643	1	29 10 20·1	19·73	1	Cl; L; Ri; mCM; R; st 9...13	8
4958	3991	.....	.....	23 18 14·6	3·674	1	158 47 39·8	19·74	1	eF; vS; R; pslbM; *10 p 22s	2
4959	3992	.....	.....	23 18 40·6	3·452	1	148 34 57·5	19·75	1	eF; R	1
4960	3994	.....	.....	23 18 48·0	3·266	1	129 59 55·5	19·75	2	eF; S; R / eF; S; R D neb; 4 st p..	2
4961	2239	III. 212	.....	23 18 52·9	3·016	1	76 33 33·5	19·75	1	vF; vS; R; psbM	2
4962	2240	.....	.....	23 18 52·9	2·956	1	63 44 7·5	19·75	1	F; vS; psmbM; *10 p	1
4963	3993	.....	.....	23 18 56·4	3·590	1	156 2 49·5	19·75	1	eF; cL; R; vgvlbM	1
4964	2241	IV. 18	.....	23 19 9·9	2·864	5	48 13 57·5	19·75	5	!!!; ○; vB; pS; R; blue.....	16*†
4965	.....	III. 438	.....	23 20 0·9	3·112	1	100 11 16·2	19·76	1	eF; S; stellar	1
4966	2242	III. 226	.....	23 20 15·0	3·025	4	78 18 33·9	19·77	4	(H.) vF / (h.) pB S; R; vsmbM; *9 p (? var).	6*
4967	2242, *a*	.....	R. nova	23 20 15·0	3·025	::	78 24 33·9	19·77	::	vF; S; 6′ s of h. 2242	0
4968	2243	.....	.....	23 20 49·8	3·040	1	81 59 10·6	19·78	1	F; cS; gbM; p of 2.....	1
4969	2244	.....	.....	23 20 59·8	3·041	1	81 59 55·6	19·78	1	vF; S; R; gbM; f of 2	1
4970	3995	.....	.....	23 21 2·6	3·457	1	150 29 2·6	19·78	1	B; S; lE; vsvmbM*11	1
4971	2245	II. 226	.....	23 21 28·0	2·985	2	68 20 38·3	17·79	2	vF; pL; vlE; lbM; am 4 st...	3†
4972	2246	III. 860	.....	23 21 36·7	2·938	(1)	58 25 6·3	19·79	1::	vF; S; R; lbM; r	2
4973	2247	II. 242	.....	23 21 52·1	3·008	2	73 28 4·3	19·79	2	vF; S; iR; r; * f	4
4974	.....	.....	D'Arrest, 123	23 21 55	3·06	[1]	87 19 4	19·79	[2]	eF; *14 p 13s·7, l n.....	0
4975	2248	III. 426	.....	23 23 21·9	3·061	1	86 52 7·7	19·81	1	eF; cL; R; gbM; * nr	3
4976	2249	VIII. 69	.....	23 23 29·0	2·839	2	41 38 50·7	19·81	2	Cl; P; lC; st 7...11	4
4977	.....	.....	D'Arrest, 124	23 23 47	3·06	[2]	87 12 42	19·81	[2]	vF; vS; *11 f 1s, n 85″	0
4978	3996	.....	Δ. 347 ?	23 24 48·4	3·352	1	144 52 22·1	19·83	1	pF; L; R; vgbM	1
4979	3997	.....	.....	23 25 20·0	3·325	2	142 28 11·8	19·84	2	cB; S; lE; psbM; *8 f	2
4980	2250	III. 213	.....	23 25 20·6	3·019	1	74 55 35·8	19·84	1	eF; pL; Δ with 2 st 10	2*
5079	.....	.....	.....	23 25 33·1	.....	...	96 22 12·0	.....	...	See No. 5079.	
