

Public (189) Department.

ORDINARY MS.

G.O., No. 1342-43

DATED 21st Dec. 96

INDEXED.

[Despatch Abstract.]

Replying to letter from the Secy to Govt. in re.
the scheme for the reorganization of
the Indian Observatories proposed by
the Meteorological Reporter to the Govt.

The Pub

draft order 77

he counter-initiate.

WLS
55.29

It has been
Submitted to see
now, it has
been seen
to see on

G.O.	No.	Department.	Date.
C	776	Pul 1897	
	Cuo 801/99	(909)	

2
1342-43

$$\begin{array}{r} 2 \\ \hline 1342-43 \end{array}$$

செப்பனிருபவர் பெயர்
செப்பனிருவதற்காக எடுத்த
கொளிக்கப்பட்ட நாள்
செப்பனிரு முடிந்த நாள்
சரிபார்க்கப்பட்ட
மு. பார்வையிட்ட
வெளியிடப்பட்ட

Public (1896) Department.

CURRENT No.

From the Meteorological Department
to the Govt. of India

Order

The following telegram
will be despatched to

Mandalay
Weather
India.

Dated

Received

Registered

Enclosures

Spare copies

12 - 21 - 96

659x Your telegram
regarding this telegram
Will await your letter.

SUBJECT.

Requesting that the reply
to the proposals of the
Govt. of India for the
extension of the Hodaikhan
observatory may be approved
until the receipt of his letter

A.S. 12/11/96
The file was sent to
you yesterday.

3013
12/11/96
12/11/96

BACK PAPERS.

G.O.	No.	Department.	

FURTHER PAPERS.

G.O.	No.	Department.	Date.

C. No. 339.

Confidential letter from Mr Elliot. Refer. Rep. to S.S.

re Pension for Miss Pogson

4
1342.

Code
Class.

INDIAN

CURRENT TELEGRAPHS

No. 437

378

To

Madras

From

Mandalay

Words

Day

Hour

Minute

Instructions

To

What Dept. is this in?

From

Weather

Reply, Govt of

CHIEF SECRETARY
12 NOV. 1896

GOVERNMENT OF MADRAS

With a letter to him re his

proposal. Will await your letter. At

12.11.96

to proposals of government of

India for extension of Kodak

observatory if possible until

you receive my letter I believe

under proposal to dismiss

her without giving

her a gratuity, compensation

pension. And I wish if possible

to obtain assistance Madras

government to secure pension

for Miss Poyson on terms stated

in my proposal. Kindly reply

if my letter will reach in time

Ref. from

LX.

Sent to

LX.

At

Hrs.

Mins.

by

At

Hrs.

Mins.

by

Telegraph Master

MADRAS 12-11-96

O. P. No. 201 T-75 9 26-12-96

7
1242-83

NOTE FOR THE CHIEF SECRETARY.

Dep. (S)
27/11

It is proposed to
wire to Mr. Eliot (Met
Repr.) as follows:
re. telegram 659
twelfth instant.

When may promised
letter regarding Miss
Pogson be expected? ^{Report}

3.5.13
25/11/16

2.11.14
15/11/16

ADA 26. 11. 90

Public (1896) Department.

CURRENT No. 2087

Telegram

From the Meteorological Reports
to the G. of S.

Order

No.

Dated 28
Received 28
Registered 30 } 11-96
Enclosures -
Spare copies -

SUBJECT.

stating that he has
posted his letter re Miss
Pogson on Thursday and that
it will be received very shortly.

Wait for it.
S.D.B.
30/11/6

BACK PAPERS.

S.O.	No.	Department	Date

FURTHER BACK PAPERS.

S.O.	No.	Department	Date

Code Class.		INDIAN TELEGRAPHS		3987
Words.		From Calcutta Park St.		Monthly Number.
Days.		Hour.		Minute.
20		28		11
Madr.		SECRETARY		28 NOV. 1896
From		To		
Madr.		Calcutta		
Registered letter in question sent off on Thursday immediately after my return to Calcutta. You will receive very shortly.				
MADRAS PORT 28-11-96				

Public (1896) Department.

CURRENT No. ¹⁰/₁₃₄₂

Confidential No.

D.O.

From

Meteorological Reporter to
the Govt of India

Order

No.

Dated 26 Nov }
Received 2 Dec } 1896
Registered 2 ~ }

Enclosures

Spare copies.

SUBJECT.

Re grant of a pension to
Miss Pogson the Meteorological
Reporter to this Govt.

BACK PAPERS.

G.O.	No.	Department.	Date

FURTHER PAPERS

G.O.	No.	Department.	Date

CONFIDENTIAL. No 339

Meteorological office, India
Calcutta, the 26th November 1896.

CHIEF SECRETARY
-2 DEC. 1896
GOVERNMENT OF MADRAS

Dear Sir,

Some little time ago I was asked by the Govt of India to draw up a scheme for the future working of the Colaba observatory and for the extension of magnetic observations. I drew up a scheme purely + from the stand-point of a scientific adviser and not from that of the Meteorological Reporter to the Government of India.

In that scheme I suggested that Miss Pogson should be pensioned and that the meteorological work and superintendence of the ^{grades} Astronomical Observatory should be doubled up and placed in the hands of a half-time officer. By this arrangement I showed that there would be not merely sufficient savings to cover Miss Pogson's pension, but to contribute to pay the increased cost of working the Kodaikanal observatory under the extended arrangements proposed in my scheme.

The Government of India, I have learnt, have accepted the whole of my scheme except that of the provision of a pension to Miss Pogson, and hence, I presume, they propose to carry out the scheme and to dismiss Miss Pogson from the service without any provision.

His most obedient servant.

provision whatever. They have not consulted me a Meteorological Reporter and hence I have had no opportunity of expressing my opinion of the hardship and injustice this action would be on Miss Pogson. When it comes before me later, I shall oppose it strongly. A strong expression of opinion from the Government of Madras would ^{however} carry infinitely more weight than any representation of mine.

The circumstances of Miss Pogson's appointment first as Assistant Government Astronomer ^{Madras} and second as Meteorological Reporter are well-known to the Madras Government. She held for some time a pensionable appointment, but by the action of her father she lost that appointment and her present position is that of a non-pensionable half-time office. She has applied twice through the Govt of Madras to be granted the status of a whole-time officer as has been refused. The Government of Madras has made at least two increments to her pay by local allowances partly I believe as they felt the hardship of her case.

She asked me several times to endeavour to arrange to get a pension for her before I retired, and hence as the present scheme afforded an opportunity, and probably the only opportunity I shall have, I included it as a part of the scheme, after having consulted her and learnt she was willing. I should

She

12/12/92
She has served Government now for about 25 years and has I believe done her work to the satisfaction of both the Governments of Madras and of India. ~~But~~ ^{She has} I believe, ~~and nothing~~ and her dismissal would probably consign her to abject poverty. It would, I feel, be a great hardship to dismiss her under the circumstances in order to effect a petty saving to be utilized by the Government of India for the expansion of a scientific observatory.

It is probable that a strong protest from the Government of Madras more especially if it was backed up by a hint that they would strongly object to her local allowance for rainfall work &c. to be utilized for the Kodakanal Observatory - might induce the Government of India to reconsider the matter and to accord her a moderate pension.

I trust in consideration of Miss Pogson's service and peculiar circumstances that the Govt of Madras will protest vigorously and if possible suggest that the scheme should be reconsidered in view of their protest.

I hope you will excuse my writing a longish letter, but I shall be deeply obliged if you can and will resist in any way ^{only} preventing what ^{is regarded} as a great hardship and injustice. She is undoubtedly not entitled to pension by the letter of the Regulations, but on the other hand if she is to be suddenly dismissed the service after about 25 years' service she appears to be entitled by all ordinary considerations

consideration to compensation. in some form, ^{rather} and
probably the best of Madras will be ^{to get in any way they can} placed
as to some ^{the} consideration for an officer, who
has served them for many years

Yours very faithfully

John Hook

Chief Rep to the

Govt of India

?
The Chief Secretary
Govt of Madras

1392
1322

CONFIDENTIAL.

Public (1896) Department.

Encl. No. 2250 W. 1906
Referred to the
Government
Astronomer for
favour of early
remarks.

CURRENT No.

14
1342

Order Attn: Mr. A. C. Secy.
From Govt. of India
(Rev & Agr)

JTB
29.10.96

30.10.96

No. 2541

For Mr. George.
3rd November 1896 }

TO BE RETURNED
WITH REPLY.

Dated 19th Oct 96
Received 27th —
Registered 28th —
Enclosures 1
Spare copies. 15

SUBJECT.

Forwarding copy of a
letter from the Metro-
logical Reporter to
the Govt of India pro-
posing a scheme for
the reorganization of
the Indian Observatories

G.O.	No.	Department.	Date.
	1097	Pub	5-10-96
	7234	"	30-8-95
	309	"	25-6-95
	1	"	4-1-94
	940-1	"	21-4-93

FURTHER PAPERS.

G.O.	No.	Department.	Date.

No. 410-S.

FROM
THE METEOROLOGICAL REPORTER
TO THE GOVERNMENT OF INDIA,

To
THE SECRETARY TO THE GOVERN-
MENT OF INDIA, REVENUE
AND AGRICULTURAL DEPART-
MENT,
SIMLA.



Simla, the 29th May 1896.

SIR,

I have the honour in reply to your No. ³²²₁₁₋₃ dated 17th February 1896, to submit the following proposals for the improvement of the work of astronomical and magnetical observation in India.

2. There are at present only two observatories at which scientific observations of the highest class in these two branches are carried out, *vis.*—

- (1) The Madras Astronomical Observatory.
- (2) The Bombay or Colaba Magnetical and Meteorological Observatory.

3. *Madras Observatory.*—The Madras Astronomical Observatory was established in 1792, or over a hundred years ago. The chief work of the observatory hitherto has been astronomical. In addition to this, the following subsidiary work has been carried out more or less systematically:—

- a. Time determination and giving time signals both locally and to every telegraph office in India and Burma.
- b. Meteorological observations (by eye at intervals of a few hours).
- c. Magnetical observations for a period of some 25 years between 1840 and 1865.

Large additions were made to the instrumental equipment of the observatory in 1859-66 to bring it up to the then level of astronomical observatories of Europe.

Mr. Pogson was appointed Astronomer in 1861, and he recorded during the next 30 years various series of observations of more or less importance. The work of

2
preparing the results for publication was for various reasons postponed until 1884, when special arrangements were made in accordance with which Mr. Pogson was to devote himself chiefly to their preparation for the press. At his death in 1892 only a small portion had been published and issued. Mr. Michie Smith was appointed his successor on the understanding that his primary duty was to continue the publication of the results of these Madras astronomical observations.

4. The following is a brief statement of the various important series of observations which were awaiting publication in the year 1884:—

(1) Meteorological and magnetical observations.—

- a. Meteorological observations made at the Madras Observatory between the years 1861 and 1890.
- b. Hourly magnetical observations made at the Madras Observatory between the years 1856 and 1860.
- c. Hourly meteorological observations made at the Madras Observatory between the years 1856 and 1860.

(2) Astronomical observations made by Mr. Pogson—

- a. Telegraphic determination of the difference of longitude between Madras and eight other stations.
- b. Results of 5,761 observations made with the new meridian circle in the years 1862, 1863 and 1864.
- c. Results of 7,651 observations made with the meridian circle in the years 1865, 1866 and 1867.
- d. Results of 5,867 observations made with the meridian circle in 1868, 1869 and 1870.
- e. Results of 5,603 observations made with the meridian circle in 1871, 1872 and 1873.
- f. Results of 4,639 observations made with the meridian circle in 1874, 1875 and 1876.
- g. Results of 9,637 observations made with the meridian circle in 1877, 1878 and 1879.
- h. Results of 9,267 observations made with the meridian circle in 1880, 1881 and 1882.

