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METEOROLOGICAL DEPARTMENT

INDIA WEATHER REVIEW, 1933

ANNUAL SUMMARY

PART D.

SEISMIC RECORDS.

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TABLE D 1—contd.

| Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) | | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) | | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) | | Remarks. | |
|-----------|----------------------|----------------------------|------------------|------------------------|----------------|----------------------------------------------------------------------------------------|------------|----------------------|-------------------|------------------|------------------------|----------------|---------------------------------------------------------------------------|------------|----------------------|------------------|------------------|------------------------|----------------|-----------------|--|
| | | | | A _N | A _E | | | | | | A _N | A _E | | | | | | A _N | A _E | | |
| 1933. | | H. M. S. | | | | | 1933. | | H. M. S. | | | | | 1933. | | H. M. S. | | | | | |
| June 8th | A _E P | 18 20 16 | ... | ... | ... | Feeble shock. | Aug. 11th | A _N Pe | 8 58 24 | ... | ... | ... | Moderate Shock. | Sept. 30th | A _E P | 14 32 1 | ... | ... | ... | Slight shock. | |
| | eF | 19 33 6 | ... | ... | ... | | | S | 9 1 44 | ... | ... | ... | | | S | 14 41 37 | ... | ... | ... | | |
| „ 13th | A _E P | 20 43 1 | ... | ... | ... | Slight shock. | | L | 9 3 55 | ... | ... | ... | | | L | 14 54 33 | ... | ... | ... | | |
| | S | 20 50 40 | ... | ... | ... | | | Fe | 9 31 58 | ... | ... | ... | | | eF | 16 6 22 | ... | ... | ... | | |
| | M | 21 10 18 | 15 | ... | 5 | | „ 12th | A _E e | 7 36 47 | ... | ... | ... | Very feeble shock. | Oct. 2nd | A _E P | 15 49 12 | ... | ... | ... | Moderate shock. | |
| | Fe | 21 53 36 | ... | ... | ... | | | M | 7 41 52(?) | 11 | ... | 3 | | | M | 17 2 51 | 20 | ... | 15 | | |
| „ 13th | A _E P | 22 42 32 | ... | ... | ... | Feeble shock. | „ 13th | A _E P | 9 38 34 | ... | ... | ... | Slight shock. | „ 2nd | A _N e | 15 49 6 | ... | ... | ... | Slight shock. | |
| | F | 23 48 45 | ... | ... | ... | | | S | 9 47 0 | ... | ... | ... | | | F | 17 46 48 | ... | ... | ... | | |
| „ 24th | A _E Pe | 22 2 31 | ... | ... | ... | Shock of very great intensity | „ 13th | A _N Pe | 9 38 41 | ... | ... | ... | Very feeble shock. | „ 5th | A _E P | 13 34 12 | ... | ... | ... | Moderate shock. | |
| „ 25th | eF | 1 56 23 | ... | ... | ... | | „ 14th | A _E P | 22 20 40 | ... | ... | ... | Feeble shock. | „ 5th | A _N P | 13 34 17 | ... | ... | ... | Do. | |
| „ 24th | A _N P | 22 2 40 | ... | ... | ... | Do. | „ 14th | F | 22 49 7 | ... | ... | ... | | „ 5th | S | 13 37 49 | ... | ... | ... | | |
| | eS | 22 8 52 | ... | ... | ... | | „ 25th | A _E P | 7 55 26 | ... | ... | ... | Shock of very great intensity. | „ 14th | eL | 13 39 42 | ... | ... | ... | | |
| | M | ? ? | ? >986 | | | Motion of recording pen restricted due to side-stops at intervals for about 5 minutes. | „ 25th | A _E P | 7 55 26 | ... | ... | ... | | „ 14th | M | 13 41 10 | 22 | 381 | ... | | |
| | F | Lost while changing chart. | | | | | „ 25th | F | Not determinable. | | | | | „ 14th | F | 14 10 56 | ... | ... | ... | | |
| July 3rd | A _E P | 15 13 21 | ... | ... | ... | Feeble shock. | „ 25th | A _N P | 7 55 29 | ... | ... | ... | Do. | „ 16th | A _E eP | 22 31 28 | ... | ... | ... | Slight shock. | |
| | F | 15 49 31 | ... | ... | ... | | | S | 7 59 42 | ... | ... | ... | | „ 16th | Se | 22 41 49 | ... | ... | ... | | |
| „ 7th | A _E P | 7 33 51 | ... | ... | ... | Do. | | L | 8 2 25 | ... | ... | ... | | „ 16th | Le | 23 1 59 | ... | ... | ... | | |
| | Fe | 8 20 14 | ... | ... | ... | | | M | ? ? | ? >1025 | | | Motion of recording pen restricted due to side-stops for about 5 minutes. | „ 16th | Fe | 23 42 26 | ... | ... | ... | | |
| „ 9th | A _N eP | 1 40 4 | ... | ... | ... | Moderate shock. | „ 20th | A _E eP | 15 11 4 | ... | ... | ... | Very feeble shock. | „ 21st | A _E e | 2 53 54 | ... | ... | ... | Feeble shock. | |
| | S | 1 48 6 | ... | ... | ... | | | Fe | 16 14 4 | ... | ... | ... | | „ 21st | Se | 3 1 28 | ... | ... | ... | | |
| „ 9th | A _N P | 12 40 42 | ... | ... | ... | Do. | „ 20th | A _E P | 15 31 85 | ... | ... | ... | Moderate shock. | „ 22nd | L | 3 14 20 | ... | ... | ... | | |
| | S | 12 48 51 | ... | ... | ... | | Sept. 24th | A _E P | 15 41 44 | ... | ... | ... | | „ 22nd | Fe | 3 57 33 | ... | ... | ... | | |
| | eL | 13 1 54 | ... | ... | ... | | | S | 15 41 44 | ... | ... | ... | | „ 22nd | e | 14 6 22 | ... | ... | ... | Slight shock | |
| | M | 13 8 42 | 17 | 87 | ... | | | L | 16 1 33 | ... | ... | ... | | „ 22nd | F | 14 30 18 | ... | ... | ... | | |
| | Fe | 14 22 58 | ... | ... | ... | | | M | 16 9 59 | 20 | ... | 18 | | Nov. 2nd | A _E P | 12 38 57 | ... | ... | ... | Moderate shock. | |
| „ 22nd | A _E P | 21 7 15 | ... | ... | ... | Do. | | F | 17 5 36 | ... | ... | ... | | | S | 12 49 2 | ... | ... | ... | | |
| | S | 21 17 23 | ... | ... | ... | | „ 25th | A _E P | 18 54 41 | ... | ... | ... | Feeble shock. | „ 5th | M | 13 17 29 | 20 | ... | 15 | | |
| | F | Lost while changing chart. | | | | | „ 25th | F | 14 53 11 | ... | ... | ... | | „ 5th | eF | 15 1 53 | ... | ... | ... | | |
| „ 22nd | A _N eP | 21 7 12 | ... | ... | ... | Do. | „ 25th | A _E P | 18 54 34 | ... | ... | ... | Moderate shock. | „ 7th | A _E P | 20 31 22 | ... | ... | ... | Slight shock. | |
| | Se | 21 17 24 | ... | ... | ... | | | F | 20 57 47 | ... | ... | ... | | | S | 20 35 0 | ... | ... | ... | | |
| | M | 21 46 7 | 19 | 53 | ... | | „ 25th | A _N Pe | 18 54 36 | ... | ... | ... | Slight shock. | „ 7th | Le | 20 37 12 | ... | ... | ... | | |
| | Fe | 22 44 26 | ... | ... | ... | | | F | 19 46 47 | ... | ... | ... | | „ 7th | Fe | 21 24 34 | ... | ... | ... | | |
| Aug. 11th | A _E P | 8 58 14 | ... | ... | ... | Do. | „ 25th | A _N Pe | 18 54 36 | ... | ... | ... | | | A _N e | 11 16 20 | ... | ... | ... | Tremors. | |
| | Fe | 10 34 32 | ... | ... | ... | | | F | 19 46 47 | ... | ... | ... | | | Fe | 11 26 54 | ... | ... | ... | | |

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TABLE D I—concl'd.

| Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) | | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) | | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) | | Remarks. | |
|-----------|----------------------|----------------------------|---------------|------------------------|----------------|---------------------------|-----------|----------------------|------------------|---------------|------------------------|----------------|---------------------------|-----------|----------------------|------------------|---------------|------------------------|----------------|---------------|--|
| | | | | A _N | A _E | | | | | | A _N | A _E | | | | | | A _N | A _E | | |
| 1933. | | H. M. S. | | | | | 1933. | | H. M. S. | | | | | 1933. | | H. M. S. | | | | | |
| Nov. 19th | A _E P | 9 12 31 | ... | ... | ... | Slight shock. | Nov. 28th | A _N eP | 11 13 52 | ... | ... | ... | Shock of great intensity. | Dec. 12th | A _E P | 5 26 6 | ... | ... | ... | Slight shock. | |
| | S | 9 15 55 | ... | ... | ... | | | S | 11 17 27 | ... | ... | ... | | | S | 5 29 49 | ... | ... | ... | | |
| | eL | 9 18 48 | ... | ... | ... | | | L | 11 19 35 | ... | ... | ... | | | A _E L | 5 32 33 | ... | ... | ... | | |
| | M | 9 21 36 | 10 | ... | 4 | | | M | 11 21 22 | 20 | 696 | ... | | | M | 5 35 38 | 10 | ... | 5 | | |
| | F | 9 45 25 | ... | ... | ... | | | eF | 12 28 58 | ... | ... | ... | | | F | 5 53 53 | ... | ... | ... | | |
| „ 20th | A _E P | 23 33 31 | ... | ... | ... | Shock of great intensity. | „ 28th | A _E e | 16 11 35 | ... | ... | ... | Feeble shock. | „ 12th | A _E P | 14 23 17 | ... | ... | ... | Feeble shock. | |
| „ 21st | F | 3 8 29 | ... | ... | ... | | | M | 16 17 23 | 9 | ... | 3 | | | Fe | 15 44 46 | ... | ... | ... | | |
| „ 20th | A _N P | 23 33 33 | ... | ... | ... | Do. | | F | 16 35 35 | ... | ... | ... | | | A _E P | 18 56 18 | ... | ... | ... | Slight shock. | |
| | S | 23 43 22 | ... | ... | ... | | | A _E P | 2 18 12 | ... | ... | ... | Slight shock. | | S | 19 0 6 | ... | ... | ... | | |
| „ 21st | A _N L | 0 1 53 | ... | ... | ... | | Dec. 2nd | S | 2 20 8 | ... | ... | ... | | | L | 19 2 56 | ... | ... | ... | | |
| | M | 0 5 2 | 28 | 648 | ... | | | F | 2 52 58 | ... | ... | ... | | | F | 19 36 28 | ... | ... | ... | | |
| | F | Lost while changing chart. | | | | | | | | | | | | | A _N eP | 18 56 6 | ... | ... | ... | Do. | |
| „ 22nd | A _E Pe | 12 54 15 | ... | ... | ... | Moderate shock. | „ 9th | A _E P | 7 54 45 | ... | ... | ... | Do. | „ 14th | S | 19 0 6 | ... | ... | ... | | |
| | S | 13 4 4 | ... | ... | ... | | | F | 8 31 26 | ... | ... | ... | | | A _E P | 10 57 34 | ... | ... | ... | Do. | |
| | M | 13 28 42 | ... | ... | ... | | | A _N eP | 7 54 45 | ... | ... | ... | Feeble shock. | „ 24th | S | 11 7 0 | ... | ... | ... | | |
| „ 28th | A _E P | 11 13 40 | ... | ... | ... | Shock of great intensity. | „ 9th | S | 7 56 50 | ... | ... | ... | | | F | 12 14 1 | ... | ... | ... | | |
| | F | 12 59 38 | ... | ... | ... | | | Le | 7 58 0 | ... | ... | ... | | | | | | | | | |

Owing to irregular behaviour of the time-marking clock of the Seismographs, from July to November 1933, the values of the time of occurrence of the various phases for the shocks recorded during this period may be uncertain, the maximum discrepancy being estimated to be ± 20 seconds.

