

Pension 1899 Department
Government {1899} of Madras.

PUBLIC.

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Recd. 29. 3. } 1899.
Regd. " }

Enclosures —

Spare copies —

G.O., No. 369, 23rd March 1899.

MARCH.

Astronomical and Solar Physics Observatories in Madras.

Communicating to the Government Astronomer and to the Meteorological Reporter to Government letter from the Government of India regarding the transfer of the control and funds of the — to that Government from the 1st April 1899, directing the latter officer to submit a formal application to retire from the service from that date, and addressing the Government of India on the subject.

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Order, 6th April 1899 No 218.

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G. H. V.

GOVERNMENT OF MADRAS.

PUBLIC DEPARTMENT.

READ—the following paper :—

From T. W. HOLDERNESS, Esq., c.s.i., Secretary to the Government of India, Department of Revenue and Agriculture (Meteorology), to the Chief Secretary to the Government of Madras, dated Calcutta, the 8th March 1899, No. 873.

With reference to the correspondence ending with your letter, No. 227 (Public), dated the 23rd February 1899, I am directed to forward a copy of the papers noted in the margin regarding the re-organization of Indian observatories.

1. Despatch to Her Majesty's Secretary of State for India, No. 56, dated 1st September 1897.
2. Despatch from Her Majesty's Secretary of State for India, No. 173 (Revenue), dated 22nd September 1895, and enclosures.
3. Despatch to Her Majesty's Secretary of State for India, No. 14, dated 2nd February 1899, and enclosure.

2. The Government of India were informed in Mr. Price's letter, No. 941 (Public), dated the 21st November 1893, that the Government of Madras had no objection to the transfer of the control of the Madras Observatory and the funds connected with it to the Government of India, or to placing the organization and management of the Solar Physics Observatory under the Meteorological Reporter to the Government of India. I am now to acquaint you that, in anticipation of the Secretary of State's approval of the scheme of re-organization, it is proposed to give effect to these arrangements from the 1st April 1899. The Meteorological Reporter to the Government of India has been informed accordingly, and the necessary budget provision has been made in the India estimates for 1899-1900.

ENCLOSURES.

DESPATCH from the Government of India, Department of Revenue and Agriculture (Meteorology), to Her Majesty's Secretary of State for India, dated Simla, the 1st September 1897, No. 56.

We have the honour again to address your Lordship on the subject of the

1. Letter to the Government of Bombay, No. 794-14-1 of 9th March 1895.
2. Letter from the Meteorological Reporter to the Government of India, No. 410-S, dated 29th May 1896.
3. Letter to the Government of Madras, No. 2541-11-6, dated 19th October 1896.
4. Letter to the Government of Bombay, No. 2542-11-7, dated 19th October 1896.
5. Letter from the Government of Madras, No. 1343, Public, dated 21st December 1896.
6. Letter from the Government of Bombay, No. 696, dated 9th February 1897.
7. Note by the Surveyor-General, dated 13th July 1896.
8. Note by the Director, Geological Survey, dated 16th July 1896.

proposed extension and re-organization of the Indian Scientific Observatories, and to forward copies of the correspondence on the subject noted in the margin.

2. The original intention was to establish a complete Astronomical and Solar Physics Observatory in Southern India, and, while reducing the Madras Observatory to some extent, to leave the Bombay Magnetic Observatory untouched. The scheme, which was set forth in our despatches, No. 9, dated 10th February 1892, and No. 37, dated 7th June 1892, was referred to the Solar Physics and Observatories Committees, who approved the proposals and recommended their adoption. In informing the Government of India of this fact, Lord Kimberley remarked in his despatch, No. 111, Revenue, dated 10th November 1892 :—

The Solar Physics Committee, it will be seen, suggest that if funds are not available for equipping a new complete observatory with two branches, the furtherance of solar physics in India would be the greater benefit to science, while astronomical requirements could for the time be met by the Madras Observatory. For solar physics observations costly buildings would not, it is added, be required. Your Government will, no doubt, consider carefully this view of the matter before you decide to recommend the establishment and equipment of a complete new observatory.

3. The financial position at the time did not admit of the establishment of the complete observatory referred to, and a partial scheme, in accordance with the suggestion of the Solar Physics Committee, was submitted to the Secretary of State in our despatch, No. 37, dated 20th June 1893. This scheme, which provided for the establishment of a Solar Physics Observatory at Kodaikānal and the continuance of the Madras Astronomical Observatory on a reduced scale, was sanctioned in Lord Kimberley's despatch, No. 117, Revenue, dated 31st August 1893. The necessary buildings at Kodaikānal are now under construction, and your Lordship has sanctioned the requisite equipment of instruments.