1362
3
i. Results of 4,052 observations made with the meridian circle in 1883 to 1887.

j. Catalogue of over 5,000 stars for the epoch 1875 from observations made with the meridian circle between the years 1862 and 1887.

k. Observations of minor planets, comets, new variable stars and nebulae, furnishing 989 positions of 73 minor planets at 260 oppositions, 75 of 10 comets, those of such variable stars as are not observable with the meridian circle, and of two new nebulae in Ara and Phoenix.

l. Observations of the transit of Mercury, November 12th, 1861; transit of Venus, December 8th, 1874; six eclipses of the sun; seven eclipses of the moon; five occultations of planets, and numerous star occultations between 1862 and 1880. Phenomena of Jupiter's satellites on 193 occasions between 1862 and 1880. Measures of Alpha Centauri, Gamma Virginis, and a few other double stars. Spectroscopic measures of Gamma Argus.

m. Determination of the constant of solar parallax by means of 212 differential measurements of the planet Mars, in Right Ascension, from adjacent comparison stars, made with the equatorials, on 104 evenings near the rising and 108 mornings near the setting of the planet, at its eight oppositions in the years 1862, 1864, 1869, 1871, 1873, 1875, 1877 and 1879.

(3) Astronomical observations of previous astronomers—

(a) A quarto volume of about 300 pages, containing certain observations made prior to 1860. They comprise 1,331 of the sun, 345 of the moon, 1,680 of the principal planets, 333 of minor planets, and 25 of Donati's comet of 1858. Also a long list of occultations of planets and stars, and of the eclipses of Jupiter's satellites.

(b) Results of observations made with the transit instrument and the mural circle in 1853, 1854

1855 and 1856, with the deduced catalogues for each year.

(c) Results of observations made with the transit instrument and the mural circle in 1857, 1858 and 1859, with the deduced catalogues for each year.

(d) Catalogue of about 2,200 stars, for the epoch 1855, from observations made with the transit instrument and mural circle between the years 1853 and 1858.

5. Of these the following have been published up to the present time :—

(A) By Mr. Peelson, the following, designated as 2 (a), 2 (b), 2 (c), and 2 (d) in the previous list,—

2 (a) Telegraphic determination of the differences of longitude between Madras and eight other stations.

2 (b) Results of 5,761 observations made with the meridian circle in the years 1862, 1863 and 1864.

2 (c) Results of 7,651 observations made with the meridian circle in the years 1865-67.

2 (d) Results of 5,867 observations made with the meridian circle in the years 1868-70.

(B) By Mr. Michie Smith, the following, marked as 1 (a), 1 (c), 2 (e), 2 (f), 2 (g), 2 (h), and 2 (i) in the preceding lists—

1 (a) Meteorological observations made at the Madras Observatory between the years 1861 and 1890.

1 (c) Hourly meteorological observations made at the Madras Observatory between the years 1856 and 1860.

2 (e) Results of 5,603 observations made with the meridian circle in the years 1871-73.

2 (f) Results of 4,639 observations made with the meridian circle in the years 1874-76.

2 (g) Results of 9,627 observations made with the meridian circle in the years 1877-79.

2 (h) Results of 9,267 observations made with the meridian circle in the years 1880-82.

2 (i) Results of 4,052 observations made with the meridian circle in the years 1883-87.

6. And the following are in preparation by Mr. Michie Smith, and will be shortly issued :—

1 (b) Hourly magnetical observations made at the Madras Observatory in the years 1856-60.

2 (j) Catalogue of over 5,000 stars for the epoch 1875, from observations made with the meridian circle during the years 1862 to 1887.

7. There hence remain the series marked 2 (k), 2 (l), 2 (m) and 3 (a), 3 (b), 3 (c), and 3 (d) to be dealt with, and of these it is very doubtful whether it would be desirable to publish the observations 3 (a, b, c, and d), as before doing so it would be necessary to take up the question of the errors, systematic, instrumental, &c., in these old observations.

This would require much time and would probably lead to the conclusion that the observations and their results were not worth the labour their final preparation for publication might entail.

8. Mr. Michie Smith during his recent visit to England consulted the Observatories Committee and astronomical authorities as to the desirability of publishing these observations, and has ascertained their views in the matter. It is probable that a portion of the observations included in 2 (k), 2 (l), and 2 (m) may be of value for certain special astronomical investigations, and he now proposes to have two or three copies of these observations made by hand for loan to any astronomer desiring them for his investigations. They will thus be available for the use of the few specialists who are likely to require them and the heavy cost of their publication will thus be avoided.

9. It is almost certain that Mr. Michie Smith will be able to prepare and issue all the series of observations which it is desirable to print for the information of astronomers before the completion of the Kodaikanal Observatory, more especially if its progress continues at the present slow rate. He also proposes to follow up the publication of the Madras meteorological observations by a discussion of the more important features of the climatology of Madras. This will probably be completed before the end of the year 1897.

10. Mr. Michie Smith, shortly after he took over charge of the observatory, recorded his opinion of its instrumental equipment in the following terms :—

"During the 33 years which have elapsed since the instruments now in use in the

observatory were obtained, astronomy has advanced so rapidly along certain lines that the instrumental equipment is again found very defective. The transit circle is still a thoroughly satisfactory instrument, but its value might be considerably increased by the addition of modern appliances, while for the 'new astronomy,' 'photography,' and 'spectroscopy' there is practically no provision (*vide* Annual Report for 1891, dated 23rd May 1892)."

These remarks indicate that the astronomical equipment at Madras is fairly complete and satisfactory and can be brought up to modern requirements at a comparatively small cost.

11. *Bombay or Colaba Observatory.*—The Bombay Magnetical and Meteorological Observatory was established about 50 years ago. Its scheme of operations was intended to include meteorological, magnetical, tidal and astronomical observations. The work was apparently not carried out satisfactorily, as it was found necessary in 1864 to appoint a committee of enquiry to report on the condition of the observatory and the changes necessary to place it on a proper footing.

12. The Committee presented their report in 1865. The report states that the work of the observatory at that time might be divided into

- (1) Astronomical observation.
- (2) Tidal observation.
- (3) Magnetical observation.
- (4) Meteorological observation.

The first was restricted to the determination and communication of correct local time to the Bombay port and shipping. The astronomical equipment consisted at that time (as at present) of one telescope, an old transit instrument, and was hence insufficient to enable astronomical work (other than that of time determination) to be carried out.

The work of tidal observation at Bombay was discontinued shortly afterwards, but was ultimately resumed by the Survey of India.

The magnetical and meteorological instruments were found to be of old patterns and makers, and in a more or less unsatisfactory state.

The Committee also pointed out that the position of the observatory was far from satisfactory. It was quite close to the lines of the Royal Artillery and the firing of the

guns from the various batteries seriously interfered with the working of the delicate magnetical instruments. The committee recommended that the observatory should be removed to a suitable site, and suggested Cotangi Hill near Parel. No action was taken on the recommendation and the observatory occupies the same site at the present time as it did 50 years ago. The objection urged by the committee of the effect of the occasional firing of the heavy guns still holds good, but it would probably be very undesirable to remove the observatory after its long series of observations to a new site and thus introduce a break and a discontinuity into a most valuable series of observations.

13. The chief results of the report of the committee were the appointment of Mr. Charles Chambers as Director and the supply of a complete set of self-recording magnetical and meteorological instruments of the Kew pattern. These instruments were received and brought into use during the period 1870-72, and a continuous series of observations have hence been made with them for a period of about 25 years.

14. It may be noted that the Committee suggested, in accordance with the recommendations and instructions for magnetical observations drawn up by a joint committee of the Royal Society and British Association, that the work of the observatory should include a magnetic survey of the neighbouring districts, the chief object of which would be to ascertain to what extent Bombay represented in its magnetic conditions the surrounding area, and to what extent its observations were affected by purely local conditions. This, so far as I am able to ascertain, has not yet been done, and no steps were taken by Mr. Chambers to carry out this recommendation.

15. Mr. Charles Chambers, F. R. S., was Director of the observatory from 1865 to the time of his death in 1896, or for nearly 31 years.

Annual reports were published during the whole of this period giving a full summary of the magnetical and meteorological observations of each year. The report for the year 1894 was issued in 1895 and that for the year 1895 is ready for issue.

16. Mr. Chambers published a large number of valuable scientific memoirs based on the magnetical and meteorological observations recorded at Bombay. The following are the more important, published at the cost or under the authority of the Government of Bombay:—

- (1) On the solar variations of Magnetic Declination at Bombay. Phil. Trans., 1869, pages 363-386.

1342

- (2) The absolute direction and intensity of the Earth's Magnetic Force at Bombay. Phil. Trans., 1872, pages 75 to 90.
- (3) The Normal Winds of Bombay, given as Appendix I to Bombay Magnetical and Meteorological Observations, 1865-70, pages 199-212. Bombay, 1872.
- (4) On the lunar variations of Magnetic Declination at Bombay, given as Appendix III to Bombay Magnetical and Meteorological Observations, 1865-70, pages 235-242. Bombay, 1872.
- (5) Meteorology of the Bombay Presidency, 1 vol. 4to, pages 1 to 295, and 1 portfolio of 82 diagrams, &c. Eyre and Spottiswoode, London, 1878.
- (6) Notes on a comparison of two unifilar magnetometers, and on magnetic induction as affecting observations of the intensity of the Horizontal Magnetic Force, given as an appendix to Bombay Magnetical and Meteorological Observations, 1871-78, pages (53) to (60). Bombay, 1881.
- (7) Bombay Magnetical and Meteorological Observations, 1864 to 1894.
- (8) Introductions and Compilations, 14 vols. 4to. Bombay, 1867 to 1895.
- (9) Appendices to Bombay Magnetical and Meteorological Observations, 1879-82, 1 vol. 4to—*viz.*

Appendix I.—History of the set of magnetographs established at the Colaba Observatory, with a new theory of the Vertical Force Magnetometer, pages [1] to [83].

Appendix II.—On the solar and lunar variations of Magnetic Declination at Bombay in the years 1846 to 1872, pages [84] to [137].

Appendix III.—On the solar and lunar variations of the Earth's Magnetic Force at Bombay in the years 1847 to 1872, pages [138] to [193].

Appendix IV.—The solar diurnal variations of Declination, Horizontal Force, and Vertical Force at Bombay, as derived from the registrations of the Colaba Magnetographs, pages [194] to [235].

Appendix V.—Influence of height above or below the ground level upon the diurnal variations of Declination and Horizontal Force, pages [236] to [241].

(10) Diurnal variation of Declination and of Horizontal Force for each month and year of the years 1865 to 1872, deduced from the readings of Grubb's Declination Magnetometer and of Grubb's Horizontal Force Magnetometer, given as an appendix to Bombay Magnetical and Meteorological Observations, 1884, pages [1] to [16].

(11) Appendices to Bombay Magnetical and Meteorological Observations, 1886—*viz.*

Appendix I.—On the luni-solar variations of Magnetic Declination and Horizontal Force at Bombay, and of Declination at Trevandrum.

Appendix II.—Luni-solar variation of Magnetic Declination at Batavia, and references to later extensions of the investigations of the preceding paper.

Appendix III.—On the influence of temperature upon the Bifilar Magnetometer.

Appendix IV.—Effect of heating the magnetograph room on the scale-co-efficient of the Vertical Force Magnetograph.

Appendix V.—Temperature coefficient of the Vertical Force Magnetograph.

Appendix VI.—Temperature coefficient of the Horizontal Force Magnetograph.

(12) Appendices to Bombay Magnetical and Meteorological Observations, 1888-89, 1 volume 4 to—*viz.*

Appendix I.—History of the set of Magnetographs established at the Colaba Observatory, Bombay.

Appendix II.—The solar diurnal variation of Declination, Horizontal Force and Vertical Force at Bombay, as derived from the registrations of the Colaba Magnetographs.

(13) Appendix to Bombay Magnetical and Meteorological Observations, 1890, containing a memoir on the Absolute Magnetic Declination and Horizontal Force at Bombay and their secular and annual variations.