4981	.....	III. 187	.....	23 25 56·9	3·084	2	93 31 10·5	19·85	2	eF; pL; stellar	1
4982	.....	.....	D'Arrest, 125	23 26 4	3·09	[1]	93 39 12	19·85	[1]	eF; pL; 3 st 11 & 12 f.....	0
4983	3998	.....	.....	23 26 48·5	3·494	1	156 19 38·2	19·86	1	eeF; pL (certain)	1
4984	.....	III. 188	.....	23 27 3·0	3·084	1	93 41 10·2	19·86	1	eF; stellar	1
4985	3999	.....	.....	23 27 43·9	3·347	2	146 47 2·9	19·87	2	B; cS; E; g, sbM; *8·9 p ...	2
4986	2251	.....	.....	23 27 44·2	3·022	1	74 42 26·9	19·87	1	vF; vS; gbM; * nf l'	1
4987	2252	.....	.....	23 27 53·0	3·059	2	85 52 26·9	19·87	2	eF; *12 p; sp of 2	2
4988	2253	.....	.....	23 28 2·0	3·058	1	85 49 1·9	19·87	1	vF; nf of 2	1
4989	2254	III. 579	.....	23 28 2·6	2·900	2	46 27 42·9	19·87	2	eF; S; R; *9·10 p, v nr	3
4990	2255	VIII. 62	.....	23 28 15·5	+2·510	2	17 51 23·9	−19·87	2	Cl; L; P; lC; st 8, 10...15 ...	5

No. of Cata-logue.	References to			Right Ascension for 1860, Jan. 0.	Annual Precession in Right Ascension for 1880.	No. of Obs. used.	North Polar Distance for 1860, Jan. 0.	Annual Precession in N.P.D. for 1880.	No. of Obs. used.	Summary Description from a Comparison of all the Observations, Remarks, &c.	Total No. of times of Obs. by h. and H.
	Sir J. H.'s Catalogues of Nebulæ.	Sir W. H.'s Classes and Nos.	Other Authorities.								
	h.	H.		h m s	s		° ′ ″	″			
4991	2256	II. 244	.....	23 28 35·2	+3·026	1	75 27 48·6	−19·88	2	F; S; R; psbM; stellar	4
4992	4000	.....	.....	23 28 56·7	3·209	1	128 13 2·6	19·88	1	pB; L; E; vgbM.....	1
4993	2257	.....	.....	23 29 2·6	3·067	1	88 36 51·3	19·89	1	pB; S; R; psbM; *12 sp ...	1
4994	2257, *a*	.....	R. nova	23 29 10·6	3·067	::	88 36 51·3	19·89	::	No description	0
4995	2258	.....	.....	23 29 20·0	3·073	1	90 28 43·3	19·89	1	F; pL; lE; gbM; *10 s	1
4996	2259	III. 146	.....	23 31 28·2	2·992	1	63 45 34·7	19·91	1	F; S; lE; bM; am st	2
4997	2260	II. 432	.....	23 31 35·5	3·092	3	97 17 32·7	19·91	3	pF; cL; E 12°±; vgbM.....	7
4998	2261	I. 110	.....	23 31 41·7	3·111	2	103 43 56·7	19·91	2	{(H.) cB}{(h.) eF}; cL; E; gmbM; r (?var.)	4*
4999	.....	III. 189	.....	23 32 21·2	3·087	1	95 24 5·4	19·92	1	eeF	1
5000	2262	I. 111	.....	23 32 38·8	3·107	2	103 4 12·4	19·92	2	pB; pL; iR; mbM	4
5001	4001	.....	.....	23 34 41·4	3·397	1	156 45 1·5	19·95	1	eF; S; R; p of 2	1
5002	4002	.....	.....	23 34 49·4	3·396	1	156 44 21·5	19·95	1	eF; cS; R; f of 2	1
5003	2263	II. 208?	.....	23 35 17·3	3·006	1	64 32 13·5	19·95	1	vF; *14 att 255°.....	1*
