

UNIVERSITY OF QUEENSLAND

SEISMOLOGICAL STATION

BRISBANE

$\phi=27^{\circ} 28' 41''$ S., $\lambda=153^{\circ} 1' 52''$ E., $h=15$ m.

Foundation: Semi-consolidated alluvium of raised river terrace.

INSTRUMENTS AND CONSTANTS.

| INSTRUMENT | COMPONENT | FREE PERIOD | DAMPING | MAGNIFICATION |
|---------------------------|-----------|-------------|---------|---------------|
| Milne Shaw No. 58 | N.—S. | 12 sec. | 20 : 1 | 250 |
| Milne Shaw No. 60 | E.—W. | 12 sec. | 20 : 1 | 250 |

The Station is maintained and operated by the University of Queensland assisted by a grant from the funds of the Australian Council for Scientific and Industrial Research.

| DATE | PHASE | G. M. T. | | | REMARKS |
|-----------------|--|----------|----|--|---|
| | | h. | m. | s. | |
| 1937 Sept. 1 | iPE eSE iSSE ME | 8 | - | 44.1 48.3 49.1 55.8 | |
| 3 | iPN ePE iPPN iSN eSE LN LE | 19 | - | 0.4 0.4 3.4 10.6 10.6 22.4 22.6 | E-W component weak |
| 8 | iPN iPPN iSKSN eSSN | 0 | - | 53.3 57.2 1 - 03.7 11.4 | |
| 15 | iPN iSN | 12 | - | 31.8 35.6 | |
| 17 | iN eE iN iE iN LN LE ME MN | 9 | - | 54.7 55.3 59.6 10 - 01.9 5.9 23.8 24.0 30.0 31.4 | Distant earthquake. Phases not identified. |
| 21 | iPN iPPN iSN eSSN iS ₀ SN | 9 | - | 47.2 48.8 53.1 55.7 57.6 | |
| 22 | iN eLN | 9 | - | 29.7 31.1 | |

| DATE | PHASE | G. M. T. | | | REMARKS |
|----------|---|----------|----|--|--|
| | | h. | m. | s. | |
| Sept. 23 | iPN ePE iSNE | 13 | - | 10.6 10.7 14.5 | All waves very large amplitudes. Largest shock yet recorded. $\Delta = 21.5^\circ$. Direction from Brisbane N. 10° E. |
| 25 | eE ME | 17 | - | 59.1 18 - 0.2 | |
| 27 | iPNE ePPE iSNE iSSN ? {SS} E {ScS} E LE ME MN | 9 | - | 3.4 5.1 10.0 13.0 13.4 14.1 23.6 23.7 | Damage and loss of life in Java. |
| 30 | iP'NE iPPNE ePPP iPPP? iN? eSKSE eSKSN ePSE ePSN eSSE eSSSN? eSSSE | 21 | - | 37.8 38.5 39.8 39.9 41.2 44.2 44.8 47.4 47.8 54.0 57.8 57.9 | |

W.H. Bryan.

W.H. Bryan.

Officer in Charge.

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| | | h. | m. | s. | |
| 1937. Oct. 4 | ePNE iPPNE eSN eSE eSSE eSSN | 7 | - | 46.0 48.8 56.0 56.2 1.0 1.3 | |
| Oct. 6 | ePNE iFPN {iSNE} {PcPNE} iSSN iSSE eScSN eScSE | 17 | - | 9.4 9.6 13.4 14.1 14.2 20.6 20.8 | |
| Oct. 9 | iPE iSE ME | 18 | - | 8.5 10.9 13.7 | |
| Oct. 10 | eP?N | 23 | - | 30 | Record fogged. |
| | eP?N | 23 | - | 40 | Very similar to preceding shock |
| Oct. 12 | iPE | 3 | - | 19.3 | |
| | iSE | | | 22.4 | |
| | ME | | | 24.4 | |
| Oct. 17 | iPN | 5 | - | 6.1 | |
| | iPPN | | | 6.7 | |
| | eSN | | | 10.3 | |
| | LN | | | 16.5 | |
| | MN | | | 20.6 | |
| Oct. 20 | eLNE | 21 | - | 2.5 | Long waves of small amplitude. |



| DATE | PHASE | G. M. T. | | | REMARKS |
|---------|-------|----------|----|------|---|
| | | h. | m. | s. | |
| Oct. 22 | ?PE | 0 | - | 59.6 | |
| | ?PN | 1 | - | 0.0 | |
| | ?eL | 1 | - | 3.8 | |
| Oct. 23 | iPE | 16 | - | 58.4 | Felt in North Island, New Zealand |
| | iSE | 17 | - | 2.7 | |
| Oct. 25 | eN | 7 | - | 44.9 | Early phases obscured by microseisms. |
| | eE | | | 47.5 | |
| | LN | | | 47.7 | |
| | LE | | | 48.1 | |
| Oct. 25 | iPNE | 10 | - | 38.5 | Felt in North Island New Zealand Very similar record to that for October 22nd. Calculated E = $\begin{cases} \phi & 37^{\circ} 45' \text{ S.} \\ \lambda & 179^{\circ} 30' \text{ E.} \end{cases}$ |
| | iSNE | | - | 42.8 | |
| | LE | | | 43.4 | |
| | LN | | | 43.5 | |
| Oct. 28 | ePN | 9 | - | 40.7 | Nearest earthquake yet recorded. |
| | iE | | | 41.2 | |
| | iSNE | | | 42.5 | |

