

M 36.

(marked June 4, 1877).

KG

11365
283

Harvard College Observatory
Account of various
Records and Papers
belonging to the Observatory.

For table of contents,
see pp. 91 and following.

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*Table of Contents
on pp. 91 & following.*

1
Catalogue
of MS. books and papers
received from Mr. J. H. Safford
and described by him under the
following titles; and of some
other papers, books, and drawings
found in the Observatory, and seeming
to relate to work done there previous
to 1866.

This book also contains some small star maps, pp. 42-60.

Notes of changes in the arrangement of these books
and papers, and accounts of the contents of some
additional books, have been added, since the Catalogue
was first drawn up. See pp. 918 following for table of contents.

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Observatory of Harvard College
Cambridge, May 26, 1868.

I. The numbers in the margin refer to the compartments of a case now on the south side of the Southwest Chamber of this Observatory, into which corresponding numbers have been pasted, and in which the papers and books named below have been placed.



II. The following descriptions and titles are taken from a Ms. list made out when Prof. Winlock took charge of the Observatory, and formed from written descriptions left by the former Director or from memoranda of his verbal statements.

Compartment

- | | |
|-------------------|---|
| 1 (Nos. 1 to 14) | III. 1. A set of Ms. books marked |
| 2 (Nos. 14 to 28) | "A", with numbers from 1 to 74 inclusive |
| 3 (Nos. 29 to 42) | Believed to contain original meridian circle |
| 4 (Nos. 43 to 58) | observations or readings from chronograph sheets. |
| 5 (Nos. 59 to 74) | |

Compart-
ment

6 (Nos. 1 to 16)

7 (Nos. 16 to 32)

8 (Nos. 33 to 36)

2. M.S. books marked "B", with numbers from 1 to 36. These contain a copy of Series "A", up to Jan. 1, 1861.

9

3. M.S. books marked "C", with numbers from 1 to 14. Relating to instrumental corrections required in using the Meridian Circle, and containing notes designed to make the chronograph sheets intelligible.

10 (Nos. 1 to 13)

8 (Nos. 14 to 20)

11 (Nos. 21 to 35)

4. M.S. books marked "D", with numbers from 1 to 35. Relating to chronometric expeditions.

8

5. M.S. books marked "E", with numbers from 1 to 8. Mostly meridian circle observations in which declinations were taken, and two books used by Mr. Tuttle in practicing observing.

12

6. M.S. books marked "F" with numbers from 1 to 11, also 12a, 12b, and 13. Containing observations with Mr. Bond's instrument, called the West Transit — also Magnetic and Prime Vertical observations.

7. MSS. books marked "G," with numbers from 1 to 8 — also G_a, G_b. Relate to clocks and chronometers.

14 (Nos. 1 to 8 and 10 to 17)
 15 (Nos. 18 to 30)
 16 (Nos. 31 to 44)
 17 (Nos. 45 to 56 and H_a, H_b)

8. MSS. books marked "H," with numbers from 1 to 8 (No. 9 omitted in the numbering) and from 10 to 56 — also H_a, H_b. Contain Equatorial Observations, and Reductions, excluding Zones.

18 (Nos. 1 to 15)
 19 (Nos. 16 to 28)

9. MSS. books marked "K," with numbers from 1 to 28. These are said to be "books — i.e., observations" and are supposed to contain nothing but observations. of zones.

20

10. MSS. books marked "L," with numbers from 1 to 13. Various books relating to the reduction of the Zones.

11. MSS. books marked "M," numbered 1, 2, 3, 4, ^(5 found later) 6, ^(7 found later) 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32. (The last was numbered at first like one of the others and changed to 32 afterwards.)

Compart-
ment.

These books have various titles, as described below.

- 28 (Nos. 1, 8, 32) No 1 (Library Catalogue) — No 8 (List of Books Received for Library) — No 32 (Library Catalogue).
- 25 (No. 2) No 2 (Reduction of Zones)
- (Nos. 3, 4, 5)
(brought down to the Clock-room.) No 3 is a book called Gould's Universal Index, used for a partial Library Catalogue. Not put away in the Case. No 5 (large memorandum book).
- 34 (No. 19) No 4 (Curve Book). No 19 (Record book, sun spots, etc.)
- 22 (No. 4) No 6 (Index to Equatorial and Transit Books).
- 20 (No. 6) No 7 (Various Memoranda)
- 35 (No. 7) No 9 (Catalogue Stars 1854), No 10 (Tables for Instrum. Corrections), No 11 (Catalogue Stars for Zones),
- 21 (Nos. 9, 10, 11, 12, 13, 15, 16, 20, 21, 26, 27, 29, 30, 31) No 12 (Reduction of Stars in Weiss), No 13 (Printing Zone Observations & History of Observatory), No 15 (Meteorological), No 16 (Comet-seeker), No 20, 21, 26, 27, 30, 31 (Miscellaneous Notebooks), No 29 (Memorandum of Printing).
- 13 (Nos. 17, 18) No 17, 18 (Notes of Colorado Survey).
- { No. 14 kept in Clock-room. } No 14 (contains addresses to which Annals have been sent)
- { No. 23 kept in Library } No 23 is a list of the books received at the Library
- { No. 28 lies on shelf 8 in pamphlet room } No 28 is one of Gould's Universal Indexes, (like No 3). Has been used for entering addresses, etc.
- 20 (Nos. 24, 25) No 24, 25. (Reduction of Moon Culminations).
- { No. 22 is in the Clock-room } No 22 (Large account-book, two pages of which have been used to open an account of the proceeds of the Sturgis Fund spent in printing.)
- For additional numbers, see p. 22
- Three other books have been found, which may comprise the missing numbers (in a fund) of

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compart-
ment.

series "M." One is the book in which the present Catalogue is entered, a second has a few pencilled mathematical symbols and equations on its first leaves. The third is a Catalogue of Stars.

