

**Report on the Administration of
the Meteorological Department
of the Government of India
in 1938-39.**



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 Indian Army Book Depot, Dayalbagh, Agra.
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 Lahiri & Co., Ltd., Calcutta, Messrs. S. K.
 London Book Co. (India), Arbab Road, Peshawar, Murree, Nowshera, Rawalpindi.
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CONTENTS.

| | PAGES. |
|---|--------|
| I.—Chief Features of the year | 1—6 |
| II.—Marine Meteorology— | |
| Storm Warnings | 6—7 |
| Services to the Bay of Bengal Ports | 7 |
| Services to the Arabian Sea Ports | 8 |
| Exchange of information with ships at sea | 8—9 |
| III.—Aviation Meteorology | 9—12 |
| IV.—Squall, Heavy Rainfall and Frost Warnings | 12—13 |
| V.—Offices and Observatories— | |
| Headquarters Office, Poona | 13—14 |
| General Section | 14 |
| Weather Section | 15—16 |
| Observatories Section | 16 |
| Instruments Section | 16—17 |
| Marine Section | 17—18 |
| Upper Air Section | 18 |
| Statistical Section and Library | 18—19 |
| Agricultural Meteorology Section | 19—20 |
| Upper Air Observatory, Agra | 21—22 |
| Colaba and Alibag Observatories | 22—23 |
| Alipore Observatory and Meteorological Office, Calcutta | 23—24 |
| Meteorological Office, Karachi | 24—25 |
| Kodaikanal Observatory | 25—26 |
| Meteorological Office, Quetta | 26—27 |
| Meteorological Office, Peshawar | 27—28 |
| Other Observatories | 28—29 |
| VI.—Rainfall Registration | 29—30 |
| Heavy Rainfall Reports.. | 29—30 |
| Snowfall Registration | 30 |
| VII.—Concluding remarks | 30—31 |
| Appendix A.—Staff | 33—38 |
| Appendix B.—Publications | 39—41 |

APPENDIX B.

PUBLICATIONS.

The following departmental publications were issued or sent to press during the year:—

I.—*Periodical.*

1. Daily Weather Reports:—
 - (i) Indian Daily Weather Report (to date).
 - (ii) Calcutta Daily Weather Report (to date).
 - (iii) Karachi Daily Weather Report (to date).
2. Weekly Weather Report (to date).
3. India Weather Review, Monthly Weather Report (to date).
4. Supplement to the India Weather Review—Monthly Frequency Tables for the 12 months in 1937.
5. India Weather, Annual Summary, 1937, in five parts:—
 - (i) Introduction.
 - (ii) Part A.—Summary of Weather with Tables.
 - (iii) Part B.—Snowfall.
 - (iv) Part C.—Storms and Depressions.
 - (v) Part D.—Seismic Records.
6. Daily Rainfall of India, 1936.
7. Monthly Rainfall of India, 1936.
8. Upper Air Data, 1937, in 2 parts:—
 - (i) Part A.—Monthly Means of Pilot Balloon Data.
 - (ii) Part B.—Sounding Balloon and Aeroplane Data.
9. Seasonal Memoranda:—
 - (i) Memorandum on the probable character of the weather in north-west India in January, February and March 1939.
 - (ii) Statement of the rainfall and snowfall of northwest India in January, February and March 1939.
 - (iii) Memorandum regarding the probable amount of monsoon rainfall in 1938.
 - (iv) Memorandum on the rainfall of June and July and the probable amount during August and September 1938.
 - (v) Statement of actual rainfall in the monsoon season, June to September 1938.
10. Magnetic, Meteorological and Seismographic observations made at the Government Observatories, Bombay and Alibag, in the year 1936.
11. Report of the Administration of the Meteorological Department of the Government of India in 1937-38.
12. Report of the Kodaikanal Observatory for the year 1938.

II.—*Occasional.*

1. Memoirs of the India Meteorological Department:—
Vol. XXVI—

Part X—The General Circulation of the Atmosphere over India and its neighbourhood, by K. R. RAMANATHAN and K. P. RAMAKRISHNAN.

Vol. XXVII—

Part I—A study of dust-storms at Agra, by B. N. SRINIVASAIAN and N. K. SUR.

Part II—Discussion of the results of sounding balloon ascents at Madras, by N. K. SUR and K. P. RAMAKRISHNAN.