G. CHATTERJEE,

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STATION—COLABA, BOMBAY.

$\phi = 18^{\circ} 54' N.$; $\lambda = 72^{\circ} 49' E.$; $h = 6$ metres. *Subsoil*—Trap-rock.

Apparatus.—1. Milne-Shaw Seismograph (A_N —North-South Component).

2. Milne-Shaw Seismograph (A_E East-West Component).

(In the underground constant temperature room.)

TABLE D 2.

| | | Vm | | T | | E | |
|--|--|-----|--|---------|--|--------|--|
| | | 250 | | 12 sec. | | 20 : 1 | |
| | | 850 | | 12 sec. | | 22 : 1 | |

| Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) | | Distance (Km.) | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) | | Distance (Km.) | Remarks. | |
|----------|--------|------------------|---------------|------------------------|-------|-------------------|----------------------------------------------------------------------------------|----------|---------|------------------|---------------|------------------------|-------|-------------------|------------------------------------------------------------------------------------------|-----|
| | | | | A_N | A_E | | | | | | | A_N | A_E | | | |
| 1933. | | H. M. S. | | | | | | 1933. | | H. M. S. | | | | | | |
| Jan. 1st | A_N | 9 2 11 | ... | ... | ... | 9390 | Slight. Epc:— Near Solomon Islands. L-waves poorly developed. | Jan. 4th | A_E | 8 56 0 | ... | ... | ... | 7030 | Tremors. | |
| | P | 9 12 39 | ... | ... | ... | ... | | | f | 9 9 0 | ... | ... | ... | ... | ... | |
| | M | 11 3 0 | ... | ... | ... | ... | | | A_N | 1 33 0 | ... | ... | ... | ... | ... | |
| | F | 11 3 0 | ... | ... | ... | ... | | | f | 2 3 0 | ... | ... | ... | ... | ... | |
| „ 1st | A_E | 9 2 11 | ... | ... | ... | 9390 | Do. | „ 5th | A_E | 1 33 0 | ... | ... | ... | ... | Do. | |
| | P | 9 12 39 | ... | ... | ... | ... | | e | 1 33 0 | ... | ... | ... | ... | ... | | |
| | M | 11 9 0 | ... | ... | ... | ... | | f | 2 4 0 | ... | ... | ... | ... | ... | | |
| | F | 11 9 0 | ... | ... | ... | ... | | A_N | 19 33 0 | ... | ... | ... | ... | ... | | |
| „ 3rd | A_N | 15 37 38 | ... | ... | ... | 6890 | Slight. Epc:— Japan, near 40° 24' N., 144° E. (C.M.O., Japan.) | „ 6th | A_E | 19 33 0 | ... | ... | ... | ... | ... | Do. |
| | P | 15 46 9 | ... | ... | ... | ... | | | e | 19 33 0 | ... | ... | ... | ... | ... | |
| | M | 16 8 46 | 13 | 4 | ... | ... | | | f | 20 17 0 | ... | ... | ... | ... | ... | |
| | F | 16 47 0 | ... | ... | ... | ... | | | A_N | 4 17 16 | ... | ... | ... | ... | ... | |
| „ 3rd | A_E | 15 37 38 | ... | ... | ... | 6890 | Do. | „ 7th | P | 4 25 53 | ... | ... | ... | ... | Moderate shock. Epc:— Japan, near 40° 18' N., 144° E. (C.M.O., Japan.) | |
| | P | 15 46 9 | ... | ... | ... | ... | | S | 4 25 53 | ... | ... | ... | ... | ... | | |
| | M | 16 7 45 | 13 | ... | 3 | ... | | L | 4 39 5 | ... | ... | ... | ... | ... | | |
| | F | 17 11 0 | ... | ... | ... | ... | | M | 4 47 33 | 15 | 14 | ... | ... | ... | | |
| „ 4th | A_N | 1 35 33 | ... | ... | ... | 7090 | Slight. Epc:— Japan, near 25° 48' N., 145° E. (C.M.O., Japan.) | „ 7th | A_E | 4 17 15 | ... | ... | ... | ... | 7030 | Do. |
| | P | 1 44 15 | ... | ... | ... | ... | | | P | 4 17 15 | ... | ... | ... | ... | ... | |
| | F | 8 24 0 | ... | ... | ... | ... | | | S | 4 25 54 | ... | ... | ... | ... | ... | |
| | A_E | 1 35 33 | ... | ... | ... | 7090 | | Do. | L | 4 30 5 | ... | ... | ... | ... | ... | |
| „ 4th | P | 1 44 15 | ... | ... | ... | ... | | M | 4 47 54 | 15 | ... | 12 | ... | ... | | |
| | S | 1 58 51 | ... | ... | ... | ... | | F | 7 13 0 | ... | ... | ... | ... | ... | | |
| | L | 3 32 0 | ... | ... | ... | ... | | A_N | 8 25 0 | ... | ... | ... | ... | ... | | |
| | F | 3 32 0 | ... | ... | ... | ... | | f | 8 35 0 | ... | ... | ... | ... | ... | | |
| „ 4th | A_N | 4 12 44 | ... | ... | ... | 8840 | Slight. | „ 7th | A_E | 8 25 0 | ... | ... | ... | ... | Do. | |
| | P | 4 22 48 | ... | ... | ... | ... | | e | 8 25 0 | ... | ... | ... | ... | ... | | |
| | SR1 | 4 29 15 | ... | ... | ... | ... | | f | 8 35 0 | ... | ... | ... | ... | ... | | |
| | F | 5 36 0 | ... | ... | ... | ... | | A_E | 6 40 0 | ... | ... | ... | ... | ... | | |
| „ 4th | A_E | 4 12 44 | ... | ... | ... | 8840 | Do. | „ 8th | f | 7 37 0 | ... | ... | ... | ... | Do. | |
| | P | 4 22 48 | ... | ... | ... | ... | | e | 7 37 0 | ... | ... | ... | ... | ... | | |
| | S | 4 52 13 | 18 | ... | 0 | ... | | A_N | 6 40 0 | ... | ... | ... | ... | ... | | |
| | M | 5 33 0 | ... | ... | ... | ... | | e | 6 40 0 | ... | ... | ... | ... | ... | | |
| | F | 5 33 0 | ... | ... | ... | ... | | f | 7 35 0 | ... | ... | ... | ... | ... | | |
| „ 4th | A_N | 8 56 0 | ... | ... | ... | ... | Tremors. | „ 8th | A_E | 15 27 0 | ... | ... | ... | ... | Do. | |
| | e | 9 9 0 | ... | ... | ... | ... | | e | 15 27 0 | ... | ... | ... | ... | ... | | |
| | f | 9 9 0 | ... | ... | ... | ... | | f | 15 41 0 | ... | ... | ... | ... | ... | | |



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TABLE D 2—contd.

| Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLI- TUDE (μ) | | Distance (Km.) Δ | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLI- TUDE (μ) | | Distance (Km.) Δ | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLI- TUDE (μ) | | Distance (Km.) Δ | Remarks. | | |
|-----------|------------------------------------------|--------------------------------------------------------|---------------|-----------------------|--------|----------------------------|----------------------------------------------------------------------------------------------------|------------------|-----------------------------------------|---------------------------------------------------------|---------------|-----------------------|--------|----------------------------|-------------------------------------------------------------------|----------|-----------------------------------------|---------------------------------------------------------|---------------|-----------------------|--------|----------------------------|------------------------------------------------------------------------------------|----------------------------------|----------------------------------------------------------------|
| | | | | A N | A E | | | | | | | A N | A E | | | | | | | A N | A E | | | | |
| 1933. | | H. M. S. | | | | | | 1933. | | H. M. S. | | | | | | 1933. | | H. M. S. | | | | | | | |
| Jan. 17th | A _N e f | 0 57 0 1 5 0 | ... | ... | ... | ... | Tremors | Jan. 21st | A _N P S L M F | 19 30 36 19 38 25 19 45 59 19 51 29 23 11 0 | ... | ... | ... | 6160 | Great. Epc. :— Indian Ocean, near 33°S., 58·5°E | Jan 29th | A _E e f | 18 24 0 18 33 0 | ... | ... | ... | ... | ... | Tremors | |
| „ 17th | A _E e f | 0 57 0 1 5 0 | ... | ... | ... | ... | Do. | „ 21st | A _E P S L M F | 19 30 36 19 38 25 19 45 59 19 49 59 23 20 0 | 18 | 286 | ... | ... | Do. | „ 30th | A _N e f | 20 39 0 20 57 0 | ... | ... | ... | ... | ... | Do. | |
| „ 17th | A _N e f | 16 11 0 16 35 0 | ... | ... | ... | ... | Do. | „ 21st | A _E P S L M F | 19 30 36 19 38 25 19 45 59 19 49 59 23 20 0 | ... | ... | ... | 6160 | Do. | „ 30th | A _E e f | 20 39 0 20 57 0 | ... | ... | ... | ... | ... | Do. | |
| „ 17th | A _E e f | 16 11 0 16 35 0 | ... | ... | ... | ... | Do. | „ 23rd | A _N P S L M F | 19 30 36 19 38 25 19 45 59 19 49 59 23 20 0 | 17 | 168 | ... | ... | Do. | Feb. 3rd | A _N P S L M F | 22 22 54 22 31 59 22 46 25 22 49 36 23 30 0 | ... | ... | ... | 7680 | Slight. Epc. :— Near Kurile Islands, 46°N., 151°E. (J. S. A.) | | |
| „ 17th | A _N P S eL M F | 18 57 17 19 4 50 19 16 14 19 18 6 20 22 0 | ... | ... | ... | 5860 | Slight. | „ 23rd | A _N e f | 0 15 0 0 30 0 | ... | ... | ... | ... | Tremors. | „ 3rd | A _E P S L M F | 22 22 54 22 31 59 22 46 25 22 49 36 23 30 0 | ... | ... | ... | 7680 | Do. | | |
| „ 17th | A _E P S eL M F | 18 57 17 19 4 50 19 16 14 19 18 41 20 24 0 | ... | ... | ... | 5860 | Do. | „ 23rd | A _E e f | 0 15 0 10 30 0 | ... | ... | ... | ... | Do. | „ 3rd | A _E P S L M F | 22 22 54 22 31 59 22 46 25 22 54 29 23 34 0 | ... | ... | 19 | 4 | ... | Very feeble near shock. | |
| „ 17th | A _N e f | 22 20 43 22 24 43 23 1 0 | ... | ... | ... | ... | Feeble. | „ 24th | A _N e f | 4 58 53 4 59 28 5 15 0 | ... | ... | ... | ... | Do. | „ 3rd | A _N e f | 11 25 0 11 41 0 | ... | ... | ... | ... | ... | Tremors | |
| „ 17th | A _E e f | 22 20 43 22 24 43 23 1 0 | ... | ... | ... | ... | Do. | „ 24th | A _E e f | 4 58 53 4 59 28 5 15 0 | ... | ... | ... | ... | Do. | „ 3rd | A _E e f | 11 24 0 11 46 0 | ... | ... | ... | ... | ... | Do. | |
| „ 18th | A _N e f | 18 44 0 19 1 0 | ... | ... | ... | ... | Tremors. | „ 25th | A _E e f | 13 44 0 14 3 0 | ... | ... | ... | ... | Tremors. | „ 5th | A _N e f | 4 30 0 4 34 0 | ... | ... | ... | ... | ... | Feeble, near shock. | |
| „ 18th | A _E e f | 18 44 0 19 4 0 | ... | ... | ... | ... | Do. | „ 25th | A _E e f | 13 44 0 14 3 0 | ... | ... | ... | ... | Do. | „ 5th | A _E e f | 4 30 0 4 34 0 | ... | ... | ... | ... | ... | Do. | |
| „ 20th | A _N P S F | 12 16 7 12 19 19 12 41 0 | ... | ... | ... | 1920 | Slight. Epc. :— North- west Frontier, near that of the 9th January. Do. | „ 26th- 27th. | A _E e f | 23 30 0 23 31 50 0 0 0 | ... | ... | ... | ... | Slight near shock. | „ 9th | A _N e f | 15 46 0 18 27 0 | ... | ... | ... | ... | ... | Tremors. | |
| „ 20th | A _E P S F | 12 16 7 12 19 19 12 42 0 | ... | ... | ... | 1920 | Do. | „ 27th | A _E e f | 22 56 23 23 54 0 | ... | ... | ... | ... | Do. | „ 9th | A _E e f | 15 46 0 16 37 0 | ... | ... | ... | ... | ... | Do. | |
| „ 21st | A _N e f | 16 30 0 17 4 0 | ... | ... | ... | ... | Tremors. | „ 27th- 28th. | A _E e f | 22 56 23 0 3 0 | ... | ... | ... | ... | Do. | „ 10th | A _N e f | 14 15 0 15 24 0 | ... | ... | ... | ... | ... | Do. | |
| „ 21st | A _E e f | 16 30 0 17 8 0 | ... | ... | ... | ... | Do. | „ 29th | A _N e f | 18 23 0 18 34 0 | ... | ... | ... | ... | Tremors. | „ 10th | A _E e f | 14 15 0 15 31 0 | ... | ... | ... | ... | ... | Do. | |
| | | | | | | | | | | | | | | | | „ 13th | A _N P S M F | Lost while changing chart. Do. 3 9 29 4 28 0 | ... | ... | 8 | 15 | ... | 3240 | Moderate Epc. :— Gobi Desert, near 45° N. E. |