{ Blank book in Clock room }
28 { Catalogue of Stars }

IV. Such observations as are recorded in any of the above described books, are frequently copies of the original records which were often made on detached pieces of paper which were not arranged in any order.

V. The books of series "M" are described in the list mentioned in section II, above, simply as Miscellaneous.

{ The bundles in each compartment are numbered as in the margin, in the order in which they were stowed away. }

VI. The following are bundles of papers, the titles of which are mostly taken from the list mentioned in section II.

24 (Package 1)

1. Papers relating to the formation of a Standard Zone Catalogue, in extension of the published Vol. 1st, Part II of the Annals, mostly by W. A. Rogers, Esq., Alfred Centre, N.Y.

24 (Package 3)

2. Preliminary Standard Catalogue between 1° and 2° N. Declination, for the Reduction of Zones.

24 (Package 2)

3. Comparison of R. A. of Stars

Compart-
ment.

in the Standard Catalogue, with the N. A.
observed in Cambridge, U.S.

- 23 (Package 3) 4. Papers relating to certain transits
observed in 1856-58 for the completion
of the Standard Zone Catalogue, unfinished.
- 24 (Package 5) 5. Papers relating to the reduction of
Lalande stars from Paris 1856 observations.
- 24 (Package 4) 6. Various papers of Mr. McConnell,
chiefly copies of Paris observations.
- 29 (Package 2) 7. Papers relating to Polar Star Tables.
- 29 (Package 3) 8. Tables of Polar Stars, 1862-65, ready
for publication.
- 28 (Package 3) 9. Computations relating to Col. Graham's
Catalogue, by Corey. The next package
contains those by other Computers.
- 22 (Package 2) 10. Papers relating to some observations
made for Col. Graham and their
reduction, and also to the formation
of a catalogue of the stars, including
some not observed here. The catalogue
had been presented to the Academy and
was ready for publication, Feb. 18, 1866.
- 32 (Package 2) 11. Miscellaneous Papers relating to the
Equatorial reductions for 1858, 1859, 1862.
- 32 (Package 3) 12. Cluster in Hercules.
- 23 (Package 4) 13. Copy of original minutes of observations
upon Mars, 1849-50.
- 28 (Package 1) 14. Mars observations reduced and

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Compact-ment } Package

prepared for publication, 1849-50.
Copy sent to Lieut. Gilliss.

- | | | | |
|----|---|---|---|
| 36 | — | 6 | 15. Miscellaneous Computations. |
| 36 | — | 5 | 16. 1 st Comet of 1850. |
| 28 | — | 2 | 17. Definitive reductions of equatorial observations for 1861. |
| 36 | — | 3 | 18. Curve of Level Errors for Cambridge Transit. |
| 32 | — | 4 | 19. Drawings of Telescopic Aspect of Meteor, July 20 th , 1856? — Damon(?) |
| 36 | — | 2 | 20. Curve of probable error. |
| 36 | — | 7 | 21. Observations on Mars, 1850. |
| 36 | — | 4 | 22. Appear to be declinations of Venus at Harvard College Observatory. |
| 43 | — | 2 | 23. Miscellaneous Computations by H. C. Corey. |
| 44 | — | 3 | 24. A bundle containing the following lesser packages:— |

- * 1. Miscellaneous Investigations of some value.
- 2. Tables of Mean Motion of Hyperion and Japetus.
- 3. Declinations for 1860 of Berlin Jahrbuch Stars from Greenwich and Paris Observations.
- 4. Wire intervals before 1862.
- 5. Cambridge, England, R. A.'s of Fundamental Stars, 1846-1854, copied into tabular form.
- 6. Computations of stars' mean R. A.'s for 1864 to correct English Nautical Almanac.

* This may be a general title for this package rather than for a subdivision.

Compartment - Package

413 - 1

25. Readings from Chronographic Sheets by H. C. Corey and Elizabeth Harris, duplicated and copied into books.

44 - 4

26. Latitude by Prime Vertical by Mr. Rogers.

44 - 2

27. Original Observations by Mr. Rogers.

44 - 1

28. Papers by J. H. S. relating to Catalogue for U. S. Lake Survey, second set, - No. 36.

44 - 6

29. Papers whose purpose is unknown.

42 - 2

30. Relating to Solar Parallax. Observations of A.R. of Mars, 1849-50.

35 - 3

31. Papers relating to the longitude of Clinton.

23 - 2

32. Papers relating to Standard Catalogue of R. Ascensions, Annals, Vol. 4, Part I, published.

27 - 1

33. Package containing drawings of various comets.

(Two drawings — marked "Comet of June, 1845" — were on boards too large for the compartments of the case, and were put into the pile of papers in the closet of the Southwest Chamber. The other drawings found in the package labelled as above are all in package 33.)