4. The scheme involved the transfer to Kodaikānal of part of the Madras Observatory staff and the whole of the Dehra Dun Solar Observatory staff, and it was proposed to transfer the control of the Madras Observatory and of the funds connected with it to the Imperial Government and to place the new Solar Physics Observatory immediately under the Government of India. To these proposals the Madras Government agreed. Further consideration led us to the conclusion that it would eventually be advisable to treat the Bombay Observatory in a similar manner, thus concentrating the higher physical work at a principal observatory at Kodaikānal, to which the Bombay and Madras Observatories would be subordinate, and bringing all three under the control of the Supreme Government. The grounds upon which we arrived at this conclusion are fully set forth in our letter to the Bombay Government, dated 9th March 1895, which forms one of our present enclosures. The Government of Bombay anticipated no insuperable difficulties in effecting the desired change, but the discussion of details was left for consideration until Mr. Chambers should have retired. That gentleman died shortly afterwards, and, pending a final settlement of the scheme, no permanent arrangements have been made for the working of the Colaba Observatory, and, as a purely temporary measure, Mr. Nanabhai Ardeser Moos, an officer of the Educational Department, has been appointed to officiate as Director.

5. The acceptance by the Governments of Madras and Bombay of the principle that scientific observatories are properly national and not provincial institutions, and the change in the direction of the Colaba Observatory rendered it possible to give immediate effect to a complete scheme of re-organization. Such a scheme was elaborated by Mr. Eliot at our request, and will be found in his letter, dated 29th May 1896; and it is this scheme that we now submit for your Lordship's approval. The proposals made by Mr. Eliot contemplate the following distribution of work at the three observatories :—

(1) *Bombay*.—Magnetic and meteorological observations as hitherto (with any further improvements and extensions that may be suggested by the new Director and approved by the Observatories Committee) and the working of the local time-ball 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 Kodaikānal.

(2) *Madras*.—Meteorological observations as at present, the working of the local time-ball arrangements, the distribution of time signals throughout India, and the preparation and issue of the Madras Daily Weather Report. The observatory to be placed under the immediate charge of a Superintendent and under the general charge of the Director of the Solar Physics Observatory at Kodaikānal.

(3) *Kodaikānal*.—(1) Observations in solar physics and the discussion of these observations and of any special astronomical observations that it may be considered desirable to take at Madras by the Director and staff of the Solar Physics Observatory; (2) the Magnetic Survey of India, meteorological observations and the discussion of the various series of magnetic observations made at Kodaikānal, Bombay, or in the course of the survey, by the Director and staff of the Magnetic Survey of India.

6. It will be seen that under this scheme, which is a further step towards the realization of the complete scheme originally proposed, provision is made for a magnetic survey of India instead of an extension of astronomical work; and, as at present advised, we are inclined to think that this is the preferable course. The notes by our Surveyor-General and our Director of the Geological Survey, which we enclose,

confirm us in our estimate of the importance of the proposed survey. But in such a matter we must depend largely upon the highest expert opinion obtainable; and therefore, while recommending the scheme generally to your Lordship's approval, we would suggest that it should be referred for examination and criticism to the Observatories Committee, the Solar Physics Committee of the Royal Society and the Admiralty or Board of Trade, or to any other authorities whose advice will, in your Lordship's opinion, be useful. We trust that the scheme as now formulated, subject to such modifications as may, on consulting the authorities referred to above, appear desirable, may receive your Lordship's approval.

7. The Governments of Madras and Bombay have expressed their general approval of the scheme, subject to certain observations on points of detail. The Bombay Government do not remark upon the criticisms offered by Mr. Moos, the officiating Director of the Colaba Observatory, and we do not find anything in them calling for special remark. They are merely the not unnatural protest of a Director against any reduction in the status of the institution which he directs. The required provision for peons has been added to the proposals.