5004	.....	II. 208	.....	23 36 45·2	3·010	1	64 38 3·2	19·96	1	cL; R; *10·11 np	1*
5005	2264	II. 255	.....	23 37 8·5	3·049	3	80 0 26·2	19·96	5	cB; cS; gmbM; r; B * f.....	7
5006	2265	II. 256	.....	23 37 13·4	3·051	1	80 50 20·2	19·96	3	pF; S; R; *15 sf	4
5007	4003	.....	.....	23 37 35·5	3·190	3	133 41 27·9	19·97	3	cB; S; vlE; svmbM*14.....	3
5008	2266	.....	.....	23 38 26·1	2·757	1	21 1 30·9	19·97	1	vL; surrounds *8	1
5009	4004	.....	.....	23 38 29·5	3·141	2	120 17 4·6	19·98	2	vF; S; R; gmbM; *12 f ...	2
5010	2267	III. 427	.....	23 39 27·3	3·066	2	86 58 39·6	19·98	2	eF; pL; vlE 0°; lbM; 2 Bst nr	4
5011	2268	II. 213	.....	23 40 2·3	3·011	1	61 17 42·3	19·99	1	eF; cL; vlE; vglbM; r	2
5012	4005	.....	.....	23 40 35·8	3·137	2	121 17 45·3	19·99	2	B; cL; R; psmbM	2
5013	2269	III. 437	.....	23 40 50·1	3·064	1	83 54 46·3	19·99	2	F; S; R; gbM; er	3
5014	2270	.....	.....	23 41 35·4	3·066	1	86 36 8·0	20·00	2	vF; cL; R; vglbM; *13 n ...	2
5015	2271	III. 854	.....	23 42 7·7	3·015	5	59 47 45·0	20·00	5	cB; vS; R; psbM; rr	7*
5016	2272	VII. 55	.....	23 43 4·8	2·849	1	22 45 49·7	20·01	1	Cl; pRi; pC; st 11...15	4
5017	4006	.....	.....	23 43 34·1	3·151	1	131 31 2·7	20·01	1	B; pL; R; gbM	1
5018	2273, *a*	.....	R. nova	23 43 ±	3·028	...	63 37 ±	20·01	...	vvF; a little np h. 2273	0
5019	2273	.....	.....	23 43 52·2	3·028	1	63 37 55·7	20·01	1	vF; S; iF; vF * inv	1
5020	2274	II. 230	.....	23 43 55·7	3·041	2	70 37 26·7	20·01	2	pF; pS; R; mbM; sp of 2 ...	4*
5021	2274, *a*	.....	R. nova	23 44 13·9	3·04	...	70 40 43·7	20·01	...	Seen and meas. with h. 2274, 2275.	0
5022	2275	II. 231	.....	23 44 17·1	3·042	2	70 39 16·7	20·01	2	pB; pL; E 90°; bM; nf of 2	4
5023	2276	.....	.....	23 44 38·0	3·049	1	74 31 22·4	20·02	1	Cl of sc st 10 m	1
5024	2277	II. 851	.....	23 45 4·8	3·024	2	59 31 6·4	20·02	3	vF; cS; R; * nf	5
5025	2278	III. 231	.....	23 46 11·5	3·063	2	82 54 5·4	20·02	2	cF; S; R; psbM; stellar; 1st of 4.	3
5026	2279	III. 232	.....	23 46 19·0	3·063	2	82 53 50·4	20·02	2	pF; S; R; psbM; stellar; 2nd of 4.	3
5027	2280	.....	.....	23 46 38·2	3·063	1	82 54 18·1	20·03	1	F; S; R; 3rd of 4	1
5028	2281	III. 233	.....	23 46 45·2	3·063	2	82 48 10·1	20·03	2	pF; pL; lE; glbM; 4th of 4	4
5029	2282	II. 468	.....	23 48 10·1	3·066	4	84 51 58·1	20·03	4	pB; pS; iR; psbM; r; *7 p 30'	5
5030	2283	.....	.....	23 49 42·8	2·975	2	29 23 16·8	20·04	2	Cl; S; pRi; vC; st 10, 13...	2
