Karteneinteilung

Arbeits-Nr. 580 Bezeichnung: Third Melb. Gen. Cat. of 3068 stars (Melbourne 1917)

Karten-Nr. [580/A57] [3068K.]

ALT: AR1 275/100 H151

NEU: AR1 282/53 MELBO 3

ZiK gew.

1		41	J
2	No.	42	±
3		43	PM NPD 1)
4		44	
5	h	45	
6		46	
7	m	47	Mag. (VAR möglich)
8	Mean R.A. 1890.0	48	.
9		49	
10	s	50	
11		51	
12		52	
13		53	
14	Mean yr. of obs.	54	
15		55	
16		56	
17	No. obs.	57	
18		58	
19		59	
20	±	60	
21	PM RA 1)	61	
22		62	
23		63	
24		64	
25	0	65	
26		66	
27		67	
28	1	68	
29	Mean NPD 1890.0	69	
30		70	
31	"	71	
32		72	
33		73	
34		74	
35	Mean yr. of obs.	75	
36		76	
37		77	
38	—	78	
39	S.P. No. obs. 1)	79	
40		80	

+ = y — = x

Bemerkungen: 1) if missing blank. —

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Message-ID: <"95-01-25-09:00:53.94*S19">
Date:     Wed, 25 Jan 95 09:00
To:       S25
From:     S19
Subject: Melbourne

Received: (from DHDURZ2 for <#mvs.urz.uni-heidelberg.de:W3WHW#GIBBS.GSFC.NASA.GOV> via B
Received: (from DHDURZ2 for MAILER#DHDURZ2 via NJE)
 (UCLA/Mail400 V1.421 B-SMTP-4748-206); Wed, 25 Jan 95 05:10:52
Received: from GIBBS.GSFC.NASA.GOV by mvs.urz.uni-heidelberg.de
   (IBM MVS SMTP V2R2) with TCP; Wed, 25 Jan 95 05:10:31 CET
Received: from GIBBS.GSFC.NASA.GOV by GIBBS.GSFC.NASA.GOV (IBM MVS SMTP V2R2.1)
   with BSMTP id 8529; Tue, 24 Jan 95 23:08:57 EDT
Date:     Tue, 24 Jan 95 23:08 EST
To:       Siegfried Roeser                <s19>
From:     "Wayne H. Warren Jr. 441-4086"       <W3WHW#GIBBS.GSFC.NASA.GOV>
          (Code 681/HSTX)
Subject: Me 3