TABLE D 2—contd.

| Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLI- TUDE (μ) | | Distance (Km.) Δ | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLI- TUDE (μ) | | Distance (Km.) Δ | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLI- TUDE (μ) | | Distance (Km.) Δ | Remarks. | |
|-----------|-----------------------------------------|------------------------------------------------------|---------------|-----------------------------|----------------|----------------------------|-------------------------------------------------------------------|-----------|--------------------------------------------------|-------------------------------------------------------|---------------|-----------------------------|----------------|----------------------------|-------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------|-------------------------------------------------------|---------------|-----------------------------|----------------|----------------------------|----------|-------------------------------------------------------------------------------------------------------------------------------------|
| | | | | A _N | A _E | | | | | | | A _N | A _E | | | | | | | A _N | A _E | | | |
| 1933. | | H. M. S. | | | | | | 1933. | | H. M. S. | | | | | | 1933. | | H. M. S. | | | | | | |
| Feb. 13th | A _E P S M F | 2 53 34 3 0 34 3 9 5 9 | ... | ... | ... | 3240 | Moderate Epc:— Gobi Desert, near 45° N., 89° E. | Feb. 22nd | A _E P S L M F | 18 2 30 18 6 42 18 9 26 18 12 29 18 34 0 | ... | ... | ... | 2580 | Slight. | Mar. 3rd | A _N P S M F | 4 48 24 4 57 3 5 19 29 5 31 0 | ... | ... | ... | ... | 7220 | Slight. Epi- centre in Japan. After shocks of the great shock of Mar. 2nd. 17 h. 42 m. (G.M.T.) |
| " 13th | A _N e f | 4 34 0 5 4 0 | ... | ... | ... | | Tremors. | " 23rd | A _N P Sc Pc PcS M F | 8 28 58 8 39 30 9 30 22 11 17 0 | ... | ... | ... | 16900 | Great shock. Epc:— Pacific Ocean off Northern Chille, 19° 30' S., 71° W. (J. S. A.) | " 3rd | A _E P S M F | 4 48 24 4 57 3 5 20 41 5 30 0 | ... | ... | ... | ... | 7220 | Do. |
| " 13th | A _E e f | 4 33 0 4 59 0 | ... | ... | ... | | Do. | " 23rd | A _E P Sc Pc PcS M F | 8 28 58 8 39 30 9 30 1 11 30 0 | ... | ... | ... | 16900 | Do. | " 3rd | A _N P S L M F | 9 23 19 9 31 59 9 46 44 9 54 7 11 14 0 | ... | ... | ... | ... | 7220 | Do. |
| " 14th | A _N e f | 13 49 0 14 8 0 | ... | ... | ... | | Do. | " 25th | A _N e f | 4 27 0 4 38 0 | ... | ... | ... | | Tremors. | " 3rd | A _E P S L M F | 9 23 19 9 31 59 9 46 44 9 52 29 11 21 0 | ... | ... | ... | ... | 7220 | Do. |
| " 14th | A _E e f | 13 48 0 14 0 0 | ... | ... | ... | | Do. | " 25th | A _E e f | 4 27 0 4 38 0 | ... | ... | ... | | Do. | " 3rd | A _E P S L M F | 9 23 19 9 31 59 9 46 44 9 52 29 11 21 0 | ... | ... | ... | ... | 7220 | Do. |
| " 16th | A _N e f | 9 17 0 9 53 0 | ... | ... | ... | | Do. | " 27th | A _N e f | 16 34 0 17 21 0 | ... | ... | ... | | Do. | " 3rd | A _N e f | 15 42 0 16 4 0 | ... | ... | ... | ... | | Tremors. |
| " 16th | A _E e f | 9 18 0 10 2 0 | ... | ... | ... | | Do. | " 27th | A _E e f | 16 34 0 17 21 0 | ... | ... | ... | | Do. | " 3rd | A _E e f | 15 39 0 16 5 0 | ... | ... | ... | ... | | Do. |
| " 19th | A _N e f | 4 41 0 5 24 0 | ... | ... | ... | | Do. | Mar. 1st | A _N e f | 16 25 0 16 40 0 | ... | ... | ... | | Do. | " 1st | A _E e f | 16 26 0 16 50 0 | ... | ... | ... | ... | | Do. |
| " 19th | A _E e f | 4 34 0 5 36 0 | ... | ... | ... | | Do. | " 1st | A _E e f | 16 26 0 16 50 0 | ... | ... | ... | | Do. | " 2nd | A _N P S L M F | 17 41 35 17 50 25 18 5 29 18 16 9 23 27 0 | ... | ... | ... | ... | 7250 | Very great. Epc:— Japan, near 39° 12' N., 144° 36' E. (C.M.O. Japan). |
| " 20th | A _N e f | 11 40 0 12 12 0 | ... | ... | ... | | Do. | " 2nd | A _E P S L M F | 17 41 35 17 50 25 18 5 29 18 18 9 23 33 0 | ... | ... | ... | 7250 | Do. | " 3rd | A _N e f | 8 30 0 9 20 0 | ... | ... | ... | ... | | Tremors. |
| " 20th | A _E e f | 11 38 0 12 8 0 | ... | ... | ... | | Do. | " 3rd | A _E e f | 2 28 0 3 0 0 | ... | ... | ... | | Do. | " 5th | A _E e f | 8 30 0 9 26 0 | ... | ... | ... | ... | | Do. |
| " 21st | A _N P S M F | 19 6 54 19 10 17 19 17 47 19 44 0 | ... | ... | ... | 1960 | Feeble. | " 3rd | A _N e f | 2 28 0 3 0 0 | ... | ... | ... | | Do. | " 5th | A _E e f | 8 30 0 9 26 0 | ... | ... | ... | ... | | Do. |
| " 21st | A _E P S M F | 19 6 54 19 10 17 19 16 2 19 49 0 | ... | ... | ... | 1960 | Do. | " 3rd | A _E e f | 2 28 0 3 5 0 | ... | ... | ... | | Do. | " 5th | A _E e f | 8 30 0 9 26 0 | ... | ... | ... | ... | | Do. |
| " 22nd | A _N P S L M F | 18 2 30 18 6 42 18 9 26 18 12 29 18 44 0 | ... | ... | ... | 2580 | Slight. | " 3rd | A _E e f | 2 28 0 3 5 0 | ... | ... | ... | | Do. | " 5th | A _E e f | 8 30 0 9 26 0 | ... | ... | ... | ... | | Do. |

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TABLE D 2—contd.

| Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) | | | Distance (Km.) | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) | | | Distance (Km.) | Remarks. | | | | | | | |
|----------|------------------------------------------|--------------------------------------------------------|---------------|----------------|----------------|----------------|----------------------------------------------------------------------------------------------------------------------|--------------|-----------------------------------------|--------------------------------------------------------|------------------|---------------|----------------|----------------|----------------------------------------------------------------------|----------------|-----------------------------------------|--------------------------------------------------------|-----|-----|-----|------|-----------------------------------------------|----------|
| | | | | A _N | A _E | A _E | | | | | | | A _N | A _E | A _E | | | | | | | | | |
| 1933. | | H. M. S. | | | | | | | | H. M. S. | | | | | | | | | | | | | | |
| Mar. 6th | A _N P S L M F | 13 9 42 13 12 54 13 14 34 13 15 6 14 18 0 | ... | ... | ... | 1850 | Slight. Epc. :- Garohills (West Assam). Felt at Dhubri, Gauhati, Cherrapunji, Rangpur Cooch Behar and Mymensingh. | Mar. 17th | A _N P S L M F | 16 7 0 16 16 27 16 33 18 16 37 35 17 40 0 | ... | ... | ... | 8040 | Moderate. Epc. :- Kamchatka, 56° N., 160° E. (J.S.A.) | Mar. 23rd | A _N P S L M F | 17 46 32 17 52 23 17 57 58 18 2 34 18 38 0 | ... | ... | ... | 4060 | Slight Epc. :- Gobi Desert (China). | |
| " 6th | A _E P S L M F | 13 9 42 13 12 54 13 14 34 13 15 19 14 17 0 | ... | ... | ... | 1850 | Do. | " 17th | A _E P S L M F | 16 7 0 16 16 27 16 33 18 16 43 1 18 42 0 | ... | ... | ... | 8040 | Do. | " 23rd | A _E P S L M F | 17 46 32 17 52 23 17 57 58 18 0 6 18 39 0 | ... | ... | ... | 4060 | Do. | |
| " 11th | A _N e f | 2 15 0 3 40 0 | ... | ... | ... | ... | Very feeble movements, phases not clear. Shock reported to be destructive in California (U.S.A.) | " 17th | A _N P S L M F | 19 41 51 19 49 50 20 0 48 20 15 34 21 25 0 | ... | ... | ... | 6320 | Moderate. Epc. :- Near Mindanao Island, 6° 30' N., 128° E. Manila | " 30th | A _N e f | 20 46 0 21 7 0 21 4 0 | ... | ... | ... | ... | ... | Tremors. |
| " 11th | A _E e f | 2 13 0 3 40 0 | ... | ... | ... | ... | Do. | " 17th | A _E P S L M F | 19 41 51 19 49 50 20 0 48 20 10 59 21 22 0 | ... | ... | ... | 6320 | Do. | " 31st | A _N P S L M F | 22 5 24 22 10 10 22 14 42 22 15 17 22 34 0 | ... | ... | ... | 3040 | Slight Epc. :- China, near 24° N., 102° E. | |
| " 11th | A _N e i M F | 14 32 49 14 41 50 15 5 5 15 58 0 | ... | ... | ... | ... | Slight. | " 18th | A _N e f | 3 24 0 5 3 0 | ... | ... | ... | ... | Tremors. | " 31st | A _E P S L M F | 22 5 24 22 10 10 22 14 42 22 15 29 22 37 0 | ... | ... | ... | 3050 | Do. | |
| " 11th | A _E e i M F | 14 32 49 14 41 50 15 4 50 16 1 0 | ... | ... | ... | ... | Do. | " 18th | A _E e f | 3 22 0 5 1 0 18 30 0 19 38 0 | ... | ... | ... | ... | Do. | " 18th | A _N e f | 18 30 0 19 38 0 | ... | ... | ... | ... | ... | Do. |
| " 11th | A _N P i PS M F | 19 42 15 19 50 1 19 51 27 20 4 25 20 52 0 | ... | ... | ... | ... | Slight. L-waves poorly developed. | " 18th-19th. | A _E e f | 23 58 0 0 15 0 | ... | ... | ... | ... | Do. | " 1st | A _E e f | 16 18 0 17 21 0 16 18 0 17 20 0 | ... | ... | ... | ... | ... | Do. |
| " 11th | A _E P i PS M F | 19 42 15 19 50 1 19 51 27 20 4 30 20 53 0 | ... | ... | ... | ... | Do. | " 18th-19th. | A _E e f | 23 58 0 0 15 0 | ... | ... | ... | ... | Do. | " 2nd | A _N e f | 21 12 0 21 29 0 21 12 0 21 30 0 | ... | ... | ... | ... | ... | Do. |
| " 15th | A _N e f | 5 28 0 6 50 0 | ... | ... | ... | ... | Tremors. | " 22nd | A _N P S F | 2 28 10 2 32 36 2 58 0 | ... | ... | ... | 2760 | Slight. | " 3rd | A _N e f | 18 50 0 19 6 0 | ... | ... | ... | ... | ... | Do. |
| " 15th | A _E e f | 5 17 0 6 55 0 | ... | ... | ... | ... | Do. | " 22nd | A _E P S F | 2 28 10 2 32 36 2 52 0 | ... | ... | ... | 2700 | Do. | " 3rd | A _E e f | 18 50 0 19 6 0 | ... | ... | ... | ... | ... | Do. |

