

GOVERNMENT OF INDIA  
METEOROLOGICAL DEPARTMENT

INDIA WEATHER REVIEW, 1936

ANNUAL SUMMARY

PART D.

SEISMIC RECORDS.

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*Director General of Observatories.*

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# INDIA WEATHER REVIEW, 1936.

## ANNUAL SUMMARY.

### PART D.

### SEISMIC RECORDS.

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#### STATION—UPPER AIR OBSERVATORY, AGRA.

Lat. 27° 8' 15" N. Long. 78° 0' 45" E. Height above M. S. L. 163 metres.

Lithologic Foundation :—Indo-Gangetic Alluvium.

Instruments :—Omori-Ewing Seismograph North-South (N) component, and Milne-Shaw Seismograph East-West (E) component, both installed in an underground room.

#### INSTRUMENTAL CONSTANTS.

| Component | Steady mass (Kg.) | T (sec.) | Vm  | ε    | Paper speed (mm./min.) |
|-----------|-------------------|----------|-----|------|------------------------|
| N         | 45                | 32.5     | 29  | 1    | 12                     |
| E         | 0.47              | 12       | 250 | 20:1 | 8                      |

TABLE D<sub>1</sub>.

| Date.  | Compt. | Phase.          | G. M. T. | Period. | Amplitude. | △    | Remarks. | Date.   | Compt. | Phase.           | G. M. T. | Period. | Amplitude. | △    | Remarks. |  |
|--------|--------|-----------------|----------|---------|------------|------|----------|---------|--------|------------------|----------|---------|------------|------|----------|--|
|        |        |                 | H. M. S. | Sec.    | μ          | Km.  |          |         |        | H. M. S.         | Sec.     | μ       | Km.        |      |          |  |
| 1936.  |        |                 |          |         |            |      |          | 1936.   |        |                  |          |         |            |      |          |  |
| Jan. 1 | E      | e               | 3 55 54  | ...     | ...        | ...  |          | Jan. 14 | E      | IP               | 14 30 48 | ...     | ...        | 7700 |          |  |
| " 2    | E      | e               | 0 53 52  | ...     | ...        | ...  |          |         | E      | PR <sub>1</sub>  | 33 6     | ...     | ...        | ...  |          |  |
|        | E      | Mn              | 1 11 9   | 25      | 44         | ...  |          |         | E      | PR <sub>2</sub>  | 34 58    | ...     | ...        | ...  |          |  |
| " 2    | E      | P               | 17 36 6  | ...     | ...        | 5790 |          |         | E      | iS               | 39 59    | ...     | ...        | ...  |          |  |
|        | E      | S               | 43 35    | ...     | ...        | ...  |          |         | E      | PS               | 40 36    | ...     | ...        | ...  |          |  |
|        | E      | PS              | 44 8     | ...     | ...        | ...  |          |         | E      | SR <sub>1</sub>  | 14 11    | ...     | ...        | ...  |          |  |
|        | E      | SR <sub>2</sub> | 48 38    | ...     | ...        | ...  |          |         | E      | SR <sub>2</sub>  | 47 32    | ...     | ...        | ...  |          |  |
|        | E      | L               | 52 11    | ...     | ...        | ...  |          |         | E      | L                | 53 41    | ...     | ...        | ...  |          |  |
| " 2    | E      | IP              | 22 41 5  | ...     | ...        | 3610 |          | " 14    | E      | e                | 17 54 46 | ...     | ...        | 7700 |          |  |
|        | N, E   | S               | 46 28    | ...     | ...        | ...  |          |         | E      | ePR <sub>1</sub> | 58 35    | ...     | ...        | ...  |          |  |
|        | E      | SR <sub>1</sub> | 48 33    | ...     | ...        | ...  |          |         | E      | iS               | 18 5 15  | ...     | ...        | ...  |          |  |
|        | E      | L               | 50 50    | ...     | ...        | ...  |          |         | E      | PS               | 5 55     | ...     | ...        | ...  |          |  |
| " 7    | E      | e               | 1 55 34  | ...     | ...        | ...  |          | " 17    | E      | e                | 12 19 28 | ...     | ...        | ...  |          |  |
|        | E      | i               | 57 27    | ...     | ...        | ...  |          |         | E      | i                | 20 45    | ...     | ...        | ...  |          |  |
| " 13   | E      | e               | 18 15 17 | ...     | ...        | ...  |          | " 20    | E      | IP               | 17 5 15  | ...     | ...        | 5355 |          |  |
|        | E      | Mn              | 28 54    | ...     | ...        | ...  |          |         | E      | i                | 5 33     | ...     | ...        | ...  |          |  |
| " 14   | E      | e               | 5 56 23  | ...     | ...        | ...  |          |         | E      | i                | 7 27     | ...     | ...        | ...  |          |  |
|        | E      | i               | 6 12 43  | ...     | ...        | ...  |          |         | E      | i                | 7 27     | ...     | ...        | ...  |          |  |

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\* Agent for publications on Aviation only.

