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Public DEPARTMENT.	
G.O. DATED	6-5-92
No.	306
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[Despatch Abstract.]

Indian Observatory

During the last
for the Indian Observatory Committee
report on the work
since
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July 1891 to the end
March 92 he
visited the
by India —

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FOR THE PAPER, NO.

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CHEBUNT No.

STATEMENT WITH DITTO.

ORDER, SEC. OF GOVERNMENT-A.

George W. GORDON.

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Govt. of {1892} Madras.
PUBLIC.

Issued

Recd.

Encl.

G.O., &c., 6th May 1892,
Nos. 306, 307.

MAY.

Madras Observatory.

Directing that the report for the Indian Observatories Committee on the working of the — since July 1891 to the end of March 1892 be forwarded to the Government of India.

GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

READ—the following paper :—

From C. MICHIE SMITH, Esq., Officiating Government Astronomer, to the Chief Secretary to Government, dated Madras, 23th April 1892, No. 68.

I have the honour to submit the enclosed report for the Indian Observatories Committee.

ENCLOSURE.

Report for the Indian Observatories Committee.

The last report having been brought up to July 1891, I have now the honour to submit a report on the working of the Observatory from that date to the end of March 1892.

2. *Instruments and Buildings.*—These have been kept in good condition throughout. The transit clock, which apparently had not been cleaned for nearly ten years, having begun to shew considerable irregularity in its rate, was cleaned on the 29th January 1892, and since that time it has gone well. The repairs to the domes referred to in last report were executed before the monsoon rains began, so that the telescopes were not injured in any way. The repairs were, however, only temporary, and the small dome, at least, is quite worn out and cannot long continue to serve its purpose.

3. *Observations and Time Service.*—Time observations have been carried on regularly as in former years and the time service has been maintained in an efficient state. This time service consists in firing the time gun at Fort St. George daily at noon and at 8 P.M., dropping a semaphore at the Port Office at 8 A.M. and 2 P.M., and sending daily a time roll at 4 P.M. to the Telegraph Office from which it is automatically distributed along the various telegraph circuits. In the 9 months, July 1891 to March 1892, there were 12 failures of the time gun. Of these 10 were due to bad friction tubes, one to a fault of the gunner in charge, and only one to a fault in the Observatory. The failures of the semaphore were slightly more numerous but much fewer than in former years. Hitherto all the time observations have been made by the First and Second Assistants, but during the past four months another of the assistants has gone through a course of training in the use of the transit circle and is now able to observe with accuracy. At the same time an observer sent from Rangoon has been trained for the new time Observatory there. No systematic observations have been made with the equatorials as none of the assistants can use these instruments, and the time of the Government Astronomer has been too fully occupied to permit of his undertaking any regular observations. A number of observations were, however, made on the great group of sunspots which appeared in February, but their value was greatly diminished by the want of any spectroscope by which the displacements of both the bright and dark lines, which were then so strongly marked, could be measured.

Early in this year instructions were received to make a series of comparative observations as to the relative advantages of Madras, Kodaikámal on the Palnis, and Kótagiri on the Nilgiris, as a locality for the proposed new Observatory. The Madras observations were begun at the end of January but were so greatly interfered with by clouds that they are not yet complete; the Kodaikámal observations were made between February 22nd and March 5th; and the Kótagiri observations between March 21st and April 2nd. As these observations will form the subject of a special report, it is not necessary to enter into details regarding them here.

4. *Meteorological Observations.*—These have been continued as in former years except that additional observations are now made at 10 A.M. and 4 P.M., and observations of bright sunshine are taken with a Whipple-Casella Recorder belonging to the Government Astronomer. The anemograph, which has now been in use for nearly 30 years, though thoroughly cleaned and repaired so far as can be done here, is in a far from satisfactory condition. All the gearing is very much worn and the friction is now so great that the record of direction at least is quite untrustworthy when the wind velocity falls below three miles an hour, and comparisons with small anemometers render it probable that the factor for the velocity is also very considerably increased for low velocities.