35 - 1

34. Papers relating to Vol. 4, Part I, of the Annals, Standard Catalogues, and to the articles on Polaris. The results of some others

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Compart-ment } Package
papers relating to this subject have not been used.

- 23 - 1 35. Charts of the naked eye views of the great comet of June & July 1861.
- 30 - 1 36. Computations relating to Catalogues for the U.S. Lake Survey by T.H.S., 1st set - see No. 28.
- 34 - 1 37. Various papers of little or no value.
- 37 - 3 38. Papers relating to Moon Culminations.
- 25 - 1 39. Harvard Jones. A package returned from the printing office, not containing all the sheets originally included in the package named thus in the list mentioned in section II.
- 41 - 1 40. Jones, third series, from $0^{\circ} 40'$ to 1° N. Declination. Not fully ready for publication.
- 2 36 - 1 41. Jones, fourth series, from 1° to $1^{\circ} 20'$ N. Declination. Incomplete.
- 35 - 2 42. Miscellaneous Papers relating to the reduction of Jones.
- 37 - 2 43. Moon Culminations in the years 1851-54 reduced.
- 44 - 5 44. Opposition of Mars 1849-1850 with discussion of results.
- 39 - 1 45. Sheets of Transit Observations, March 1862-Aug. '63.
- 38 - 1 46. Sheets of Transit Observations, Sept. 1863-Dec. 1864.
- 37 - 1 47. Sheets of Transit Observations, January 1865-January 1866.

Compart-
ment } Package

- 40 - 1 48. Current sheets of Transits and Equatorial Observations for the dates included. Copied into books of series "A" and "H".
- 43 - 3 49. Sheets of observations about which little is known.
- 40 - 2 50. Done sheets — are read off in the books of series "K".
- 43 - 4 51. Papers relating to instrumental Corrections of Transits, 1862 - 1865.
- 29 - 1 52. Papers relating to the Transits of 1862-65 —: Computation of apparent Right Ascensions.
- 33 - 1 53. Orion Papers, from the floor of the Southwest Chamber.
- 31 - 1 } 54. Orion Papers, formerly kept in a
32 - 1 } drawer, distinct from those on the floor.
- 22 - 1 55. Papers by Mr. Hall, relating to reduction of Transits for 1861.
- 42 - 1 56. Miscellaneous Papers apparently relating to Transit Reductions.

VII. The following are packages of

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Compart-ment } Package
papers, and drawings not named
in the list mentioned in section II,
but found with others named in that
list, and put into the same case with
them.

- 30 - 2 1. Original Observations with Great
Equatorial.
- 30 - 3 2. Papers relating to Harvard Jones,
Some asteroid observations.
- 27 - 2 3. Chalk sketches of Donati's Comet.
By Mr. Fettee.
- 26 - 1 4. Original drawings of Great Comet
of 1858 (Donati's Comet).
- 28 - 4 5. Papers with sketches of Mars,
Jupiter, and Saturn, photographs
of Sun and Moon, and a
meteorological table.

25 - In this compartment are some papers
respecting the Condition of the Observatory
on Prof. Winlock's arrival (among them the list
named in section II.)
27 Some printed numbers which may be used
for the Compartments of other cases.

- 27 9. Small book marked "Solar Eclipse
April 25 '46. Portland.

For changes

See additional notes three pages farther on.

The following is a list of the contents of each of the compartments of the case named in section I. The numbers designating the bundles of papers refer to the preceding list.

The case has four vertical divisions with eleven compartments in each, numbered from 1 to 44, beginning at the left hand upper corner, and proceeding vertically through each division from top to bottom, instead of as in the list below, or horizontally.

No. of compartment	1	2	3	4
Contents	Books A1 to A14	Books A15 to A28	Books A29 to A42	Books A43 to A58
No. of compartment	5	6	7	8
Contents	Books A59 to A74	Books B1 to B16	Books B17 to B32	{ Books B33 to B36 " D14 to D20 " E1 to E8

See notes beyond for changes.

No. of compartment Contents	9 Books C1 to C14	10 Books D1 to D13	11 Books D21 to D35	12 Books F1 to F11 " F12a, 12b, 13
No. of compartment Contents	13 Books G1 to G8 " Ga, Gb, Mc1, 18	14 Books H1 to H17 (No book marked H9)	15 Books H18 to H30	16 Books H31 to H44
No. of compartment Contents	17 Books H45 to H56 " Ha, Hb.	18 Books K1 to K15	19 Books K16 to K28	20 Books L1 to L13 " Mb6, Mb24, K25
No. of compartment Contents and no. of package (in narrow cols.)	21 Books No 9, 10, 11, 12, 13, 15, 16, 20, 21, 26, 27, 29, 30, 31.	22 1 VI, 55 2 VI, 10 Book No 4	23 1 VI, 35 2 VI, 32 3 VI, 4 4 VI, 13	24 1 VI, 1 2 VI, 3 3 VI, 2 4 VI, 6 5 VI, 5
No. of compartment No. of package & contents	25 1 VI, 39 Book No 2 Paper on Condition of Observatory in 1866.	26 VII, 4	27 1 VI, 33 2 VII, 3 Printed numbers for books VII, 9	28 1 VI, 14 2 VI, 17 3 VI, 9 4 VII, 5 Book-Catalogue of Stars Books No 1, Mb8, M32.
No. of compartment No. of package & contents	29 1 VI, 52 2 VI, 78 3 VI, 18	30 1 VI, 36 2 VII, 1 3 VII, 2	31 Part of VI, 54	32 1 Part of VI, 54 2 VI, 11 3 VI, 12 4 VI, 19
No. of compartment No. of package and contents	33 VI, 53	34 1 VI, 37 Book No 19	35 1 VI, 34 2 VI, 42 3 VI, 31 No 7 (Book)	36 1 VI, 44 2 VI, 20 3 VI, 18 4 VI, 22 5 VI, 16 6 VI, 15 7 VI, 21
No. of compartment No. of package & contents	37 1 VI, 47 2 VI, 38	38 VI, 46	39 VI, 45	40 1 VI, 48 2 VI, 50
No. of compartment No. of package and contents	41 VI, 40	42 1 VI, 56 2 VI, 30	43 1 VI, 25 2 VI, 23 3 VI, 49 4 VI, 54	44 1 VI, 28 2 VI, 27 3 VI, 24 4 VI, 26 5 VI, 44 6 VI, 29