(14) Appendix to Bombay Magnetical and Meteorological Observations, 1891-92, 2

volume 4to, containing a memoir on the secular variation of Magnetic Dip at Bombay during the years 1867 to 1892.

In addition, the following papers have been published in the transactions of certain scientific societies.

(15) "On the variation of the daily range of atmospheric temperature," and "On the variation of the daily range of the magnetic declination at Bombay." Roy. Soc. Proc. Vol. XXXIV, pages 231-264.

(16) Examples of the application of a modified form of Sabine's method of reduction of hourly observations of Magnetic Declination and Horizontal Force to a single quarter's registrations of the Magnetographs at the Colaba Observatory, Bombay, to accompany the second report of the Committee appointed for the purpose of considering the best means of comparing and reducing magnetic observations. Published in the British Association Report for 1886.

(17) Luni-solar variation of the vertical magnetic force at Bombay for the single quarter, November 1875 to January 1876, to accompany the third report of the Committee appointed for the purpose of considering the best means of comparing and reducing magnetic observations. Published in the British Association Report for 1887.

(18) On the mathematical expression of observations of complex periodical phenomena, and on planetary influence on the Earth's Magnetism. Phil. Trans., Vol. 165, pages 361-402 (by C. and F. Chambers).

17. The magnetical observations recorded at Colaba during the past 30 years have been more or less fully dealt with by Mr. Chambers in the various published papers enumerated above.

The present Director, Mr. Moos, has informed me that he ascertained from enquiries he made in the office of the Colaba Observatory that Mr. Chambers had no discussion in hand at the time of his death. The last memoir he prepared was in 1892, "On the variation of the dip at Bombay," and numbered (14) above.

18. The hourly meteorological observations for the years 1872-95 derived from measurements of the photographic traces of the barograph and thermograph have been fully tabulated and await discussion. It would be very desirable that they should be taken up shortly and the meteorology of Bombay be fully worked out from this long series of observations.

19. By an arrangement with the Port Trust the observatory drops two time-balls, one at noon at the Port Trust office and the other at 1 P.M. at Prince's Dock, giving mean local time to the port and shipping.

The following history of the arrangements for the communication of mean local time has been sent to me by the Director, Mr. Moos.

"From the very first this observatory had the charge of the time communication to the harbour. The ball tower was originally located at the observatory, but in 1865 the Harbour and Pilotage Board, under whose direction the Time Communication office was placed, considered that the site of the ball tower was unsuitable and suggested the removal of the ball to the Castle. In January 1867, signalling was commenced at the new site and the ball-dropping at this observatory was discontinued. In 1873 the Port Trust was formed and the Harbour and Pilotage Board ceased to exist—the rights and duties of the latter vesting in the Port Trustees. Under this arrangement the Time Communication office was placed under the Port Trustees and Mr. Chambers first began to draw his Rs. 150 for superintending this work from the Port Trustees in 1873. This arrangement has been in force up to now."

The previous paragraphs give a statement of the work carried out hitherto at the Madras and Bombay Observatories.

20. *Defects in programme of work of Indian scientific observatories.*—The programme of work as stated above is defective in two very important respects:—

(1) There is no provision, instrumental or observational, at Madras for the classes of observations included under the terms "New astronomy," "Astronomical physics," and "Solar physics."

(2) There is no provision at the Bombay Observatory for the determination of the more important features of the intensity and direction of the force due to terrestrial magnetism in different parts of India, or in other words for a magnetic survey of India.

21. *Proposed extension of work.*—With respect to the first defect, the Secretary of State has fully recognized the desirability of India co-operating in the important class of observations comprised under the subject of "Solar physics," and has sanctioned the erection of a suitable observatory at Kodaikanal on the Palni hills

in Southern India, where the climatic and atmospheric conditions are believed to be specially favourable to this class of observation, and has also sanctioned the necessary instrumental equipment and staff.

22. It appears to be remarkable that the Government of India, which has for many years maintained the large and important Trigonometrical and Geological Surveys of India, should have taken no steps towards the execution of a magnetic survey of India. The importance from a practical standpoint of as accurate a knowledge as possible of the magnetic elements, more especially declination, and of their variations, periodic and secular, and the determination of their causes, is almost self-evident. A knowledge of the actual magnetic conditions of as large an area of the earth's surface as possible is required not merely for practical purposes, but for testing the various theories advanced to account for the phenomena of terrestrial magnetism. Up to the present time such surveys have been made of the greater part of Europe and a portion of North America and Japan. I believe a survey of a large tropical area like India is greatly desired by scientists in Europe. Such a magnetic survey was attempted by the brothers Schlagenweit in the years 1854-58, the results of which were published in their work, "Results of a Scientific Mission to India and High Asia". The brothers Schlagenweit received a considerable grant-in-aid from the East India Company and assistance in various ways from the Company's officers. The mission was, however, throughout a private and not a Government one. I have not met with any statement as to the value of that survey and have no copy of their book, and am hence unable to offer any opinion on the scientific value of their results. As it is, however, nearly forty years since the survey was made, it is almost certain that a general magnetic survey of India would be of much scientific and practical value and would furnish results that would be of great use in the discussion of the distribution of the earth's magnetism and its secular variations, and it is also possible that a comparison of the results of such a survey with those of the Schlagenweit mission might lead to interesting results respecting the secular variations of the earth's magnetism.

23. The Observatories Committee should be consulted on this point. I may, however, for the information of the Government of India, state what has been done in the British Isles in the matter. In all, three magnetic surveys have been made. The

first was made in 1834-38, the second in 1857-62, and the third in 1884-88. The last of these surveys was made because the earlier surveys were not satisfactory with regard to the distribution and number of the stations and in order that the secular changes might be redetermined. It was based on observations recorded at 250 stations. The memoir of Rücker and Thorpe based on this survey is a most valuable contribution to the knowledge of terrestrial magnetism. It contains charts showing terrestrial isomagnetic lines in which all the disturbances or distortions due to local magnetism are neglected, and also charts, in which the true lines are given showing all disturbances, local and regional. A very interesting feature of the investigation is the relation between the magnetic and geological constitution of the magnetic districts of the British Isles. It is hence probable that a magnetic survey of India might furnish results of great interest to the Geological Survey Department, and it would hence be advisable to consult that Department on the subject.

24. In a recent article in a scientific paper dealing with the great importance of magnetic observations it is stated—"We have now heavily-armed protected steel cruisers steaming over the whole world with less change of deviation of the compass than the wood-built *Erebus* and *Terror* of Ross's Antarctic Expedition; and this remarkable result could not have been effected if the terrestrial magnetic observer had not done his work. Still much more remains to be done before sufficient is known about the secular changes of terrestrial magnetism to enable magnetic charts to be provided to navigators for years in advance, just as the tides can now be tabulated for use." Perhaps the Admiralty or Board of Trade might be asked if the magnetic survey proposed is desirable from the standpoint indicated in these remarks.

25. *Future programme of work.*—If the extensions of work suggested above be adopted, the complete programme of the work of the scientific observatories under the Government of India would hence be—

- (1) Astronomical observation and discussion, including
 - (a) Meridian and extra-meridian observations,
 - (b) Spectroscopic observations,
 - (c) Solar photography;
 - (d) Stellar Photography.

- (2) Magnetical, including
 - (a) Special and accurate registration of all magnetic changes at Bombay,
 - (b) General magnetic survey of India;
- (3) The determination of time signals;
- (4) Meteorological (special) by autographic methods, including atmospheric electricity.

If the whole of this programme is to be carried out economically and at the same time effectively, it will be desirable to redistribute and modify the work of the observatories at Madras and Bombay to some extent, and to extend the field of work as hitherto proposed for Kodaikanal and sanctioned by the Secretary of State.

26. *Necessary changes of staff to carry out proposed programme.*—The work of scientific observatories, such as those of Bombay and Madras, usually includes—

- (1) Actual observation and the reduction and tabulation of the observations for permanent record and discussion, and hence demands a competent staff of observers.
- (2) Immediate superintendence and control of the work of observation by an officer thoroughly trained in the mechanical and technical knowledge and practice of the special class or classes of instruments in use at the observatory.
- (3) The general direction of the work of observation and the discussion and publication of the observations without unnecessary delay, so that the results of the work may be available to all scientific workers, and hence contribute to the general progress of knowledge in that branch of science.

27. The observing, computing, and clerical staff at the Bombay and also at the Madras Observatory consists solely of natives of India who carry out the duties named in paragraph (1) above. The second and third duties named above at each of these observatories have been hitherto performed by two European scientists, one for each observatory. There is, however, no necessary connection between the duties of (2) and those of (3). The proper performance of the latter—*i.e.*, (3)—usually requires an officer of much higher

scientific attainments than of those numbered (2). It would evidently be an advantage and an economy, if there be sufficient work of the highest class to occupy an officer fully, to assign the duties of (2) to a half-time officer of the necessary scientific attainments. The professors of physical science at the larger colleges in Madras and Bombay would, for example, be fully qualified to act as Superintendents of the observatories at these two places.

28. If this change were approved and adopted it would still be necessary to have European experts whose chief work would be to superintend generally the work of observation, to carry out the necessary changes in the methods and in the instruments so as to maintain the work of observation at the level demanded by the advances, theoretical and instrumental, in their branch of science, and finally to discuss the observations. It would evidently be advisable to place such officers in a climate most suited for hard and effective brain-work, and in immediate connection with a large observatory and a scientific library, &c., and this could be most satisfactorily obtained by locating them at Kodaikanal.

29. The previous remarks indicate that it would be desirable in future to place the observatories at Madras and Bombay under the charge of half-time officers. The Superintendents would have free quarters in the observatories, and would be in charge of the actual work of observation and see that the observers carried out their work fully and satisfactorily. Each of these observatories would be placed under the general charge of a Director who would be stationed at Kodaikanal, and who would occasionally visit the observatory under his control and direct and modify the work in accordance with the general scheme of observations for which the observatory is maintained by the Government and on the lines laid down and suggestions made by the Observatories Committee.

30. These changes if carried out would locate the two scientific officers (hitherto stationed at Madras and Bombay) at Kodaikanal. One of these officers would direct and carry on the work of solar physics observations (*i.e.*, spectroscopic observations and solar photography) at Kodaikanal, and the other would carry out the magnetic survey of India. It would be necessary to provide each of these officers with a competent staff to carry on the observational work assigned to him fully and to assist in the tabulation and computation of the data required for their scientific discussions and investigations.

31. The work of the extended Kodaikanal Observatory as now proposed would hence include:—

- (1) Solar physics observations,
- (2) Magnetical observations,
- (3) Meteorological observations,

and the full scientific discussion of the astronomical and magnetical observations taken at the observatories under the control of the two Directors.

32. The question of the extension of the work of astronomical observation and of the locality at which it should be carried out will almost certainly require consideration in the course of a few years. There are undoubtedly certain special classes of astronomical observation which can only be carried out by or under the immediate superintendence of a trained astronomer, and which also demand the very highest and most satisfactory atmospheric conditions. All this part of the work of astronomical observation should undoubtedly be performed at Kodaikanal and not at Madras. It would probably, however, not be expedient to commence any astronomical work on the large scale at either Madras or Kodaikanal for some years yet, and in fact until the Solar Physics Observatory has been satisfactorily established on a permanent footing. The question of the desirability of appointing a third officer, an astronomer, might then be taken up. The astronomical work at Madras during the next four years would, if this suggestion be adopted, be very limited in amount.

33. It may be noted here that I consider it absolutely essential the Colaba Observatory should be maintained as hitherto, and that the magnetic and meteorological observations should be recorded to the same extent and by the same methods as hitherto. In fact, according to these proposals, there would be no decrease in the amount of the observational work at Colaba, or in the tabulation of the recorded observations. The only changes would be the substitution of a resident Superintendent under the charge of a Director at Kodaikanal for a resident Director. Similarly there would be no change in the work of time determination or of meteorological observation at Madras. But, as at Bombay, the work would be carried out under the supervision of a resident Superintendent subject to the general control of a Director at Kodaikanal instead of under the supervision of a resident Astronomer.

