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SEISMOLOGICAL SERIES

of the

DOMINION OBSERVATORY

1963-1
Seismological Bulletin
January - March
1963

**Seismological Service
of Canada**

OTTAWA, CANADA

Department of Mines and Technical Surveys

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DOMINION OBSERVATORIES

1964

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SEISMOLOGICAL BULLETIN - 1963

This report lists the instrumental results obtained at the Seismological stations maintained by the Seismological Service of Canada. These are divided into two divisions.

Eastern Division

Alert, N. W. T. -

Owned and operated by the Dominion Observatory.

C. H. McCloughan in charge.

Halifax, Nova Scotia -

Operated by Dalhousie University for the Dominion Observatory.

London, Ontario -

Operated by The University of Western Ontario for the Dominion Observatory.

Mould Bay, N. W. T. -

Owned and operated by the Dominion Observatory.

W. T. Piche in charge.

Ottawa, Ontario -

Owned and operated by the Dominion Observatory.

Resolute, N. W. T. -

Owned and operated by the Dominion Observatory.

O. J. Jensen in charge.

Scarborough, Ontario -

Owned by Dominion Observatory.

Operated for Dominion Observatory by Radiosonde Division, Meteorological Branch, Department of Transport.

Schefferville, Quebec -

Owned by Dominion Observatory.

Operated for Dominion Observatory by McGill Sub-Arctic Research Laboratory.

Sept.-Iles, Quebec -

This station is owned and operated by the North Shore and Labrador Railway Company, Sept.-Iles, P. Q. and seismograms from the station are available through the Dominion Observatory.

Seven Falls, Quebec -

Owned by the Dominion Observatory.

Operated by the Quebec Power Company for the Dominion Observatory.

DOMINION OBSERVATORIES

Eastern Division (Cont'd)

Shawinigan Falls, Quebec -

Owned by the Shawinigan Water and Power Co.

Operated by the Company for the Dominion Observatory.

Yellowknife, N. W. T. -

An experimental array is being operated at Yellowknife, N. W. T. through co-operation of the Dominion Observatory, Ottawa, Defence Research Board, Ottawa, and the United Kingdom Atomic Energy Authority. One seismometer of this array produces a visual record. Copies of these records are available at Ottawa. Calibrations are shown on each record.

Local earthquakes are interpreted by means of travel-time curves based on rockburst studies. (See J. H. Hodgson, Publication of the Dominion Observatory, XVI, Nos. 5 and 6.

Western Division

Banff, Alberta -

Operated by the Banff School of Fine Arts for the Dominion Observatory.

Penticton, British Columbia -

Owned and operated by the Dominion Observatory.
W. H. McNaughton in charge.

Port Hardy, British Columbia -

Owned by Dominion Observatory.
Operated for Dominion Observatory by Radiosonde Division,
Meteorological Branch, Department of Transport.

Victoria, British Columbia -

Dominion Astrophysical Observatory, Department of Mines and
Technical Surveys, R. R. #7, Victoria, B. C.

Local earthquakes are interpreted by means of travel-time curves based on blast studies. (See W. G. Milne and W. R. H. White, Publications of the Dominion Observatories, XXIV, No. 7.) Records for all stations of the Seismological Service of Canada are stored on microfilm in Ottawa. Positive microfilm copies, or full-scale prints, will be sent on request. Beginning in 1960 records

SEISMOLOGICAL BULLETIN - 1963

of the station at Brebeuf College, Montreal, are included in the microfilm file through the courtesy of M. Buist, S. J., Director.

Magnification curves for the various instruments operated at the above stations will be found on the following pages.

John H. Hodgson,
Chief, Division of Seismology.

DOMINION OBSERVATORIES

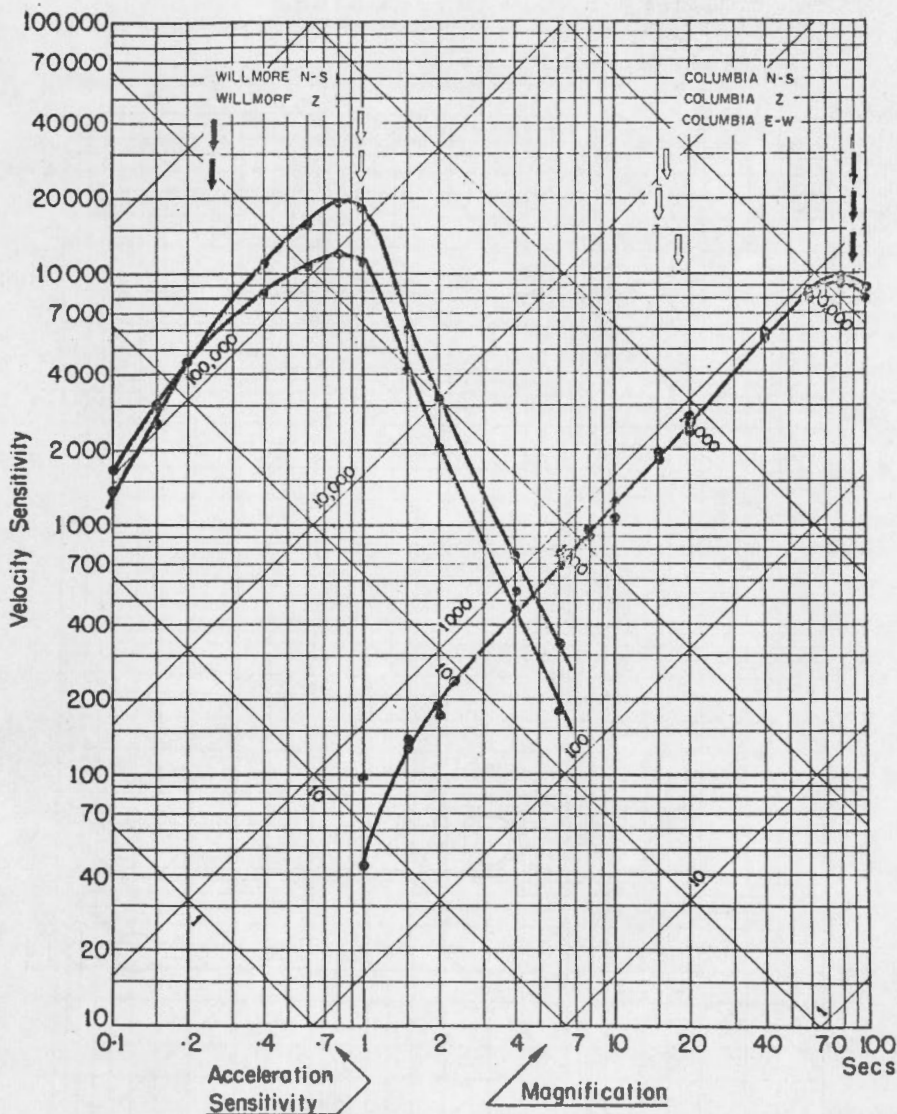
Explanation of Calibration Curves

Calibration curves for all the seismographs of the Canadian network have now been determined using a bridge circuit developed by this Observatory (see P. L. Willmore, "The Application of the Maxwell Impedance Bridge to the Calibration of Electromagnetic Seismographs", Bull. Seis. Soc. Am., Volume 49, No. 1, pp. 99-114, 1959.) Estimated curves are included for the instruments which have not yet been calibrated, and are distinguished from the others by the absence of calibration points. The curves show the velocity sensitivity of each instrument (i.e. the trace displacement in centimetres for unit particle velocity in the ground) as a function of the period of the earthquake waves.

For waves of period T , the magnification and the acceleration sensitivity of any instrument can be determined by multiplying the velocity sensitivity by $\frac{2\pi}{T}$ or by $\frac{\pi T}{2}$ respectively. To facilitate these conversions, lines of constant magnification and of constant acceleration sensitivity are ruled across each graph, the former sloping upwards from left to right, and the latter from right to left. To find the magnification of an instrument for ground waves of any given period, place one point of a pair of dividers on the calibration curve at the appropriate period, and adjust the other point to rest vertically below the first on a magnification line. Move the dividers so that the lower point falls on a horizontal grid line marked with an exact power of 10. The upper point of the dividers will then indicate the magnification. The decimal multiplier will be determined by the fact that the magnification must lie between the values indicated on the datum lines above and below the calibration point. The acceleration sensitivity can be found in the same way as the magnification, starting with an acceleration datum line.

SEISMOLOGICAL BULLETIN - 1963

STATION: ALERT



$\phi = 82^{\circ}29'N$

$\lambda = 62^{\circ}24'W$

Altitude 65M (C.a.)

Foundation : Permanently frozen glacial debris overlying Palaeozoic limestone.