Sept 27 1871.

No Mb. 2 vols. Wa data 1848 & 1860.

~~Catalogue of Stars & M 8, not in compartment 28~~

Contents of 29 missing.

VI, 41 : 36, 1 missing

35 packages 2, 3 & book M 7 missing

VI 40, 41 missing

Nov. 3

Contents of 29 replaced.

M. 6 & D 3, 4, 5, 6, 7 found & replaced

Sept. 4, 1873.

The case has been moved to the
Dome entrance,

Missing C 11, 13, 14 D 1, 6

Additional book in 13 (clocks & chron.)

VI 42 ~~43~~

VI 31

~~VI 42~~

VI 40

over

Sept. 4, 1873.

The case containing the papers named in the preceding catalogue has been moved from the Southwest Chamber to the Dome Entrance. The packages have been looked over today.

Books of series "D" have been removed from the case, to be boxed up with other papers relating to the Chronometric expeditions. D1 & D6 are missing.

Series "C"

17
Packages VII 4 and VI 12
were missing, but other loose
parcels were found which were
probably the same as these, or
included them. These parcels
were accordingly placed in
Compartments 26 and 32.

Packages VI 4, VI 31, and VI 40,
are missing. The first and last
were in doubt used in preparing
Vol. VI of the Annals of the Observatory.
Package VI 31 may have been sent
to Clinton.

An additional book of clock & chronometer
records made since 1866 has been
placed in compartment 18.

There is no book Hb, but two
marked Ha.

Feb. 27, 1874.

E. Equatorial records since 1866 placed in
compartments 10 and 11, vacated by removal
of Series "D."

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Note on the arrangement and
storage of Observatory records,
July 12, 1877.

Extensive changes have been made this year, under Professor Pickering's direction, in the arrangement and storage of the record books and loose papers relating to the work of the Observatory in past years. The following remarks explain the results of these changes.

I. The records considered to be of most value (chiefly in the form of books) are in the entry on the lower floor south of the Sears Tower, from which they can be very readily removed in case of fire. These records include the books of the various series from A to M, (except D, for which see pp. 3, 16, 21); series N, O, P, Q, for the contents of which see pp. 23 to 29 inclusive; the books used by W. A. Rogers in his work with the meridian circle since the autumn of 1870; the books used by C. S. Peirce in his photometric observations, about 1872; the sketches of the Sun made by L. Foucault, 1870-1874; those made by W. C. Bond 1847-1849 (published in Vol. VII of the Annals); photographs of various objects taken before 1866; seven bound

Most valuable
records in entry
south of Sears Tower.

Books of series A
to M; see pp. 2, 3, 4, 5, 6;
also 22.

Books of series N to Q.

Mer. circle work, W. A. R.
see also p. 19.

Photometry, C. S. P.

Sketches of Sun, L. F.

Do., W. C. B.

Stellar Photographs,
etc.
see also p. 21.

Chronograph sheets;
see also pp. 20, 21, 27.
Steel plates; for
a copper-plate see p. 24.
Wood-cuts.

Mer. circle work, W. A. R.;
see also p. 18

Equatorial work,
R. W. Willson.

Sheets of double
star observations
etc., C. S. P.

Notes on double
stars, C. S. P.

Papers relating to
work done before
1866; see
also pp. 20, 21.

Places in the
entry of the
books and
papers above
mentioned.

series of chronograph sheets used before 1866;
a box of steel plates (mostly those used in
Vol. III); three boxes of wood-cuts (used in
Vol. II, Part I, Vol. VII, etc.); papers used by
W. A. Rogers in his work with the meridian
circle; a package of computations by R. W.
Willson, 1874-1875, (the results of which are
almost wholly, or entirely, contained in
book N 33); observations of double stars
and of a few other objects, 1866-1872,
entered on separate sheets by C. S. Peirce or
under his direction; a package of notes
on double stars by C. S. Peirce, originally
designed for publication in the Annals
in connection with the observations of
double stars made here 1866-1872;
and a few packages of papers relating to
work done before 1866, including the
package marked "Box 44, bundle 3", described
on p. 8.