2. Scientific Notes:—

Vol. VII—

No. 79—Atmospheric electric potential gradient, conductivity and air-earth current on electrically 'quiet' days at Colaba, by S. M. MUKHERJEE.

No. 80—Normal monthly percentage frequencies of surface and upper winds (afternoon) up to 3 km. in India, Burma and Persian Gulf.

No. 81—Vertical currents in the first few kilometers over Poona and their possible effect on the measures of upper winds made by pilot balloons assumed to rise at a known constant rate, by K. P. RAMAKRISHNAN.

No. 82—An analysis of Indian rainfalls using the median as a statistic, by L. S. MAHALINGAM.

3. Kodaikanal Observatory Bulletin:—

Summary of prominence observations for the first half of the year 1937.

The following were contributed to extra-departmental publications:—

BANERJI, S. K.

Does thunderstorm rain play any part in the replenishment of earth's negative charge? 1938 *Q. J. Roy. Met. Soc.*, 64, 293—299.

Potential gradient inside thunderclouds. 1938 *Q. J. Roy. Met. Soc.*, 64, 221—222.

Earthquake problems of India. 1938 *Sci. and Cult.*, 3, 637—642.

On the interchange of electricity between solids, liquids and gases in mechanical actions. 1938 *Indian J. Phys.*, 12, 409—436.

Our knowledge of frictional electricity. (Pres. Address, Fifth Annual Meeting, Lahore, Jan. 1939.) 1938 *Annual Report and Proc. Indian Phys. Soc.*, 5, 1—12.

DAS, A. K.

Progress of meteorology in India during the last 25 years. *Progress of Science in India*, 732—741. 1938 Indian Sci. Congr. Ass.

DESAI, B. N.

— (S. MAL and)

The mechanism of thundery conditions at Karachi. 1938 *Q. J. Roy. Met. Soc.*, 64, 525—537.

— (S. MAL and)

Thundersqualls of Bengal. 1938 *Gerl. Beitr. Geophys.*, 53, 288—304.

— (P. M. BARVE, Y. S. PARANJPE and)

Importance of dialysis in the study of colloids. V—Colloidal gold. 1938-39 *Proc. Roy. Soc. Edin.*, 59, 22—29.

— (P. M. BARVE, Y. S. PARANJPE and)

Importance of dialysis in the study of colloids. VI—Colloidal vanadium pentoxide. 1938-39 *Proc. Roy. Soc. Edin.*, 59, 30—37.

IYER, V. D.

An attempt at foreshadowing monsoon rainfall in Mysore. 1938 *Curr Sci.*, 6, 510—511.

KRISHNA RAO, P. R. — (K. L. BHATIA and)

Distribution of temperature and humidity in the upper air over Karachi. 1939 *Curr. Sci.*, 8, 71—73.

PURI, H. R.

Airman's weather worries. 1938 *Aviation Gazette and Annual*, 7—10.

RAMANATHAN, K. R.

Climatology of Bombay. 1938 *J. Univ. Bombay*, 7, 1—8.

The earth's magnetism and the upper atmosphere. 1939 Pres. Address. Sec. Math. Phys., twenty-sixth Indian Sci. Congr., Lahore. 25 pages.

RAMDAS, L. A.

Report on simple methods of measurement in agricultural meteorology. 1937 *Kommission für landwirtschaftliche Meteorologie, Protokolle der Tagung in Salzburg*, 53—57.

— (A. K. MALLIK and)

The exchange of moisture between air layers near the ground and substances like soils, plant leaves, seeds etc., exposed to the atmosphere. 1938 *Curr. Sci.*, 6, 452—453.

— (V. SATAKOPAN, S. GOPAL RAO and)

Frequency of days with hailstorms in India. 1938 *Indian J. Agri. Sci.*, 8, 787—805.

SAVUR, S. R.

The fundamental idea underlying statistical tests of significance. 1938 *Curr. Sci.*, 7, 106—107.

A problem in coin-tosses. 1938 *Proc. Phys. Soc. Lond.*, 50, 947—960.

SIL, J. M.

Some atmospheric-electric observations at Poona. 1938 *Terr. Mag. and Atmos. Elec.*, 43, 139—142.