$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: 1961

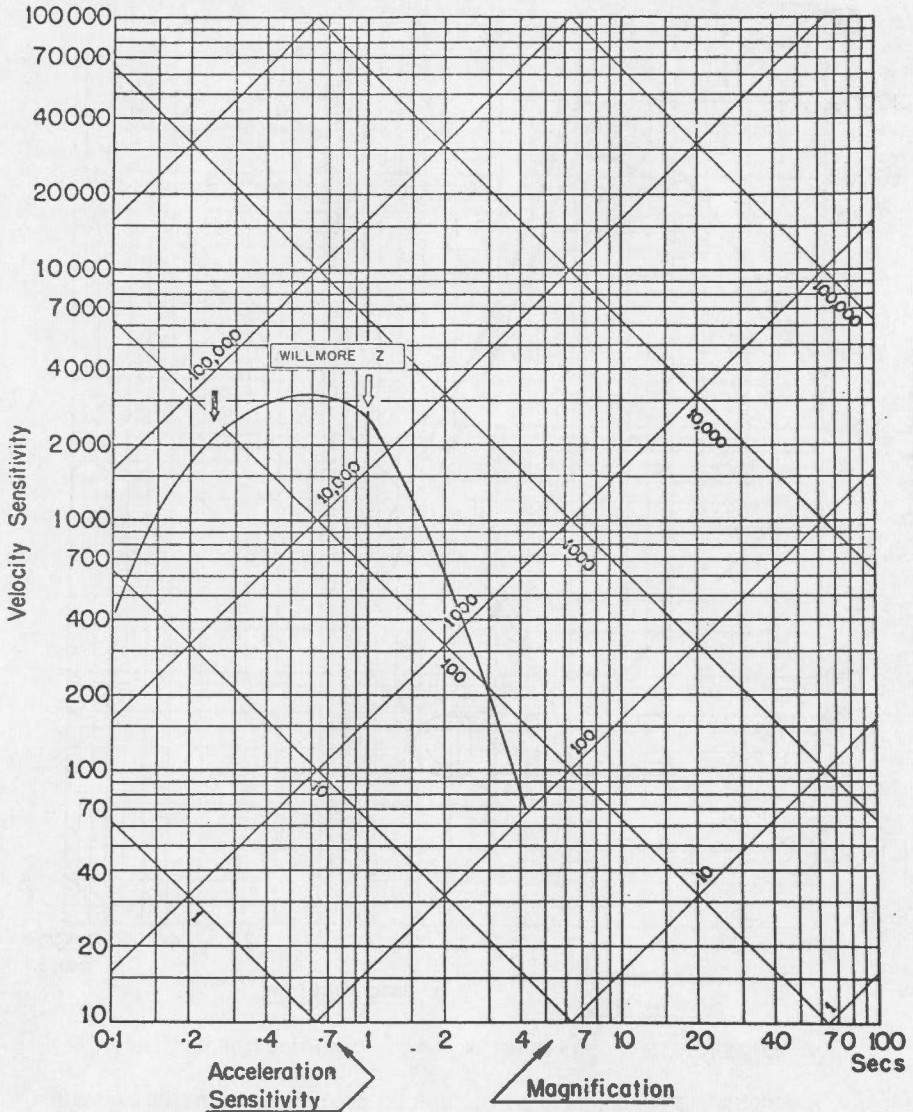
WILLMORE'S

COLUMBIA'S

S.P.-Z	SEPT. - 29	L.P.-Z.	SEPT. - 30
S.P.H. - N.S.	SEPT. - 29	L.P.H. - N.S.	OCT. - 2
S.P.H. - E.W.		L.P.H. - E.W.	OCT. - 1