Lieber Siggi;
Thanks very much for sending the Me 3.  It is just what was needed.  I
edited it to agree basically with the format of the other catalogs; for
example, moved the magnitude column to position 2 instead of at the
end.  I have now homogenized the formats of all five catalogs, plus
corrected some errors in the others  (I have the printed books from
the USNO library and the copies of Me 4 and Me 5 that you kindly made).
Here are samples of all five as they now look, plus a description of
Me 1.  Order is Me 1 to Me 5.
-------------------------------------------------------------------------
   1  6.8 00 00 16.05  1867.8     4 -0.018- 129 36 06.28 1867.8    3      0.00
   2  7.3 00 01 08.44  1869.9     3         156 39 14.05 1869.9    3
   3  2.0 00 01 40.26  1867.8    48 +0.009   61 37 39.10 1867.5   30     +0.15
   4  4.2 00 02 48.35  1870.9     3 +0.010  136 27 51.75 1870.9    3     +0.19
   5  6.9 00 03 15.70  1867.7     4 +0.003   93 17 03.96 1868.9    3     +0.02
-------------------------------------------------------------------------
   1  7.3 00 00 06.58  1880.85    3         123 29 03.69 1880.85   3
   2  7.0 00 01 17.53  1876.82    3 -0.009  147 30 14.88 1876.82   3     +0.05
   3  6.8 00 01 35.21  1883.86    3 +0.001   93 13 00.85 1883.86   3     -0.01
   4  6.0 00 01 57.31  1875.40    4 -0.006  124 11 50.51 1875.24   3     -0.01
   5  2.0 00 02 11.14  1877.96   96 +0.009   61 34 20.30 1875.86  26     +0.16
-------------------------------------------------------------------------
   1  7.0 00 00 00.96  1885.86    3         151 55 21.11 1885.86   3
   2 10.0 00 00 40.03  1892.88    1         158 09 08.50 1892.88   1
   3  9.2 00 01 50.12  1892.84    3         175 59 19.99 1892.84   3
   4  9.1 00 01 56.67  1892.79    3         172 05 55.54 1892.79   4
   5  8.7 00 02 01.86  1892.85    3         168 06 22.29 1892.83   4
-------------------------------------------------------------------------
   1  8.3 00 00 23.53 -68 31 01.1   3    1908.21                          0000
   2  8.0 00 01 13.36 -64 47 51.8   3    1894.88                          0000
   3  8.7 00 01 17.19 -84 39 19.0   3    1897.87                          0000
   4  8.9 00 01 27.75 -80 19 28.3   3    1900.88                          0000
   5  7.6 00 02 15.49 -77 17 15.5   3    1897.22                          0000
-------------------------------------------------------------------------
   1  9.7 00 00 59.69         -65 00 17.8          1913.84 CP-65 4199
   2  9.3 00 01 08.99 +0.011  -68 43 00.8 -0.006  1917.13 CP-68 3599
   3  9.5 00 01 09.74         -64 28 00.2          1915.87 CP-64 4403
   4  9.2 00 01 21.25 -0.002  -70 27 11.8 -0.016  1917.84 CP-70 0001
   5  7.8 00 03 07.04 +0.003  -78 46 03.3 +0.000  1918.41 CP-78 0002
-------------------------------------------------------------------------
I/156  First Melbourne General Catalogue of 1227 Stars
       (Ellery and White 1874)
=========================================================================
First Melbourne General Catalogue of 1227 Stars for the Epoch 1870.0,
Deduced from Observations Extending from 1863 to 1870
Ellery, R.L.J., and White, E.J. 1874, Melbourne Observatory
=========================================================================
ADC_Keywords:  Positional data - 660; proper motions - 665

=========================================================================

Introduction (excerpt):
The present Catalogue of Stars, entitled the First Melbourne General
Catalogue, contains the results of observations made with the Melbourne
Transit Circle from the middle of the year 1863 to the end of 1870.  The
materials from which it has been compiled have been already published in
Volumes II., III., and IV. of the Melbourne Observations, which contain
the results for each year.

The results of the Meridian Observations made before the removal of the
Observatory from Williamstown to its present site in 1863 were compiled
and form a catalogue of 546 stars contained in Vol. I. of the Melbourne
Observations, which is styled the Williamstown Catalogue.
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As a full description of the instruments used, methods of observations and reduction, is given in the Introduction to the several volumes of observations already published, it will be unnecessary to enter into further detail on these points here, and it therefore only remains to explain the processes that have been employed for the formation of the star places in this catalogue.

The right ascensions and north polar distances were taken from the manuscript copies of each annual catalogue, and by means of the precessional values, using terms of the third order where necessary, these were reduced to the epoch 1870. In the case of the Nautical Almanac fundamental stars the proper motions were included in the precessions. These separate results for 1870 were then combined with weights proportaional to the number of observations in each year to make the provisional places, to which the following corrections were applied. First, the right ascensions were all increased by the quantity 0.018s to make them correspond to the same equinox as that of the Greenwich Seven-Year Catalogue for 1864. This was shown to be necessary by a comparison of the right ascensions of the clock stars as derived from the Greenwich and Melbourne Catalogues. This was the only correction applied to the right ascensions of the Nautical Almanac fundamental stars, except in a few cases of southern stars, where the adopted proper motions are different from those of the Nautical Almanac.