5031	2284	VI. 30	C. H.	23 49 58·5	2·994	1	34 3 46·8	20·04	1	Cl; vL; vRi; vmC; st 11...18	3
5032	2285	VII. 56	.....	23 50 0·7	2·979	1	29 33 50·8	20·04	1	Cl; pRi; pC.....	2
5033	2286	.....	.....	23 50 47·4	3·063	1	80 0 18·8	20·04	1	vF; vS; (?)	1
5034	2287	.....	.....	23 51 34·3	2·999	1	30 45 41·8	20·04	1	Cl; vL; P; lC; st 7, 10...	1
5035	4009	.....	.....	23 51 45·2	3·136	1	146 14 16·8	20·04	1	pB; cS; R; gmbM	1
5036	2288	III. 466	.....	23 51 47·0	3·065	1:	80 2 53·5	20·05	1	vF; pS; iR	2
5037	2289	III. 867	.....	23 51 50·3	3·070	1	87 8 41·5	20·05	1	eF; pS; iR; lbM.....	2
5038	2290	II. 232	.....	23 52 17·4	3·058	1	70 0 13·5	20·05	1	pF; S; R; sbM; * 10 sp.....	3
5039	2291	II. 10	.....	33 52 28·1	3·063	1	75 58 24·5	20·05	1	F; pS; iE 15°±	3
5040	2292	.....	.....	23 53 17·8	3·033	1	40 3 38·5	20·05	1	Cl; pRi; pC; st 9...	1
5041	2293	.....	.....	23 53 49·6	3·069	1	84 32 7·5	20·05	1	vF; S; R; psbM.....	1
5042	2294	III. 855	.....	23 54 14·4	3·056	2	59 20 47·5	20·05	3	eF; S; R; sbM; stellar sp of 2	4
5043	2295	III. 856	.....	23 54 17·0	3·056	3	59 20 0·5	20·05	3	eF; S; R; stellar; nf of 2 ...	4
5044	2296	III. 984	.....	23 55 10·4	3·067	2	77 48 0·5	20·05	3	eF; stellar; Δ with 2 st	4*
5045	4010	.....	.....	23 55 43·1	3·085	1	125 1 38·5	20·05	1	vF; S; R; am st	1
5046	2297	II. 240	.....	23 56 4·5	3·067	1	74 37 31·5	20·05	1	cB; cL; ir; vgbM	2†
5047	2298	III. 436	.....	23 56 32·1	+3·070	1::	83 25 16·5	−20·05	1	vF; pL; R; lbM.....	2

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	h.	H.		h m s	s		° ′ ″	″			
5048	2299	.....	.....	23 56 39·9	+3·070	1	83 17 43·5	−20·05	1	vF; pL; R; gbM.....	1
5049	2300	II. 227	.....	23 56 48·7	3·067	1	70 0 3·5	20·05	1	pF; cL; mE 45°+; lbM.....	4
5050	2301	.....	.....	23 57 19·7	3·072	1	85 34 38·5	20·05	1	pB; vS; mE; vsmbM	2
5051	2302	.....	.....	23 57 32·6	3·051	1	22 6 18·2	20·06	1	l; eeF; eeL.....	1*
5052	4011	.....	.....	23 57 35·2	3·087	2	152 50 42·2	20·06	2	F; S; R; gbM.....	2
5053	2303	.....	.....	23 57 55·7	3·072	1	83 51 42·2	20·06	1	pF; S; R; * 9 np	1
5054	2304	.....	.....	23 57 56·2	3·072	1	85 34 12·2	20·06	1	vF; S; gbM	1
5055	2305	VIII. 29	.....	23 58 1·9	3·070	1	111 29 37·2	20·06	1	Cl; vP; vlC.....	2
5056	2306	.....	.....	23 58 17·7	3·072	1	85 33 47·2	20·06	1	vF; S; R; * nf	1
5057	4013	III. 190	.....	23 59 17·4	+3·072	1	94 29 48·2	−20·06	1	vF; vS; R; vg, psmbM; 2 st 9 sf.	2

SUPPLEMENTARY LIST OF NEBULÆ AND CLUSTERS.