DOMINION OBSERVATORIES

STATION: BANFF



$\phi = 51^{\circ} 10.3' N$ $\lambda = 115^{\circ} 33.5' W$ Altitude

Foundation : Bedrock

$T_s \uparrow$

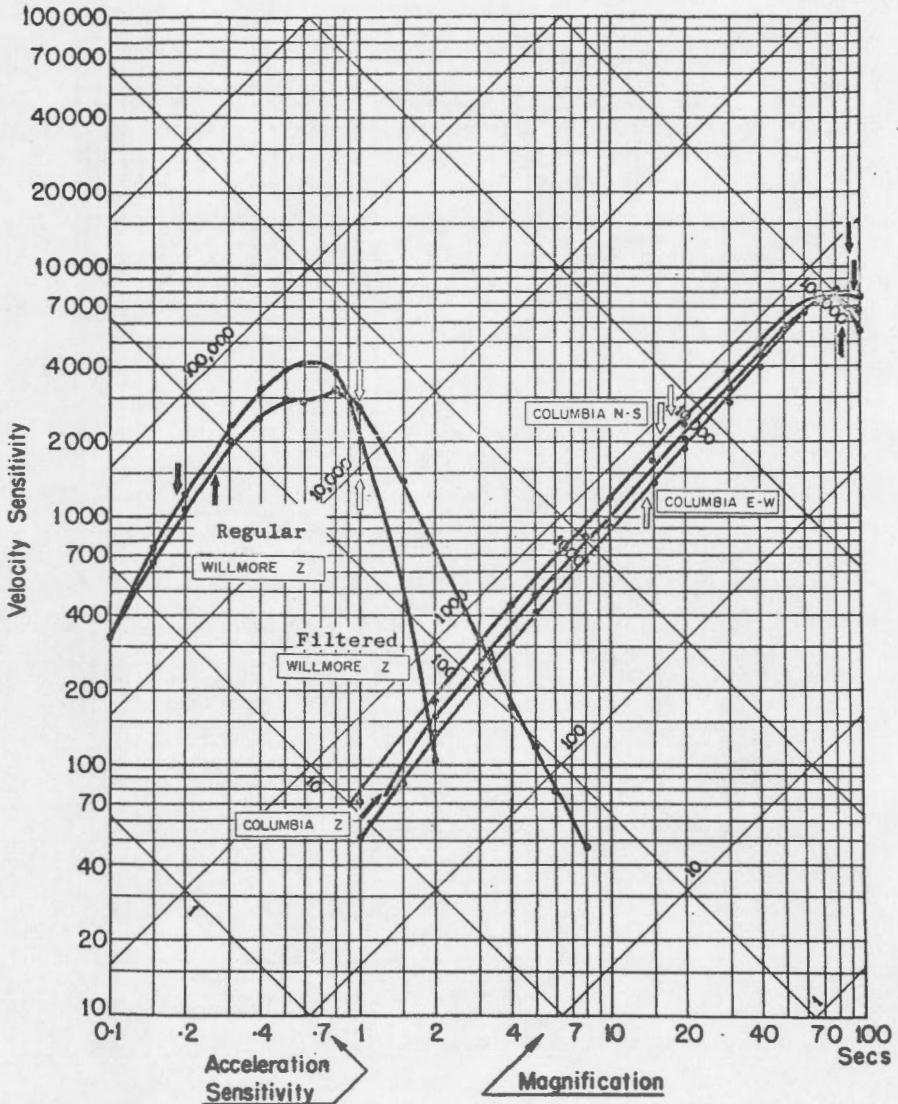
$T_g \uparrow$

Date of Calibration: Estimated Curve

SEISMOLOGICAL BULLETIN - 1963

CALIBRATION CURVES

STATION: HALIFAX



$\phi = 44^{\circ} 38' N$

$\lambda = 63^{\circ} 36' W$

Altitude 56 M

Foundation : Carbonaceous slate

$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: June 1960

Columbia LP-EW June 10/60

Regular Willmore SPZ - June 3/60

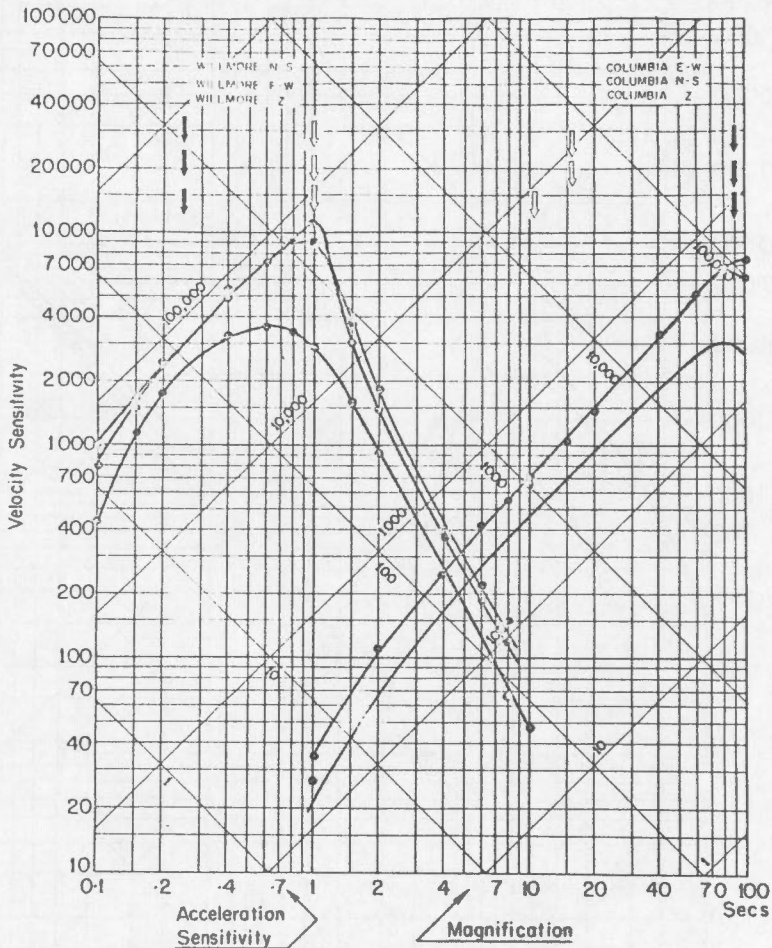
Columbia LP-NS June 10/60

Filtered Willmore SPZ - June 6/60

Columbia LP Z June 17/60

DOMINION OBSERVATORIES

STATION: LONDON



$\phi = 43^{\circ}02.4'N$ $\lambda = 81^{\circ}11.0'W$ Altitude

Foundation : Devonian Limestone

$T_s \uparrow$

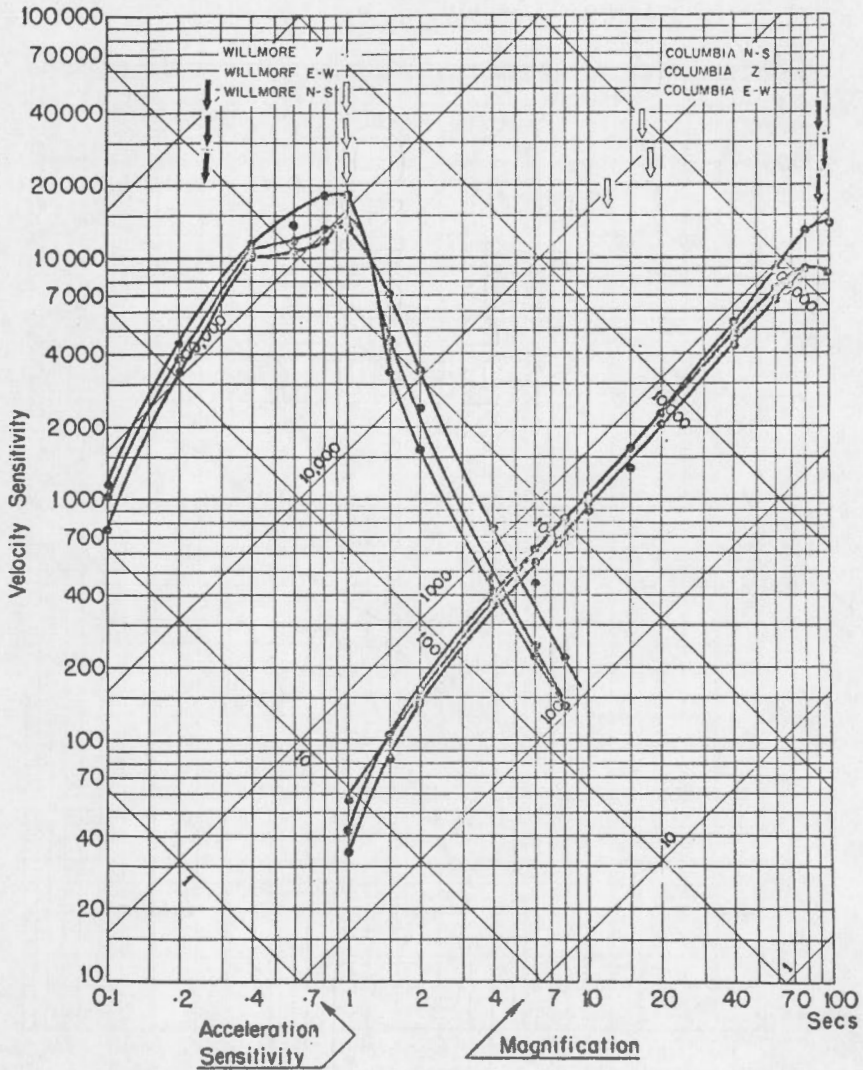
$T_g \uparrow$

Date of Calibration: 1961-62

S. P. - Z.	NOV. 10	L. P. - Z.	JULY 2 - 1963
	(at Ottawa)		installed
S. P. H. - N. S.	DEC. 11	S. P. H. - N. S.	DEC. 12
S. P. H. - E. W.	DEC. 11	S. P. H. - E. W.	DEC. 13

SEISMOLOGICAL BULLETIN - 1963

STATION: MOULD BAY



$\phi = 76^{\circ}14'N$

$\lambda = 119^{\circ}20'W$

Altitude

Foundation : Regolith and solifluxion deposits overlying Devonian sandstone (permafrost)

$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: 1962

WILLMORE'S

COLUMBIA'S

S.P. -Z. AUG. - 27

L.P. -Z. AUG. - 31

S.P.H. - N.S. AUG. - 27

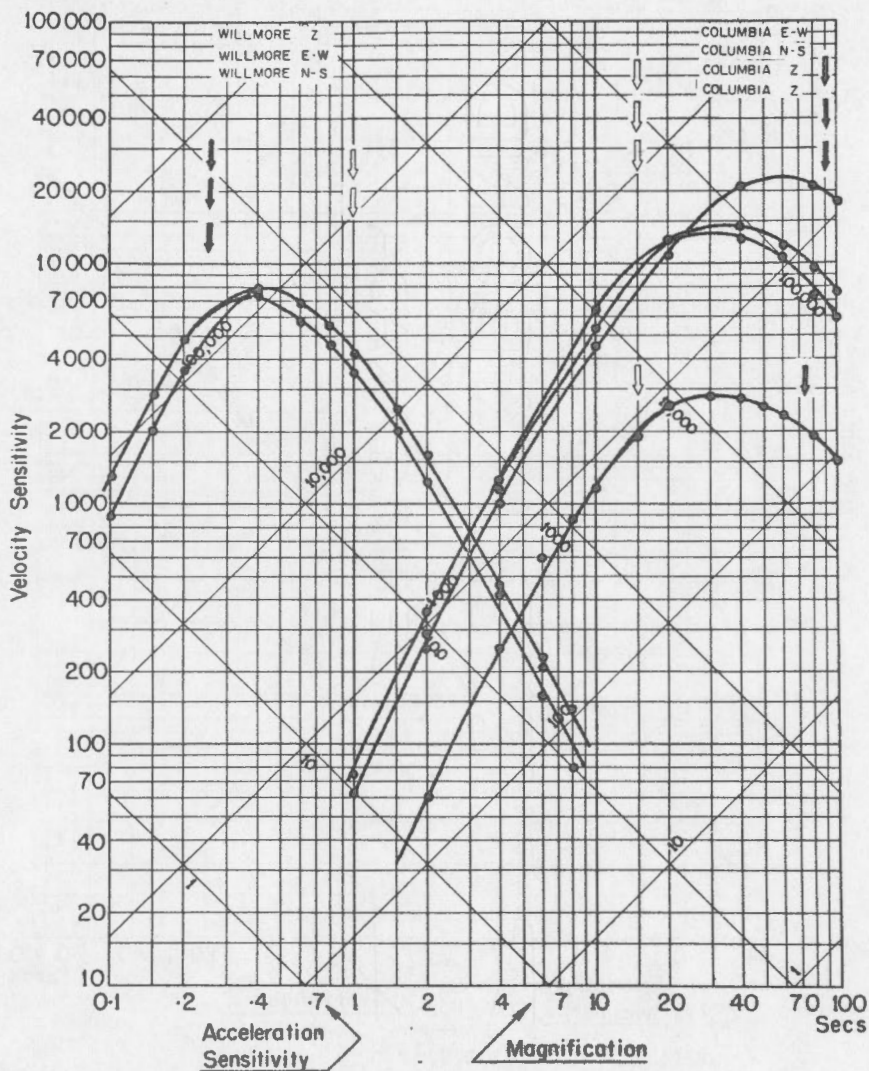
L.P.H. - N.S. AUG. - 30

S.P.H. - E.W. AUG. - 27

L.P.H. - E.W. AUG. - 30

DOMINION OBSERVATORIES

STATION: OTTAWA



$\phi = 45^{\circ}23'38''N$ $\lambda = 75^{\circ}42'57''W$ Altitude 83M

Foundation : Boulder clay on limestone

$T_s \uparrow$

$T_g \uparrow$

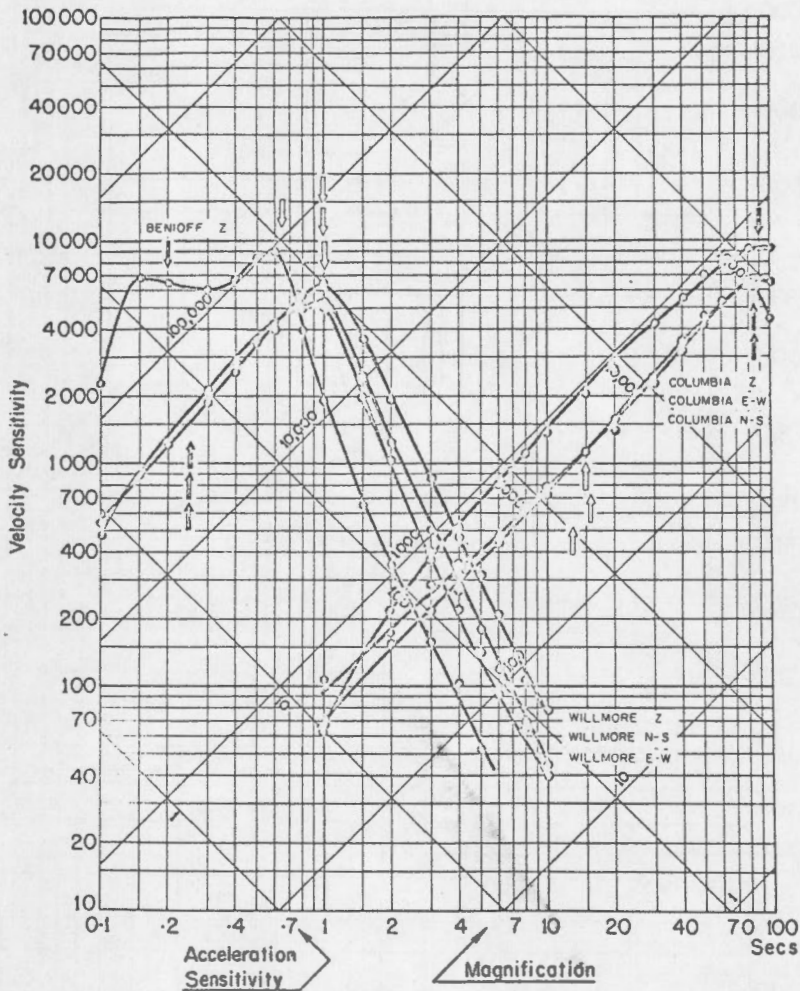
Date of Calibration: 1961-63

S.P. - Z.	JAN. 22	L.P. - Z.	JUNE 1 - 1961
S.P. - N.S.	JAN. 30	L.P. - Z.	FEB. 1
S.P. - E.W.	JAN. 23	L.P. - N.S.	FEB. 1
		L.P. - E.W.	JAN. 31