Of these books and papers, those belonging
to the work of W. A. Rogers are mainly in
the pigeon-holes and large drawers on the
south side of the entry; the remaining papers,
steel plates and wood-cuts, photographs, chronograph
sheets, and some books, in the cupboards on each
side of the drawers; the remaining books, except
the few in current use, on the shelves on the north side
of the entry.

Papers relating
to work done
before 1866;
see also p. 19.

II. The bulk of the records of date previous to 1866 and not in the form of books, together with such subsequent records as appeared of secondary importance, are in boxes in the cellar of the West Wing. These boxes are placed with a large number of others containing copies of the Annals of the Observatory. Their contents were roughly classified when put up, but no detailed record was kept of them. There are five boxes of rough pine, marked or labeled as follows:

Five boxes containing papers.

First box.

MSS. containing miscellaneous computations by W. C. Bond and others, 1820 and later.

Second box.

MSS. Miscellaneous. Before 1866.

Third box.

MSS. observations, all before 1866, of Mars and solar parallax; comets of 1858 and other years; latitude (by W. A. Rogers); meteor seen with a telescope.

Fourth box.

MSS. relating to the Orion nebula, to stellar photography, to curves of level error, etc., and to various, partly unknown, matters of seemingly small importance. All before 1866.

Fifth box;
contains some
papers of dates
later than 1866;
see p. 27, top.

Papers and chronograph sheets relating to the Bond equatorial zones; other chronograph sheets of observations before

1866; papers and chronograph sheets relating to observations made 1866-1871, none by W. A. Rogers.

Photographs
of sun
1870-76;
see foot of
p. 18 for other
photographs.

There are also several boxes of hard wood, long and narrow, (used for transport of Chronometers about 1850), in which are packed the photographs of the sun taken here 1870-1876.

Copper-plate;
for steel plates &
wood-cuts see
p. 19.

A large copper-plate, used for Vol. III of the Annals, in a rough pine box, is also kept here.

Records of
chronometric
expeditions,
including books
of series D.

III. A box containing the records of the chronometric expeditions of 1849-1851, including the books of series D, is in the Observatory cellar, northeast of the pier of the meridian circle. Here are also a box marked Admiral Davis' books, and a few other boxes none of which seem to contain any records of the Observatory.

Papers relating
to Vol. IV, Part II.

IV. Various papers selected by T. H. Safford in 1875 from the packages described pp. 6 to 12 inclusive, for use in the preparation of Vol. IV, Part II, of the Annals, are left at present where he placed them, in pigeon holes in the upper south room of the West Wing.

Note on the continuation of the numbering of the record books of the Observatory in series, July 12, 1877.

Books M
33 to 36; for
Nos 1 to 32 see
pp. 4, 5, 6.

I. Four books were added this year to series M (see pp. 4, 5, 6), and numbered respectively M 33, 34, 35, 36.

M 33 is a large book containing the catalogue of stars mentioned p. 6, near the top. It is connected with the work to be published by T. H. Safford in Vol. IV, Part II, of the *Annals*.

M 34 is a small book with a list of stars used in the work just mentioned.

M 35 is the small book marked "Solar Eclipse, April 25, '46. Portland" mentioned on p. 12.

M 36 is the book in which these notes are written.

Note made Sept. 7, 1878.

There seem to be two books marked M 5. ~~both~~ are 4^{to} half sheep. One is a collection of manuscript tables and formulae, for reduction of observations with East Transit Circle, etc.; the other is a diary by W. C. Bond, 1846-1849. The number of this diary is now changed to M 37.

M 37.

Books N
1 to 50

[Original records,
N 1, 24, N 30,
N 47, 48, 49.]

N 1 to 7

II. Fifty books relating to the equatorial observations, 1866 - 1876, were recently collected and arranged in a series marked N, with numbers from 1 to 50. {51 added December, 1880}

N 1 to 7. Small 4^{to}, stiff paper.
Original equatorial observations, 1866 June 9 to 1866 October 21.

N 8 to 16

N 8 to 16. Large 4^{to}, cloth back.
Original equatorial observations, 1866 October 22 to 1869 October 18.

N 17

N 17. Large 4^{to}, cloth back.
Original equatorial observations, 1869 October 24 to 1870 May 17, but not containing all the work. (See N 19, N 47, N 48, N 49).

N 18

N 18. Large 4^{to}, cloth back.
Original miscellaneous observations 1871 October 21 to 1872 Nov. 27. A few observations only. (See N 19, N 47, N 48, N 49).

N 19

N 19. Large stout 4^{to}, $\frac{1}{2}$ mor.
Original observations of comets, nebulae, and clusters, 1869 December 24 to 1874 September 1.

N 20

N 20. Small 8^{mo} cloth back.
Notebook used by R. W. Willson 1874 Dec. 8 to 1875 July 11. (See N 33).

N 21 and 22

N 21 and 22. Large 4^{to}, cloth backs.

Copies and reductions
of equatorial observations
N 25 to 29, N 31 to 40,
N 50

Observations of asteroids by W. A. Rogers
in 1870 and 1871.

N 23, 24, 30,

N 23, 24, 30. Large 4^{to}, cloth backs.
Records of search for asteroids by W.
A. Rogers about 1870.

N 25 to 28

N 25, 26, 27, 28. 4^{to}, stiff paper.
Reductions of observations in N 21 and N 22.

N 29

N 29. Large 4^{to}, cloth back.