8. The most important question raised by the Government of Madras is in regard to Miss Pogson's retirement and pension. The proposals of the Meteorological Reporter will be found in paragraphs 42 to 44 and 50 to 53 of his letter of 29th May 1896. The changes he suggests in the arrangement of work at Madras involve the retirement of Miss Pogson on a pension of Rs. 250 per mensem. In inviting the opinion of the Government of Madras upon the proposed arrangements, we specially referred to them the question whether a pension should be given to her. That Government, in reply, urge her claims very strongly indeed, and make their approval of the proposals contingent upon her being provided for, since "the Governor in Council finds himself altogether unable to agree to any arrangements which involve dispensing with Miss Pogson, the Meteorological Reporter to this Government, without a retiring allowance". The Meteorological Reporter to the Government of India also urges her claims most strongly. The Madras Government have shown themselves exceedingly ready to promote our aims in this matter, not only by relinquishing the control and consenting to the reduction in status of their own observatory, but also by agreeing to the Meteorological Reporter's proposals for the amalgamation of the Meteorological and Observatory establishments. We are unwilling therefore to insist upon the dismissal of Miss Pogson without a pension in the face of their opposition. But apart from this, we agree with the Madras Government in thinking that the case is an exceptional one and deserves exceptional treatment. Under a ruling of the 30th August 1876 (Finance Department Resolution No. 2430) the appointment of Meteorological Observer, if held by a person who has no other substantive appointment, is pensionable. The appointment of Meteorological Reporter, however, is held, in all provinces except Madras, in conjunction with other pensionable appointments, so that no general ruling has been necessary; and in the absence of special orders, Miss Pogson would come under the general rule that appointments paid by local allowances do not qualify for pension. Miss Pogson has done meritorious service for Government for nearly 24 years, of which over $11\frac{1}{2}$ years were spent in a pensionable appointment which was, without any fault or shortcoming on her part, transferred by the Madras Government to another member of the family; and though her present appointment is a non-pensionable one, and she has therefore no claim on Government under the rules, we are unwilling, in carrying out our scheme, to deprive her of the means of livelihood. Mr. Eliot's proposals for amalgamation result in a saving of Rs. 519 per mensem upon the cost of the existing establishment and house-rent at Madras, so that, even if the proposed pension to Miss Pogson, upon which the Madras Government make their assent to the amalgamation conditional, is sanctioned, there will still be a net saving of Rs. 269 per mensem. We agree with that Government in thinking that, unless a pension is to be given to Miss Pogson, the amalgamation, with its consequent saving, should be postponed. Under the circumstances we have no hesitation in recommending very strongly for your Lordship's sanction the proposal to give Miss Pogson a pension of Rs. 250 per mensem with effect from the date on which the new scheme may be brought into operation. She is

at present in receipt of remuneration amounting in all to Rs. 550 per mensem; and will by that time have completed 25 years' service, as will appear from the statement of her services which we enclose.

9. The Government of Madras further raise the question of increasing the pay of Mr. Michie Smith, the Government Astronomer; but we are inclined to think that the consideration of this matter may be postponed for the present, although we recognise the fact that an increase will probably be advisable during the next few years.

10. In Lord Kimberley's despatch of the 31st August 1893 already referred to, he remarked that our proposals involved an initial outlay of Rs. 25,000 and a yearly increased charge of Rs. 1,619. The former figure was a rough estimate for the observatory only, and did not include the cost of accommodation for the astronomer and his establishment, or of an office building. It now appears that the cost of building in the Kodaikānal hills is unusually high; and the Solar Physics Observatory will cost Rs. 35,000, the Director's house Rs. 20,000 and quarters for his establishment Rs. 11,500. To this, under the present proposals, must be added another house for the Director of the Magnetic Survey at a cost of Rs. 20,000; while a joint office for the Observatory and the Survey, and the quarters for the establishment of the latter, will add Rs. 16,500 more. Thus the total cost of the buildings will amount to Rs. 1,03,000, of which, however, some Rs. 73,000 would necessarily be incurred under the original scheme. The additional capital outlay of Rs. 30,000 will enable us to secure from our annual outlay of Rs. 50,000 results which have been demanded by the best scientific opinion in England, supported by Your Lordship's predecessors, and which will rank with those obtained by other National or Imperial Observatories, and will ensure us a fuller return for our recurring expenditure than we obtain at present.

11. As regards the annual cost of establishment, the financial effect of the enlarged scheme may be thus compared with the cost under the original scheme:—

		RS.	A.	P.
Present Madras Observatory		380	0	0
Proposed Madras Observatory		332	0	0
(a) Saving	..	48	0	0
Present Madras Meteorological Office		943	12	0
Proposed Madras Meteorological Office		524	12	0
(b) Saving	..	419	0	0
Present Colaba Observatory		1,187	0	0
Proposed Colaba Observatory		507	0	0
(c) Savings	..	680	0	0
Sanctioned by Secretary of State for Solar Physics establishment (d)		1,451	0	0
Available for Kodaikānal $a + b + c + d$		2,598	0	0
Proposed for Kodaikānal		2,529	0	0
Saving	..	69	0	0
Add Miss Pogson's pension		250	0	0
Excess	..	181	0	0 per mensem.

Rs. 100 per mensem on account of the rent of the Madras Meteorological Office will be saved by the amalgamation.