SEISMOLOGICAL BULLETIN - 1963

CALIBRATION CURVES

STATION: PENTICTON



$\phi = 49^{\circ}19'N$ $\lambda = 119^{\circ}37'W$ Altitude 550 Km

Foundation : Tertiary shale

$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: Feb. 1961

Willmore's

S. P. -Z Feb-20
 S. P. H. -N. S. Feb-20
 S. P. H. -E. W. Feb-20

Benloff

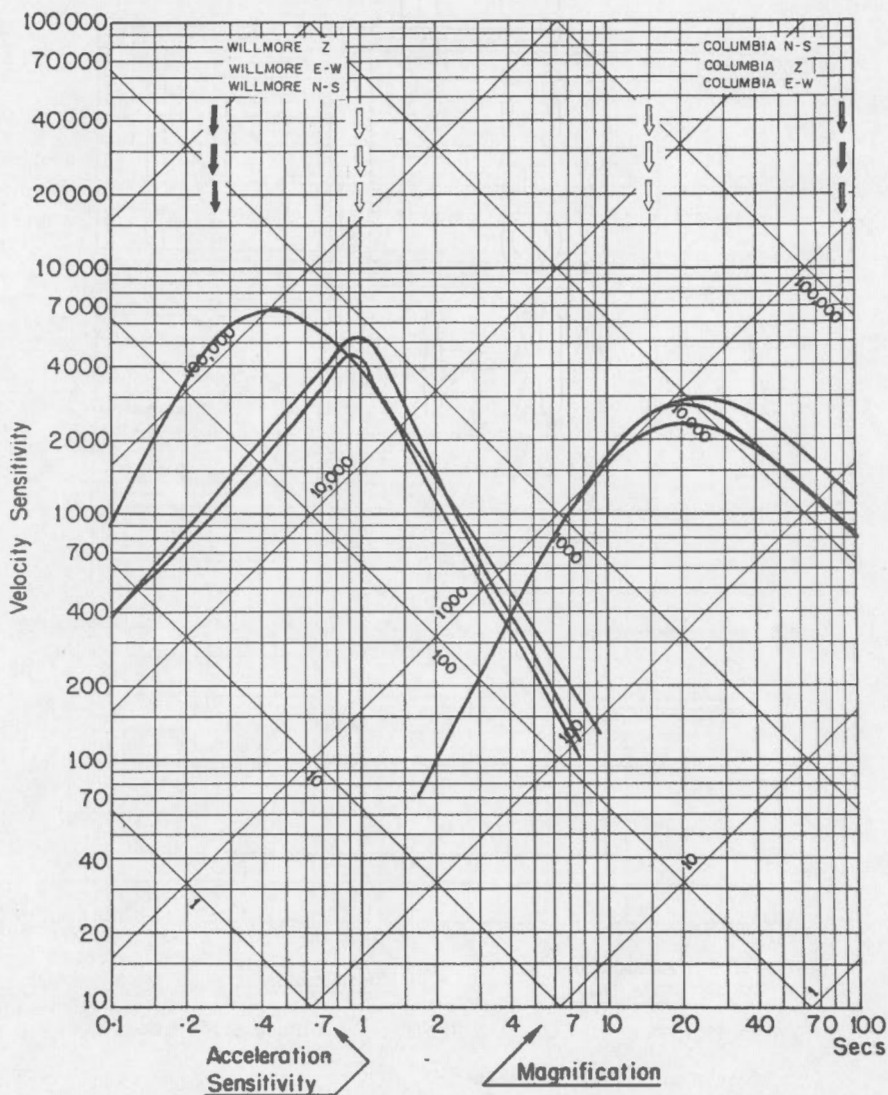
S. P. -Z. Feb-19

Columbia's

L. P. -Z Feb-19
 L. P. II. - N.S. Feb-18
 L. P. H. -E. W. Feb-18

DOMINION OBSERVATORIES

STATION: PORT HARDY



$\phi = 50^\circ 42.4'N$ $\lambda = 127^\circ 25.9' W$ Altitude 30 m.

Foundation : Cretaceous sandstone

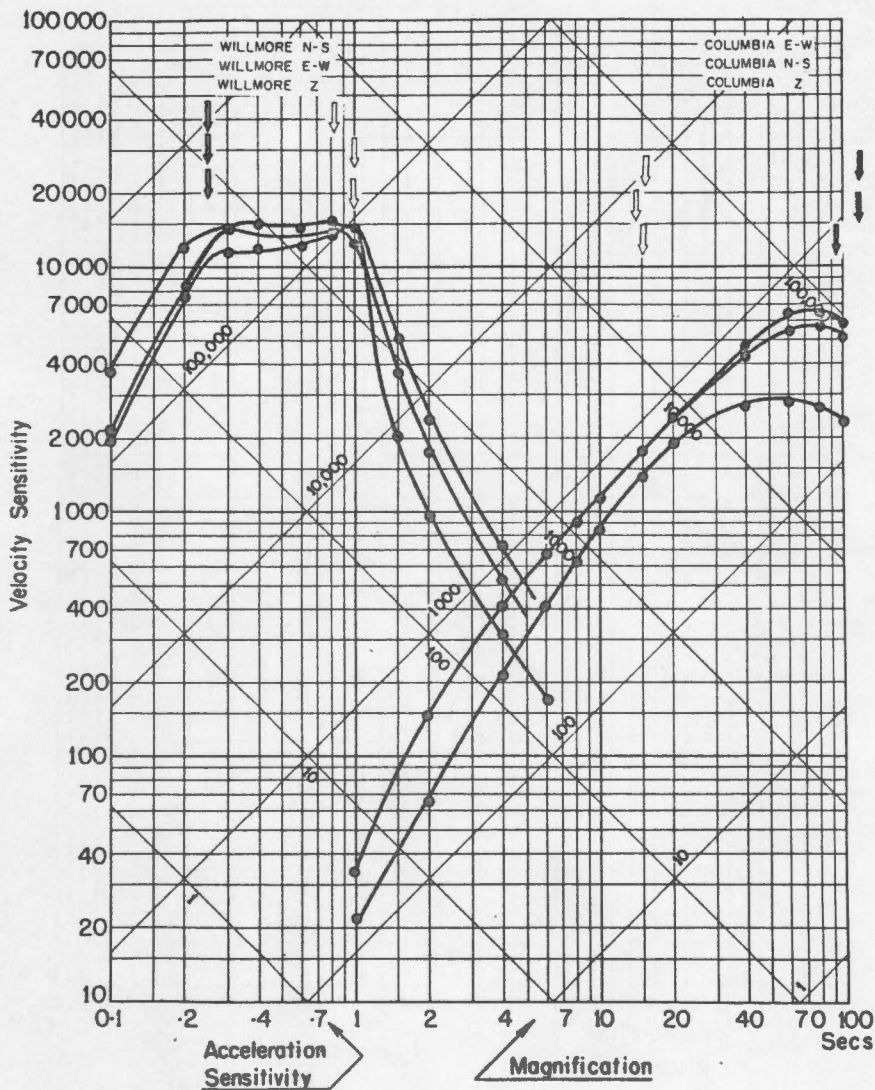
$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: March 17, 1963

SEISMOLOGICAL BULLETIN - 1963

STATION: RESOLUTE, N.W.T.



$\phi = 74^{\circ}41.2'N$ $\lambda = 94^{\circ}54.0'W$ Altitude 15M

Foundation : Early Palaeozoic limestone

$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: August 1963

WILLMORE'S

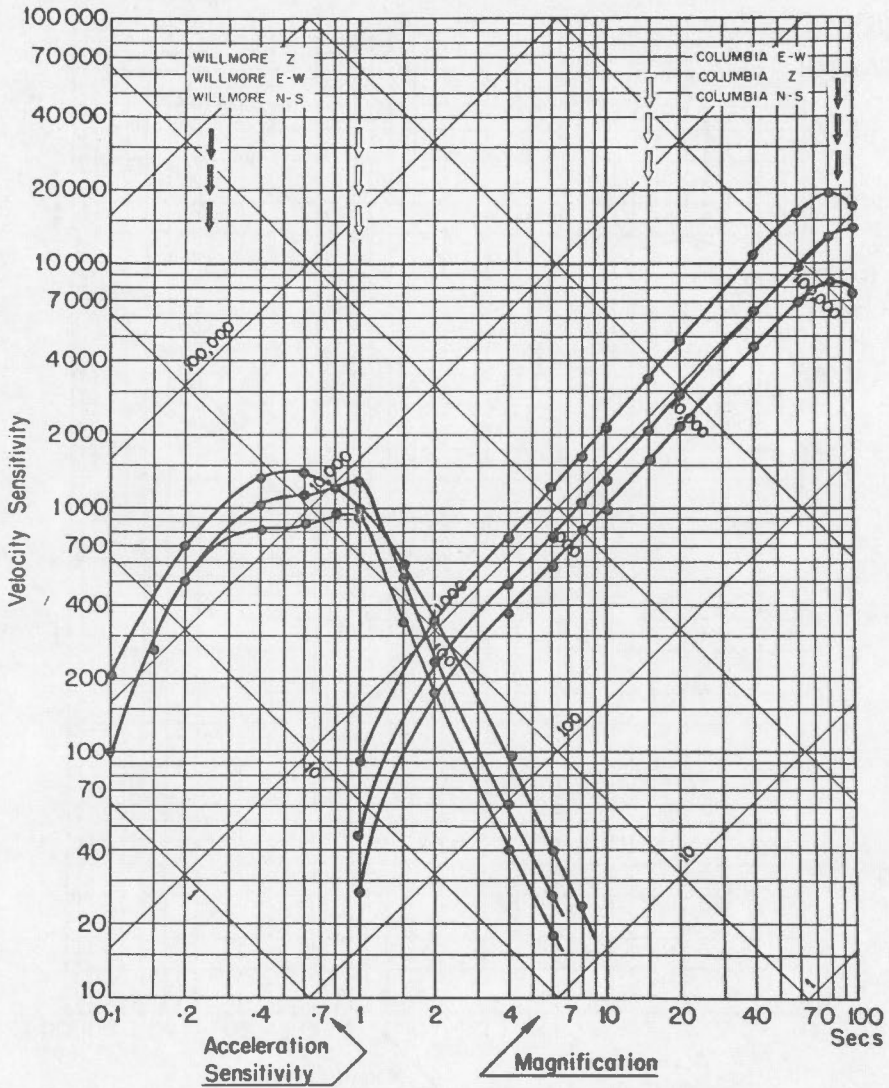
COLUMBIA'S

S.P. - Z. AUG. 10
 S.P.H. - N.S. AUG. 10
 S.P.H. - E.W. AUG. 10

L.P. - Z. AUG. 11
 L.P.H. - N.S. AUG. 12
 L.P.H. - E.W. AUG. 12

DOMINION OBSERVATORIES

STATION: SCARBOROUGH



$\phi = 43^{\circ}43'N$ $\lambda = 79^{\circ}14'W$ Altitude 153M

Foundation :