(N 30 entered above)

Reductions of observations in N 21 and N 22.

N 31

N 31 (30 already mentioned). 4^{to}, cloth back.
Copy of a few observations from N 34.

N 32

N 32. Large 4^{to}, cloth back.
Reduction of some equatorial observations,
1866 - 68.

N 33

N 33. Large 4^{to}, cloth back.
Copy and reduction of N 20.

N 34 to 40

N 34 to 40 inclusive. Large 4^{to}, cloth backs.
Copy of N 1 to 13 inclusive, as far as p. 41
of N 13, with some observations made
before the beginning of the record in N 1.
The time included is 1866 April 9 to
1868 June 28.

N 41
[Catalogue of nebulae]

N 41. Small 8^{vo}, sheep. MS.
catalogue of nebulae, made about 1866,
presumably.

N 42 and 43

N 42 and 43. Large 4^{to}, cloth back.
Records of measurements, made on
photographs of eclipses, about 1870.

N 44 and 45

[Drawings &
photographs
of sun (a few
rough ones in N 17)
N 44 to 46;
see also pp. 18, 21.]

N 44 and 45. 4^{to} $\frac{1}{2}$ mor.

Translation of the notes on the
margins of L. Houvelot's drawings of
the sun, 1870-74.

N 46

N 46. Small 8^{vo}, $\frac{1}{2}$ mor.

Notes of work done in photographing
the sun, 1870-75.

N 47

N 47. Long 4^{to} scrapbook, $\frac{1}{2}$ mor.

Contains sheets of observations of double
stars 1866-1872; some original, some
probably copied; some pasted in, some
loose.

N 48

N 48. General record of equatorial
observations, 1869 Nov. 25 - 1872 October 14.
See N 17, N 18, N 19, N 21, N 22, N 47, N 49, for
other observations of this period. The
book consists of loose sheets, recently
fastened roughly together, with a cover
of brown paper.

N 49

N 49. Very small note-book ($\frac{1}{2}$ mor.)
containing measures of coincidence and
zero 1869 Dec. 17 - 1872 Feb. 16.

N 50

N 50. Large 4^{to}, cloth back. Tables
prepared about 1866 for equatorial
reductions; indices and notes to equatorial observations,
added later.

N 51

N 51. Like N 50. Returned to the Observatory by G. S.
Peirce towards the end of 1880; marked Dec. 8, 1880. It contains
some of the early reductions of the measures of double stars made
1866-72.

Series O;
observations for
clock error,
instrumental
corrections,
transit observations,
determinations of
longitude, and
miscellaneous
records.
Nos. 1 to 28.

III. Twenty-eight books, relating chiefly to observations for clock error, were collected and arranged in a series marked O, with numbers from 1 to 28.

O 1 to 9 inclusive. Large 8^{vo}, 1/2 mor. Observations for clock error 1866 May 1 to 1871 Dec. 27.

O 10. Small 8^{vo}, mor. Original notes to accompany chronographic records 1866 April to 1867 July 29. (See O15 for continuation).

O 11. Small 8^{vo}, mor. Observations to determine errors of East Transit Circle, 1866 April 17 to 1867 Sept. 17.

O 12. Small 8^{vo}, mor. Notes relating to longitude campaign of 1867, Cambridge and Washington.

O 13. 8^{vo}, red mor. Record of transit observations, probably part of those to which O 12 relates.

O 14. Small 8^{vo}, mor. Formula for reducing transit observations, drawn up about 1867.

O 15 to 18 inclusive. 8^{vo}, mor. Notes to accompany chronographic record, 1867 July 31 to 1870 July 7. Continuation of O 10.

O 19. 8^{vo}, mor. Record of errors of clocks, transit instrument, etc. 1866-1869.

O 20. 4^{to}, stiff marbled paper. Second

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computation of transits 1867-68. (Several other books forming part of the work upon these transits, the results of which are given at the end of Vol. X of the *Annals*, are in the cellar of the West Wing, with chronograph sheets and loose papers relating to the same general subject; see pp. 20 and top of 21).

O 21. Stout 4^{to}, $\frac{1}{2}$ mor. Copy of computations of longitude work of 1869, Cambridge and San Francisco.

O 22. Large 4^{to}, cloth back. Meridian Circle observations by W. A. Rogers, 1870.

O 23. Large 4^{to}, cloth back. Relates to longitude work of 1871.

O 24. 8^{vo}, mor. (flexible). Clock corrections, 1869-1872; (see O 19).

O 25. Small 4^{to}, mor. (flexible). Clock corrections, 1872-1875; (see O 19, 24).

O 26. Long 4^{to}, $\frac{1}{2}$ mor. (red). Clock corrections, 1875; (see O 19, 24, 25).

O 27. Long 4^{to}, red mor. back. Record of weather of Jerez, 1864-65, brought from Spain in 1870 by Prof. Winlock; used afterwards for miscellaneous entries at the Observatory; contains notes on Astronomical Engravings, small apparatus, equatorial observations, etc.

O 28. Stout 4^{to}, $\frac{1}{2}$ mor., black. Copies of reports on eclipses of 1869.

For continuation
of series O see
page 32.

Meteorological
record;
series P & Q.

IV. The meteorological record for 1866 and following years (including some magnetic observations made 1866 to 1868) was arranged in two series marked P and Q, series P including the original records and Q the copy where the reductions are made. It is proposed to continue these series.