W.H. Bryan,

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Officer in Charge.

| | | | |
|---------|-----|-----------|---|
| Oct. 22 | 121 | 0 - 22.8 | |
| | 122 | 1 - 21.0 | |
| | 123 | 1 - 21.8 | |
| Oct. 22 | 124 | 16 - 22.4 | Site in North Island, New Zealand |
| | 125 | 17 - 21.7 | |
| Oct. 22 | 126 | 7 - 21.9 | Early phases observed by microseisms |
| | 127 | 47.8 | |
| | 128 | 48.8 | |
| | 129 | 48.8 | |
| | 130 | 48.8 | Very similar record to that for October 22nd. |
| | 131 | 48.4 | Calculated $H = \begin{cases} 270 \text{ km} \\ 201 \text{ km} \end{cases}$ |
| | 132 | 48.8 | |
| Oct. 22 | 133 | 0 - 20.7 | Various earthquakes yet recorded. |
| | 134 | 21.2 | |
| | 135 | 22.5 | |

W.H. Brown

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Station in Christchurch

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| DATE | PHASE | G. M. T. | | | REMARKS |
|--------|--|--------------|---|----|---|
| | | h. | m. | s. | |
| 1937. | | | | | |
| Nov. 2 | iPN ePE iSN iSE LNE MNE ScSN ScSE | 11 | - 0.0 0.0 4.0 4.1 6.0 7.7 11.6 11.7 | | $\Delta = 23^{\circ}$ ca. N-S component much stronger than E-W. |
| | ePN eSE iSN LN | 15 | - 7.1 11.1 11.2 13.6 | | $\Delta = 23^{\circ}$ ca. Similar to preceding. Possibly same epicentre |
| Nov. 3 | eE eN | 5 | -37.8 38.0 | | Phases not identified. |
| Nov. 4 | iE LE iE iE eLE | 8 22 | - 9.7 11.6 -57.4 58.9 59.9 | | Phase not identified. Long waves of small amplitude. Long waves of small amplitude. |
| Nov. 5 | iPNE ePPE ePPN eSN iSE LNE | 9 | -40.3 41.0 41.1 44.7 44.7 45.6 | | $\Delta = 25^{\circ}$ ca. |
| Nov. 7 | eLN | 17 | - 5.0ca | | Long waves of small amplitude |
| Nov. 8 | iP?E iS?E LE ME eE iE iE LE LE | 5 7 15 | -44.5 48.4 50.4 52.7 -35.9 36.3 36.8 37.9 -56.0ca | | Tracks crossed. Time uncertain Long waves of small amplitude. |
| Nov. 9 | eNE | 21 | -31.6 | | Followed by long waves of small amplitude. |

| DATE | PHASE | G. M. T. | | | REMARKS | |
|------------|--------|----------|-------|----|---|--|
| | | h. | m. | s. | | |
| Nov. 13 | iPE | 9 | -55.9 | | $\Delta = 30^\circ$ ca. | |
| | ePPE | | 56.7 | | | |
| | ePcPE | | 59.1 | | | |
| | iSE | 10 | - 0.9 | | | |
| | LE | | 2.3 | | | |
| | eScSE | | 6.6 | | | |
| | iPE | 17 | -59.3 | | $\Delta = 28^\circ$ ca. | |
| | iPPE | 18 | - 0.4 | | | |
| | eSPE | | 4.1 | | | |
| | LE | | 4.8 | | | |
| Nov. 15 | eNE | 22 | -21.4 | | Short waves superimposed on long. | |
| Nov. 16 | eNE | 16 | - 3.3 | | | |
| | M?N | | 8.3 | | | |
| Nov. 17-19 | | | | | Station out of action. | |
| Nov. 23 | eN | 8 | -23.5 | | N-S components stronger than E-W. | |
| | iE | | 23.5 | | | |
| | iS?N | | 25.5 | | | |
| | eE | | 25.8 | | | |
| | ePN | 13 | -56.5 | | $\Delta = 26^\circ$ ca. N-S components considerably stronger than E-W. | |
| ePPN | | 57.2 | | | | |
| iSN | 14 | - 1.0 | | | | |
| iSE | | 1.1 | | | | |
| eLN | | 2.2 | | | | |
| Nov. 25 | ePE | 4 | -47.4 | | $\Delta = 28^\circ$ ca. | |
| | ePN | | 47.6 | | | |
| | ePPE | | 47.9 | | | |
| | ePPN | | 48.1 | | | |
| | eSN | | 52.2 | | | |
| | eSE | | 52.3 | | | |
| | eLN | | 52.7 | | | |
| | eLE | | 52.8 | | | |
| | MN | | 57.3 | | | |
| | ME | | 57.5 | | | |
| | iScSNE | | 58.5 | | | |
| Nov. 26 | eP?N | 10 | -57.3 | | | |
| | iN | | 59.2 | | | |
| | iS?N | 11 | - 3.0 | | | |
| | iSS?NE | | 4.9 | | | |
| | eL? | | 7.1 | | | |
| Nov. 28 | iPN | 5 | -34.2 | | $\Delta = 58^\circ$ ca. | |
| | iPP?N | | 35.9 | | | |
| | eSN | | 42.1 | | | |
| | eSSN | | 45.9 | | | |
| | eL?N | | 51.0 | | | |
| | MN | | 58.2 | | | |
| Nov. 30 | iPN | 1 | - 0.4 | | $\Delta = 26^\circ$ ca. | |
| | iPE | | 0.5 | | | |
| | iPPN | | 1.3 | | | |
| | iPPE | | 1.4 | | | |
| | iSN | | 4.8 | | | |
| | eSE | | 4.9 | | | |
| | eL?N | | 6.8 | | | |
| | MN | | 20.6 | | | |
| | ME | | 21.2 | | | |
| | MN | | 28.2 | | | |
| | ME | | 28.3 | | | |
| | iN | 13 | -44.1 | | | |
| | eN | | 45.9 | | | |
| | iL?N | | 53.4 | | | |
| | eLE | | 57.5 | | | |