$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: 1962

WILLMORE'S

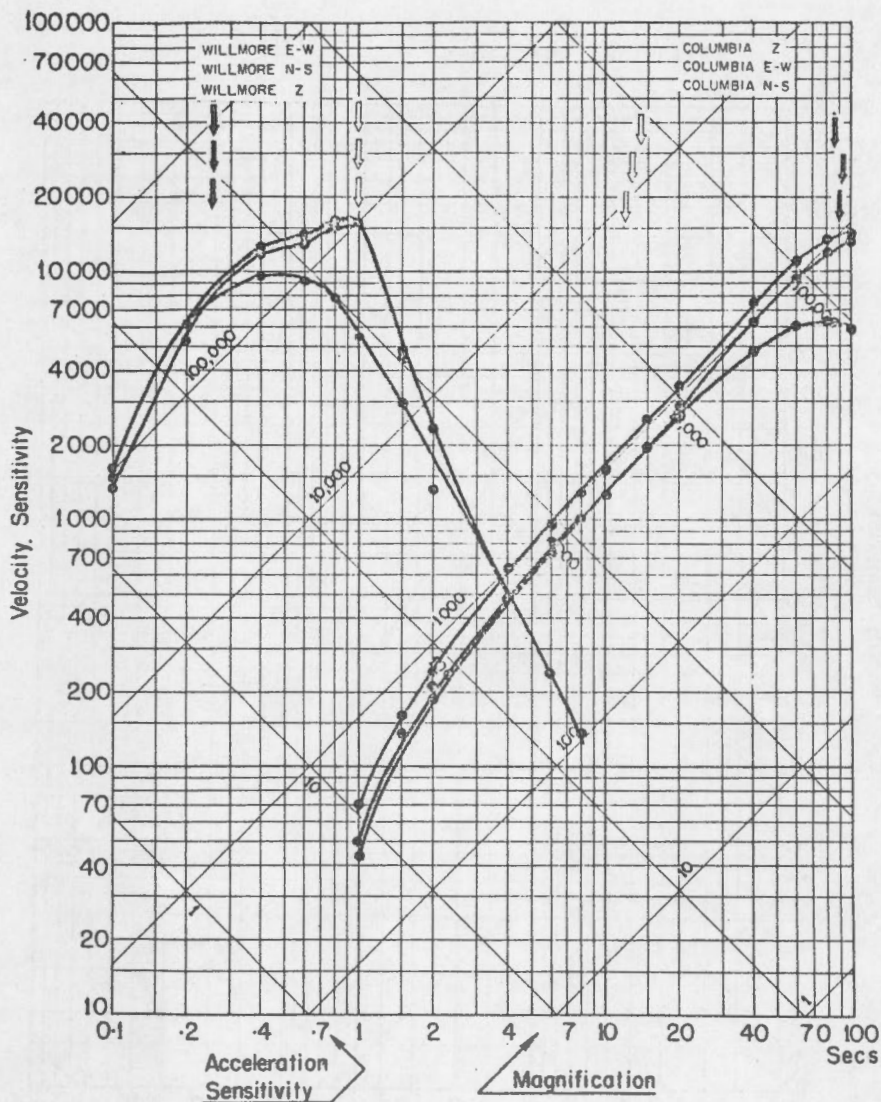
COLUMBIA'S

S. P. - Z. NOV. 9
 (at Ottawa)
 S. P. H. - N. S. MAY 30
 S. P. H. - E. W. MAY 30

L. P. - Z. MAY 31
 S. P. H. - N. S. MAY 31
 S. P. H. - E. W. JUNE 1

SEISMOLOGICAL BULLETIN - 1963

STATION: SCHEFFERVILLE



$\phi = 54^{\circ}49'N$ $\lambda = 66^{\circ}47'W$ Altitude 540M

Foundation : Precambrian foundation rocks.

$T_s \updownarrow$

$T_g \uparrow$

Date of Calibration:

WILLMORE'S

COLUMBIA'S

S.P. -Z JULY - 17

L.P. -Z JULY - 19

S.P.H. - N.S. JULY - 17

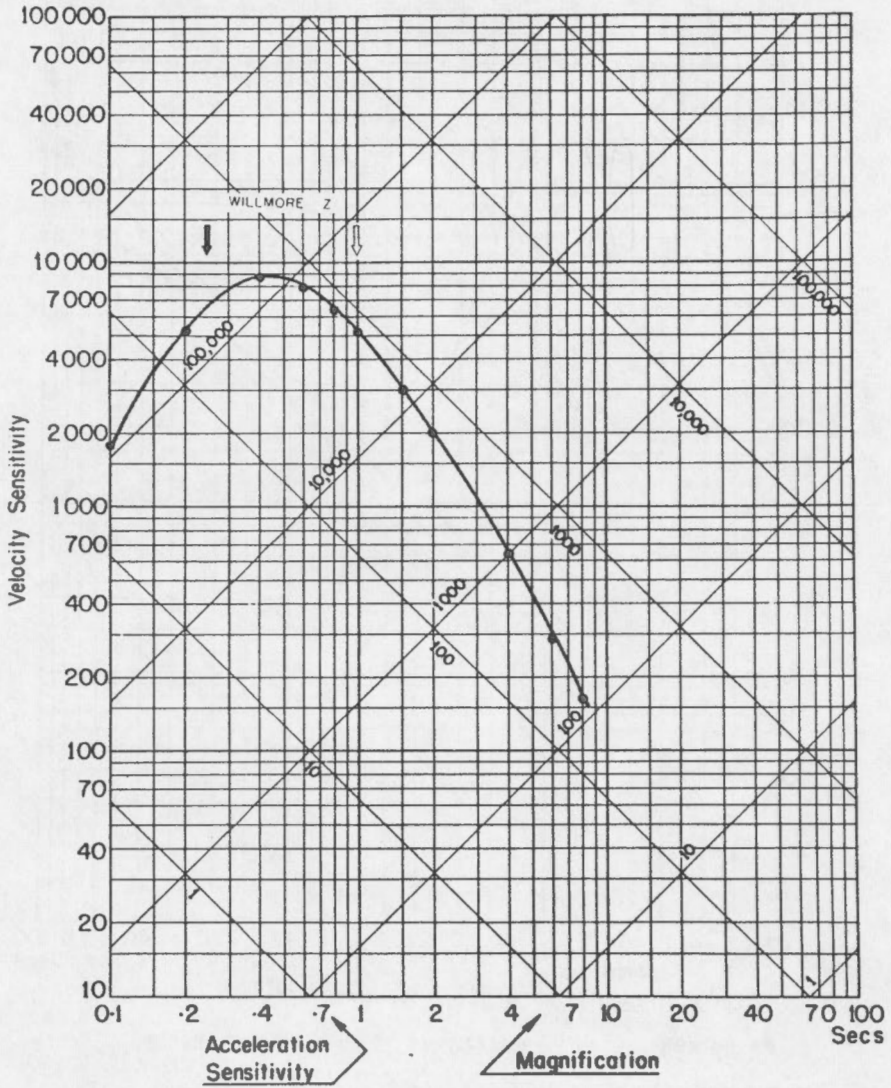
L.P.H. - N.S. JULY - 19

S.P.H. - E.W. JULY - 17

L.P.H. - E.W. JULY - 19

DOMINION OBSERVATORIES

STATION: SEPT-ILES



$\phi = 50^{\circ}10.2N$

$\lambda = 66^{\circ}39.8'W$

Altitude

Foundation :

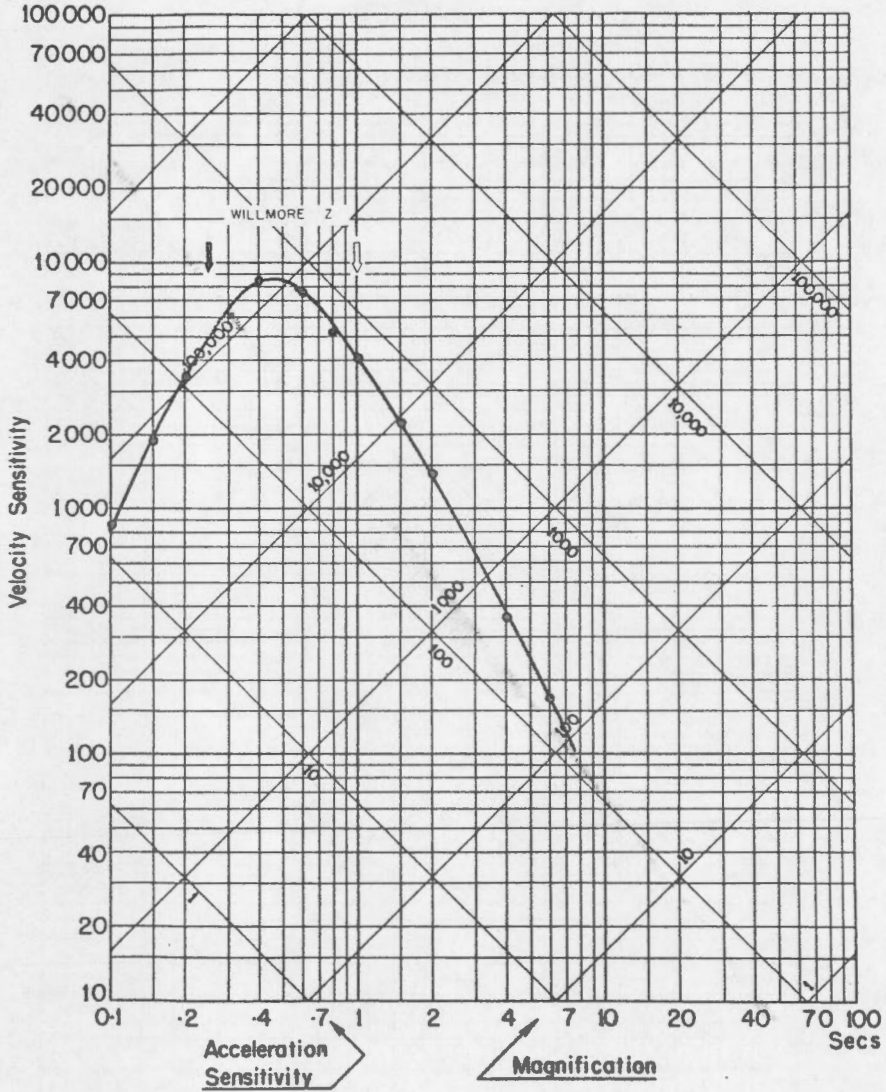
$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: January 29, 1963
(at Ottawa)

SEISMOLOGICAL BULLETIN - 1963

STATION: SEVEN FALLS



$\phi = 47^{\circ}07.4'N$ $\lambda = 70^{\circ}49.6'W$ Altitude 232M

Foundation : Precambrian basement rocks.