34. Bearing these facts in mind, the following is the arrangement of work now

1342
17
proposed for the three scientific observatories at Bombay, Madras and Kodaikanal:—

- (1) *Bombay*.—Magnetical and meteorological observations as hitherto (and with any further improvements and extensions suggested by the new Director and approved by the Observatories Committee) and the working of the local time ball dropping arrangements. The observatory to be under the immediate charge of a Superintendent and under the general control of the Director of the Magnetic Survey of India (stationed at Kodaikanal).
- (2) *Madras*.—Meteorological observations as at present, the working of the local time ball service arrangements, the distribution of time signals throughout India, and the preparation and issue of the Madras Daily Weather Report. The Madras Observatory to be placed under the immediate charge of a Superintendent and under the general charge of the Director, Solar Physics Observatory, Kodaikanal.
- (3) *Kodaikanal*.—Solar physics observations and discussion of these observations and any special astronomical observations it may be considered desirable to take at Madras by the Director and staff of the Solar Physics Observatory; the magnetic survey of India and meteorological observations by the Director of the Magnetic Survey of India, and a special staff of observers and assistants to carry on the work of taking, recording, and discussing the various series of magnetical observations made at Kodaikanal, Bombay, or on tour of survey.

35. *Collateral minor advantages of proposed changes*.—It may be pointed out that there would be several minor collateral advantages derived from the location of the two Directors of the scientific observatories in India at Kodaikanal.

36. The observatories at Bombay and Madras have undoubtedly done admirable work during the past, and the Provincial Governments have taken great interest in their progress and contributed very materially towards their efficiency. These institutions have, however, been from the first Imperial rather than Provincial institutions, and are recognised as such by foreign countries and scientists in England. It would be

desirable to take the present opportunity of placing them under the immediate control of the Government of India, and thus converting them into Imperial institutions in name as well as in fact. The Madras Government has agreed fully to the transfer of the Madras Observatory (*vide* Government of Madras, letter No. 941, Public, of the 21st November 1893), and the Bombay Government is also prepared to transfer the Colaba Observatory. It may be pointed out that if the changes proposed for the Colaba Observatory be approved and sanctioned it will be absolutely necessary to transfer the Colaba Observatory to the Government of India. It would be impossible that the Directors of the Imperial Observatory at Kodaikanal and working under the immediate orders of the Government of India should direct and control observatories at Madras or Bombay subject to the orders of the Local Governments.

37. The combination of the India scientific observatories under the Government of India will enable them to be interlinked and treated as components of a general system, each dealing with special features of the same general subject of investigation. The subjects of their investigations are cognate, and it is evident that, in order to make the whole work as effective as possible, they should work in sympathy and co-operation with each other and under the same ultimate control.

38. This is especially desirable in India, where scientific workers are isolated and have none of that personal intercourse with co-workers which forms so valuable a feature of scientific life in England. It may also be pointed out that co-operation of this kind would undoubtedly improve the character of the scientific work at each observatory. There are reasons for believing there may be relations between sun-spots and other features of the sun and the magnetism of the earth. Astronomical physics (including solar physics) again is naturally regarded as a part of astronomy. It would hence appear to be desirable that the various observatories carrying on these different classes or kinds of observations should not only co-operate, but that they should, in India at least, be located, so far as possible, near each other, so that the results of one class of observation might be immediately available for guidance and information in another branch. Progress in one department under such conditions would almost certainly suggest fields for investigation in another department, which, if followed out, would

undoubtedly contribute to the progress of knowledge in both departments.

39. The location of both Directors at Kodaikanal would enable leave arrangements to be made with little difficulty, as either Director would be able to superintend generally the office and observational work of the other Director when the latter went on leave. Hitherto it has been practically impossible to make satisfactory arrangements for the absence of the Madras Astronomer on furlough; and I believe it was in some part due to Mr. Pogson's not being able to take leave during the latter part of his service that he broke down in health completely before he could retire.

40. This arrangement would place both Directors in a suitable climate for hard intellectual work, and hence probably enable them to do better and more sustained work than in the enervating climates of Bombay and Madras. And as the chief value of these officers lies in their scientific investigations, it appears to be the most prudent and economical plan to place them in the best climate compatible with the full performance of their scientific and directorial duties in India.

41. It may also be pointed out that it is extremely desirable the Directors should be able to take frequent leave to Europe and ascertain by personal investigation the directions of progress, instrumental and otherwise, in the various subjects in which they are interested. They should hence in my opinion be encouraged to take occasional leave at fairly regular intervals, and the arrangements at the Kodaikanal Observatory should be such as to enable this to be done without in any way interfering with the current observational work of the observatory.

42. *Amalgamation of Madras Observatory and Meteorological Office.*—It would be very desirable to take this opportunity of transferring the meteorological office to the observatory and of combining the duties of the Meteorological Reporter to the Government of Madras and of the Superintendent of the observatory. The doubling up of the two appointments will result in certain economies and enable the Government, out of savings effected by the transfer, to remedy a grievance under which the present holder of the Madras meteorological appointment, Miss Pogson, labours. Miss Pogson was appointed Assistant Astronomer by the Secretary of State, and was, so long as she held that appointment, entitled to the ordinary benefits of furlough, pension, &c. She was in 1876 appointed Meteorological

Reporter to the Government of Madras, a non-pensionable post, and in 1881, her father, the Government Astronomer, transferred the Assistant Astronomership from his daughter to his wife. By this series of changes Miss Pogson has lost all claims to pension. After 23 years of service her health is giving way, but she is unable to take furlough as she has not been able to save anything. The present arrangement is expensive and also not satisfactory, as Miss Pogson must continue to work in declining health until she is compelled by the doctor's order to take sick leave. The arrangement has also, in other respects, not been altogether satisfactory, and it would, I am confident, be best to terminate it now by offering Miss Pogson compensation pension and placing the Meteorological Reportership at Madras on the same footing in every respect as at Calcutta, Bombay, and Allahabad,—viz., a half-time appointment held by an Educational or Telegraph officer.

43. I talked the matter over with Miss Pogson during a recent visit to Madras and she is willing to retire if she be granted a moderate pension. If she were granted a compensation pension it would remove a grievance which she has already brought twice before the Government of India, and which, I believe she is trying to induce the Government of Madras to bring up again.

44. It will also remove the one anomaly in the Provincial meteorological appointments and enable proper leave arrangements to be made in future at Madras, which it is hardly possible to do at present. This is very necessary, as the publication of the Madras Daily Weather Report requires that the officer in charge of the Meteorological work should always be present in Madras.

45. *Control.*—The Secretary of State in the year 1895 appointed an "Observatories Committee" to which all questions and matters relating to the scientific methods and work of the Madras and Bombay observatories should be submitted for opinion and advice. The continuation of this system will evidently secure the full scientific control of the Indian Imperial observatories, and also tend to keep them up to the standard of European observatories of similar character.

The control of large national observatories as those of Bombay and Madras is partly administrative and partly directorial. If the proposal for the transfer of the Colaba Observatory to the Government of India be accepted, the administrative con-

trol of the Indian observatories can be carried out directly by the Government of India, but it would not be possible for the Government to control and guide properly the scientific work of these observatories. The system initiated some years ago for the direction and criticism of the scientific work of these observatories by the "Observatories Committee" in London is undoubtedly the best that can be devised under the special circumstances and should hence be continued and if possible the advice of that Committee should be utilized to an even greater extent than hitherto.

46. It would probably be desirable to place the senior Director at Kodaikanal in administrative charge of the Kodaikanal Observatory. The two Directors should be absolutely independent of each other in their scientific work, but all correspondence with the Government of India should pass through the senior Director and he should have the general control and administrative management of the observatory.

47. *Financial.*—As already stated, the Secretary of State has sanctioned the following charges for the Madras observatory and the Kodaikanal Solar Physics observatory in his despatch No. 117 (Revenue), dated the 31st August 1893:—

Rs. A. P.

1 Director, Solar Physics Observatory, and Superintendent, Kodaikanal Observatory	800	0	0
1 Assistant Superintendent, Madras Observatory (local allowance)	100	0	0
<i>Madras Observatory.</i>			
1 Clerk for Time and Meteorological Observations	60	0	0
1 Clerk for Time and Meteorological Observations	40	0	0
1 Clerk for preparation of volumes of observations	100	0	0
1 Clerk for preparation of volumes of observations	80	0	0
<i>Solar Physics Observatory.</i>			
1 First Observer (or assistant) on Rs. 200—300	275	0	0
1 Second Observer (or assistant) on Rs. 100—150	137	8	0
1 Third Observer (or assistant) on Rs. 50—75	68	12	0
2 Menial Assistants, Rs. 15—25	45	0	0
1 Writer, Rs. 30—50	45	0	0
2 Head peons at Rs. 10 each	20	0	0
4 Peons at Rs. 8 each	32	0	0
4 Lascars at Rs. 7 each	28	0	0
TOTAL	1,831	4	0

48. Mr. Michie Smith wishes to make one or two slight changes in this, and hence I embody them in the present scheme. In the first place he considers that it will be absolutely necessary to have a good mechanic for the Kodaikanal Observatory to make any repairs or slight changes in the instruments, &c., that may be necessary, more especially as it would probably not be possible, except under rare circumstances, to obtain one at that hill station. In order to obtain the kind of mechanic required it will be necessary to fix his wages at Rs. 40 per mensem. Also it will be necessary to pay the peons somewhat more at Kodaikanal than at Madras. In order to obtain the Rs. 10 per mensem required to increase their pay, and the Rs. 40 per mensem for the pay of the mechanic, he proposes to decrease the pay of the first assistant by Rs. 50. He feels he will have no difficulty in obtaining a man of the stamp required at the lower rate. He also proposes to transfer the clerk on Rs. 80 per mensem engaged hitherto at Madras in the preparation of the volume of observations to Kodaikanal as an extra assistant, and to utilize the clerk on Rs. 100 per mensem, engaged at present on the same work, as computer and head clerk in charge of the office work of the Madras observatory. The following is the readjusted establishment for the Madras observatory and Kodaikanal Solar Physics Observatory, as now proposed :—

Kodaikanal Solar Physics Department.

	Rs.	A.	P.
Director	800	0	0
First Assistant, Rs. 150 to 250	225	0	0
Second Assistant, Rs. 100 to 150	137	8	0
Third Assistant, Rs. 65 to 85	80	0	0
Fourth " " 50 to 75	68	12	0
Mechanic	40	0	0
2 Menial Assistants, Rs. 15 to 25	45	0	0
Writer, Rs. 30 to 50	45	0	0
1 Head peon, Rs. 12	12	0	0
2 Peons, " 10	20	0	0
" " 9	9	0	0
2 Lascars " 8-8	17	0	0
TOTAL	1,499	4	0

Madras Astronomical Office (Time Ball, &c., Branch).

	Rs.	A.	P.
Superintendent ...	100	0	0
Computer ...	100	0	0
First Assistant ...	60	0	0
Second " ...	40	0	0
Head peon ...	10	0	0
Peon ...	8	0	0
2 Lascars ...	14	0	0
TOTAL	332	0	0

The total cost of the establishment of both Departments is Rs. 1,831-4-0 and the same in amount as sanctioned by the Secretary of State.

In addition there is sanctioned for contingencies an annual amount of Rs. 2,024. *Vide* despatch of Secretary of State.