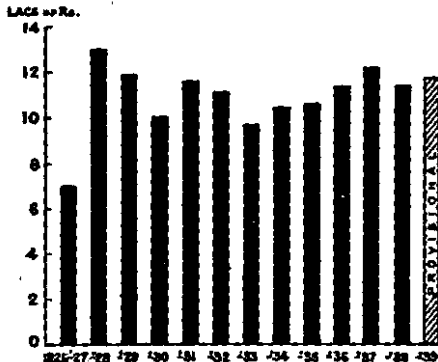


FIG. 1. EXPENDITURE.

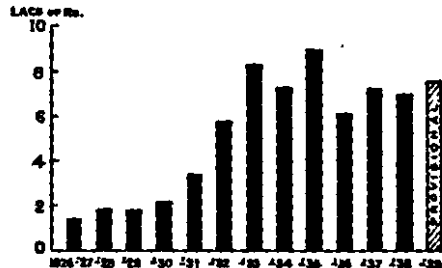


FIG. 2. EXPENDITURE ON TELEGRAMS.

(EXCLUDING EXPENDITURE ON TELEGRAMS AND ENGLISH CHARGES)

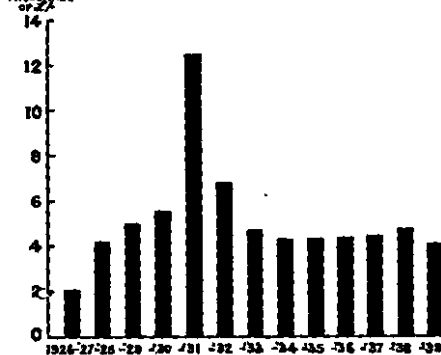


FIG. 3. GRANT FOR PURCHASES BY INDIA STORE DEPT., LONDON, (i.e. ENGLISH CHARGES).

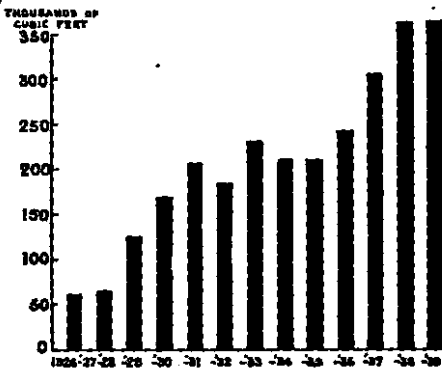


FIG. 4. PRODUCTION OF HYDROGEN FOR BALLOONS.

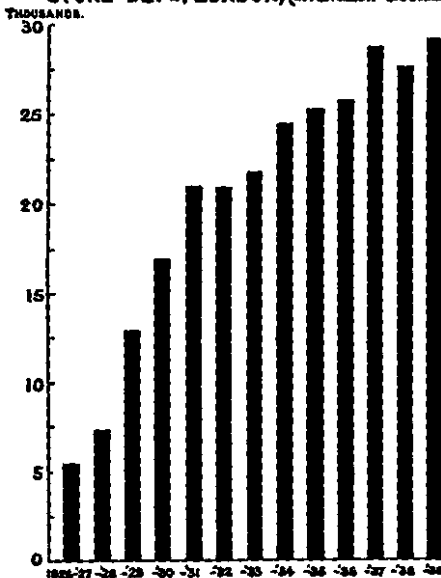


FIG. 5. NUMBER OF PILOT BALLOON ASCENTS.

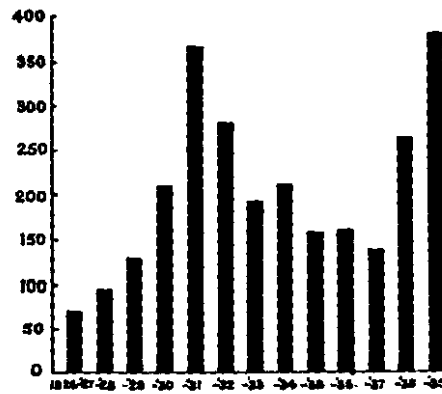


FIG. 6. NUMBER OF SOUNDING BALLOON ASCENTS.

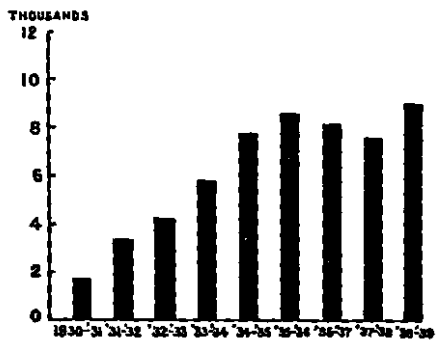


FIG. 7. WEATHER FORECASTS FOR AVIATION.