$T_s \uparrow$

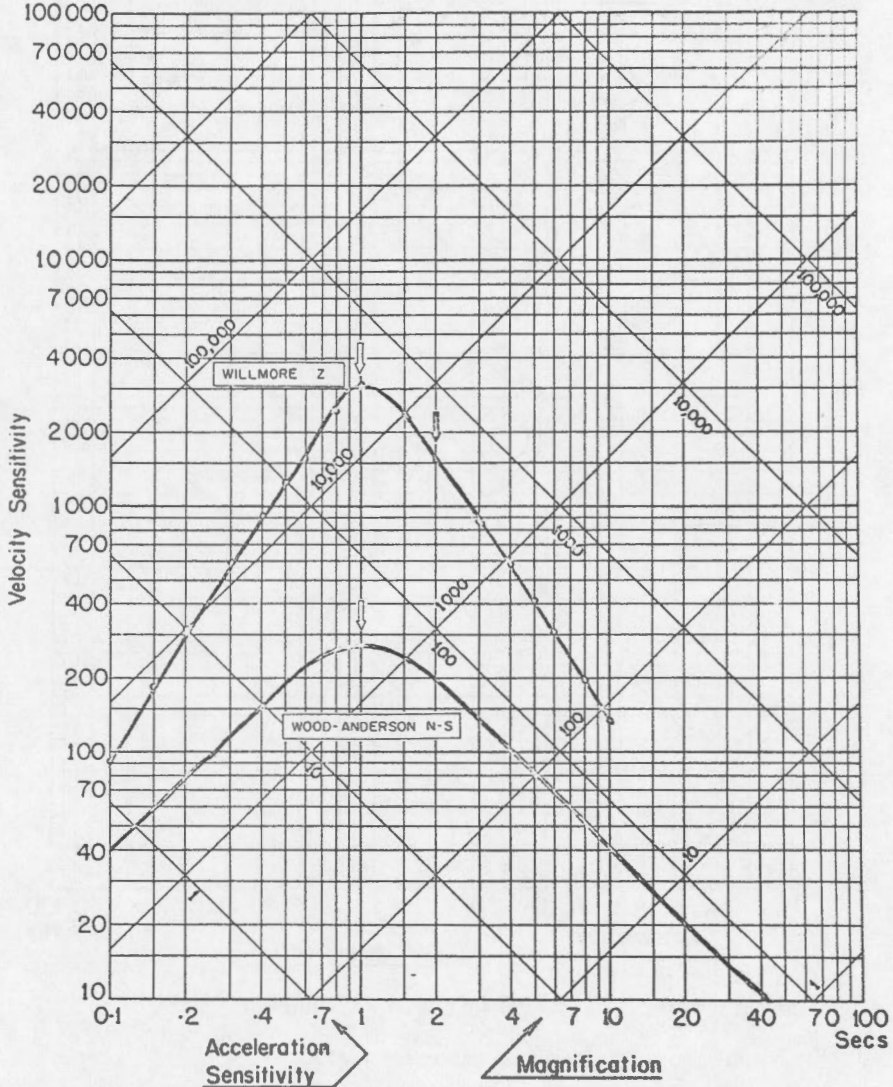
$T_g \uparrow$

Date of Calibration: February 10, 1963
(at Ottawa)

DOMINION OBSERVATORIES

CALIBRATION CURVES

STATION : SHAWINIGAN FALLS



$\phi = 46^{\circ} 33.1' N$ $\lambda = 72^{\circ} 45.8' W$ Altitude 60 M

Foundation : Precambrian basement

$T_s \uparrow$

$T_g \uparrow$

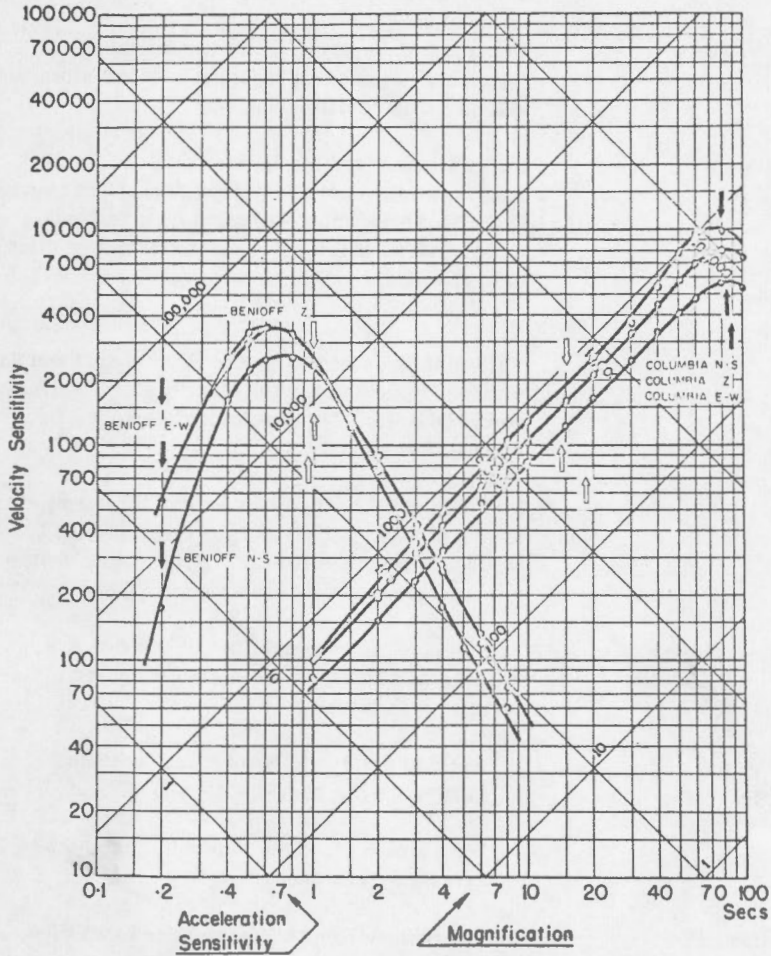
Date of Calibration: November 6, 1959

Read from end of minute mark.

SEISMOLOGICAL BULLETIN - 1963

CALIBRATION CURVES

STATION: VICTORIA (Revised)



$\phi = 48^{\circ}31'10''N$ $\lambda = 123^{\circ}24'55''W$ Altitude 197 M

Foundation: Quartz Diorite

$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: February - March - 1961

Benioff's

Columbia's

S. P. Z. Feb. 9
 S. P. H. - N. S. Feb. 10
 S. P. H. - E. W. Feb. 13

L. P. Z. Mar. 22
 L. P. H. - N. S. Mar. 3
 L. P. H. - E. W. Mar. 2

DOMINION OBSERVATORIES

JANUARY - MARCH 1963

NOTES

1. Ottawa, Ont. January 22 - February 1, - Willmore S. P. seismographs and Columbia L. P. seismographs calibrated.
February 25 - May 10. Test running the 3 L. P. Columbia seismographs using various attenuators and damping coefficients.

2. Port Hardy, B. C. Instruments installed December 1962. S. P. seismographs operating throughout first quarter. L. P. seismographs operating on a test basis most of first quarter but seismograms available only after calibration of instruments on March 17, 1963.

This station is owned by the Dominion Observatory and operated for the Observatory by Radiosonde Division, Meteorological Branch, Department of Transport.

Records are retained in Victoria for three months for local seismicity studies, then shipped to Ottawa to be microfilmed. After being photographed the records are stored in Ottawa.

3. Schefferville, P. Q. February 6. The polarities of the two S. P. horizontal seismographs were changed to conform to standard:

 Willmore S. P. -N. S. uptrace indicates ground moves north.

 Willmore S. P. -E. W. uptrace indicates ground moves east.

4. Sept Iles, P. Q. Mk. II SPZ Willmore seismograph installed.

SEISMOLOGICAL BULLETIN - 1963

JANUARY 1

Penticton
eP_n 03 28 00.0
eS_n 03 28 41.1
Victoria
iP_n 03 27 42.2
iS_n 03 28 04.4

Mould Bay

eP 12 30 43
Ottawa
eP' 12 36 12
Yellowknife
eP 12 30 46 d

JANUARY 1

U. S. C. G. S.
6.9S, 155.5E
Solomon Islands
H = 17 49 31.0
h = about 82 km
Mould Bay
eP 18 02 47

JANUARY 1

Penticton
eP_n 03 55 39.5
eS_n 03 56 41.2

JANUARY 1

U. S. C. G. S.
7.4N, 74.1W
Colombia
H = 12 50 21.7
h = about 33 km
Mould Bay
eP 13 01 43

JANUARY 1

Mould Bay
eP 19 38 39

JANUARY 1

U. S. C. G. S.
6.9N, 73.1 W
Colombia
H = 04 05 27.5
h = about 151 km
Alert
eP 04 16 58 c
Mould Bay
iP 04 16 47 c
Ottawa
iP 04 12 37 d
Penticton
iP 04 15 03 d
Resolute
eP 04 16 17
Schefferville
iP 04 13 54 c
Victoria
eP 04 15 16
Yellowknife
iP 04 15 41 c

JANUARY 1

U. S. C. G. S.
20.8N, 144.6E
Mariana Islands
H = 13 48 06.5
h = about 43 km
Alert
eP 13 59 52 d
Mould Bay
eP 13 59 23
Resolute
eP 13 59 59 d
Yellowknife
eP 13 59 53 d