49. The present sanctioned establishment and pay of the Madras Meteorological Office is as follows :—

	Paid out of Budget grant of India Meteorological Department.	Paid out of contribution of Madras Government made to India Meteorological Department towards the publication of the Daily Weather Report.
	Rs. A. P.	Rs. A. P.
Reporter	300 0 0	100 0 0
First Assistant Rs. 60 to 80	75 0 0	15 0 0
Second Assistant Rs. 40 to 55	51 4 0	10 0 0
Third Assistant Rs. 30 to 40	37 8 0	5 0 0
First Draftsman	...	50 0 0
Second "	...	30 0 0
Signaller	...	22 8 0
Litho Printer	...	12 0 0
Pressman	...	8 0 0
Do.	...	7 0 0
1 Peon	...	10 0 0
2 Peons	...	9 0 0
3 Peons	16 0 0	8 0 0
Total	479 12 0	286 8 0

In addition the following payments are made directly by the Madras Government,

chiefly on account of Miss Pogson being in charge of the rainfall registration of the Presidency—

	Rs.	A.	P.
Allowance to Miss Pogson ...	150	0	0
Clerk engaged to tabulate rainfall on Rs. 20 to 30 ...	27	8	0
Rent of Office and Reporter's quarters ...	100	0	0
Total ...	277	8	0

The present total cost of the Madras Meteorological Office exclusive of contingent charges is as follows:—

	Rs.	A.	P.
Paid out of Budget grant of India Meteorological Department ...	479	12	0
Paid by contribution of Madras Government made to India Meteorological Department for the publication of the Daily Weather Report ...	286	8	0
Paid directly by Madras Provincial Government on account of rainfall registration ...	277	8	0
Total ...	1,043	12	0

The postage charges and contingencies of the Madras Meteorological office are paid from the Budget Grant of the India Meteorological Department and at the present time average Rs. 100 per mensem, including the postage of the Madras Daily Weather Report.

As shown by the statement, the total expenditure is Rs. 1,043-12 per mensem of which nearly half is met from Imperial funds, and the balance *viz* Rs. 564 per mensem is paid by the Government of Madras. A portion of this amount *viz*. Rs. 286-8-0 is met from the contribution of that government to the Budget grant of the Meteorological Department and the balance Rs. 286-8-0, from provincial funds.

50. If these amounts were consolidated and all were available for the readjustment of establishment, I would propose that Miss Pogson, the present holder of the appointment of Meteorological Reporter to the Government of Madras, should be pensioned off, and would suggest a pension of Rs. 250 per mensem, which is practically thirty-sixtieths of her present pay and allowances, the ordinary pension grant allowed by the rules after the 25 years' service that she will have probably served before these changes take effect.

51. The work done by her office now consists almost solely of—

- (1) The preparation of the Daily Weather Report.
- (2) The supervision of the Madras rainfall registration and preparation of the monthly rainfall statement.

The office should on her retirement be transferred to the astronomical observatory, where there will be sufficient room for it after the reduction of establishment to be effected at the Madras Observatory when the Kodaikanal Observatory is opened. The Superintendent of the observatory (if an Educational officer) would have no difficulty in arranging for the performance of the work and should be paid Rs. 200 per mensem in addition to his pay as Superintendent, making a total of Rs. 300 per mensem with free quarters at the observatory. The establishment is larger than is necessary for the work that has to be done and might be slightly reduced.

52. The following would be the cost of the readjusted staff:—

	Rs.	A.	P.
Allowance to Superintendent, Madras Astronomical Observatory ...	200	0	0
First Assistant, Rs. 55 to 70 ...	66	4	0
Second „ „ 40 to 50 ...	47	8	0
Rain Clerk ...	32	8	0
Draftsman ...	50	0	0
2nd Draftsman ...	30	0	0
Signaller ...	22	8	0
Litho Printer, 12 to 20 ...	18	0	0
Pressman ...	15	0	0
5 Peons ...	43	0	0

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which with Miss Pogson's pension of Rs. 250 per mensem would give a total monthly expenditure, of Rs. 774-12-0. In the preceding, the first and second assistants and the rainfall clerks are retained on their present pay together with the amounts of the local allowances hitherto given to the first, second and third assistants. I have also slightly increased the pay of Litho. Printer, substituting a graded pay of Rs. 12 rising to Rs. 20 by yearly instalments of say Rs. 2, as it is extremely desirable to give him some inducement to remain as lithographic printer for the Daily Weather Report. A total saving of Rs. 269 per mensem would hence be effected

by these changes and be available for the increased expenditure necessitated by the changes proposed in connection with the Bombay Magnetical Observatory the cost of which is given below in paras. 55-6.

53. The following gives a summary of the preceding changes in connection with the Madras Astronomical and Meteorological Office.

Present sanctioned Expenditure—

	Rs.	A.
<i>Establishment, Madras and Kodaikanal Solar Physics Observatory</i> ...	1,831	4
<i>Establishment—</i>		
Madras Meteorological Office ...	1,043	12
<i>Contingencies—</i>		
Madras Observatory and Kodaikanal ...	168	12
Madras Meteorological Office ...	100	0
Total	3,143	12

Proposed Expenditure—

Establishment, Kodaikanal Solar Physics ...	1,499	4
Ditto, Madras Astronomical Observatory ...	332	0
Ditto, Madras Meteorological ...	524	12
Pension to Miss Pogson ...	250	0
Contingencies, Madras and Kodaikanal ...	268	12
Total	2,874	12

The difference between the two totals above (*viz.* Rs. 269) represents the monthly saving in the present sanctioned expenditure which will be effected by carrying out the changes in the Madras Meteorological Office as proposed.

It may further be pointed out that if Miss Pogson be not pensioned off, it would hardly be possible to dismiss her in order to effect these changes as she has performed her duties satisfactorily.

54. It should perhaps be noted that if the Meteorological Office be transferred to the Astronomical Observatory, as proposed above, the meteorological work of the Superintendent of the Astronomical Observatory and Meteorological Reporter would be directly under the Meteorological Department, and the contingent expenditure, &c., would be met from the budget grant of the Meteorological Department as before.

28
1342

55. The following is a statement of the present expenditure of the Colaba Observatory:—

	Pay. Rs.	Allowance from Port Trust funds. Rs.
Director ...	700	150
(with free quarters).		
<i>Magnetical Department—</i>		
First Assistant ...	105	...
Second Assistant ...	60	...
First Observer ...	40	...
Second Observer ...	40	...
Third Observer ...	40	...
Computer ...	30	...
	Pay. Rs.	Allowance from Port Trust fund. Rs.
<i>Astronomical Department—</i>		
First Assistant ...	80	25
Second Assistant ...	50	...
<i>Time Ball Establishment—</i>		
First Assistant ...		100 (including Rs. 20 for carriage allowance).
Second Assistant ...		20
5 peons (one on Rs. 42 and four on Rs. 8)	42	
Total	1,187	295
Contingencies, monthly about ...	150	...

The total monthly expenditure is hence Rs. 1,632 of which Rs. 295 is paid from Port Trust Funds, according to permanent arrangements, and Rs. 1,337 by the Government.

56. It would probably effect some savings if the Bombay Meteorological Office were removed to the Colaba Observatory and the Superintendent or Assistant Director appointed Meteorological Reporter for Western India, thus making similar arrangements at Bombay as at Madras for the publication of the provincial weather reports. I am not, however, prepared to advise this change at present, as the arrangements in force enable the Daily Weather Report to be published and issued to subscribers probably two hours earlier than would be possible if the office were removed from its central position in the commercial part of Bombay to the Colaba Observatory three miles away. The present arrangements have worked most satisfactorily and it would be a mistake to disturb them, as a delay of two hours in the publication of the Daily Weather Reports would undoubtedly diminish their value considerably to subscribers and probably give rise to strong complaints.

57. As already stated, it is proposed to carry on the work of magnetical and meteorological observations and time determination exactly as hitherto, but to place the observatory under the immediate charge of a Superintendent or Assistant Director, subject to the general control of the Director of the Magnetic Survey of India at Kodaikanal. It will hence be necessary to maintain at Colaba a staff sufficiently large to carry on the whole of the work of observation as fully as hitherto and to tabulate the observations (the first stage in the work of discussing the observations) and also to carry on the time ball work satisfactorily.

58. The following would, I think, be found sufficient to perform the whole of the work satisfactorily :—

	From Imperial Funds.	From Port Trust.
	Rs.	Rs.
Superintendent ...	100	150
(with free quarters).		
<i>Magnetical and Meteorological Department—</i>		
First Assistant ...	105	...
Second Assistant ...	60	...
First Observer ...	40	...
Second Observer ...	40	...
Third Observer ...	40	...
<i>Time Ball—</i>		
First Assistant ...	*80	25
Second Assistant ...	...	100
Third Assistant ...	...	20
TOTAL ...	465	295

The Director of Magnetic Surveys would be stationed at Kodaikanal, and it would be necessary to provide him with a small staff of assistants in his office for the Magnetic survey work and to assist him in his calculations and scientific investigations.

The following would probably be sufficient provision (more especially considering the remarks in the foot-note) :—

	Rs.
Director, 600—800 ...	733½
First Assistant, 120—180 ...	165
Second ditto, 50—70 ...	65
Third ditto, 30—50 ...	45
Peon ...	12
Peon ...	10
TOTAL ...	1,030½

* The staff is probably larger than is necessary for the full performance of the observation and tabulation work, but the First Assistants in the magnetical and astronomical departments are exceptionally useful men and well acquainted with the mathematical methods of treating magnetical observations, and might hence for some years be assigned a part at least of the computation work required by the Director.

29
1342
29

59. The following sums up the financial effects of these changes in the Colaba observatory :—

	Rs.
<i>Present sanctioned Expenditure—</i>	
Establishment, Colaba ...	1,187
Contingencies ...	150
TOTAL ...	1,337
<i>Proposed Expenditure—</i>	
Establishment, Colaba ...	465
Ditto, Kodaikanal ...	1,030½
Contingencies ...	150
TOTAL ...	1,645½

The additional cost of the proposed arrangements for the Colaba observatory and Magnetic Survey of India would hence be 308½. This would be reduced to Rs. 39 per mensem, if the changes proposed in the Madras system were effected and the savings were allowed to be utilized.

60. It would, if the changes suggested at Kodaikanal be accepted, be necessary to make provision for the accommodation of the second Director and his staff. The small office room in the observatory buildings as at present designed would be too small to accommodate the double staff and it would be necessary to build a separate and double office room. The following is a rough estimate of the initial expenditure :—

	Rs.
House for Director of Magnetic Survey ...	20,000
Joint office ...	8,000
Houses for 3 Assistants and 2 peons ...	8,500
TOTAL ...	36,500

61. The following is a brief comparative statement of the present and proposed cost of the various changes suggested :—

	Monthly.
	Rs. A. P.
<i>Present sanctioned Expenditure—</i>	
Establishment, Madras Observatory and Kodaikanal Solar Physics Observatory ...	1,831 4 0
Establishment, Madras Meteorological Office ...	1,043 12 0
Establishment, Colaba ...	1,187 0 0
<i>Contingencies—</i>	
Madras Observatory ...	168 12 0
Colaba ...	150 0 0
Madras Meteorological Office ...	100 0 0
TOTAL ...	4,480 12 0

*Proposed Expenditure—**Kodaikanal Observatory—*

Establishment, Solar Physics
Department ... 1,499 4 0

Establishment, Magnetic De-
partment ... 1,030 0 0

Madras Observatory—

Establishment, Astronomical
Branch ... 332 0 0

Establishment, Meteorological
Branch ... 524 12 0

Colaba Observatory Establish-
ment ... 465 0 0

Contingencies—

Madras Observatory ... 168 12 0

Colaba ... 150 0 0

Madras Meteorological
Office ... 150 0 0

4,269 12 0

Miss Pogson's pension ... 250 0 0

TOTAL ... 4,519 12 0

In addition a contribution of Rs. 295 per mensem would continue to be made by the Bombay Port Trust towards the pay of the Superintendent and Time Ball Establishment of the Colaba Observatory and hence increasing it from a total of Rs. 465 to Rs. 760 per mensem.

As already pointed out the contingent expenditure would be met from the annual sum of Rs. 2,024 sanctioned by the Secretary of State for the Madras Astronomical and Kodaikanal Solar Physics Observatories, the annual grant of Rs. 1,800 for the Colaba Observatory and of Rs. 1,200 from the budget grant of the India Meteorological Department for the Madras Meteorological Office.