Pa, Pb, Pc, are three files of wind registers, taken automatically 1867 — 1870.

P1. Small 8^{vo}, mor. Magnetic observations, made 1866 to 1868.

P2. Small 8^{vo}, cloth. Diary for 1865 with meteorological observations made in 1866.

P3. 8^{vo}, $\frac{1}{2}$ mor. Recitation record, with meteorological observations, apparently belonging to 1866.

P4. Small 4^{to} $\frac{1}{2}$ mor. Diary for 1867, containing meteorological record.

P5. Small 8^{vo}, cloth. Diary for 1868, containing meteorological record.

P6 and 7. Small 4^{to}, $\frac{1}{2}$ mor. Diaries for 1869 and 1870, with meteorological record.

P8. Small 8^{vo}, cloth. Diary for 1871, containing meteorological record.

P9 and 10. Small 4^{to}, $\frac{1}{2}$ mor. Diaries for 1872 and 1873, with meteorological record.

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P 11, 12, 13. Stout 8^{vo}, $\frac{1}{2}$ size. Meteorological
record books for 1874, 1875, and 1876.
Printed by W. C. Winlock.

P 14 is the current meteorological record book.

Q 1. Large 4^{to}, cloth back. Meteorological
observations for 1866, 1867, 1868.

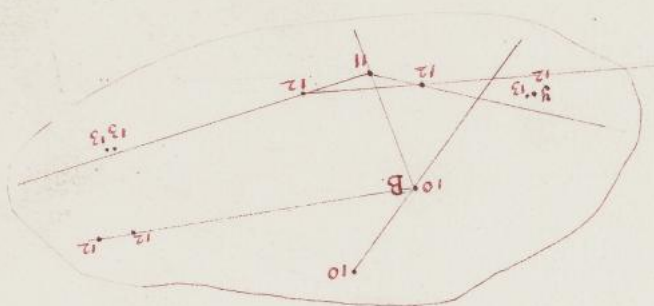
Q 2. 4^{to}, marbled paper. Meteorological
observations for 1869.

Q 3. 4^{to}, marbled paper. Meteorological
observations for 1870 and 1871.

Q 4. Large 4^{to}, $\frac{1}{2}$ size. Meteorological
observations 1872 - 1877, still in use.

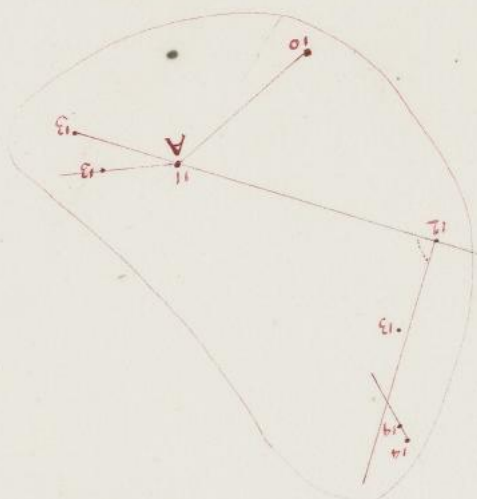
Series O;
continued from
page 27.

O 29. Small memorandum book, marbled paper,
containing observations for absolute personal equation
made in 1871 with apparatus constructed by A. Searle.