JANUARY 1

U. S. C. G. S.
40.2S, 81.3E
Indian Ocean
H = 19 35 55.1
h = about 33 km
Mould Bay
eP' 19 55 22
Resolute
eP' 19 55 29

JANUARY 1

Penticton
eP 04 46 23

JANUARY 1

U. S. C. G. S.
20.0S, 175.4W
Tonga Islands
H = 16 27 38.1
h = about 130 km
Penticton
iP 16 40 01 d

JANUARY 1

U. S. C. G. S.
56.6N, 157.7W
Alaska Peninsula
H = 23 39 05.6
h = about 50 km
Mag 6 1/2 (PAS)
5 3/4 (PAL)
Alert
eP 23 45 55 c
S 23 51 19
Banff
iP 23 44 27 d
Halifax
iP 23 48 42 d
London
iP 23 47 45
Mould Bay
iP 23 44 (18) c
iS 23 48 31
Ottawa
iP 23 47 53 d
Penticton
iP 23 44 16 d
Port Hardy
iP 23 48 23 d

JANUARY 1

U. S. C. G. S.
6.8S, 155.9E
Solomon Islands
H = 12 17 38.6
h = about 165 km

DOMINION OBSERVATORIES

Resolute eP 23 45 07 c	JANUARY 2 Mould Bay eP 09 01 (11) c	JANUARY 2 U. S. C. G. S. 52. 9S, 118. 2W South Pacific Ocean H = 15 55 47. 9 h = about 33 km Mould Bay eP' 16 14 51
Schefferville eP 23 47 39 d	JANUARY 2 U. S. C. G. S. 10. 0N, 84. 8W West coast of Costa Rica H = 09 53 36. 7 h = about 151 km	JANUARY 2 Mould Bay eP 18 21 25 Resolute e(P) 18 22 06 d
Victoria iP 23 44 00 c		
Yellowknife iP 23 43 59 d		
JANUARY 2 Mould Bay eP 00 17 (33)	JANUARY 2 Mould Bay eP 10 04 26 Penticton iP 10 02 07 d	
Yellowknife eP 00 17 40		
JANUARY 2 U. S. C. G. S. 17. 5N, 82. 7W Swan Islands region H = 00 53 49. 1 h = about 33 km Mould Bay eP 01 04 02	JANUARY 2 Mould Bay eP 11 57 01	JANUARY 2 Mould Bay eP 21 03 53
Schefferville eP 01 01 12	JANUARY 2 U. S. C. G. S. 51. 4N, 178. 4W Andreanof Islands Aleutian Islands H = 11 57 21. 2 h = about 29 km Mould Bay eP 12 04 (00) Penticton eP 12 04 27	JANUARY 3 U. S. C. G. S. 29. 7N, 130. 1E Ryukyu Islands H = 03 05 03. 5 h = about 33 km Alert eP 03 16 01 Banff eP 03 17 16 Mould Bay eP 03 15 48 c Penticton iP 03 17 12 Resolute eP 03 16 24 c
JANUARY 2 U. S. C. G. S. 4. 6S, 105. 9W 1700 km south of Galapagos Islands H = 01 15 50. 6 h = about 33 km Mould Bay eP 01 27 (54) Penticton iP 01 25 20 d	JANUARY 2 U. S. C. G. S. 4. 1S, 135. 2E Near-south coast of Western New Guinea H = 14 56 05. 4 h = about 33 km Mould Bay eP 15 09 32	JANUARY 3 Mould Bay eP 05 17 17 c Resolute eP 05 17 53 c
JANUARY 2 H = 05 39 43 Port Hardy iP ₁ 05 40 08. 7 iS ₁ 05 40 27. 0 D = 150 km		JANUARY 3 Mould Bay eP 06 44 19

SEISMOLOGICAL BULLETIN - 1963

JANUARY 3
U. S. C. G. S.
52.6N, 167.8W
Fox Islands
Aleutian Islands
H = 07 13 29
h = about 33 km
Mould Bay
eP 07 19 (36)

JANUARY 3
Penticton
eP 08 18 15

JANUARY 3
Mould Bay
eP 08 39 18

JANUARY 3
U. S. C. G. S.
5.3S, 151.5E
New Britain
H = 09 39 46.8
h = about 74 km
Banff
eP 09 53 05 c
Mould Bay
eP 09 53 00
Ottawa
eP' 09 58 35
Penticton
eP 09 52 54
Shawinigan Falls
eP' 09 58 37
Yellowknife
eP 09 53 (12)

JANUARY 3
U. S. C. G. S.
6.9S, 155.2E
Solomon Islands
H = 13 56 34.5
h = about 91 km
Mould Bay
eP 14 09 50 c

Yellowknife
eP 14 09 54

JANUARY 3
Shawinigan Falls
eP 19 11 (17)

JANUARY 4
U. S. C. G. S.
1.2N, 27.7W
1500 km south of
Cape Verde Islands
H = 00 23 55.1
h = about 33 km

Alert
eP 00 36 17
Halifax
eP 00 33 14
Mould Bay
eP 00 36 49
Ottawa
eP 00 34 08
Resolute
eP 00 36 18 d
Schefferville
eP 00 34 16
Shawinigan Falls
eP 00 33 59

JANUARY 4
Mould Bay
eP 01 51 23

JANUARY 4
U. S. C. G. S.
29.7N, 142.2E
Bonin Islands region
H = 05 42 35.3
h = about 33 km
Alert
eP 05 53 30
Mould Bay
eP 05 53 03
Penticton
iP 05 54 04

Resolute
eP 05 53 42
Yellowknife
eP 05 53 44

JANUARY 4
U. S. C. G. S.
32.6S, 178.6W
Kermadec Islands
region
H = 06 43 42.3
h = about 44 km
Resolute
eP' 07 02 25 d

JANUARY 4
H = 08 29 02
Port Hardy
iP_n 08 29 36.5
iS_n 08 30 04.7
D = 230 km

JANUARY 4
U. S. C. G. S.
46.3N, 154.3E
Kurile Islands
H = 08 47 25.2
h = about 33 km
Mould Bay
eP 08 55 36

JANUARY 4
77.5°N, 118.1°W
Off the coast of
Prince Patrick Island
Foreshock of the
earthquake on January
4 at 12 43 00.6
H = 11 14 20.8
Mag 2.5
Mould Bay
P₁ 11 14 43
S₁ 11 15 00
D = 140 km

DOMINION OBSERVATORIES

JANUARY 4

77.5°N, 118.1°W
Off the coast of
Prince Patrick Island.
Foreshock of the
earthquake on
January 4 at 12 43 00.6
H = 11 18 01.8
Mag 2.0
Mould Bay
P₁ 11 18 24
S₁ 11 18 41
D = 140 km

JANUARY 4

77.5°N, 118.1°W
Off the coast of
Prince Patrick Island.
Foreshock of the
earthquake on
January 4 at 12 43 00.6
H = 11 21 50.8
Mag 2.0
Mould Bay
P₁ 11 22 13
S₁ 11 22 30
D = 140 km

JANUARY 4

77.5°N, 118.1°W
Off coast of
Prince Patrick Island.
Foreshock of the
earthquake on
January 4 at 12 43 00.6
H = 11 54 26.8
Mag 2.2
Mould Bay
P₁ 11 54 49
S₁ 11 55 06
D = 140 km

JANUARY 4

77.5°N, 118.1°W
Off the coast of
Prince Patrick Island.
Foreshock of the
earthquake on
January 4 at 12 43 00.6
H = 12 13 10.8
Mag 2.0
Mould Bay
P₁ 12 13 33
S₁ 12 13 50
D = 140 km

JANUARY 4

U. S. C. G. S.
4.7S, 154.0E
Solomon Islands
region
H = 12 16 38.0
h = about 69 km
Alert
e 12 40.9
Mould Bay
eP 12 29 (50)
Penticton
eP 12 29 30
Yellowknife
eP 12 29 (54)

JANUARY 4

77.5°N, 118.1°W
Off the coast of
Prince Patrick Island.
Foreshock of the
earthquake on
January 4 at 12 43 00.6
H = 12 27 21.8
Mag 2.2
Mould Bay
P₁ 12 27 44
S₁ 12 28 01
D = 140 km

JANUARY 4

77.5°N, 118.1°W
Off the coast of
Prince Patrick Island,
near Cape Leopold
McClintock
H = 12 43 00.6
Mag 3.2
Alert
Not recorded
Mould Bay
P₁ 12 43 23 c,S
S₁ 12 43 40
D = 140 km
Resolute
P_n 12 44 30
S_n 12 45 37
L_g 12 46 07
D = 690 km

JANUARY 4

77.5°N, 118.1°W
Off the coast of
Prince Patrick Island,
Aftershock of the
earthquake on
January 4 at 12 43 00.6
H = 12 55 44.8
Mag 2.0
Mould Bay
P₁ 12 56 07
S₁ 12 56 24
D = 140 km

JANUARY 4

H = 13 22 48
Mag 2.8
Probably in Montana,
U. S. A.
Banff
eP_n 13 23 33.3
eS_n 13 24 11.3
D = 312 km

SEISMOLOGICAL BULLETIN - 1963

Penticton eP _n 13 23 44.8 eS _n 13 24 36.0 D = 420 km	JANUARY 4 Mould Bay eP 18 32 17	JANUARY 5 U. S. C. G. S. 3.2N, 127.0E Halmahera region H = 00 20 11.6 h = about 33 km
JANUARY 4 77.5°N, 118.1°W Off the coast of Prince Patrick Island Aftershock of the earthquake on January 4 at 12 43 00.6 H = 13 23 20.8 Mag 2.0 Mould Bay P ₁ 13 23 43 S ₁ 13 24 00 D = 140 km	JANUARY 4 77.5°N, 118.1°W Off the coast of Prince Patrick Island. Aftershock of the earthquake on January 4 at 12 43 00.6 H = 18 55 51.8 Mag 2.1 Mould Bay P ₁ 18 56 14 S ₁ 18 56 31 D = 140 km	Mould Bay eP 00 33 21 Resolute eP 00 33 48 c
JANUARY 4 Penticton iP 13 47 50	JANUARY 4 U. S. C. G. S. 6.9N, 73.1W Colombia H = 21 17 10.0 h = about 160 km Mould Bay eP 21 28 28 d Penticton eP 21 26 45 Yellowknife iP 21 27 22 d	JANUARY 5 Banff eP 00 40 13 d Penticton iP 00 39 59 d
JANUARY 4 Canadian Arctic H = 18 16 37 Mag 2.1 Alert P ₁ 18 17 02 S ₁ 18 17 21 D = 156 km	JANUARY 4 U. S. C. G. S. 46.5N, 153.7E Kurile Islands H = 23 50 09.1 h = about 33 km Alert eP 23 59 00 Mould Bay eP 23 58 20 c Resolute eP 23 59 09 c	JANUARY 5 Mould Bay eP 01 49 49 d
		JANUARY 5 Mould Bay eP 04 05 06
		JANUARY 5 Mould Bay eP 05 49 (14) Yellowknife eP 05 47 57
		JANUARY 5 U. S. C. G. S. 65.2N, 148.0W Central Alaska H = 06 52 26.6 h = about 33 km Banff eP 06 57 16 Mould Bay eP 06 55 (50) Penticton iP 06 57 17 c