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| 1937. Dec. 2 | eNE eN eN eN eLN eLE MN ME | 16 | - | 33.1 35.5 36.4 37.7 39.6 40.6 41.5 42.6 | |
| Dec. 5 | eN eN eLN MN | 15 | - | 24.0 24.9 26.4 32.8 | |
| Dec. 6 | eN eLN | 4 | - | 53.5 5 - 6.0 | Followed by long waves of small amplitude. |
| Dec. 8 | eN eNE LE iPNE iPPN e?N iSNE eSSN e?SSSN eLE eLN MN iPN ePE iSE eSN ME MN | 0 1 8 16 | - | 54.4 58.1 1.5 42.2 44.5 46.0 50.2 53.9 55.7 57.0 57.2 8.9 50.0 50.1 53.6 53.8 57.3 58.1 | $\Delta = 58^{\circ}$ ca. $\Delta = 20^{\circ}$ ca |
| Dec. 10 | eN eLN | 13 | - | 42.2 48.0 | Followed by long waves of small amplitude. |
| Dec. 12 | | | | | No records. |

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|--------------------------|---------|----------|----|------|---|---|------|
| | | h. | m. | s. | | | |
| Dec. 13 | i(?P)N | 19 | - | 3.9 | | | |
| | e(?PP)N | | | 5.6 | | | |
| | e(?S)N | | | 11.5 | | | |
| | e(?SS)N | | | 14.5 | | | |
| | eLN | | | 20.6 | | | |
| | MN | | | 28.5 | | | |
| Dec. 16 | eE | 18 | - | 41.1 | All phases very small amplitude | | |
| | eE | | | 44.0 | | | |
| | iE | | | 48.9 | | | |
| Dec. 17 | eN | 4 | - | 46.4 | | | |
| | eLN | | | 50.8 | | | |
| | iN | 9 | - | 42.2 | | | |
| | eL | | | 58.9 | | | |
| Dec. 20 | iPN | 3 | - | 40.1 | $\Delta = 22^\circ$ ca. Followed by series of maxima Very definite maximum. | | |
| | ePE | | | 40.2 | | | |
| | iSNE | | | 44.0 | | | |
| | eLN | | | 45.6 | | | |
| | ME | | | 47.5 | | | |
| | MN | | | 49.4 | | | |
| Dec. 22 | eN | 4 | - | 4.6 | | | |
| | eLN | | | 11.3 | | | |
| | ?MN | | | 29.0 | | | |
| Dec. 23 | eSN | 3 | - | 7.3 | Earlier phases obscured | | |
| | iSE | | | 7.4 | | | |
| | iPPE | 13 | - | 37.7 | $\Delta = 113^\circ$ ca. | | |
| | eN | | | 38.5 | | | |
| | eN | | | 39.6 | | | |
| | iSKSE | | | 43.5 | | | |
| | iSKKSE | | | 44.6 | | | |
| | iN | | | 45.6 | | | |
| | iPSE | | | 47.1 | | | |
| | iPSN | | | 47.2 | | | |
| | iPPSE | | | 49.1 | | | |
| | iN | | | 49.6 | | | |
| | iSSNE | | | 53.6 | | | |
| | eLE | | | 14 | | - | 10.5 |
| | eLN | | | | | | 10.6 |
| | ME | 22.0 | | | | | |
| MN | 22.5 | | | | | | |
| Dec. 24 to Dec. 31 | F | 16 | - | 31.0 | Station closed | | |

W.H. Bryan

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Officer in Charge.