A small addition would probably be necessary to cover the travelling expenses of the Second Director and small establishment when engaged in the field work of magnetic survey. This would vary considerably from year to year and might be a matter for special application and sanction.

62. Amongst the advantages to be derived from the proposed changes will be—

(1) The transfer of the Imperial observatories to the immediate control of the Government of India.

(2) The extension of the field of magnetic work to include a survey of India, the necessity of which has been to some extent hitherto recognized, but which has been neglected.

(3) The abolition of the anomalous arrangements at Madras by which an officer, virtually a whole-time officer, is accorded the rank and status of a half-time officer only.

(4) The introduction of arrangements at Colaba by which it will be easy to arrange for the continuance of the publication of the Daily Weather Report under similar conditions to those at Madras and Calcutta if hereafter the Telegraph Department should wish to terminate the present arrangement as detrimental to the work of the Department at Bombay.

(5) The changes can be effected with practically no increase of cost to the state.

I have the honour to be,

SIR,

Your most obedient Servant,

JOHN ELIOT,

*Meteorological Reporter to the
Government of India.*

1896.

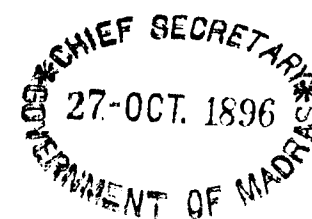
GOVERNMENT OF INDIA.

DEPARTMENT OF REVENUE AND AGRICULTURE.

METEOROLOGY.

File No. 11 of
1896.

Serial No. 6.



To

THE CHIEF SECRETARY TO THE GOVERNMENT OF MADRAS.

No. $\frac{2541}{11-6}$.

Dated Simla, the 19th October 1896.

SUBJECT.

Forwards, for consideration, a copy of a letter from the Meteorological Reporter to the Government of India, proposing a scheme for the reorganization of the Indian Observatories.

No. 2541
11-6

32
1342

FROM

DENZIL IBBETSON, Esq., C.S.I., C.S.,
Offg. Secretary to the Government of India,

TO

THE CHIEF SECRETARY TO THE GOVERNMENT OF MADRAS.

Dept. of Rev. & Agri.
meteorology.

Simla, the 19th October 1896.

SIR,

I AM directed to address you in continuation of the correspondence ending with the letter from the Hon'ble Mr. Price, No. 941 (Public), dated 21st November 1893, in which it was said that there was no objection on the part of the Government of Madras to the transfer to the Government of India of the control of the Madras Observatory and of the funds connected with it.

2. Pending the construction of the necessary buildings at Kodaikanal the transfer has not been made. Meanwhile the Government of India have had under consideration a proposal that the Bombay Observatory should also be transferred to Imperial control, and the recent death of the Director of the Colaba Observatory has afforded an opportunity for reorganization. The Meteorological Reporter to the Government of India has accordingly proposed a scheme for the reorganization of the Indian Observatories which I am to forward for the consideration of the Government of

Vide letter No. 410-S, dated 29th May 1896, from the Meteorological Reporter to the Government of India, enclosed.

Madras.

3. The arrangement of work now proposed for the three scientific observatories at Bombay, Madras, and Kodaikanal, is set forth in paragraph 34 of the letter from the Meteorological Reporter to the Government of India. The principal change now proposed is the addition of a magnetic survey of India to the work of magnetic observation as hitherto carried on at Colaba. It is proposed to postpone for the present the question of the extension of astronomical work as carried on under Miss. Pogson for many years past at Madras until the value of Kodaikanal as an observing station has been fully tested. If conditions are satisfactory and funds are available, a third Director may eventually be appointed to carry on the astronomical work. It is also proposed to combine the duties of the Meteorological Reporter to the Government of Madras and of the Superintendent of the Astronomical Observatory at Madras and to apply the savings which will result from this combination of appointments to meet the

additional cost of the revised arrangements proposed for the magnetic survey establishment. The meteorological work and time-ball service arrangements at Madras would remain unaltered, but an officer of the Educational or Telegraph Department will be appointed resident half-time Superintendent of the Observatory and will work under the general control of the Director, Kodaikanal Observatory.

4. The ultimate adoption of the scheme will depend upon the advice which the Government of India may receive through the Secretary of State from the Observatories Committee, but as at present advised they are disposed to support it as a well-devised and carefully thought out plan for utilising to the best advantage the money to be spent upon astronomical observations and cognate subjects, and for enabling India to contribute in a fitting manner to the progress of science in these directions. They desire to be favoured with a full expression of the opinion of the Governor in Council and with any suggestions that he may desire to make.

5. It will be observed that the scheme cannot be carried out in its entirety, if Miss Pogson's services are retained, and Mr. Eliot suggests that Miss Pogson should receive a pension in consideration of her meritorious services to Government. A proposal that the appointment should be made pensionable has already been negatived in the Government of India's letter No. 13, dated 21st April 1886, and long and meritorious service in a non-pensionable post can give no claim to a pension especially when, as in this case, the fact that the appointment was non-pensionable was taken into account in fixing its emoluments. It may be possible to find employment for Miss Pogson in another department, such as the Educational Department or the Court of Wards, and I am to ask the Madras Government to consider this suggestion. At the same time, considerations personal to Miss Pogson cannot be allowed to prevent a change which on public grounds is desirable.

I have the honour to be,

SIR,

Your most obedient Servant,

Wm. A. B. Khan

Offg. Secretary to the Govt. of India.

Public (189) Department.

CURRENT No. 27/3



From

*The Govt. Astronomer.
Madras.*

Order

No. 219

Dated 5 November 1896

Received

Registered

Enclosures *for Pub. C. no. 3583*

Spare copies

796. m

SUBJECT.

*Returning with remarks.
his endorsement no. 2259 dated.
3rd November 1896, regarding the
proposal of a scheme by the
Meteorological Reporter to the Govt.
of India for the reorganization
of the Indian Observatories.*

BACK PAPERS.

G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.

No. 219

34
1342

THE OBSERVATORY,

NUNGUNBAKUM,

Madras, 5 November 1896.

FROM

THE GOVERNMENT ASTRONOMER,

Madras.

TO

The Honble Mr. A. J. Arundel,
Ag Chief Secretary to Government

SIR,

With reference to your enclosure
No 2259 dated 3^d November 1896, I have the
honor to state that I most strongly approve
of the scheme prepared by Mr. Eliot for the
reorganization of the Madras and Bombay
Observatories. As the scheme was prepared
here in consultation with me, I have no
criticisms to make upon it.

I have the honor to be,

Sir,

Your most obedient servant

Arthur Smith

Govt Astronomer

* Herewith returned

35
1342
3543 and 3715.

SUBJECT.

Re-organization of the Indian
Observatories.

3. H. E. THE GOVERNOR.

1. THE HON'BLE MR. BLISS, C.I.E.

2. THE HON'BLE MR. GROSE, C.I.E.

FOR ORDERS.

I quite agree with Mr. Bliss's scheme and also with his D.O. letter, which, however, is one of the most improper productions, in the light of his position and the Govt. of India, that I have ever come across. That however is not our business.

BS

10/12/96

11.12.96

I should like to see the D.O. letter 1.6.96

2.5.97 11.12.96

With its letter No. 2541 of the 11-6-19th October, the Govt. of India forwarded a scheme for the reorganization of Indian Observatories prepared by the Meteorological Reporter to India. A full expression of opinion is asked for on this scheme and any suggestions that it might be desirable to make. The institutions dealt with are the Madras astronomical observatory, the Bombay or Colaba Magnetical and Meteorological Observatory, the Meteorological Offices at Madras and Bombay and the new observatory at Kodalkanal.

2. Mr. Eliot points out that the existing programme of Indian observatories is defective in that

(1) There is no provision for observations included under the terms "new astronomy", "astronomical physics" and "solar physics".

(2) There is no magnetical Survey of India.

Para. 20 of the scheme.

3. As regards (1) an observatory of solar physics has already been mentioned at Kodaikanal. The extension of astronomical observations at Elitch proposes to improve the observatory until the suitability of the Kodaikanal observatory has been tested.

4. As regards (2) Mr. Elitch strongly supports the institution of a Magnetical Survey. He suggests that the opinion of the Observatory Committee, and the Admiralty or Board of Trade should be taken on the point, but proceeds to frame his scheme on the supposition that a survey will be started.

5. The items of the revised programme will be found at para. 25 and the distribution of work among the observatories at para. 31.

6. The system on which the programme will be worked is shortly as follows:-

Each of the observatories at Bombay and Madras will be placed under the charge of a Director who would be stationed at the new observatory at Kodaikanal. Of the 2 Directors thus appointed one would work at Solar physics and the other at the Magnetical Survey. These Directors are to take the place of the Scientific officers now at Bombay and Madras.

7. It is necessary for the efficient working of this scheme, that the observatories at Madras and Bombay should no longer be under the control

Para. 21 of the scheme

Para. 22 ---do---

Para. 23 ---do---

Handwritten notes:
The scheme is to be worked out by the Director at Kodaikanal. The Director at Bombay will be in charge of the Magnetical Survey. The Director at Madras will be in charge of the Solar physics.

Paras. 29 and 30

Para. 25

Handwritten note:
This for India to work out its own scheme. Mr. M. Smith cordially approves of it, and his Govt. may endorse his view.
A.A.

Para. 32

no 42, 43 & 44

3583

26
10/12

of the Local Governments but that the whole Department should be imperial (para. 36). The Govt. of Madras has agreed to this in G.O. 941, Pub., dated 21st Nov. 1893.

8. The work at the existing observatories will be modified by these changes and that at Kodaikanal extended beyond what has already been sanctioned by the Secretary of State.

9. In consequence, the existing staffs will require alteration. The staffs with which it is intended to work are detailed in paras. 48 & 52 for Madras and 58 for Bombay. It is thought unnecessary to go into the details of these arrangements which seems to have been most carefully worked out. The only proposal which calls for consideration by this Govt. is the one by which the offices of Meteorological Reporter and Superintendent of the Observatory will be amalgamated; and this brings forward the case of Miss. Pogson, the Meteorological Reporter. Unless she goes the scheme cannot be worked out. Miss Pogson is willing to go if given a pension, but her appointment is not pensionable and the Govt. of India in the current suggests that some other appointment should be found for her either in educational or in the Court of Wards; and states that a change which is desirable cannot be postponed on personal grounds, which means that ^{Miss Pogson} she would should be given the ordinary notice to go, if necessary.

It was only last month that the Govt. had under consideration an application from Miss Pogson for a grant of money and for her appointment to be made of a permanent nature so that she could take the leave which the state of her health after 23 years' service necessitates. It was unanimously agreed that another effort should be made to get Miss Pogson's services declared pensionable from the first, and, to strengthen the case, Miss Pogson was asked in G.O. No. 1117 Pub. dated 10th October 1896, to furnish a medical certificate of the necessity for her taking long leave shortly. The advent of Mr. Eliot's scheme was not at the time even suspected, although it seems possible Miss Pogson knew something about it. It will be seen from para. 15 that Miss Pogson is willing to retire if she be granted a moderate pension; and in para. 50 Mr. Eliot proposes that it should be fixed at Rs. 250 per mensem. In regard to the suggestion that other employment should be found for Miss Pogson, it is improbable that she would meet the requirements of the Educational dept., but the Court of Wards wife might be referred to as they may have some female wards in need of an European Supt. The Secretary of State's despatch quoted in para. 47 of the note will be found in G.O. No. 940 Public, dated 21st Nov. 1893. In para. 49 the present total cost of the Madras Meteorological

Miss Pogson would not be fitted for the post. She has not been in the habit of dealing with natives of the terminated class & if I am rightly informed she would not probably encourage thrift habits. She is said to be heavily indebted. If the C. of W. could employ her, such employment would be only temporary. The C. of W. is of course entirely independent of Govt. in such matters. H.A.