I.S.I

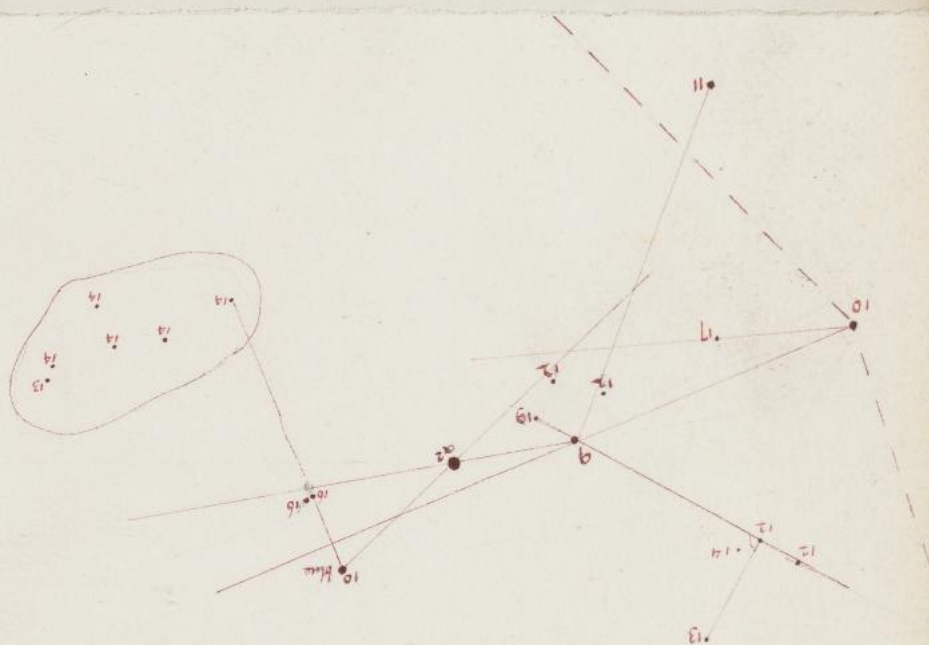
44



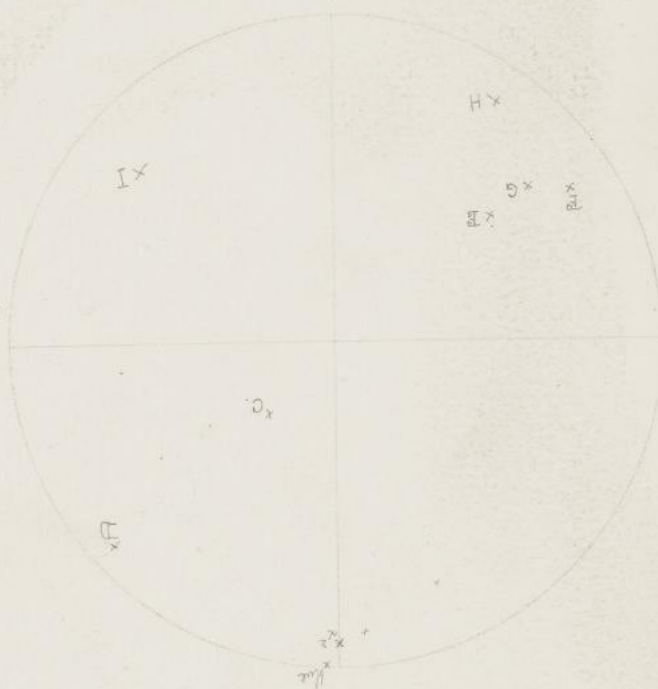
A. B.

*Smith**Smith I*

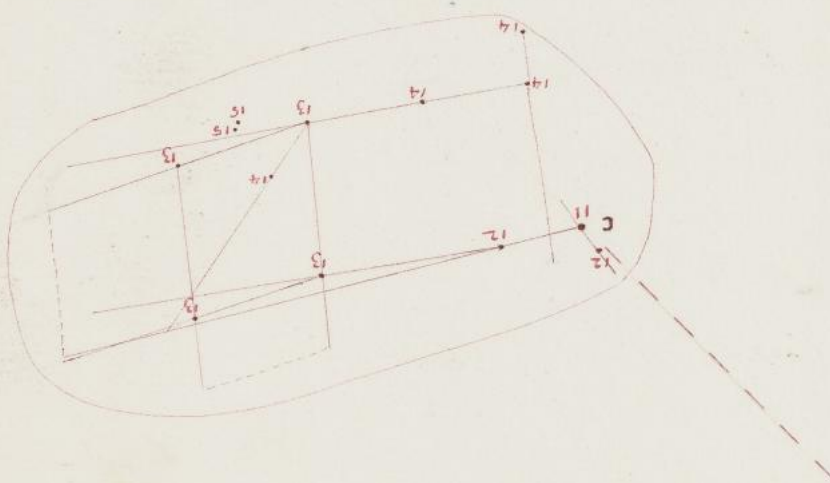
4th July 1866 10 blue in no larger blue but yellow



α 2 Capricorn



Finder I. North.

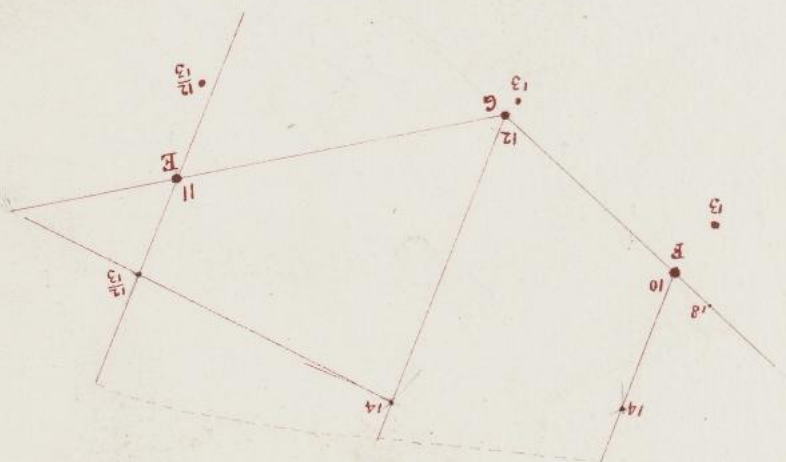


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D.







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Table of Contents.

Pages
1 to 14 incl.

Catalogue of M.S. books and papers containing records and computations relating to the work of the Observatory previous to 1866. This catalogue was drawn up in 1868, from notes and papers previously made out, and also in part from actual examination of the material; but it does not pretend to completeness. There were many records stowed away in various places about the Observatory when this catalogue was made which are not named in it. It includes practically the loose material in the upper southern room of the West Wing at the time when Professor Winlock took charge of the Observatory.

15 to 17 incl.

Notes made in 1871, 1873, and 1874, on the state of the records named in the preceding catalogue, and on changes in the arrangement of the records of the Observatory.

18 to 21 incl.

Note on the arrangement and storage of Observatory records, July 12, 1877.

22 to 29 incl.

Note on the continuation of the numbering of the record books of the Observatory in series, July 12, 1877.

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Table of Contents, continued.

Pages

42 to 60 incl.

Small star maps, made before 1866. Purpose not known.

18660000,proj., 2835