5. *Reductions and Publications.*—The fourth volume of the Madras Meridian Circle observations which was begun at the date of last report was completed early in January and has been distributed, the next volume for 1874—75—76 has been begun. It is hoped that the publication of these volumes will proceed somewhat more rapidly in future as the staff of the Observatory has been strengthened by the appointment of a graduate with considerable scientific training as a temporary assistant. The work on the general catalogue is now being begun so that it may be completed as soon as possible after the publication of the last of the preliminary volumes. A preliminary attempt has been made to estimate the error of the latitude of Madras Observatory from the observations made of circumpolar stars, but the results so far are hardly encouraging and it seems doubtful whether circumpolar stars will give a good result in so low a latitude. In addition to the astronomical volume a volume of meteorological results has been published and distributed. This volume contains the mean daily results for the 30 years, 1861—1890, with monthly and annual means. No attempt has been made in it to discuss the general character of the meteorological conditions of Madras as it seemed preferable to wait for this till after the publication of the hourly observations for the previous five years, as this would enable a continuous series of records extending over 50 years to be employed in the discussion. The publication of the results for these five years will be gone on with as rapidly as more important duties will permit. Meanwhile a good deal of work has been done towards a complete investigation of the diurnal frequency of rainfall for the years 1861—1890. The hourly records of the anemograms have been tabulated and the totals for each hour for each year have been obtained. Of the hourly magnetical observations made at the Observatory two periods of 5 years each (1841—1845 and 1856—1860) have not been published though those for the 10 intermediate years have been published. Professor R. L. Jones has, however, kindly offered to undertake the work of publishing the observations for the latter period, and this offer having been accepted by Government the work will be put in hand at once. Fortunately the observations are in such a state that the publication will not present any serious difficulties.

6. *General.*—During the past 9 months a considerable part of the Astronomer's time has had to be given to the arrangement of papers, &c., connected with the Observatory. In this he has been greatly helped by a special clerk lent by Government from the Secretariat. This clerk is now engaged under the direct supervision of the Astronomer in arranging and cataloguing the library, which contains a large number of valuable books. No catalogue at present exists and a large proportion of the books are unbound, while, unfortunately, many of the series are incomplete, especially in the earlier volumes. Permission has been obtained to have the necessary binding done at the Government Press, and considerable progress has already been

made with the work, but such a large number of books have to be bound that it will take many months before it can be completed. When the catalogue has been completed and a list of missing volumes can be prepared, an attempt will be made to complete, as far as possible, the more valuable series.

ORDER—dated 6th May 1892, No. 306, Public.

The report will be forwarded to the Government of India.

(True Extract.)

Chief Secretary.

To the Government Astronomer.

ENDORSEMENT—dated 6th May 1892, No. 307, Public.

Copy of the above, and of the report, forwarded to the Government of India, Revenue and Agricultural Department.

J. F. PRICE,
Chief Secretary.

Exd. A. Raitt.

1160

THE OBSERVATORY,

Madras, ~~25~~ April 1892.

68.

Ent 306-7865752

FROM

THE GOVERNMENT ASTRONOMER,

Madras.

TO

The Honble J. F. Price,
Chief Secretary to Govt.
Fort St George.

SIR,

I have the honor to submit
the enclosed report for the Indian
Observatories Committee.

I have the honor to be,

Sir,
Your most obedient servant,

C. Michie Smith.

Offgoat Astronomer.

Melton

28

Report for the Indian Observatory Committee.

The last report having been brought up to July 1891, I have now the honor to submit a report on the working of the Observatory from that date to the end of March 1892.

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C. Mearns Smith.
Offg Govt Astronomer

CT. No. 1160

Public (1992) Department

1/8/91 ~~206/20~~ ~~206/20~~
2/8/91 ~~206/20~~

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rec. MS
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The report will be
forwarded to the Govt
of India.

25-4-92

From
The Asst. Astronomer

To
Chief of Astronomer

Encl: h 307

51 copies
sent
1/6/92

Copy of the above
and of the report, for-
warded to the Govt. of
India, Rev. & Agri. Dept.

of 28 April 92
Recd.
Recd 29/4

Encl. one

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2/5.

Office
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J. V.
5/5

Submitting report for
the Indian Observatories
Committee.

WITH ORDER

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