The whole thing ~~is~~ become impractical. It is better to leave the allowances sufficiently high to attract a good man. Yes. But the ~~total~~ ^{total} allowances are certainly very high. H.A.

Office, excluding contingent charges, is shown to be Rs. 1,043-12-0, and in para 52 is given the pay of the re-adjusted staff. In regard to this it may be remarked that it is proposed to give the half-time officer who is to hold the offices of Supt. of the Observatory and Meteorological Reporter Rs. 100 (local allowance) as Asstt. Supt. of the Observatory, and Rs. 200 for carrying on meteorological duties. In addition to this, he would have free quarters at the Observatory, which are certainly equal to another Rs. 125 a month. It is a question whether these allowances are not in excess of requirements. It seems probable that a suitable officer could be obtained locally ^{who} would be willing to take up the work for less than Rs. 300 a month (and house).

In paragraph 53 Mr. Eliot shows that, after allowing Rs. 250 a month on account of Miss Pogson's pension, his scheme, as far as Madras is concerned, would result in a monthly saving of Rs. 269. It would however mean an additional expenditure of Rs. 39 per mensem for the whole scheme. In the concluding clause of that paragraph he testifies to the satisfactory manner in which Miss Pogson has conducted her duties, and refers to the consequent impossibility of dispensing with her services without a pension. Under the strict letter of the regulations, however, Miss Pogson would be

no claim beyond the usual notice .In
this connection however please see Mr.
Eliot's letter (confidential current 539)
orders are requested as to what course
is to be adopted.

It will be observed from para. 5 of India's despatch on page 2 of C.O. No. 940 Public, dated 21st November 1893, that Mr. Eliot proposed Mr. Michie Smith's salary at Kodakanal should rise from Rs. 800 to Rs. 1,200, but that India considered Rs. 800 per mensem to be sufficient, and preferred to make separate recommendations, there-
after, should it at any time find it necessary to increase the pay of the appointment. More than three years have passed since the date of that despatch. It therefore seems reasonable to consider in connection with this scheme some increase to the Rs. 800 which Mr. Michie Smith now receives. It is unlikely that the Court will be able to retain his valuable services for this sum, or efficiently replace him should he leave its service.

N In accepting ~~that~~ Mrs. Eliot's scheme generally a strong protest should be made against India's proposal to dismiss Miss Pogson without pension & her claims for pension should be warmly supported.

Certainly. 8.97

It will be well to take the opportunity to point out that provision should be made for a rise in Mr. M. Smith's salary.

salary.
A qualified scientific man
could no doubt be
obtained in England for
his present salary.

MA 8.12.96

$$\left[\frac{0}{14} \right]$$

NOTE FOR THE CHIEF SECRETARY.

I send this on
to you at once as it
would be well to obtain
Hris approval of the
draft before he leaves
on Thursday. If you will
pass the
draft the
prom will
take it straight on to the
House.

7813
4/11/96.

Q. L. H.

3/12/86

I think it is a bad ~~policy~~ and unbecomingly
policy to have ministers even singly
because ~~such men~~ we are usually entangled
with and for almost nothing. If
you want to get the best results out of a
man of science you must treat him as
you would any one else, that is, pay him
enough to keep his mind free from petty
everyday cares - surely the example
such cases is but little.

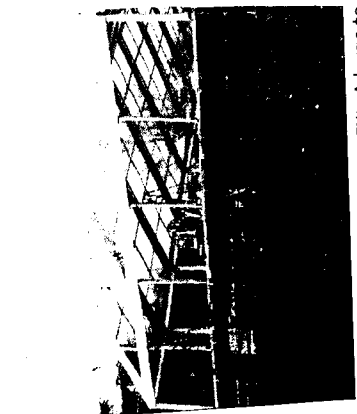
4-11

22.45 Min. leaves
 the Presy. the letter
 must be passed in his
 absence.
 The draft letter shows
 review the history of my
 Popson's appt. & how sh
 was deprived by her father
 or resigned at his request
 in favour of her step mother
 the pensionable post
 she first held. - Asst
 Astronomer I think
 M 15.12.96

Chicagoano Kalyanika
 Two observations that I've heard
 unfailingly in the past 15 years
 from family and friends visiting Wash-
 ington DC are: One, the "White House
 is so small"; and two, "Food portions
 in America are so large."

The White House isn't all that
 small. It looks modest compared to the
 Rashtrapati Bhavan, formerly the
 Viceroy's House (humbly called the
 viceregal lodge). The White House also
 looks oversized because the wings
 sort of taper off to the sides and much
 of the structure is underground as
 seen from the road. The White House
 is six-storied (it looks like a two or
 three-storied building from the out-
 side), with at least three underground
 floors jokingly known as the "secret,
 undisclosed location". Its built-up area
 measures approximately 55,000 square
 feet (just over an acre).

Also known by its street address
 of 1600, Pennsylvania Avenue, the
 White House has 132 rooms and 35
 bathrooms, not to speak of frills such
 as a movie theatre, a bowling alley,



MORE THAN WHAT MEETS THE EYE A large te-
 House in Washington DC for Prime Ministe-
 and the infamous Situation Room. Ve-
 scene of much jaw-jaw about war-
 war. Its 18 acres of grounds has a jog-
 ging track and a putting green, al-
 among other distractions. In a strip
 of sand and gravel that has come to
 be known as the "beach", the White
 House even allows credentialled net-
 work and cable television to perma-
 nently park their cameras.
 In contrast, the Rashtrapati Bha-

NOTE FOR THE CHIEF SECRETARY.

It is believed that the
 reason why Miss P. ceased to
 do the duties of Asst wa. that
 she could not live under
 the same roof with her
 step mother - but that
 cannot well be stated
 in the letter.

The draft has
 been amplified and
 is resubmitted.

What is meant by this last
 sentence of para 4. Mark this
 507 S. despatch 17.12

cowardliness

FBI indict-
 mates, Headley said. "Some of
 us are saying that 'terrorism'
 is the weapon of the cowardly.
 I will say that you may call it
 barbaric or immoral or cruel,
 but never cowardly." He added,
 "Courage is by and large ex-
 clusive to the Mus-
 lim nation."



The cases of
 Headley and the
 Fort Hood Shooter
 Major Nidal Hasan
 has focused atten-
 tion on home-grown
 Islamism in the US.
 Headley, like 9/11
 mastermind Khalid
 Sheikh Mohammed, did not
 come from the poor, indoctri-
 nated madrassas of Pakistan, in-
 stead hailed from a more edu-
 cated westernised background.
 Headley was born in Washing-
 ton to parents who worked as
 diplomats and officials at the
 Pakistani embassy.

But Daoud
 at the right side
 the left side
 The reports paint him as
 someone with a Pakistani Mus-
 lim wife in Chicago, but having
 a make-up artist as a girlfriend
 in New York.

Kasab's lawyer Abbas Kazmi is weary of hatred he encounters

given Pakistan's highest
 award. But none of this has
 prevented him from doggedly
 doing his duty. Kazmi's cross-
 examination has brought out
 incredible facts. "One hundred
 and nine men of the Railway
 Police Force, Government
 Railway Police and Home
 Guards were at CST, 30 of
 them armed, when Kasab and
 his companion landed. Two-
 ty officers, a few armed with
 AK 47s, carbines and some
 with bullet-proof vests, were
 around Cama later. The police
 commissioner's office is a two-
 minute walk away. The Con-
 trol Room knew what was hap-
 pening. Yet two young men
 with barely six months' train-
 ing, who had two AK-47s but
 no bullet-proof vests, could do
 what they wanted from 9.30 to
 12.30 that night!"

One of Kazmi's many frus-
 trations is that the layperson
 knows hardly anything about
 what his cross-examination
 has brought on record. For in-
 stance, a SIM card used by the
 terrorists was issued to one
 Suresh Prasad by the Gov-
 ernment of India, Ministry of
 Urban Development, and
 though his electricity bill is
 on record, the police say he is
 untraceable. Another loose
 end is the silence on Abu Jin-
 dal, whom Kasab has de-
 tailed, whom Kasab has de-
 tailed.

'Your Islam is not my Islam'

ing allowed to carry either my
 laptop or my briefcase (The
 FBI agents were allowed
 both), so the bulky charge
 sheet remains in my office
 while I'm in court. My other
 cases have almost had to be
 abandoned."

As soon as he accepted the
 brief, Kazmi was removed
 from trusteeship of the Islam
 Gymkhana. Last week, two
 strangers at a chemist's
 shop asked him why he had
 agreed to defend Kasab whom
 the entire world had seen
 committing the crime. Why
 hadn't he instead used the op-
 portunity to pump bullets into
 Kasab's head?
 "I've said it before: I be-
 lieve in the Constitution.
 When I watched the events on
 TV, I wanted the severest pun-
 ishment to be given to the ter-
 rorists. I too am a patriot.
 That's precisely the reason I
 believe we must give Kasab a
 fair trial. Our Constitution de-
 clares that every accused is
 innocent until proven guilty.
 The entire world is watching
 us, we are a civilised country.
 Our criminal law doesn't be-
 lieve in lynch mobs."

bly not even talking of sundry out-
 houses for the many frills. And to
 compared to the Rashtrapati Bhavan
 and the White House, or even the
 French President's Elysee Palace,
 every year for the 20 years it took to
 build it, reduced the building size by

already been made.
 If professional integrity
 wasn't so dear to Kazmi, the
 last six months would've been
 a breeze. He could have sat
 back, declined cross-examina-
 tion, and been a defence attor-
 ney only in name. The Rs 2,500
 hearing would then have actu-
 ally meant something. Instead,
 he has been fighting a frus-
 trating battle to give his client
 as good a defence as possible,
 given the special circumstances
 of this case.

Chicago consulate issued visa to Rana without scrutiny
 New Delhi: The Indian con-
 sulate in Chicago goofed up
 badly in giving visas to
 Tahawwur Hussain Rana and
 his wife to visit India. Rana
 has been arrested by the FBI
 for plotting attacks in India.
 The security lapse was dis-
 covered after an internal in-
 quiry into the working of the
 Chicago consulate. The probe
 was prompted by foreign min-
 ister S M Krishna after home
 ministry alleged that the con-
 sulate had slipped up badly.
 Rana was given a multiple-
 entry visa for a whole year and
 his wife Samraz Rana Akhtar
 a five-year multiple-entry visa
 by the Indian consulate, at the
 discretion of the Indian con-
 sul general in 2008.

A probe has shown that the
 residential address provided
 by the Rana couple doesn't ex-
 ist. Moreover, an immigration
 services company where Rana
 claimed to have been employed
 told Indian authorities that he
 was never employed by them
 nor did they have a branch in
 Mumbai. This flies in the face
 of the claim made by the con-
 sulate that it had done "due
 scrutiny" before issuing visas.



LEGALLY BOUND Abbas Kazmi and (below) his client Aimal Kasab

Last week, two
 strangers asked kazmi
 why he had agreed to
 defend Kasab and not
 used the opportunity to
 pump bullets into the
 terrorist's head



study the 14,000-page charge-sheet, the humiliation of being frisked three before entering the courtroom, not he

Papers to be read in proceedings:—

Again G.O., dated 189 , No.

Again G.O., dated 189 , No.

Current No. 3583 of 1896, dated 19/10, from *the Govt of India (Rev. Secy)*
" " 3713 " 1896, " 7/11, " *the Govt Astronomer*
" " " 189 " " " "

and circ.
the Governor

ORDER.

His No. 1342 D 21st December

Ordered that the following
letter be attached.

the Govt Astronomer. Dep 23/12

*Q.94
19.12.96*

LETTER:— *No. 1343*

To
The Secretary to the Govt. of India,
Dept. of Rev. & Agr. (Meteorology)

SIR,

I am directed to acknowledge
the receipt of your letter No. 2511 of
11/6
the 19th October last, forwarding, for
an expression of opinion by this Govt.
and any suggestion it ^{may} have to
offer, a scheme ^{prepared} by the Astro-
nological Reporter for the re-organiza-
tion of the Indian Observatories.