12. In conclusion we desire to suggest to Your Lordship that, in view of the extended scheme of operations now to be undertaken at the Kodaikānal Observatory, it might possibly be advisable to associate with the present Observatories Committee some gentlemen specially conversant with the subject of Solar Physics.

2429—11-10.

Copy forwarded to the Finance Department for information.

(By order.)

(Signed) E. MACONCHIE,
Offg. Under Secy. to the Govt. of India.

DESPATCH from the Government of India, Department of Revenue and Agriculture (Meteorology), to Her Majesty's Secretary of State for India, dated Calcutta, the 2nd February 1899, No. 14.

With Your Lordship's despatch No. 173 (Revenue), dated 22nd September 1898, we received a copy of reports by the Astronomer Royal and Sir J. Norman Lockyer and of a letter and enclosure from the Royal Society in reference to the proposed re-organization of Indian observatories. We would ask Your Lordship to communicate our acknowledgments to those gentlemen and to the Royal Society for the valuable assistance which they have given to our Government.

2. We now forward, for Your Lordship's information, a copy of a report by Mr. John Eliot, the head of our Meteorological Department and our principal scientific adviser, on the matters discussed in the papers under reference, and of the proceedings of a departmental committee to which we submitted them for further consideration.

3. Subject to Your Lordship's approval, we propose to accept and act on the recommendations (1) to (9) of the committee and on the first portion of recommendation (10). The second portion of the last recommendation is in accordance with our general views, but will not come under actual consideration until Mr. Eliot's retirement. The committee's recommendations provide for the carrying out through the agency of the Survey of India within two or three years of the fundamental magnetic survey of the Indian Continent recommended by Professor Rücker. This survey will be undertaken as part of the operations of the Survey Department, and will be controlled by an officer of that department. It may be necessary to arrange that the officer selected should undergo a short training in England before the survey is started; but on this point we await the recommendations of the Surveyor-General. We agree with the committee that until the completion of the fundamental survey, so much of the scheme submitted by us in 1897 to Your Lordship for organizing the Kodaikānal Observatory as provides for the appointment of a Director of Magnetic Surveys and appropriate staff should be held in abeyance.

4. We also agree with the committee that our work at Kodaikānal should for the present be restricted to the Solar Physics Observatory which is now in course of completion. We have authorized the officer (Mr. Michie Smith), who has hitherto held the post of Madras Astronomer, to assume the duties of Director of the Solar Physics Observatory at Kodaikānal, and we have decided to give immediate effect to the scheme of re-organization for the Madras Observatory and the Kodaikānal Solar Physics Observatory proposed in paragraph 48 of Mr. Eliot's letter No. 410 S., dated 29th May 1896, which formed an enclosure to our despatch No. 56, dated 1st September 1897. This scheme is identical in cost with that sanctioned in Lord Kimberley's despatch No. 117, dated 31st August 1893, and merely makes certain changes in the subordinate establishment. We also propose to grant from the 1st April next to Miss Pogson, the Meteorological Reporter to the Madras Government, the pension sanctioned in Your Lordship's Despatch No. 193, dated 4th November 1897, and to re-adjust the office hitherto held by her in the manner explained in paragraphs 52 and 53 of Mr. Eliot's letter above referred to.

5. With regard to the Colaba Observatory, we propose during the next two or three years to maintain its establishment as it is at present. The arrangement sanctioned in Your Lordship's Despatch No. 69, dated 6th May 1897, under which Mr. N. A. Moss receives a salary of Rs. 500 per mensem while holding the sub. *pro*

tem. appointment of Director, may be conveniently continued. But from the 1st April next we propose to bring the Colaba Observatory under the administrative control of the Meteorological Reporter to the Government of India.

6. The financial effect of our present proposals, as summarized in paragraphs 4 and 5 of this despatch, is shown in the tabular statement appended. The cost of the fundamental survey is excluded, as it is difficult to estimate apart from the regular operations of the Survey department.

7. We would request Your Lordship to obtain from the Royal Society the information which, in paragraph 4 of their proceedings, our departmental committee consider to be required in respect of the proposed astronomical observatory at Kodaikānal. The establishment of such an observatory two or three years hence will be dependent on financial considerations, and also on the cost of the arrangements which may be made for future maintenance of the magnetic survey.