TABLE D 2—contd.

| Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLI- TUDE (μ) | | Distance (Km.) | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLI- TUDE (μ) | | Distance (Km.) | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLI- TUDE (μ) | | Distance (Km.) | Remarks. | |
|----------|----------------|----------------------------------|---------------|-----------------------------|-----|-------------------|----------------------------------------------------------------------------|-----------|----------------|----------------------------------|---------------|-----------------------------|-----|-------------------|-----------------------------------------------------------------------------|---------|----------------|------------------|---------------|-----------------------------|-----|-------------------|--------------------------------------------------------------|----------|
| | | | | A | N | | | | | | | A | E | | | | | | | A | N | | | A |
| 1933. | | H. M. S. | | | | | | 1933. | | H. M. S. | | | | | | 1933. | | H. M. S. | | | | | | |
| Apl. 9th | A _N | 2 57 11 | ... | ... | ... | 6980 | Slight. Epc.— Japan, near 39° 30' N., 143° E. (J. S. A.). | Apl. 23rd | A _E | 6 5 38 | ... | ... | ... | 5060 | Slight. Epc.— Kos Islands in Aegean Sea, 36° 5' N., 26° 5' E. (Strasbourg.) | May 6th | A _N | 5 53 0 | ... | ... | ... | ... | Tremors. | |
| | P | 3 5 47 | ... | ... | ... | ... | | | S | 6 12 36 | ... | ... | ... | ... | | | c | 7 52 0 | ... | ... | ... | ... | | |
| | S | 3 21 0 | ... | ... | ... | ... | | | L | 6 22 5 | ... | ... | ... | ... | | | i | 5 53 0 | ... | ... | ... | ... | | |
| | L | 3 27 10 | 12 | 14 | ... | ... | | | M | 6 26 37 | 10 | ... | 13 | ... | | | e | 7 31 0 | ... | ... | ... | ... | Do. | |
| | M | 4 44 0 | ... | ... | ... | ... | | | F | Mixed up in the following shock. | | | | | | | f | 10 53 15 | ... | ... | ... | ... | | |
| | F | ... | ... | ... | ... | ... | | | A _N | 7 24 12 | ... | ... | ... | 6980 | Slight. Epc.— Japan, near that of April 9. | | | A _N | 11 59 29 | 28 | 33 | ... | ... | |
| „ 9th | A _E | 2 57 11 | ... | ... | ... | 6980 | Do. | „ 23rd | P | 7 32 48 | ... | ... | ... | ... | | | i | 13 13 0 | ... | ... | ... | ... | Slight. Very distant. Beginning not traceable. | |
| | P | 3 5 47 | ... | ... | ... | ... | | | S | 7 47 39 | ... | ... | ... | ... | | | M | 10 53 15 | ... | ... | ... | ... | | |
| | S | 3 19 8 | ... | ... | ... | ... | | | L | 7 54 21 | 13 | 6 | ... | ... | | | F | 12 4 3 | 28 | ... | 13 | ... | | |
| | L | 3 28 0 | 13 | ... | 11 | ... | | | M | 9 28 0 | ... | ... | ... | ... | | | A _E | 12 51 0 | ... | ... | ... | ... | Do. | |
| | M | 4 56 0 | ... | ... | ... | ... | | | F | ... | ... | ... | ... | ... | | | i | 18 18 24 | ... | ... | ... | ... | Slight. Epc.— Gulf of Salonica, 40° N., 24° E. (Strasbourg.) | |
| | F | ... | ... | ... | ... | ... | | | A _E | 7 24 12 | ... | ... | ... | 6980 | Do. | | | M | 18 25 16 | ... | ... | ... | ... | |
| „ 9th | A _N | 4 59 0 | ... | ... | ... | ... | Tremors. | „ 23rd | P | 7 32 48 | ... | ... | ... | ... | | | F | 18 34 43 | ... | ... | ... | ... | | |
| | f | 5 45 0 | ... | ... | ... | ... | | | S | 7 47 39 | ... | ... | ... | ... | | | A _E | 20 32 0 | ... | ... | ... | ... | | |
| | A _E | 5 0 0 | ... | ... | ... | ... | Do. | | L | 7 59 4 | 11 | ... | 3 | ... | | | P | 18 18 24 | ... | ... | ... | ... | 5140 | |
| | f | 5 45 0 | ... | ... | ... | ... | | | M | 9 49 0 | ... | ... | ... | ... | | | S | 18 25 16 | ... | ... | ... | ... | ... | |
| „ 9th | A _N | 22 23 0 | ... | ... | ... | ... | Do. | „ 27th | A _N | 2 49 21 | ... | ... | ... | 10300 | Great. Epc.— 61° N., 150° W. (U. S. C.G.S.) Des- tructive in Alaska. | „ 11th | P | 18 18 24 | ... | ... | ... | ... | ... | 5140 |
| | f | 25 31 0 | ... | ... | ... | ... | | | Sc- Tcs | 2 59 55 | ... | ... | ... | ... | | | S | 18 25 16 | ... | ... | ... | ... | ... | |
| „ 13th | A _E | 22 25 0 | ... | ... | ... | ... | Do. | | L | 3 22 17 | ... | ... | ... | ... | | | L | 18 34 43 | ... | ... | ... | ... | ... | |
| | f | 23 16 0 | ... | ... | ... | ... | | | M | 3 35 47 | 14 | 78 | ... | ... | | | F | 20 21 0 | ... | ... | ... | ... | ... | |
| „ 13th | A _N | 6 46 0 | ... | ... | ... | ... | Do. | „ 27th | A _E | 2 49 21 | ... | ... | ... | 10300 | Do. | „ 12th | P | 16 16 14 | ... | ... | ... | ... | ... | 2720 |
| | f | 7 38 0 | ... | ... | ... | ... | | | Sc- Pcs | 2 59 55 | ... | ... | ... | ... | | | S | 16 20 37 | ... | ... | ... | ... | ... | |
| „ 16th | A _N | 19 27 0 | ... | ... | ... | ... | Do. | | L | 3 22 17 | ... | ... | ... | ... | | | L | 16 23 43 | ... | ... | ... | ... | ... | |
| | f | 20 4 0 | ... | ... | ... | ... | | | M | 3 37 10 | 13 | ... | 37 | ... | | | F | 16 45 0 | ... | ... | ... | ... | ... | |
| „ 16th | A _E | 19 27 0 | ... | ... | ... | ... | Do. | „ 27th | A _N | 12 9 0 | ... | ... | ... | ... | Tremors. | „ 12th | P | 16 16 14 | ... | ... | ... | ... | ... | 2720 |
| | f | 20 50 0 | ... | ... | ... | ... | | | e | 13 40 0 | ... | ... | ... | ... | | | S | 16 20 37 | ... | ... | ... | ... | ... | |
| „ 19th | A _E | 6 53 1 | ... | ... | ... | 5010 | Moderate. Epc.— For- mosa Island. | „ 27th | A _E | 12 9 0 | ... | ... | ... | ... | Do. | „ 16th | P | 1 18 9 | ... | ... | ... | ... | ... | 2900 |
| | P | 6 59 46 | ... | ... | ... | ... | | | f | 13 33 0 | ... | ... | ... | ... | | | S | 1 22 45 | ... | ... | ... | ... | ... | |
| | S | 7 8 31 | ... | ... | ... | ... | | | A _N | 10 2 0 | ... | ... | ... | ... | Do. | „ 16th | L | 1 26 23 | ... | ... | ... | ... | ... | |
| | L | 7 16 1 | 11 | ... | 12 | ... | | | e | 21 59 0 | ... | ... | ... | ... | | | M | 1 37 33 | 15 | 34 | ... | ... | ... | |
| | M | 8 20 0 | ... | ... | ... | ... | | | f | 19 2 0 | ... | ... | ... | ... | Do. | „ 16th | F | 3 29 0 | ... | ... | ... | ... | ... | |
| | F | ... | ... | ... | ... | ... | | | A _E | 21 41 0 | ... | ... | ... | ... | | | A _E | 1 18 9 | ... | ... | ... | ... | ... | |
| „ 23rd | A _N | 6 5 38 | ... | ... | ... | 5060 | Slight. Epc.— Kos Island in Aegean Sea, 36° 5' N., 26° 5' E. (Strasbourg.) | „ 1st | P | 23 27 0 | ... | ... | ... | ... | Do. | „ 18th | P | 0 30 0 | ... | ... | ... | ... | ... | Tremors. |
| | S | 6 12 36 | ... | ... | ... | ... | | | f | 0 21 0 | ... | ... | ... | ... | | | S | 1 22 45 | ... | ... | ... | ... | ... | |
| | L | 6 22 5 | ... | ... | ... | ... | | | A _N | 23 32 0 | ... | ... | ... | ... | Do. | „ 18th | L | 1 26 23 | ... | ... | ... | ... | ... | |
| | M | 6 30 41 | 12 | 8 | ... | ... | | | e | 0 18 0 | ... | ... | ... | ... | | | M | 3 17 0 | ... | ... | ... | ... | ... | |
| | F | Mixed up in the following shock. | | | | | ... | | | A _E | ... | ... | ... | ... | | | F | 1 15 0 | ... | ... | ... | ... | ... | |

TABLE D 2—contd.

| Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) | | | Distance (K. m.) Δ | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) | | | Distance (K. m.) Δ | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) | | | Distance (K. m.) Δ | Remarks. | | | |
|-----------------|-----------------------------------------|---------------------------------------------------|---------------|------------------------|----------------|----------------|------------------------------------------------------------------------------------|----------|----------------------------------------------|--------------------------------------------------------------------------------|------------------|---------------|------------------------|----------------|--------------------------------------------------------|------------------------------|----------------------------------------------|----------------------------------------------------------------|-------------------|------------------|---------------|------------------------|----------------|----------------|------------------------------------------------|----------|----------------|----------------|--|
| | | | | A _N | A _E | A _E | | | | | | | A _N | A _E | A _E | | | | | | | A _N | A _E | A _E | | | A _N | A _E | |
| 1933. | | H. M. S. | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| June 24th-25th. | A _E P S L M F | 22 2 24 22 8 38 22 15 16 22 19 37 18 | ... | ... | ... | 4440 | Very great. Destructive in Southern Sumatra. Epc.:— 4°S., 103°5'E (Strasbourg.) | July 8th | A _E e f | 8 36 0 8 51 0 | ... | ... | ... | ... | | Tremors. | July 9th | A _E e f | 22 54 0 23 9 0 | ... | ... | ... | ... | | Tremors. | | | | |
| „ 25th | A _N e f | 18 4 0 18 40 0 | ... | ... | ... | ... | Tremors. | „ 9th | A _N P S L M F | 1 41 0 1 50 7 2 4 23 2 14 15 3 31 0 | ... | ... | ... | 7780 | Slight. Epc.:— near Kurile Islands. | „ 10th | A _N e M F | 0 32 0 1 1 37 15 3 Confused with microseisms. | ... | ... | ... | ... | ... | | Distant, feeble. | | | | |
| „ 25th | A _E e f | 18 11 0 18 39 0 | ... | ... | ... | ... | Do. | „ 9th | A _E P S L M F | 1 41 0 1 50 7 2 4 23 2 16 45 15 | ... | ... | ... | 7780 | Do. | „ 10th | A _E e M F | 0 32 11 Movements very small. Confused with microseisms. | ... | ... | ... | ... | ... | | Do. | | | | |
| „ 29th | A _N e f | 0 23 0 0 55 0 | ... | ... | ... | ... | Do. | „ 9th | A _N e P S L M F | 9 38 53 9 48 3 10 4 15 10 16 23 15 6 11 20 0 | ... | ... | ... | ... | Mixed up with microseisms. | „ 10th | A _N e M F | 3 45 0 4 52 30 19 8 5 34 0 | ... | ... | ... | ... | ... | | Very distant, feeble. | | | | |
| „ 29th | A _E e f | 0 23 0 0 46 0 | ... | ... | ... | ... | Do. | „ 9th | A _N e P S L M F | 9 38 53 9 48 3 10 4 15 10 16 23 15 6 11 20 0 | ... | ... | ... | 7890 | Slight. | „ 10th | A _E e M F | 3 45 0 4 52 30 19 8 5 34 0 | ... | ... | ... | ... | ... | | Do. | | | | |
| July 3rd | A _N P S L M F | 15 18 10 15 23 12 15 24 43 15 25 30 10 4 | ... | ... | ... | 3100 | Slight. Epc.:— 5°N., 80°W., west of Sumatra, Batavia | „ 9th | A _E e P S L M F | 9 38 53 9 48 3 10 4 15 Uncertain Mixed up with microseisms. | ... | ... | ... | 7890 | Do. | „ 10th | A _N e P S L M F | 10 44 0 11 33 0 | ... | ... | ... | ... | ... | ... | | Tremors. | | | |
| „ 3rd | A _E P S L M F | 15 18 10 15 23 12 15 24 43 15 28 0 9 3 | ... | ... | ... | 3100 | Do. | „ 9th | A _N P S L M F | 12 41 37 12 50 45 13 7 2 13 14 49 15 26 15 24 0 | ... | ... | ... | 7670 | Moderate. Epc.:— 45°N., 150°E. near Kurile Islands. | „ 10th | A _E e P S L M F | 10 44 0 11 32 0 | ... | ... | ... | ... | ... | ... | | Do. | | | |
| „ 4th | A _N e f | 3 1 0 3 20 0 | ... | ... | ... | ... | Tremors. | „ 9th | A _E P S L M F | 12 41 37 12 50 45 13 7 2 13 17 21 15 20 Confused with microseisms. | ... | ... | ... | 7670 | Do. | „ 13th | A _N e P S L M F | 8 28 0 8 55 0 | ... | ... | ... | ... | ... | | Do. | | | | |
| „ 4th | A _E e f | 3 5 0 3 20 0 | ... | ... | ... | ... | Do. | „ 9th | A _E P S L M F | 12 41 37 12 50 45 13 7 2 13 17 21 15 20 Confused with microseisms. | ... | ... | ... | 7670 | Do. | „ 13th | A _N e P S L M F | 8 27 0 8 57 0 | ... | ... | ... | ... | ... | | Do. | | | | |
| „ 4th | A _N e M F | 7 33 0 7 39 44 15 8 | ... | ... | ... | ... | Distant, feeble. | „ 9th | A _N e M F | 16 19 0 16 52 0 13 3 Confused with microseisms. | ... | ... | ... | ... | Distant, very feeble. | „ 13th | A _E e P S L M F | 14 31 0 15 17 0 14 31 0 15 9 0 | ... | ... | ... | ... | ... | | Do. | | | | |
| „ 4th | A _E e M F | 7 33 0 7 39 14 13 7 | ... | ... | ... | ... | Do. | „ 9th | A _E e M F | 16 19 0 16 52 0 14 3 Confused with microseisms. | ... | ... | ... | ... | Do. | „ 13th | A _N e P S L M F | 23 16 58 23 18 38 23 26 0 | ... | ... | ... | ... | ... | 1940 | Feeble. Epc.:— North Assam, felt at Gauhati | | | | |
| „ 8th | A _N e f | 8 36 0 8 52 0 | ... | ... | ... | ... | Tremors. | „ 9th | A _N e f | 22 52 0 23 12 0 | ... | ... | ... | ... | Tremors. | „ 13th | A _E e P S L M F | 23 16 58 23 18 38 23 28 0 | ... | ... | ... | ... | ... | ... | | Do. | | | |

TABLE D 2—concl'd.

| Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) | | Distance (Km.) | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) | | Distance (Km.) | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) | | Distance (Km.) | Remarks. | | | |
|----------|----------------|------------------|---------------|----------------|----------------|----------------|--------------------------------------------------------------------------------------------|-----------|-----------------|------------------|---------------|----------------|----------------|----------------|----------------------------------------------------------------------------------|-----------|----------------|------------------|---------------|----------------|----------------|----------------|----------|-----------------|----------------------------|-----|
| | | | | A _N | A _E | | | | | | | A _N | A _E | | | | | | | A _N | A _E | | | | | |
| 1933. | A _N | H. M. S. | | | | | | 1933. | H. M. S. | | | | | | | 1933. | H. M. S. | | | | | | | | | |
| Dec. 3rd | e | 13 20 0 | ... | ... | ... | ... | Tremors. | Dec. 13th | A _N | 21 43 9 | ... | ... | ... | 16350 | Slight. Epc:— Pacific Ocean off Central America, 180° N., 140° W. (U. S. C.G.S.) | Dec. 18th | A _E | 10 29 0 | ... | ... | ... | ... | ... | Feeble distant. | | |
| | f | 13 39 0 | ... | ... | ... | ... | | | P _N | 21 46 27 | ... | ... | ... | ... | | | M | 10 37 7 | 11 | ... | 1 | ... | ... | | | |
| | A _E | 13 10 0 | ... | ... | ... | ... | | | PR ₁ | 21 53 24 | ... | ... | ... | ... | | | F | 11 11 0 | ... | ... | ... | ... | ... | ... | | |
| " 3rd | e | 13 36 0 | ... | ... | ... | ... | | | Sc | 22 5 43 | ... | ... | ... | ... | | | " 19th | A _N | 5 50 53 | ... | ... | ... | ... | ... | Very feeble, very distant! | |
| | f | 13 36 0 | ... | ... | ... | ... | | | Pc | 23 4 43 | 17 | 5 | ... | ... | | | | i | 6 0 4 | ... | ... | ... | ... | ... | | |
| | A _N | 14 45 13 | ... | ... | ... | 2200 | Slight. Origin in Assam near Cherrapunji hills. Felt at Cherrapunji, Shillong and Gauhati. | " 13th | A _E | 21 43 9 | ... | ... | ... | 16350 | Do. | " 24th | A _N | 10 57 56 | ... | ... | ... | ... | ... | ... | Do. | |
| " 4th | P | 14 48 49 | ... | ... | ... | ... | | | M | 22 55 58 | 16 | ... | 6 | ... | | | | i | 11 7 37 | ... | ... | ... | ... | ... | | |
| | S | 16 20 0 | ... | ... | ... | ... | | | F | 23 57 0 | ... | ... | ... | ... | | | | F | 12 33 0 | ... | ... | ... | ... | ... | | |
| " 4th. | A _N | 19 34 27 | ... | ... | ... | ... | Feeble. very distant. | " 14th | A _E | 8 24 0 | ... | ... | ... | ... | Tremors. | " 24th | A _E | 10 57 56 | ... | ... | ... | ... | ... | ... | Do. | |
| | e | 19 43 57 | ... | ... | ... | ... | | | e | 8 56 0 | ... | ... | ... | ... | | | | i | 11 7 37 | ... | ... | ... | ... | ... | | |
| | F | 20 47 0 | ... | ... | ... | ... | | | f | 8 27 0 | ... | ... | ... | ... | Do. | " 24th | A _N | 18 9 0 | ... | ... | ... | ... | ... | ... | Tremors. | |
| " 6th | A _E | 0 7 0 | ... | ... | ... | ... | Tremors. | " 14th | A _E | 8 56 0 | ... | ... | ... | ... | | | | f | 18 21 0 | ... | ... | ... | ... | ... | | |
| | e | 0 28 0 | ... | ... | ... | ... | | | f | 12 47 17 | ... | ... | ... | 2270 | Slight. Epc:— North of Andaman Islands, 14° N., 94° E. (Tentative), | " 26th | A _E | 18 9 0 | ... | ... | ... | ... | ... | ... | Do. | |
| " 9th | A _E | 7 56 14 | ... | ... | ... | 1950 | Slight. Probable origin in Afghanistan. | " 14th | A _N | 12 51 3 | ... | ... | ... | ... | | | | e | 18 20 0 | ... | ... | ... | ... | ... | | |
| | S | 7 59 29 | ... | ... | ... | ... | | | L | 12 52 56 | ... | ... | ... | ... | | | | f | 18 20 0 | ... | ... | ... | ... | ... | | |
| | eL | 8 1 0 | ... | ... | ... | ... | | | M | 12 54 26 | 7 | 4 | ... | ... | | | | A _N | 10 22 0 | ... | ... | ... | ... | ... | Do. | |
| | F | 8 36 0 | ... | ... | ... | ... | | | F | 13 10 0 | ... | ... | ... | ... | | | | f | 10 47 0 | ... | ... | ... | ... | ... | | |
| " 12th | A _N | 3 8 0 | ... | ... | ... | ... | Tremors. | " 14th | A _N | 12 54 50 | 7 | ... | 3 | ... | | | | e | 10 24 0 | ... | ... | ... | ... | ... | Do. | |
| | f | 3 18 0 | ... | ... | ... | ... | | | F | 13 7 0 | ... | ... | ... | ... | | | | i | 10 44 0 | ... | ... | ... | ... | ... | | |
| " 12th | A _E | 3 8 0 | ... | ... | ... | ... | Do. | " 14th | A _N | 18 56 21 | ... | ... | ... | 2340 | Slight. Epc:— Same as in previous shock. | " 26th | A _N | 22 37 0 | ... | ... | ... | ... | ... | ... | Do. | |
| | f | 3 18 0 | ... | ... | ... | ... | | | S | 19 0 14 | ... | ... | ... | ... | | | | f | 22 55 0 | ... | ... | ... | ... | ... | | |
| " 12th | A _N | 5 26 11 | ... | ... | ... | ... | Very feeble, distant. | " 14th | A _E | 19 35 0 | ... | ... | ... | ... | | | | A _E | 22 37 0 | ... | ... | ... | ... | ... | Do. | |
| | i | 5 30 6 | ... | ... | ... | ... | | | P | 18 56 21 | ... | ... | ... | 2340 | Do. | " 14th | A _E | f | 22 55 2 | ... | ... | ... | ... | ... | | |
| | M | 5 40 37 | ... | ... | ... | ... | | | S | 19 0 14 | ... | ... | ... | ... | | | | e | 11 47 0 | ... | ... | ... | ... | ... | Do. | |
| | F | 6 0 0 | ... | ... | ... | ... | | | L | 19 2 25 | ... | ... | ... | ... | | | | f | 12 52 0 | ... | ... | ... | ... | ... | | |
| " 12th | A _E | 5 26 11 | ... | ... | ... | ... | Do. | " 14th | A _N | 19 42 0 | ... | ... | ... | ... | | | | A _N | 11 47 0 | ... | ... | ... | ... | ... | Do. | |
| | i | 5 30 6 | ... | ... | ... | ... | | | F | 19 42 0 | ... | ... | ... | ... | | | | e | 12 39 0 | ... | ... | ... | ... | ... | | |
| | M | 5 38 52 | ... | ... | ... | ... | | | A _N | 23 10 0 | ... | ... | ... | ... | | | | f | 11 47 0 | ... | ... | ... | ... | ... | Do. | |
| | F | 5 53 0 | ... | ... | ... | ... | | | f | 23 33 0 | ... | ... | ... | ... | | | | f | 12 52 0 | ... | ... | ... | ... | ... | | |
| " 12th | A _N | 14 23 37 | ... | ... | ... | 9440 | Slight. Epc:— East New Guinea, 6° S., 153° E. Perth (S-P) | " 17th | A _E | 23 15 0 | ... | ... | ... | ... | Do. | " 17th | A _N | 12 50 0 | ... | ... | ... | ... | ... | ... | ... | Do. |
| | P | 14 33 45 | ... | ... | ... | ... | | | f | 23 33 0 | ... | ... | ... | ... | | | | f | 13 17 0 | ... | ... | ... | ... | ... | | |
| | Sc | 14 30 45 | ... | ... | ... | ... | 4340 kms Nanking | " 17th | A _E | 10 29 0 | ... | ... | ... | ... | | | | e | 12 49 0 | ... | ... | ... | ... | ... | Do. | |
| | Pc | 15 5 32 | 18 | 4 | ... | ... | 5300 kms | " 18th | A _N | 10 38 26 | 11 | 1 | ... | ... | | | | f | 13 23 0 | ... | ... | ... | ... | ... | | |
| | S | 16 52 0 | ... | ... | ... | ... | Do. | " 18th | F | 11 12 0 | ... | ... | ... | ... | | | | f | ... | ... | ... | ... | ... | ... | | |
| " 12th | A _E | 14 23 37 | ... | ... | ... | 9440 | | | | | | | | | | | | | | | | | | | | |

S. C. ROY,
Meteorologist,
Bombay.

STATION—CALCUTTA (ALIPORE).