The north polar distances, as printed in the annual catalogues, were computed on the assumption that the colatitude was 52d 10' 6.6", and that the refractions of the Tabulae Regiomontanae were the same as those at Melbourne. A discussion of the Greenwich and Melbourne observations, however, by Mr. Stone, the present Astronomer Royal at the Cape of Good Hope, which was published in the Monthly Notices of the Royal Astronomical Society for the 13th of December 1867, showed that the colatitude required the corrections +0.149", and that the refractions employed were too great, requiring a factor of 0.99086 to satisfy the Melbourne observations on the north of the zenith, and 0.99628 for those on the south. A subsequent comparison of the Pulkova and Melbourne observations by Mr. Gylden led to a very similar result. This difference in the amount of the refraction on the two sides of the zenith was at first believed by Mr. Stone to be produced by local causes; as, for example, the position of the Observatory on the edge of the Australian continent, so that the northern meridian passed over the heated dry land, while the southern one passed over the sea. Mr. Gylden's investigations, however, showed that a similar discrepancy was apparent in the Cape of Good Hope and the St. Helena observations, thus indicating the cause to be a more general one. In these circumstances, Mr. Stone's results were adopted, especially as the Melbourne observations, since these comparisons were made, have not extended sufficiently far on both sides of the pole to afford data for another determination, and the following corrections were applied, R representing the refraction of the Tabulae Regiomontanae:

Correction to N.P.D. from 37d 50' to 127d 50' = -0.149" + 0.00914R.
Correction to N.P.D. from 127d 50' to 180d 00' = -0.149" - 0.00372R.
S.P. 180d 00' to 142d 10' = +0.149" + 0.00372R.

The Mean Year of Observations was computed from the mean years in the annual catalogues by combining them with weights proportional to the number of observations in each year.

With these provisional results for 1870 the proper motins were now computed, except for those stars whose proper motions had been already published by Messrs. Main and Stone in the Memoirs of the Royal Astronomical Society, and which have been adopted in the present catalogue. The others were obtained by comparing the Melbourne places for 1870 with the places for the same epoch derived from the following catalogues:

(See printed volume, p. vi, for list of nine catalogs.)

File Summary :

FileName.DataType	lrecl	Records	Explanaations
Mel.doc	72	.	Description
Mel.dat	76	1227	Catalog

Byte-by-byte description of the file: Mel.dat

Bytes	Format	Units	Label		Explanation
1- 4	I4	---	MelID		Sequential number
6- 9	F4.1	mag	m(v)	*	Estimated visual magnitude
11- 12	I2	h	RAh	*	Right ascension (B1870)

14- 15	I2	m	RAm	[redacted]Right ascension
17- 21	F5.2	s	RAs	[redacted]Right ascension
24- 29	F6.1	year	EpochRA	?Mean epoch of RA observations
32- 34	I3	---	nRA	[redacted]Number of observations in RA
36- 41	F6.3	s	pmRA	?Annual proper motion
42	A1	---	code	*--- pmRA code
44- 46	I3	deg	NPDd	*[redacted]North polar distance (B1870)
48- 49	I2	arcmin	NPDm	[redacted]North polar distance
51- 55	F5.2	arcsec	NPDs	[redacted]North polar distance
57- 62	F6.1	year	EpochNP	?Mean epoch of NPD observations
65- 66	I2	---	nNP1	*?Number of observations of NPD
68- 69	I2	---	nNP2	*?Number of observations of SPD
71- 75	F5.2	arcsec	pmNP	?Annual proper motion
76	A1	---	code	*--- pmNP code

Note on estimated visual magnitude:
The magnitudes given represent the means of all estimates made at Melbourne. When the magnitude was not estimated at Melbourne, it was taken from Argelander, as published in the Greenwich Catalogues, or from the British Association Catalogue. The numbers of magnitude estimates are given in the published catalog, but these have been omitted in the machine version.

Note on positions:
Mean positions in RA and NPD are given for 1870 January 1 equator, equinox, and epoch, except when a proper motion has not been used (see note on proper-motion codes).

Note on proper-motion codes:
The presence of a minus sign denotes cases where a proper motion has not been used to adjust the star place to the epoch of the catalogue; in these cases, if it should be thought desirable to take account of the proper motion, the interval should not be counted from 1870, but from the mean year of the observations.

Note on numbers of observations:
Polar distance observations were made on both sides of the zenith. NPD and SPD give the total numbers of observations made above and below the pole, respectively.

(end) Wayne H. Warren Jr. -NASA/GSFC/LASP- 20-Jan-1995