*Errata to India Weather Review, 1936, Annual Summary, Part D.*

| Page. | Place.   | For.               |
|-------|--|--------------------|
| D 2   | February 11, hour 4 51 20, 'phase' column . . . .    | S                  |
| D 3   | March 2, 'remarks' column . . . .                    | PR                 |
| D 6   | July 26, hour 7 56 49, 'phase' column . . . .        | P <sup>1</sup>     |
| D 7   | October 5, hour 6 18 37, 'phase' column . . . .      | ePR,               |
| D 19  | November 19, hour 21 30 0, 'phase' column . . . .    | P <sup>1</sup>     |
| D 19  | November 22, hour 18 38 52, 'phase' column . . . .   | P <sup>1</sup>     |
| D 20  | December 26-27, hour 23 11 0, 'phase' column . . . . | P <sup>1</sup> (?) |
| D 29  | November 2, 'remarks' column . . . .                 | 49°·5E             |
| D 32  | January 15, 'remarks' column . . . .                 | no                 |
| D 35  | July 5, 'remarks' column . . . .                     | 124°E              |

TABLE D<sub>1</sub>—contd.

| Date.   | Compt. | Phase.           | G. M. T. | Period. | Amplitude. | △    | Remarks.   |
|---------|--------|------------------|----------|---------|------------|------|--|
|         |        |                  | H. M. S. | Sec.    | μ          | Km.  |  |
| 1936.   | E      | IS               | 12 20    | ...     | ...        | ...  |  |
|         | E      | PS               | 12 56    | ...     | ...        | ...  |  |
|         | E      | SR <sub>1</sub>  | 15 39    | ...     | ...        | ...  |  |
|         | E      | SR <sub>2</sub>  | 16 49    | ...     | ...        | ...  |  |
| Jan. 24 | E      | e                | 16 54 47 | ...     | ...        | ...  |  |
|         | E      | F                | 17 28 53 | ...     | ...        | ...  |  |
| Feb. 4  | E      | e                | 12 17 1  | ...     | ...        | ...  | Slight, near.  |
|         | E      | i                | 17 32    | ...     | ...        | ...  |  |
|         | E      | F                | 30       | ...     | ...        | ...  |  |
| " 6     | E      | e                | 4 16 37  | ...     | ...        | ...  |  |
| " 7     | E      | IP               | 9 1 25   | ...     | ...        | 2520 | iP in E.<br>Epc: Lat. 32°N.<br>Long. 102°E (Manila).                             |
|         | N      | P                |          |         |            |      |  |
|         | E      | PR <sub>1</sub>  | 1 46     | ...     | ...        | ...  |  |
|         | N, E   | IS               | 5 33     | ...     | ...        | ...  |  |
|         | E      | SR <sub>1</sub>  | 6 34     | ...     | ...        | ...  |  |
|         | E      | L                | 7 46     | ...     | ...        | ...  |  |
|         | E      | F                | 12 18    | ...     | ...        | ...  |  |
| " 8     | E      | P                | 12 22 35 | ...     | ...        | 7790 |  |
|         | E      | ePR <sub>1</sub> | 25 5     | ...     | ...        | ...  |  |
|         | E      | IS               | 31 50    | ...     | ...        | ...  |  |
|         | E      | PS               | 32 20    | ...     | ...        | ...  |  |
|         | E      | SR <sub>1</sub>  | 33 37    | ...     | ...        | ...  |  |
|         | E      | F                | 13 56    | ...     | ...        | ...  |  |
| " 10    | E      | e                | 18 23 39 | ...     | ...        | ...  |  |
|         | E      | i                | 28 56    | ...     | ...        | ...  |  |
|         | E      | F                | 19 32    | ...     | ...        | ...  |  |
| " 11    | N      | P                | 4 50 17  | ...     | ...        | 720  | Felt over a wide area in Bihar, parts of the United Provinces, Bengal and Nepal. |
|         | N      | S                | 51 0     | ...     | ...        | ...  |  |
|         | N      | S                | 51 20    | ...     | ...        | ...  |  |
|         | N      | S                | 51 45    | ...     | ...        | ...  |  |
|         | N      | F                | 5 14     | ...     | ...        | ...  |  |
| " 11    | E      | P                | 20 10 16 | ...     | ...        | ...  | Felt in Assam and Bengal.  |
|         | E      | P                | 11 21    | ...     | ...        | 290  |  |
|         | E      | S                | 12 16    | ...     | ...        | ...  |  |
|         | N      | e                | 12 23    | ...     | ...        | ...  |  |
|         | E      | S*               | 13 2     | ...     | ...        | ...  |  |
|         | N, E   | S                | 13 36    | ...     | ...        | ...  |  |
|         | E      | F                | 32       | ...     | ...        | ...  |  |
| " 12    | E      | P                | 9 42 28  | ...     | ...        | 4590 |  |
|         | E      | IS               | 43 50    | ...     | ...        | ...  |  |
|         | E      | F                | 10 25    | ...     | ...        | ...  |  |
| " 15    | N, E   | IP               | 12 57 15 | ...     | ...        | 6665 |  |
|         | N, E   | PR <sub>1</sub>  | 59 22    | ...     | ...        | ...  |  |
|         | N, E   | IS               | 13 5 34  | ...     | ...        | ...  |  |
|         | E      | PS               | 6 0      | ...     | ...        | ...  |  |