$\phi = 22^{\circ} 32' N$; $\lambda = 88^{\circ} 20' E$; $h = 7.1$ metres above; M. S. L. *Subsoil*—Alluvial.

Apparatus.—Milne-Shaw Seismograph (A_N component).

(Exposed in constant temperature room).

TABLE D 3.

| | | | | | | | v_m | T | G | $\frac{r}{T\sigma^2}$ | Steady mass (Kg). | Paper speed m m/min. | Up. |
|--------|--|--|--|--|--|--|-------|---------|--------|-----------------------|-------------------|----------------------|--------|
| A N | | | | | | | 250 | 12 sec. | 20 : 1 | .0005 approx. | 0.45 | 8 | North. |

| Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) A N | Distance (Km.) | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) A N | Distance (Km.) | Remarks. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (μ) A N | Distance (Km.) | Remarks. |
|----------|--------|---------------|---------------|-------------------------------|----------------|----------|----------|--------|---------------|---------------|-------------------------------|----------------|----------|-----------|--------|---------------|---------------|-------------------------------|----------------|----------|
| | | | | | | | | | | | | | | | | | | | | |
| H. M. S. | | | H. M. S. | | | H. M. S. | | | | | | | | | | | | | | |
| Jan. 1st | P | 9 3 1 | 3 | ... | 3350 | Slight. | Jan. 9th | P | 8 51 2 | 2 | ... | 2100 | Slight. | Jan. 24th | P | 4 53 30 | 2 | ... | 900 | Slight. |
| | S | 9 8 11 | 4 | ... | ... | | | S | 8 54 32 | 5 | ... | ... | | | S | 4 55 18 | 3 | ... | ... | |
| | L | 9 13 11 | 6 | ... | ... | | | L | 8 56 35 | 6 | ... | ... | | | L | 4 56 0 | 5 | ... | ... | |
| | F | ? | ... | ... | ... | | | F | ? | ... | ... | ... | | | M | 4 56 50 | ... | 33 | ... | |
| | F | ? | ... | ... | ... | | | F | ? | ... | ... | ... | | | F | 5 16 40 | ... | ... | ... | |
| .. 1st | eP | 19 54 16 | ? | ... | 300 | Do. | .. 17th | P | 16 2 33 | 5 | ... | 2100 | Do. | .. 26th | P | 22 37 32 | ? | ... | 450 | Do. |
| | S | ? | ? | ... | ... | | | S | 16 6 15 | 8 | ... | ... | | | S | 22 38 17 | 3 | ... | ... | |
| | L | 19 55 1 | 4 | ... | ... | | | L | 16 8 23 | 10 | ... | ... | | | L | 22 38 39 | 5 | ... | ... | |
| | F | ? | ... | ... | ... | | | F | 16 40 53 | ... | ... | ... | | | F | 23 7 9 | ... | ... | ... | |
| .. 3rd | eP | 15 33 4 | 3 | ... | 6000 | Do. | .. 17th | P | 18 57 6 | 2 | ... | 7050 | Do. | .. 30th | eP | 20 31 12 | ? | ... | 2100 | Do. |
| | S | 15 41 33 | 5 | ... | ... | | | S | 19 5 40 | 5 | ... | ... | | | S | 20 34 49 | 4 | ... | ... | |
| | L | 15 54 49 | 10 | ... | ... | | | L | 19 19 40 | 15 | ... | ... | | | L | 20 36 42 | 5 | ... | ... | |
| | F | 16 42 19 | ... | ... | ... | | | F | 20 14 40 | ... | ... | ... | | | F | ? | ... | ... | ... | |
| .. 4th | P | 4 11 50 | 4 | ... | 9600 | Do. | .. 20th | eP | 12 16 31 | ? | ... | 1650 | Do. | Feb. 3rd | P | 22 20 57 | 4 | ... | 6400 | Do. |
| | S | 4 22 28 | 7 | ... | ... | | | S | 12 19 13 | 3 | ... | ... | | | S | 22 28 51 | 6 | ... | ... | |
| | L | 4 44 50 | 10 | ... | ... | | | L | 12 20 55 | 5 | ... | ... | | | L | 22 42 32 | 14 | ... | ... | |
| | F | 5 25 35 | ... | ... | ... | | | F | 12 39 55 | ... | ... | ... | | | F | 23 37 47 | ... | ... | ... | |
| .. 7th | P | 4 15 40 | 2 | ... | 5600 | Moderate | .. 21st | P | 16 28 6 | 4 | ... | 3700 | Do. | .. 13th | P | 2 24 26 | 4 | ... | 2650 | Moderate |
| | S | 4 22 52 | 5 | ... | ... | | | S | 16 33 26 | 7 | ... | ... | | | S | 2 28 46 | 6 | ... | ... | |
| | L | 4 33 3 | 13 | ... | ... | | | L | 16 38 26 | 10 | ... | ... | | | cL | 2 31 28 | 10 | ... | ... | |
| | M | 4 38 23 | ... | ... | ... | | | F | ? | ... | ... | ... | | | F | 2 43 46 | ... | ... | ... | |
| | F | 6 38 33 | ... | ... | ... | | | F | ? | ... | ... | ... | | | F | ? | ... | ... | ... | |
| .. 8th | P | 6 1 32 | 4 | ... | 6250 | Slight. | .. 21st | P | 19 31 3 | 4 | ... | 6250 | Great. | .. 13th | P | 4 28 32 | 3 | ... | 2300 | Slight. |
| | S | 6 9 27 | 6 | ... | ... | | | S | 19 39 5 | 10 | ... | ... | | | S | 4 32 24 | 5 | ... | ... | |
| | L | 6 21 27 | 13 | ... | ... | | | L | 19 50 26 | 16 | ... | ... | | | L | 4 34 17 | 8 | ... | ... | |
| | F | ? | ... | ... | ... | | | F | 19 54 31 | ... | 151 | ... | | | F | 5 8 17 | ... | ... | ... | |
| | F | ? | ... | ... | ... | | | F | 21 1 31 | ... | ... | ... | | | F | ? | ... | ... | ... | |
| .. 9th | P | 2 6 7 | 4 | ... | 2200 | Moderate | .. 23rd | P | 0 9 41 | 2 | ... | 1200 | Slight. | .. 21st | eP | 19 10 27 | 5 | ... | 3000 | Do. |
| | S | 2 9 52 | 8 | ... | ... | | | S | 0 11 51 | 5 | ... | ... | | | S | 19 15 8 | 6 | ... | ... | |
| | L | ? | ... | ... | ... | | | L | 0 12 41 | 8 | ... | ... | | | L | 19 18 36 | 10 | ... | ... | |
| | M | ? | ... | ... | ... | | | F | 0 28 11 | ... | ... | ... | | | F | 12 51 10 | ... | ... | ... | |
| | F | 3 40 7 | ... | ... | ... | | | F | ? | ... | ... | ... | | | F | ? | ... | ... | ... | |

STATION—CALCUTTA (ALIPORE).

$\phi=22^{\circ} 32'$; $\lambda=88^{\circ} 20'$; $h=6$ metres above M. S. L. ; *Sub-soil—Alluvial.*

Apparatus—Omori Ewing Seismograph (A_N A_E components).

TABLE D 4.

| | | | | | | Vm | To | ε | | r | | | | | | | | | | | | |
|----------|--------|-------------------|----------------|-----------------------|----------------------|----------------------|-----------|--------|-------------------|-----------------|-----------------------|----------------------|-----------------------------------------|----------------|----------|-------------------|----------------|-----------------------|----------------------|-------------|----------|--|
| | | | | | | 32 | 28 secs. | | | To ² | | | | | | | | | | | | |
| | | | | | | 30 | 28 secs. | | | | | | | | | | | | | | | |
| Date. | Phase. | Time. G. M. T. | Period (Sec.). | AMPLI- TUDE (μ) | Distance (Km.). Δ | Remarks. | Date. | Phase. | Time. G. M. T. | Period (Sec.). | AMPLI- TUDE (μ) | Distance (Km.). Δ | Remarks. | Date. | Phase. | Time. G. M. T. | Period (Sec.). | AMPLI- TUDE (μ) | Distance (Km.). Δ | Remarks. | | |
| | | H. M. S. | | A N E | | | | | H. M. S. | | A N E | | | | | H. M. S. | | A N E | | | | |
| 1933. | | | | | | (A) N | 1933. | | | | | | (A) N | 1933. | | | | | | | (A) E | |
| Mar. 6th | P | 13 5 43 | 2 | ... | 480 | Moderate | June 24th | P | 22 0 33 | 6 | ... | 3,900 | Very great. | Aug. 25th | P | 7 54 55 | 5 | ... | 1,900 | Very great. | | |
| | S | 13 6 30 | 4 | ... | ... | | | S | 22 6 3 | 15 | ... | ... | | S | 7 58 9 | 12 | ... | ... | ... | | | |
| | L | 13 6 52 | 5 | ... | ... | | | L | 22 10 46 | 28 | ... | ... | | L | 7 59 41 | 24 | ... | ... | ... | | | |
| | M | 13 7 8 | ... | 655 | ... | | | M | 22 14 16 | ... | 3069 | ... | (A) E instru- ment stopped. | M | ? | ... | ... | ... | ... | | | |
| | F | 14 4 38 | ... | ... | ... | | | F | ? | ... | ... | ... | (A) N Great. | F | ? | ... | ... | ... | ... | | | |
| | P | 13 5 45 | 2 | ... | ... | (A) E | Aug. 11th | P | 8 53 51 | 4 | ... | 1,450 | | Nov. 28th | P | 11 15 7 | 5 | ... | 2,950 | Moderate | (A) N | |
| | S | 13 6 31 | 4 | ... | ... | | | S | 8 56 45 | 6 | ... | ... | | S | 11 19 43 | 7 | ... | ... | ... | | | |
| | L | 13 6 53 | 6 | ... | ... | | | L | 8 57 50 | 8 | ... | ... | | L | 11 24 14 | 12 | ... | ... | ... | | | |
| | M | 13 7 11 | ... | 448 | ... | | | M | 8 59 32 | ... | 483 | ... | | M ₁ | 11 25 30 | ... | 259 | ... | ... | | | |
| | F | 14 3 39 | ... | ... | ... | (A) N Moderate | | F | 9 56 49 | ... | ... | ... | (A) E | M ₂ | 11 27 12 | ... | 259 | ... | ... | | | |
| May 16th | P | 1 16 33 | 4 | ... | 2,150 | Moderate | | P | 8 54 25 | 4 | ... | ... | | F | 12 26 55 | ... | ... | ... | ... | | | |
| | S | 1 20 1 | 7 | ... | ... | | | S | 8 56 49 | 6 | ... | ... | | | | | | | | | | |
| | L | 1 22 25 | 16 | ... | ... | | | L | 8 27 49 | 8 | ... | ... | | | | | | | | | | |
| | M | 1 26 39 | ... | 379 | ... | | | M | 8 59 33 | ... | 948 | ... | | | | | | | | | | |
| | F | 2 11 15 | ... | ... | ... | (A) E Moderate | | F | 9 56 49 | ... | ... | ... | (A) N Very great. | P | 11 15 16 | 5 | ... | ... | ... | | | |
| „ 16th | P | 1 16 35 | 5 | ... | 1,900 | Moderate | „ 25th | P | 7 54 54 | 5 | ... | 1,900 | | S | 11 19 54 | 7 | ... | ... | ... | | | |
| | S | 1 20 3 | 7 | ... | ... | | | S | 7 58 9 | 10 | ... | ... | | L | 11 24 23 | 12 | ... | ... | ... | | | |
| | L | 1 22 25 | 16 | ... | ... | | | L | 7 59 39 | 24 | ... | ... | | M | 11 27 31 | ... | 138 | ... | ... | | | |
| | M | 1 26 49 | ... | 241 | ... | | | M | ? | ... | ... | ... | | F | 12 26 59 | ... | ... | ... | ... | | | |
| | F | 2 10 55 | ... | ... | ... | | | F | ? | ... | ... | ... | | | | | | | | | | |