2. In reply I am to inform you,
that after having ascertained from the
Govt. Astronomer, ^{warmlly} ~~approved~~ of the scheme, the
various proposals ~~are~~ ^{are} ~~being~~ ^{being} ~~considered~~ ^{considered} ~~by~~ ^{by} ~~the~~ ^{the} ~~Govt.~~ ^{Govt.}

41
1342

4. ~~Although~~ The facts of Miss Pogson's case are already on record with the Govt. of India, ^{but} I am directed ~~to~~ ^{to} briefly recapitulate them for ready reference.

In his despatch No. 66, Public, dated 16th June 1870, communicated with Home Department Enforcement No. 3688, dated 6th August 1870, the Secretary of State sanctioned the appointment of an Assistant to the Govt. Astronomer on Rs. 150 per mensem to be increased to Rs. 200 as soon as the publication of the unpublished portions of the twenty years' series of magnetic and meteorological observations made by the late Mr. Pogson had been completed, and to be still further increased to Rs. 250 as soon as the publication of all other arrears of observations whether astronomical, meteorological, or magnetic, had been brought up to date. This appointment was first held by Mr. Pogson's son ~~and he~~ ^{and he} was succeeded in September 1873 by his sister. It may be mentioned here that the late Mr. Pogson did not qualify any of his Assistants for an increase of pay ^{by completing the publication of his observations} ~~under the conditions laid down in the manner just indicated~~ ^{in the manner just indicated} by the Secretary of State and that ~~in~~ ^{in consequence} Miss Pogson suffered a serious pecuniary loss.

5. By G.O. No. 329, Public, dated 10th March 1881, a Committee was appointed to consider and report the best means of relieving the Govt. Astronomer of his meteorological duties, and by G.O. No. 953, dated 14th July 1881, they were transferred to Miss Pogson on the same ^{as duties}

carefully considered by this Govt. with the result, that, while ~~approving~~ ^{concurring} generally of its main provisions, His Excellency finds himself altogether unable to agree to any arrangement which involves the services of Miss Pogson, the Meteorological Reporter to this Govt. ~~being dispensed with~~ ^{dispensing with} without a pension ~~relieving allowance~~.

In paragraph 5 of your letter reference is made to the previous correspondence which has taken place on the subject of Miss Pogson's status in the public service. With ~~reference~~ ^{advice} to this, I am to inform you, for communication to the Govt. of India, that Miss Pogson's case engaged the attention of this Govt. so recently as September last ~~when~~ ^{when} it was decided that a further representation should be made to the Govt. of India in view to her service being declared ~~as~~ pensionable. Had it not been necessary to ~~obtain~~ ^{obtain} some particulars in regard to Miss Pogson's state of health, which has suffered very considerably of late from her incessant work and continuous residence in this country without ~~leave of absence~~ ^{leave of absence}, a further communication on the subject ^{to you} would have been despatched before the date on which your letter under reply was received.

I am, however, to take this opportunity of once more pressing Miss Pogson's case on the favourable consideration of the Govt. of India and to

rate of pay viz Rs. 250 per mensem and without prejudice to her ~~appointment~~
Assistant to the Astronomer. It was in February 1885 that Miss Pogson first asked that ~~her appointment~~ ^{the post of} Meteorological Reporter might be regarded as a pensionable one. The matter was discussed in letter to the Meteorological Reporter etc to the Govt. of India No. 156/14-8, Revenue and Agr. Dept., dated 2nd November 1885. The officer had recommended that Miss Pogson's local allowance of Rs. 250 and her salary of Rs. 150 should be consolidated into a substantive monthly salary of Rs. 400 ^{total} attached to the Meteorological Reportership.

This Govt., however, had pointed out that as the salary of his Assistant had hitherto been virtually an addition to the salary of the Govt. Astronomer it should not be merged in the emoluments of the Meteorological Reporter. The Govt. of India understood that the duties of Assistant to the Astronomer were actually performed by another member of Mr. Pogson's family, and was, therefore, of the opinion that Miss Pogson should vacate the appointment, but was willing that ~~the local allowance as Meteorological Reporter~~ might be conditionally increased by Rs. 50 a month.

6. ^{total} As this decision involved the loss to Miss Pogson of a pensionable appointment, twelve years' pensionable service and a reduction of her emoluments from Rs. 400 to Rs 300, the Govt. in its letter No. 173, dated 1st January 1886 begged that the matter

42
1342
might be reconsidered. Sanction was requested to the salary of Rs. 300 ^{making} ~~the~~ pensionable and ^{granting} Miss Pogson ~~the~~ a local allowance of Rs. 100 a month for the duties connected with the Meteorological stations of the Board of Revenue which were to be handed over to her at the ^{desire} ~~wishes~~ of the Govt. of India. In Mr. Bailey's reply of the 21st April 1886, No. 81 Met. 4--15-3, the Govt. of India declined to comply with the ^{first} ~~1st~~ recommendation but sanctioned the additional local allowance of Rs. 100 a month from Provincial revenues.

7. The hardship of Miss Pogson's case was again represented by this Govt. in its letter No. 2324 Pub, dated 4th November 1886, in which it was ^{suggested} ~~recommended~~ that the salary of Rs. 150 attached to the pensionable appointment of Assistant to the Govt. Astronomer hitherto held by Miss Pogson should be converted into a local allowance and ^{that} ~~the~~ Meteorological Reportership on Rs. 300 ^{should} be declared to be a pensionable appointment when not held conjointly with any substantive post under Govt. The Govt. of India, however, in its letter No. 31/23-1, dated 25th Feb. 1887, declined to reconsider the orders already passed on Miss Pogson's case, and this Govt. had therefore no alternative ^{but} ~~but~~ to appoint ~~Miss~~ Pogson to be Assistant to the Govt. Astronomer, thus depriving Miss Pogson of her pensionable appointment.

8. I am ~~to~~ to take this
once ~~more~~ more pressing
opportunity of ~~the~~ more pressing
Miss Pogson's case on the fa
consideration of th ~~the~~ India and
in

13
1312
47
doing so, I am to remark, with reference
to the concluding sentence of your letter
of the 19th October, that this Govt. is
not urged to this course by considera-
tions which are purely personal to Miss
Pogson ^{exceptional} ~~by the~~ ^{worthy} ~~circumstances~~ ^{disposition} of her
case which would render it ~~it~~
special consideration whoever might be
the person who had served the Govt. for
so long under such conditions. Miss
Pogson was appointed ^{to the Govt} ~~as~~ Assistant Astro-
nomer ~~at Madras~~ by the Secretary of
State in September 1875, and now, after
23 years' approved service the last 13
of which have been continuous in Madras,
~~it is~~ proposed to dispense with her
services without compensation. It is
known to His Excellency in Council
that Miss Pogson has been unable for
private reasons of a family nature to
make any provision ~~for her~~ ^{mean} ~~retirement~~ ^{work} ~~therefore~~ ^{proposed}
little less than absolute poverty, for
it must be remembered that Miss Pogson's
duties have not been such as to fit her
for any but technical ^{work} ~~of~~ a similar nature,
for which there is no demand in the
private market.

9. The suggestion that ~~an~~ employ-
ment might be found for Miss Pogson in
another department, such as ^{the} Educational
department or ^{the} Court of Wards, has re-
ceived the attention of His Excellency
in Council. It is, however, much re-
gretted that this ^{proposed} ~~proposed~~
~~by the Govt. of India~~ is wholly im-
practicable. There is no appointment
in the Educational department which

Miss Pogson could efficiently fill, and the duties which she ^{has been} ~~was~~ called upon to perform during the past 23 years have deprived her of any suitability she ^{may} ever have possessed for ~~any~~

~~her native or the same~~, ~~residence~~ service under the Court of Wards, ^{a service ~~never~~ which is of} neither ~~of~~ permanent nor a pensionable character

4. Taking all the circumstances of the case into consideration, this Govt. is ~~very~~ strongly of ~~an~~ ^{the} opinion that the recommendations of the Meteorological Reporter that Miss Pogson should be granted a retiring allowance of Rs. 250 ~~per mensem~~ should be accepted. So ~~that~~

~~is~~ His Excellency in Council of the strong claim possessed by Miss Pogson to ~~the~~ special consideration ~~that~~ ^{that} he would not feel justified in ~~accepting~~ ^{accepting} any re-arrangement of the ~~astronomical and meteorological work~~ in this Presidency which ~~he~~ would not secure to her the small provision which has been suggested.

1. There is ^{one} ~~another~~ point in connection with Mr. Eliot's scheme, which this Government desires to bring to the notice of the Govt. of India. In para. 5 of its Despatch to the Secretary of State No. 37, dated 20th June 1893, the Govt. of India drew ^{his} Lordship's attention to its suggestion that Mr. Michie Smith's salary should be fixed at Rs. 800 ~~per mensem~~ in place of one rising from

44
1892

with a view to the permanent retention of his services and is freed from pecuniary cares in the execution of his scientific duties, &c. Council strongly recommends that provision for a progressive increase be made in Mr. Eliot's scheme for a progressive increase to Mr. Michie Smith's salary

KA 8.7.96

Rs. 800 to Rs. 1,200 as proposed by Mr. Eliot. It was remarked that the lower salary ^{would be} ~~is~~ sufficient for some years, and ^{that} the Govt. of India would prefer to make separate recommendations thereafter if it should at any time be found expedient to increase the pay of the appointment. More than three years have passed since the date of that Despatch, and ~~yet~~ ^{although} Mr. Eliot's scheme, under the most favourable circumstances, ^{can} ~~could~~ not ^{probably} ~~come~~ into force ~~probably~~ for another two years, the same rate of pay, viz. Rs. 800, is provided ^{in it} for Mr. Michie Smith. It cannot be doubted that ^{Mr. Michie Smith} the experience which ~~he~~ has gained since he took up the appointment of Govt. Astronomer has rendered him a more valuable public servant, and ~~although~~ ~~his~~ ~~services~~ ~~are~~ ~~valuable~~ ~~to~~ ~~the~~ ~~Govt.~~ ~~and~~ ~~it~~ ~~is~~ ~~not~~ ~~possible~~ ~~to~~ ~~replace~~ ~~him~~ ~~efficiently~~ ~~and~~ ~~at~~ ~~the~~ ~~same~~ ~~time~~ ~~and~~ ~~with~~ ~~the~~ ~~same~~ ~~amount~~ ~~of~~ ~~money~~ ~~as~~ ~~is~~ ~~now~~ ~~paid~~ ~~to~~ ~~him~~ ~~and~~ ~~it~~ ~~is~~ ~~not~~ ~~possible~~ ~~to~~ ~~replace~~ ~~him~~ ~~efficiently~~ ~~and~~ ~~at~~ ~~the~~ ~~same~~ ~~time~~ ~~and~~ ~~with~~ ~~the~~ ~~same~~ ~~amount~~ ~~of~~ ~~money~~ ~~as~~ ~~is~~ ~~now~~ ~~paid~~ ~~to~~ ~~him~~ ~~and~~ ~~it~~ ~~is~~ ~~not~~ ~~possible~~ ~~to~~ ~~replace~~ ~~him~~ ~~efficiently~~ ~~and~~ ~~at~~ ~~the~~ ~~same~~ ~~time~~ ~~and~~ ~~with~~ ~~the~~ ~~same~~ ~~amount~~ ~~of~~ ~~money~~ ~~as~~ ~~is~~ ~~now~~ ~~paid~~ ~~to~~ ~~him~~ ~~and~~ ~~it~~ ~~is~~ ~~not~~ ~~possible~~ ~~to~~ ~~replace~~ ~~him~~ ~~efficiently~~ ~~and~~ ~~at~~ ~~the~~ ~~same~~ ~~time~~ ~~and~~ ~~with~~ ~~the~~ 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