TABLE D<sub>1</sub>—contd.

| Date.   | Compt. | Phase.           | G. M. T. | Period. | Amplitude. | △    | Remarks.  |
|---------|--------|------------------|----------|---------|------------|------|---|
|         |        |                  | H. M. S. | Sec.    | μ          | Km.  |   |
| 1936.   | E      | e                | 7 4 13   | ...     | ...        | ...  |   |
| Feb. 24 | E      | F                | 35       | ...     | ...        | ...  |   |
| " 24    | E      | e                | 16 34 53 | ...     | ...        | ...  |   |
|         | E      | i                | 39 38    | ...     | ...        | ...  |   |
|         | E      | F                | 17 13    | ...     | ...        | ...  |   |
| " 27    | E      | IP               | 10 13 51 | ...     | ...        | 6165 |   |
|         | N      | P                |          |         |            |      |   |
|         | E      | PR <sub>1</sub>  | 15 56    | ...     | ...        | ...  |   |
|         | E      | PR <sub>2</sub>  | 17 6     | ...     | ...        | ...  |   |
|         | N, E   | IS               | 21 41    | ...     | ...        | ...  |   |
|         | E      | PS               | 22 44    | ...     | ...        | ...  |   |
|         | E      | ISR <sub>1</sub> | 24 39    | ...     | ...        | ...  |   |
|         | E      | SR <sub>2</sub>  | 27 41    | ...     | ...        | ...  |   |
|         | E      | L                | 31 41    | ...     | ...        | ...  |   |
|         | N      | F                | 52       | ...     | ...        | ...  |   |
| " 27    | E      | e                | 17 9 41  | ...     | ...        | ...  |   |
|         | E      | F                | 17       | ...     | ...        | ...  |   |
| " 28    | E      | e                | 3 26 14  | ...     | ...        | ...  |   |
|         | E      | F                | 4 48     | ...     | ...        | ...  |   |
| " 28    | E      | eP               | 16 23 58 | ...     | ...        | 5190 |   |
|         | E      | S                | 30 53    | ...     | ...        | ...  |   |
|         | E      | eSR <sub>1</sub> | 33 53    | ...     | ...        | ...  |   |
|         | E      | SR <sub>2</sub>  | 35 8     | ...     | ...        | ...  |   |
|         | E      | L                | 38 6     | ...     | ...        | ...  |   |
|         | E      | Mn               | 44 37    | 20      | 17         | ...  |   |
|         | E      | F                | 18 8     | ...     | ...        | ...  |   |
| Mar. 1  | E      | eP               | 10 30 52 | ...     | ...        | 5550 | Probably deep focus. Epc: South of Sakhalin Island. (Chiufung). |
|         | E      | IS               | 38 8     | ...     | ...        | ...  |   |
|         | N      | i                | 38 13    | ...     | ...        | ...  |   |
|         | E      | i                | 39 48    | ...     | ...        | ...  |   |
|         | E      | i                | 48 34    | ...     | ...        | ...  |   |
|         | E      | Mn               | 11 5 52  | ...     | ...        | ...  |   |
|         | E      | F                | 13 7     | ...     | ...        | ...  |   |
| " 2     | E      | IP               | 3 28 33  | ...     | ...        | 6145 | From P and PR.  |
|         | N      | P                |          |         |            |      |   |
|         | E      | IPR <sub>1</sub> | 30 40    | ...     | ...        | ...  |   |
|         | E      | ePR <sub>2</sub> | 31 37    | ...     | ...        | ...  |   |
|         | N, E   | S                | 36 21    | ...     | ...        | ...  |   |
|         | E      | PS               | 36 53    | ...     | ...        | ...  |   |
|         | E      | ISR <sub>1</sub> | 40 7     | ...     | ...        | ...  |   |
|         | E      | SR <sub>2</sub>  | 41 56    | ...     | ...        | ...  |   |
|         | E      | L?               | 45 46    | ...     | ...        | ...  |   |
|         | E      | Mn               | 55 21    | 18      | 71         | ...  |   |
|         | E      | F                | 7 4      | ...     | ...        | ...  |   |
| " 2     | E      | e                | 20 3 15  | ...     | ...        | ...  | Tremors.  |
|         | E      | F                | 14       | ...     | ...        | ...  |   |
| " 6     | E      | e                | 12 20 14 | ...     | ...        | ...  | Tremors.  |
|         | E      | e                | 21 30    | ...     | ...        | ...  |   |
|         | E      | F                | 57       | ...     | ...        | ...  |   |