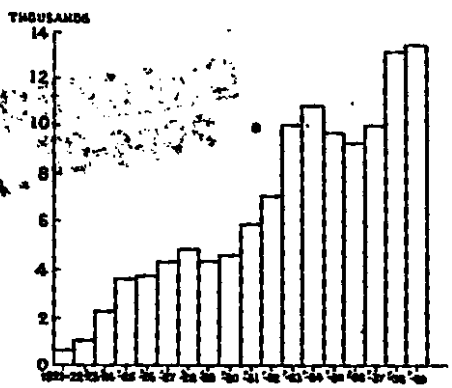


FIG. 8. WIRELESS WEATHER MESSAGES FROM SHIPS.

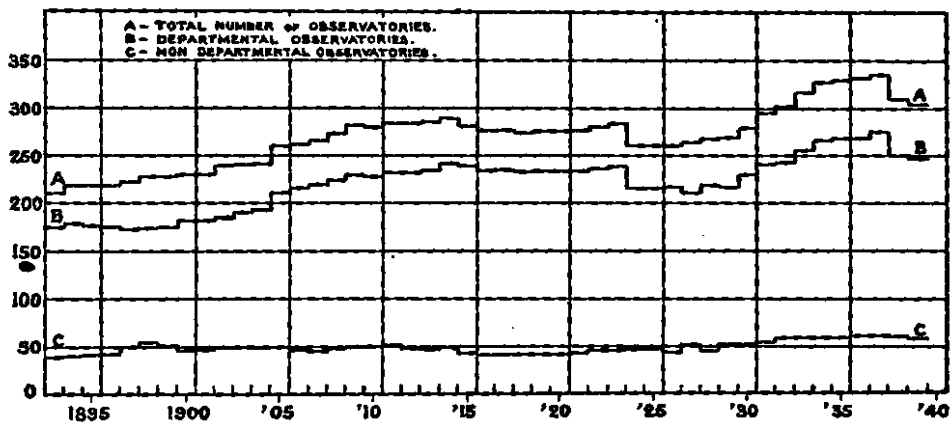
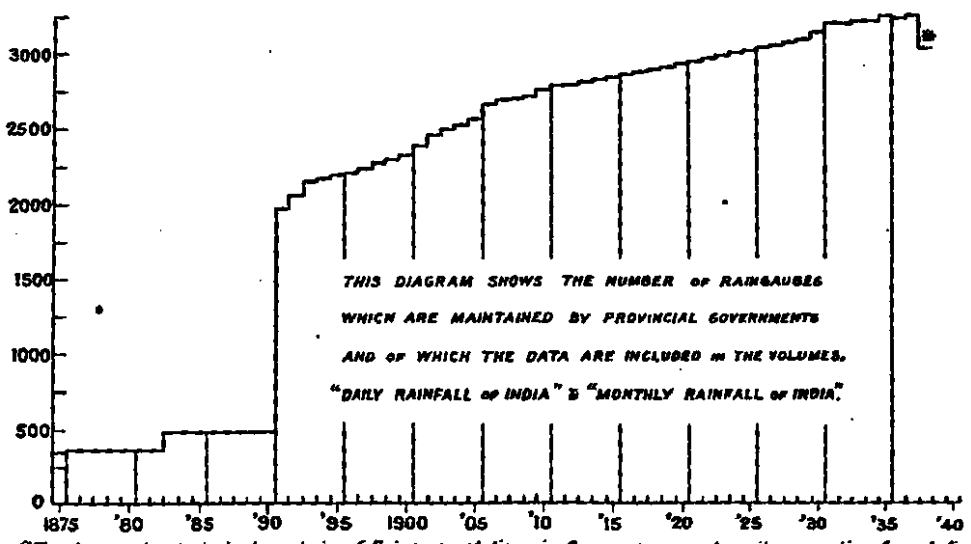


FIG. 9. SURFACE METEOROLOGICAL OBSERVATORIES.



*The decrease in 1938 is due to exclusion of Rain gauge stations in Burma consequent on its sepeation from India.

FIG. 10. DEVELOPMENT OF PROVINCIAL RAINFALL ORGANISATION IN INDIA.