8. We accept the conclusion recorded in paragraph 8 of the committee's proceedings that an annual inspection of the Indian observatories by a small board of visitors is not feasible in India. It would withdraw officers from other important work which fully occupies their time, and it would not, in our opinion, result in equivalent advantages. The observatories will from time to time be visited on convenient occasions by our Meteorological Reporter and by the Surveyor-General while these officers are on tour. We anticipate much benefit from the submission of the annual reports of the Kodaikānal Observatory and of the officer in charge of the Magnetic Survey to the Observatories Committee of the Royal Society, and from the assistance which we trust the Observatories Committee will give us in the settlement of definite programmes of work. We approve the recommendation made by Mr. Eliot in paragraph 8 of his letter that a programme for the Solar Physics Observatory be prepared and submitted to the Observatories Committee.

Minutes of Proceedings of the Committee, Calcutta, 19th December 1898.

PRESENT:

The Hon'ble Sir JAMES WESTLAND, K.C.S.I.

" " Mr. C. M. RIVAZ, C.S.I.

T. W. HOLDERNESS, Esq., C.S.I., Secy. to the Government of India, Department of Revenue and Agriculture.

Major-General C. STRAHAN, R.E., Surveyor-General of India.

J. ELIOT, Esq., C.I.E., F.R.S., Meteorological Reporter to the Government of India.

1. That the fundamental magnetic survey of the Indian Continent should be undertaken by the Survey of India, and that for the present, until the fundamental survey which is likely to last for two or three years is completed, the question of the appointment of a specialist from Europe as Director of Magnetic Survey is not one that presses for immediate decision. On the completion of the fundamental survey, the question of the future of the survey and of the discussion of the results will have to be considered.

2. That until the fundamental survey be completed the Colaba Observatory be maintained on the present scale.

3. That for the present the efforts of the Government of India be directed at Kodaikānal to the completion of the Solar Physics Observatory, and that the question of the establishment at Kodaikānal of an Astronomical Observatory be taken up hereafter along with the question of the appointment of the Director of Magnetic Surveys.

4. That meanwhile the Observatories Committee of the Royal Society be requested to advise as to the equipment, staff, organization and scheme of observations of the proposed Astronomical Observatory at Kodaikānal, and that when this information has been obtained, a site be selected and plans and estimates for the proposed buildings framed.

5. (a) That with reference to paragraph 3 of the Royal Society's letter the Director of Solar Physics (Mr. Michie Smith) be asked for an estimate of his requirements.

(b) That the Survey of India continue the daily photographs of the sun at Dehra at least for five years.

6. That with reference to paragraph 4 of the letter the Surveyor-General be asked to report on the proposal for the establishment of a permanent magnetic observatory for eye observations at Dehra.

7. That with reference to paragraph 5 the Surveyor-General be asked to report as to how he proposes to arrange for the superintendence of the fundamental survey.

8. That with reference to paragraph 6 it is agreed that the proposal for an annual inspection by a small board of visitors is not feasible in India.

9. That paragraph 7 be complied with by the Director of the Solar Physics Observatory and by the officer placed in charge of the proposed magnetic survey.

10. That the Director of the Solar Physics Observatory for the present be placed for administrative purposes under the Meteorological Reporter to the Government of India; and that eventually there should be a scientific adviser to the Government of India who should be a man of established European reputation and who should occupy the position of Director-General over the Meteorological, Solar Physics, Astronomical and Magnetic Branches of all Indian observatories.

STATEMENT showing the financial effect of the proposed re-organization of Indian Observatories.

	Sanctioned.	Proposed in 1897.	Now proposed.
	RS. A. P.	RS. A. P.	RS. A. P.
Solar Physics establishment	1,451 4 0	1,499 4 0	1,499 4 0
Madras Observatory	380 0 0	332 0 0	332 0 0
Madras Meteorological Office	1,043 12 0	524 12 0	524 12 0
Pension to Miss Pogson	Nil.	250 0 0	250 0 0
Colaba Observatory	987 0 0	507 0 0	987 0 0
Magnetic Survey	Nil.	1,030 0 0	Nil.
Total ..	3,862 0 0	4,143 0 0	3,593 0 0

ORDER—No. 369, Public, dated 23rd March 1899.

Communicated to the Government Astronomer and to the Meteorological Reporter to Government in continuation of G.O., No. 191, Public, dated 2nd February 1898.

2. In the despatch printed with the Government Order above quoted, the Secretary of State sanctioned the grant of a pension of Rs. 250 per mensem to Miss Pogson, and she should now submit a formal application to retire from the service from the 1st April 1899.

3. The following letter will be addressed to the Government of India:—

[Here enter letter No. 370, Public, dated 23rd March 1899.]

(True Extract.)

M. Smith
for Chief Secretary.

To the Government Astronomer.
" Meteorological Reporter to Government,
" Accountant-General.
" Revenue Department.
" Pension Department.

Exd. S. J. Pereira.