5058	.....	.....	G. P. Bond	0 35 1·0	+3·073	...	89 50 6·6	−19·80	...	F; S; R; * 11 sp 1′; disc Sept. 16, 1862.	0
5059	79, *b*	.....	R. nova	0 50 7·9	3·241	...	60 23 27	19·56	...	No description; γ in Lord R.'s diagram.	0
5060	.....	.....	S. Coolidge	3 6 55·2	3·089	...	89 4 27·5	13·67	...	F; disc Jan 25, 1860	0
5061	.....	.....	S. Coolidge	3 16 29·0	+3·086	...	89 19 3·0	13·07	...	F; disc Dec. 16, 1859	0
5062	(123)	.....	.....	4 57 18·4	−0·385	1	159 36 32·1	− 5·43	1	No description.....	1
5063	(374)	.....	.....	5 20 52·9	−0·469	1::	159 36 35·4	− 3·42	1::	No description.....	1
5064	.....	.....	J. H. Safford	6 5 7:	+3·093	...	88 50 39:	+ 0·43	...	2 Cls; near 2 st 9.10 & 10.11; disc Mar. 19, 1863.	0
5065	.....	.....	J. H. Safford	6 6 40·9	3·093	...	88 58 11·2	0·44	...	Cl; bet 2 st 9.10 & 10.11; disc Mar. 19, 1863.	0
5066	.....	.....	G. P. Bond	7 55 12·5	3·509	...	65 25 19·4	9·73	...	vF; cometic; disc Sept. 1, 1852.	0
5067	.....	.....	S. Coolidge	9 59 51·1	3·079	...	89 15 7·3	17·38	...	Neb; no description; disc Mar. 31, 1859.	0
5068	.....	.....	S. Coolidge	10 16 14·1	3·079	...	89 13 46·0	18·05	...	F; disc Mar. 31, 1859	0
5069	939, *c*	.....	R. nova	11 33 ±	3·122	...	71 29 ±	19·93	...	No description	0
5070	2849, *a*	.....	D'Arrest	12 12 41	3·06	...	83 46 42	20·02	...	A nebula; no description ...	0*
5071	.....	.....	S. Coolidge	12 31 0·5	3·069	...	89 2 46·5	19·87	...	* 12, in F neb; disc May 3, 1859.	0
5072	.....	.....	S. Coolidge	13 24 32·0	3·067	...	89 18 29·7	18·67	...	* 12, in F neb; disc Apr. 30, 1859.	0
5073	.....	.....	S. Coolidge	13 42 38·3	3·065	...	89 14 2·4	18·03	...	* 12, in F neb; disc Apr. 30, 1859.	0
5074	.....	.....	G. P. Bond	13 49 18·6	3·068	...	89 31 9·0	17·77	...	S; R; *92′; disc June 8, 1855.	0
5075	.....	.....	S. Coolidge	13 53 58·0	3·065	...	89 13 53·3	+17·60	...	* 12, in neb; disc Apr. 29, 1859.	0
5076	.....	.....	Lac. I. 11	18 20 44·6	3·952	...	123 30 27·3	− 1·89	...	Neb. without stars	0
5077	.....	.....	G. P. Bond	21 45 12·5	2·217	...	40 53 46·4	16·67	...	Neb; no description; disc Feb. 10, 1848.	0
5078	3943, *a*	.....	Lassell	22 20 50:	3·336	...	115 34 ±	18·25	...	Neb* * 1′ dist from h. 3943 ..	0
5079	.....	.....	G. P. Bond	23 25 33·1	+3·093	...	96 22 12·0	−19·83	...	Neb; * 9·10 sf; disc Oct. 23 1848.	0

Of this supplementary list, the objects Nos. 5058, 5060, 5061, 5064, 5065, 5066, 5067, 5068, 5071, 5072, 5073, 5074, 5075, 5077, and 5079 were communicated to me by Professor Bond, Director of the Observatory of Harvard College, U.S., too late for insertion in the body of the Catalogue.

ERRATA.

In page 7, lines 13, 14, *for* 5063 *read* 5079, and *for* six *read* 22.