S. N. SEN,
Meteorologist,
Calcutta.

STATION—KODAIKANAL.

$\phi=10^\circ 13' 50''$; $\lambda=77^\circ 28' 00''$; $h=2343m.$; *Sub-soil—Rock.*

Apparatus.—Milne Shaw Seismograph (E-W).

TABLE D 5.

| | | Steady Mass (Kg). | T | Vm | ε | S* (mm) | Paper speed mm/min. | Up | | | | | | | | | | | | | |
|----------|----------|----------------------|---------------|------------------------|-------------------|----------------------------------------------------------------------------|------------------------|----------|-------------------|---------------|-------------------------|-------------------|--------------------|-----------|----------|-------------------|---------------|-------------------------|-------------------|----------|------------------------------|
| A | E | 0.45 | 11.5 | 250 | 20:1 | 44 (appr.) | 8 | E | | | | | | | | | | | | | |
| Date. | Phase. | Time. G. M. T. | Period (Sec.) | AMPLI- TUDE (MM) | Distance (Km.) | REMARKS. | Date. | Phase. | Time. G. M. T. | Period (Sec.) | AMPLI- TUDE (MM.) | Distance (Km.) | REMARKS. | Date. | Phase. | Time. G. M. T. | Period (Sec.) | AMPLI- TUDE (MM.) | Distance (Km.) | REMARKS. | |
| 1933. | H. M. S. | | | | | | 1933. | H. M. S. | | | | | | 1933. | H. M. S. | | | | | | |
| Jan. 1st | .. | ... | ... | 5.00 | 1000 | No time marks. | Jan. 27th —28th | P | 23 02 15 | ... | ... | .. | Very feeble shock. | Mar. 11th | IP | 19 42 09 | ... | ... | 3980 | | |
| " 7th | P | 4 17 22 | ... | ... | 2800 | | " 28th | F | 00 23 00 | ... | ... | .. | | | S | 19 53 15 | ... | ... | ... | | |
| | S | 4 26 08 | ... | ... | .. | | | P | 3 13 41 | ... | ... | .. | Very feeble shock. | | L | ... | ... | ... | ... | | |
| | L | 4 44 11 | ... | ... | .. | | | F | 3 18 00 | ... | ... | .. | | | M | ... | ... | ... | ... | | |
| | M | 4 53 06(1) | ... | 1.50 | .. | | Feb. 13th | F | 3 18 00 | ... | ... | .. | | | F | 20 47 00 | ... | ... | ... | | Feeble shock. |
| | | 4 55 54(2) | ... | ... | .. | | | P | 2 56 26 | ... | ... | 1366 | | | | | ... | ... | ... | | |
| | F | ? | ... | ... | .. | No re- cord at time of F. | | S | 3 01 43 | ... | ... | .. | | " 12th | P | ... | ... | ... | ... | | |
| " 9th | P | 2 07 15 | ... | ... | 680 | | | L | 3 04 02 | ... | ... | .. | | | S | ... | ... | ... | ... | | |
| | S | 2 10 13 | ... | ... | .. | | | M | 3 13 34 | ... | 1.75 | .. | | | L | ... | ... | ... | ... | | |
| | L | 2 11 00 | ... | ... | .. | | " 13th | F | 3 47 00 | ... | ... | .. | | | M | ... | ... | ... | ... | | |
| | M | 2 11 41 | ... | 16.25 | .. | Lines over- lapping | | P | 4 30 00 | ... | ... | .. | | | F | ... | ... | ... | ... | | Tremors No time marks. |
| | F | ? | ... | ... | .. | | " 21st | F | 5 00 00 | ... | ... | .. | Feeble shock. | " 17th | IP | 16 07 24 | ... | ... | 3260 | | |
| " 11th | P | 18 13 51 | ... | ... | 680 | | | P | 19 08 22 | ... | ... | 1210 | | | S | 16 17 08 | ... | ... | ... | | |
| | S | 18 16 49 | ... | ... | .. | | | S | 19 13 13 | ... | ... | .. | | | L | 16 31 15 | ... | ... | ... | | |
| | L | 18 22 03 | ... | ... | .. | | | L | 19 17 45 | ... | ... | .. | | | M | 16 46 13 | ... | 0.75 | ... | | |
| | M | 18 23 22 | ... | 1.50 | .. | | | M | ... | ... | ... | .. | | | F | 17 32 00 | ... | ... | ... | | |
| | F | 19 20 00 | ... | ... | .. | | | F | 19 39 00 | ... | ... | .. | Feeble shock. | " 17th | IP | 19 41 11 | ... | ... | 2235 | | |
| " 17th | P | 16 14 15 | ... | ... | .. | | " 22nd | P | 18 03 37 | ... | ... | 1335 | | | iS | 19 48 34 | ... | ... | ... | | |
| | F | 16 14 32 | ... | ... | .. | Tremors. | | S | 18 08 45 | ... | ... | .. | | | L | 19 53 00 | ... | ... | ... | | |
| " 17th | P | 18 56 22 | ... | ... | 1800 | | | L | 18 12 08 | ... | ... | .. | | | M | 20 04 56 | ... | 2.0 | ... | | |
| | S | 19 02 45 | ... | ... | .. | | | M | 18 15 04 | ... | 0.75 | .. | | " 18th | P | 3 17 15 | ... | ... | ... | | |
| | L | 19 06 09 | ... | ... | .. | | | F | 18 33 00 | ... | ... | .. | | | F | 4 41 00 | ... | ... | ... | | Tremors. |
| | M | 19 12 19 | ... | 1.00 | .. | | " 23rd | IP | 8 28 58 | ... | ... | 5155 | | | P | 22 15 00 | ... | ... | ... | | |
| | F | 20 17 00 | ... | ... | .. | | | S | 8 45 23 | ... | ... | .. | | " 31st | F | 22 33 00 | ... | ... | ... | | Tremors. |
| " 17th | P | 22 20 38 | ... | ... | .. | | | L | 9 11 52 | ... | ... | .. | | | P | 22 15 00 | ... | ... | ... | | |
| | F | 22 52 00 | ... | ... | .. | Very feeble shock. | | M | 9 27 33 | ... | 1.75 | .. | | April 9th | P | 2 57 11 | ... | ... | ... | | |
| " 20th | P | 12 19 15 | ... | ... | 870 | | Mar. 2nd | F | 10 39 00 | ... | ... | .. | | | S | 3 06 04 | ... | ... | ... | | |
| | S | 12 22 51 | ... | ... | .. | | | IP | 17 41 45 | ... | ... | 2857 | | | L | 3 22 27 | ... | ... | ... | | |
| | L | 12 25 00 | ... | ... | .. | | | iS | 17 50 36 | ... | ... | .. | | | M | ... | ... | ... | ... | | |
| | M | ... | ... | ... | .. | | | L | ? | ... | ... | .. | | | F | 4 13 00 | ... | ... | ... | | Feeble shock. |
| | F | 12 41 00 | ... | ... | .. | Feeble shock. | | M | 18 13 38 | ... | 98.0 | .. | | " 9th | P | 5 12 15 | ... | ... | ... | | |
| 21st | P | ... | ... | ... | .. | | " 3rd | F | 22 39 00 | ... | ... | .. | | | F | 5 39 00 | ... | ... | ... | | Tremors. |
| | S | ... | ... | ... | .. | | | P | 2 27 24 | ... | ... | .. | | " 10th | P | 11 09 19 | ... | ... | ... | | |
| | L | ... | ... | ... | .. | | | F | 2 52 00 | ... | ... | .. | Tremors. | | F | 11 48 00 | ... | ... | ... | | |
| | M | ... | ... | 30.00 | .. | | " 11th | P | 14 33 09 | ... | ... | 3012 | | " 16th | P | 06 19 09 | ... | ... | ... | | Very feeble shock. |
| | F | ... | ... | ... | .. | Lines over- lapping and times not possible to measure | | S | 14 42 21 | ... | ... | .. | | | F | 6 42 00 | ... | ... | ... | | |
| | | | | | | | | L | 15 04 08 | ... | ... | .. | | " 16th | P | 7 00 09 | ... | ... | ... | | Do. |
| | | | | | | | | M | ... | ... | ... | .. | | | F | 7 28 00 | ... | ... | ... | | Tremors. |
| | | | | | | | | F | 15 47 00 | ... | ... | .. | Feeble shock. | | | | ... | ... | ... | | |

*S.-Tilt sensitivity, i.e., the trace amplitude in mm. per second of arc tilt.

TABLE D 5—concl'd.

| Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (MM.) | | Distance (Km.) | REMARKS. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (MM.) | | Distance (Km.) | REMARKS. | Date. | Phase. | Time G. M. T. | Period (Sec.) | AMPLITUDE (MM.) | | Distance (Km.) | REMARKS. | |
|-----------|--------|------------------|---------------|-----------------|-----|----------------|---------------|----------|----------|------------------|---------------|-----------------|-----|----------------|-------------------------------------|-----------|--------|------------------|---------------|-----------------|-----|----------------|----------|-----------------------------|
| | | | | A | E | | | | | | | A | E | | | | | | | A | E | | | |
| 1933. | | H. M. S. | | | | | | 1933. | | H. M. S. | | | | | | 1933. | | H. M. S. | | | | | | |
| Sept. 7th | P | 18 02 19 | ... | ... | ... | 2000 | | Oct. 5th | P | 13 36 03 | ... | ... | ... | 1260 | | Nov. 22nd | iP | 12 53 06 | ... | ... | ... | ... | 3230 | |
| | S | 18 08 54 | ... | ... | ... | ... | | | iS | 13 41 00 | ... | ... | ... | ... | | | iS | 13 02 45 | ... | ... | ... | ... | ... | |
| | L | ... | ... | ... | ... | ... | | | iL | 13 46 25 | ... | ... | ... | ... | | | L | 13 19 00 | ... | ... | ... | ... | ... | |
| | M | ... | ... | ... | ... | ... | | | M | 13 40 19 | ... | 2.5 | ... | ... | | | M | 13 24 30 | ... | ... | 0.4 | ... | ... | |
| | F | 18 35 00 | ... | ... | ... | ... | Feeble shock. | | F | 14 26 00 | ... | ... | ... | ... | | | F | 14 19 00 | ... | ... | ... | ... | ... | |
| „ 7th | P | 23 18 10 | ... | ... | ... | ... | | „ 10th | P | 4 44 35 | ... | ... | ... | 310 | | „ 23rd | P | 16 55 40 | ... | ... | ... | ... | ... | |
| | F | 23 41 00 | ... | ... | ... | ... | Tremors. | | S | 4 45 55 | ... | ... | ... | ... | | | F | 17 06 00 | ... | ... | ... | ... | ... | Tremors. Lines overlapping. |
| „ 9th | P | 21 43 24 | ... | ... | ... | ... | | | L | 4 47 47 | ... | ... | ... | ... | | | „ 28th | P | 11 15 30 | ... | ... | ... | 1550 | |
| | F | 22 36 00 | ... | ... | ... | ... | Feeble shock. | | M | 4 40 14 | ... | 1.6 | ... | ... | | | iS | 11 21 10 | ... | ... | ... | ... | ... | |
| „ 21st | P | 10 28 12 | ... | ... | ... | ... | | „ 22nd | P | 14 14 16 | ... | ... | ... | ... | | | iL | 11 29 25 | ... | ... | ... | ... | ... | |
| | F | 10 47 00 | ... | ... | ... | ... | Tremors. | | F | 14 20 00 | ... | ... | ... | ... | Tremors. | | M | 11 30 34 | ... | ... | 2.0 | ... | ... | |
| „ 24th | P | 15 35 36 | ... | ... | ... | 2470 | | „ 23rd | P | 11 45 44 | ... | ... | ... | 1366 | | Dec. 2nd | P | 2 25 50 | ... | ... | ... | ... | 534 | |
| | S | 15 43 32 | ... | ... | ... | ... | | | iS | 11 51 00 | ... | ... | ... | ... | | | S | 2 28 08 | ... | ... | ... | ... | ... | |
| | L | 16 07 20 | ... | ... | ... | ... | | | iL | 11 55 00 | ... | ... | ... | ... | | | iL | 2 29 00 | ... | ... | ... | ... | ... | |
| | M | ... | ... | ... | ... | ... | | | M | 11 58 06 | ... | 0.9 | ... | ... | Lines overlapping. Times uncertain. | | M | 2 29 32 | ... | ... | 1.0 | ... | ... | |
| | F | 16 56 00 | ... | ... | ... | ... | Feeble shock. | | F | 12 25 00 | ... | ... | ... | ... | | | | 2 38 00 | ... | ... | ... | ... | ... | |
| „ 25th | P | 13 54 31 | ... | ... | ... | 2100 | | „ 26th | P | 12 27 22 | ... | ... | ... | ... | | | „ 4th | P | 14 46 00 | ... | ... | ... | ... | |
| | S | 14 01 33 | ... | ... | ... | ... | | | F | 13 50 00 | ... | ... | ... | ... | Tremors. | | F | 14 59 00 | ... | ... | ... | ... | ... | Tremors. Lines overlapping. |
| | L | 14 09 40 | ... | ... | ... | ... | | | „ 30th | P | 11 44 35 | ... | ... | ... | ... | | „ 4th | P | 22 50 15 | ... | ... | ... | 260 | |
| | M | ... | ... | ... | ... | ... | | | F | 11 51 00 | ... | ... | ... | ... | Tremors. | | S | 22 51 23 | ... | ... | ... | ... | ... | |
| | F | 14 31 00 | ... | ... | ... | ... | Feeble shock. | | Nov. 2nd | P | 12 40 11 | ... | ... | ... | ... | | L | 22 52 43 | ... | ... | ... | ... | ... | |
| „ 25th | P | 19 02 13 | ... | ... | ... | 1220 | | | F | 13 46 00 | ... | ... | ... | ... | Tremors. | | M | 22 52 49 | ... | ... | 0.6 | ... | ... | |
| | iS | 19 07 04 | ... | ... | ... | ... | | | „ 5th | iP | 20 32 42 | ... | ... | ... | 435 | | F | 23 22 00 | ... | ... | ... | ... | ... | |
| | L | 19 16 04 | ... | ... | ... | ... | | | S | 20 34 35 | ... | ... | ... | ... | ... | | „ 9th | P | 8 02 32 | ... | ... | ... | 500 | |
| | M | 19 18 35 | ... | 2.0 | ... | ... | | | iL | 20 37 14 | ... | ... | ... | ... | | | S | 8 04 42 | ... | ... | ... | ... | ... | |
| | F | 20 35 00 | ... | ... | ... | ... | | | M | 20 37 32 | ... | 0.5 | ... | ... | | | M | 8 06 30 | ... | ... | 0.9 | ... | ... | |
| „ 30th | P | 14 31 33 | ... | ... | ... | 2600 | | | F | 21 5 00 | ... | ... | ... | ... | | | F | 8 34 00 | ... | ... | ... | ... | ... | |
| | S | 14 39 48 | ... | ... | ... | ... | | | Oct. 2nd | iP | 15 49 28 | ... | ... | 453 | | | „ 12th | P | 14 23 05 | ... | ... | ... | 1000 | |
| | L | 14 50 48 | ... | ... | ... | ... | | | „ 20th | iS | 23 34 54 | ... | ... | 4040 | | | S | 14 27 10 | ... | ... | ... | ... | ... | |
| | M | ... | ... | ... | ... | ... | | | iL | 0 13 22 | ... | ... | ... | ... | | | L | 14 32 48 | ... | ... | ... | ... | ... | |
| | F | 15 53 00 | ... | ... | ... | ... | Feeble shock | | M | 0 22 40 | ... | 5.0 | ... | ... | | | M | 14 33 35 | ... | ... | 0.5 | ... | ... | |
| Oct. 2nd | iP | 15 49 28 | ... | ... | ... | 453 | | | F | 2 13 00 | ... | ... | ... | ... | | | F | 15 13 00 | ... | ... | ... | ... | ... | |

T. ROYDS,
Director, Madras and Kodaikanal Observatories.

The following table contains a list of earthquakes that were reported by voluntary observers from various stations:—

TABLE D-6.

| Station. | Date. | G.M.T. of earthquake. | Duration. | Intensity Rossi-Forel scale. | No. of shocks. | REMARKS. | Station. | Date. | G.M.T. of earthquake. | Duration. | Intensity Rossi-Forel scale. | No. of shocks. | REMARKS. |
|-----------------------------|--------|-----------------------|--------------------------|------------------------------|----------------|----------|--------------------------|---------|-----------------------|--------------|------------------------------|-------------------|----------|
| | 1933. | H. M. | Sec. about 90 | | | | | 1933. | H. M. | Sec. | | | |
| Gauhati | Jan. 1 | 19 50 | | 6 | 2 | | Dhubri | Apl. 5 | 17 42 | 4 | 7 | 2 | |
| Salonah | " 1 | 20 15 | 4-5 | 4 | 1 | | Dhubri | " 6 | 3 16 | 6 | 7 | 4 | |
| Drosh. | " 5 | 19 55 | 20 } -15 } 3 | 6 | 1 | | Dhubri | " 17 | 4 23 | 48 | 7 | 5 | |
| Lahore | " 9 | 23 00 2 07 | | 5 | 3 | | Drosh. | " 20 | 10 27 | 14 | 7 | 3 | |
| R. A. F. Peshawar | " 9 | 2 07 | 90 | 7 | 3 | | Dhubri | " 25 | 15 30 | 65 | 3 | 2 | |
| Cherat | " 9 | 2 04 | 40 | 7 | 2 | | Dhubri | " 28 | 7 54 | 26 | 7 | 3 | |
| Drosh | " 9 | 2 10 | 80 | 7 | 1 | | Dhubri | May 17 | 12 16 | 6 | 7 | 3 | |
| Rawalpindi. | " 9 | 2 01 | 120 | 8 | 2 | | Lahore | " 17 | 9 44 | 30 | 68 | 1 | |
| Gurez | " 9 | 2 10 | 15 | 5 | 3 | | Sialkot | " 17 | 9 44 | 2 | 3 | 1 | |
| Skardu | " 9 | 2 05 | 10 | 6 | 3 | | Dhubri | " 19 | 1 50 | 6 | 7 | 3 | |
| Gilgit | " 9 | 2 03 | Nearly 10 & 12 | 5 | 2 | | Drosh | " 24 | 8 35 | 30 | 4 | 1 | |
| Dras | " 9 | 2 12 | 30 | 8 | 3 | | Gauhati | " 26 | 14 18 | 12 | 7 | 1 | |
| Gauhati | " 10 | 24 00 | 10 | 6 | 1 | | Dhubri | " 26 | 14 33 | 20 | 6 | 1 | |
| Drosh | " 11 | 15 55 | 40 | 6 | 1 | | Drosh | " 27 | 22 45 | 90 | 6 | 1 | |
| Drosh | " 20 | 0 15 | 16 | 6 | 1 | | Drosh. | June 3 | 18 01 | 90 | 6 | 3 | |
| Gauhati | Feb. 6 | 12 46 | 20 | 6 | 1 | | Gauhati | July 13 | 23 21 | about 15 | 6 | 1 | |
| Gauhati | " 8 | 1 15 | 30 | 5 | 3 | | Salonah | " 13 | 23 03 | about 10 | 6 | .. | |
| Drosh. | " 17 | 12 11 | about 90 | 6 | 2 | | Poona | " 16 | 23 50 | about 5 | 5 | 1 | |
| Dhubri | Mar. 9 | 16 38 | 12 | 7 | 3 | | Salonah | " 18 | 13 07 | about 2 or 3 | 3 | 1 | |
| Cherrapunji | " 6 | 13 6 | 10 | 3 | 1 | | Salonah | " 27 | 3 36 | 5-7 | 3 | 1 | |
| Dhubri | " 6 | 13 7 | 5 | 7 | 2 | | Dras. | " 29 | 4 11 | 24 | 8 | 3 | |
| Dhubri | " 6 | 13 44 | 22 | 7 | 3 | | Skardu | Aug. 3 | 9 00 | 10 | 6 | 1 | |
| Dhubri | " 6 | 17 54 | 7 | 7 | 3 | | Yatung (Tibet) | " 30 | 13 13 | 30 | 4 | Several tremors. | |
| Salonah | " 6 | 13 8 | about 10 to 12 | 5 | | | Shillong | Sep. 2 | 10 49 | 2 | 5 | 1 | |
| Rangpur | " 6 | 13 6 | 32 | 5 | 40 | | Cooch Behar | " 24 | 15 41 | about 5 | 6 | 1 | |
| Gauhati | " 6 | 13 13 18 00 | about 80 10 } 10 } | 6 | 3 } 1 } | | Akyab | Nov. 7 | 2 19 | 2 | 3 | 2 | |
| Dhubri | " 7 | 10 21 | 4 | 7 | 2 | | Chaman | " 12 | 2 15 | 1 | 3 | 1 | |
| Dhubri | " 7 | 3 3 | 3 | 6 | 1 | | Salonah | " 29 | 5 56 | about 5 | 4 | Small vibrations. | |
| Mymensingh | " 7 | 00 12 | 2 | 6 | 1 | | Salonah | Dec. 4 | 14 40 | 10-12 | 4 | 1 | |
| Chaman | " 11 | 10 25 | 2 | 5 | ... | | Cherrapunji | " 4 | 14 40 | 10 | 3 | 2 | |
| Dras. | " 13 | 18 10 | 40 | 8 | 2 | | Gauhati | " 4 | 14 41 | 5-7 | 5 | 1 | |
| Dhubri | " 14 | 2 6 | 4 | 6 | 2 | | Sibsagar | " 4 | 14 40 | about 70 | 6 | 1 | |
| R. A. F. Quetta | " 30 | 8 41 | 15 | 5 | 1 | | Shillong | " 4 | 14 40 | about 20 | 4 | 2 | |
| Akyab | " 31 | 8 10 | 2 | 3 | 2 | | Salonah | " 5 | 13 38 | about 5 | 4 | 1 | |
| Skardu | Apl. 1 | 16 16 | 5 | 3 | 5 | | Srinagar | " 21 | 8 33 | 2 | 6 | 2 | |

J. M. SIL,
Meteorologist,
Poona.

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