DOMINION OBSERVATORIES

Victoria eP 06 57 14	Halifax eP' 13 36 19	JANUARY 6 U. S. C. G. S. 6.0N, 125.3E
Yellowknife eP 06 55 52	Mould Bay eP 13 30 54	Near coast of Mindanao, Philippine Islands
JANUARY 5	Penticton iP' 13 35 24	H = 03 18 56.6 h = 143 km
U. S. C. G. S. 46.8N, 153.7E	Victoria eP' 13 35 20	Mould Bay eP 03 31 41
Kurile Islands H = 07 05 22.3 h = about 33 km	Yellowknife eP' 13 35 19	Ottawa eP' 03 37 41
Alert	JANUARY 5	Resolute eP 03 32 08
eP 07 14 12 c	U. S. C. G. S. 43.0N, 152.6E	Shawinigan Falls eP' 03 37 42
i 07 15 01	Kurile Islands region H = 15 05 00 h = about 33 km	JANUARY 6
Mould Bay eP 07 13 31 c	Resolute eP 15 14 09 c	U. S. C. G. S. 23.6N, 108.6W
Penticton iP 07 14 51 d	JANUARY 5	Gulf of California H = 04 40 14 h = about 33 km
Resolute eP 07 14 20 c	U. S. C. G. S. 7.0S, 72.1W	Mould Bay eP 04 49 30
JANUARY 5	Western Brazil H = 17 43 35.1 h = about 544 km	JANUARY 6
U. S. C. G. S. 7.3S, 73.9W	Alert eP 17 55 34 d	H = 06 01 17
Peru-Brazil border H = 11 05 10.5 h = about 180 km	Mould Bay iP 17 55 25 d	Port Hardy eP ₁ 06 01 45.0 eS ₁ 06 02 06.0 D = 173 km
Penticton iP 11 15 59 c	Penticton iP 17 53 52 d	JANUARY 6
JANUARY 5	Resolute eP 17 55 01 d	U. S. C. G. S. 1.8S, 80.7W
Yellowknife e(P) 11 47 12	Shawinigan Falls eP 17 52 04	Near coast of Ecuador H = 06 17 28.0 h = about 51 km
JANUARY 5	Yellowknife iP 17 54 29 d	Alert
U. S. C. G. S. 10.0S, 124.0E	JANUARY 5	iP 06 29 57
Timor H = 13 16 43.0 h = about 33 km	Mould Bay eP 21 35 06	Banff eP 06 27 34
Alert e 13 44.9	JANUARY 5	London eP 06 25 36 c
Banff eP' 13 35 26		

SEISMOLOGICAL BULLETIN - 1963

Mould Bay eP 06 29 38 c	JANUARY 6 U. S. C. G. S. 62.7N, 151.1W Central Alaska H = 17 25 53.8 h = about 116 km	JANUARY 6 U. S. C. G. S. 8.9S, 123.8E Near Flores H = 19 46 58.8 h = about 33 km
Ottawa eP 06 25 56	Alert iP 17 31 38 d	Schefferville eP' 20 06 11
Penticton iP 06 27 38 c	Banff eP 17 30 42	e 20 09 33
Resolute eP 06 29 (15)	Halifax iP 17 34 41 d	Shawinigan Falls e 20 09 52
Schefferville eP 06 27 14	Mould Bay eP 17 29 47	
Shawinigan Falls eP 06 26 13	Penticton iP 17 30 39 d	JANUARY 6 U. S. C. G. S. 47.4N, 155.9E
Yellowknife eP 06 28 29 c	Resolute eP 17 30 44 d	Kurile Islands H = 21 20 56.5 h = about 33 km
JANUARY 6 U. S. C. G. S. 46.8N, 153.6E	Schefferville eP 17 33 31 d	Alert eP 21 29 40 d
Kurile Islands H = 07 29 54.3 h = about 33 km	Shawinigan Falls eP 17 33 59	Banff eP 21 30 21
Alert eP 07 38 44 c	Yellowknife iP 17 29 41	Mould Bay eP 21 28 57 d
Mould Bay eP 07 38 03 c	JANUARY 6 Yellowknife eP 17 37 49	Ottawa eP 21 32 47
Penticton eP 07 39 20	JANUARY 6 U. S. C. G. S. 44.7N, 112.0W	Penticton iP 21 30 13
Resolute eP 07 38 52 c	Montana - Idaho border region H = 18 07 47.8 h = about 33 km	Resolute eP 21 29 46 d
JANUARY 6 U. S. C. G. S. 41.7N, 142.4E	Banff eP 18 09 25	Schefferville eP 21 32 18 d
Near south coast of Hokkaido, Japan H = 08 04 31.4 h = about 57 km	Mould Bay eP 18 14 10	Shawinigan Falls eP 21 32 48
Mould Bay eP 08 13 35	Penticton eP 18 09 25	Yellowknife iP 21 29 42 d
Resolute eP 08 14 19 c	Victoria eP 18 09 50	JANUARY 7 Mould Bay eP 02 46 (11)
JANUARY 6 Mould Bay eP 10 08 54 c	Yellowknife eP 18 11 50	JANUARY 7 U. S. C. G. S. 6.4S, 154.7E
Resolute eP 10 09 21 c		Solomon Islands H = 06 24 49.2 h = about 80 km

DOMINION OBSERVATORIES

Banff eP 06 38 02	Shawinigan Falls eP' 12 07 30	JANUARY 8 Yellowknife e 10 51 51
Mould Bay eP 06 38 03 c	Yellowknife eP 12 02 16	
Ottawa eP' 06 43 34		JANUARY 8 Resolute eP 14 09 47 d
Penticton iP 06 37 50	JANUARY 7 Alert e(P) 15 13 (00)	
Shawinigan Falls eP' 06 43 37		JANUARY 8 Mould Bay eP 15 24 36
Yellowknife iP 06 38 08 c	JANUARY 7 Port Hardy eP ₁ 18 59 46.2 eS ₁ 19 00 05.5 D = 158 km	
JANUARY 7 Penticton eP 07 08 55		JANUARY 8 U. S. C. G. S. 31.2N, 130.2E Near south coast of Kyushu, Japan H = 15 46 45.5 h = about 177 km Alert eP 15 57 16 i 15 57 58
JANUARY 7 Penticton eP 07 28 10	JANUARY 7 Port Hardy eP ₁ 19 08 44.5 eS ₁ 19 09 05.6 D = 173 km	
JANUARY 7 Penticton eP 07 57 48	JANUARY 7 U. S. C. G. S. 17.5S, 167.7E New Hebrides Islands H = 19 19 34.1 h = about 19 km Shawinigan Falls eP' 19 38 31	Mould Bay eP 15 57 04 c i 15 57 43 Penticton iP 15 58 30 Resolute eP 15 57 41 c Schefferville eP 15 59 (40) Yellowknife eP 15 57 58
JANUARY 7 Alert e(P) 10 12 (01)		
JANUARY 7 U. S. C. G. S. 0.6N, 126.7E Halmahera region H = 11 48 22.7 h = about 42 km Mag 5 1/2 - 5 3/4 (PAL) Alert eP 12 01 (54) Mould Bay eP 12 01 41 Ottawa eP' 12 07 30 Resolute eP 12 02 09 c	JANUARY 8 U. S. C. G. S. 39.9N, 77.9E Sinkiang Province, China H = 01 31 47.4 h = about 33 km Mould Bay eP 01 42 16 c	JANUARY 8 Mould Bay eP 19 49 49 JANUARY 8 U. S. C. G. S. 17.0S, 171.8W Samoa Islands region H = 19 50 04.9 h = about 33 km Penticton iP 20 02 15 c

SEISMOLOGICAL BULLETIN - 1963

JANUARY 8

Mould Bay
eP 23 23 39

JANUARY 9

H = 00 01 27

Mag 1.3

Penticton

eP₁ 00 01 41.2

eS₁ 00 01 51.7

D = 86 km

JANUARY 9

U. S. C. G. S.

18.6N, 145.4E

Mariana Islands

H = 03 13 26.4

h = about 192 km

Alert

iP 03 25 06 c

Mould Bay

eP 03 24 37

i 03 25 20

S 03 33 48

Penticton

iP 03 25 11

Resolute

eP 03 25 13 c

Yellowknife

iP 03 25 05 c

JANUARY 9

Mould Bay

eP 08 37 32

Yellowknife

eP 08 36 10

eS 08 39 22

JANUARY 9

Port Hardy

eP_n 17 00 05.6

eS_n 17 00 32.0

D = 216 km

JANUARY 9

Penticton

eP 19 41 48

JANUARY 9

Penticton

eP 19 47 49

JANUARY 9

Mould Bay

eP 23 05 (11)

JANUARY 9

Port Hardy

eP₁ 23 49 41.4

eS₁ 23 49 49.8

D = 69 km

JANUARY 10

U. S. C. G. S.

18.8N, 106.3W

Off coast of

Jalisco, Mexico

H = 05 18 36.9

h = about 33 km

Mould Bay

eP 05 28 (26)

JANUARY 10

U. S. C. G. S.

36.7N, 70.8E

Hindu Kush

H = 06 47 04.0

h = about 193 km

Mould Bay

eP 06 57 38 c

JANUARY 10

Port Hardy

eP₁ 08 58 43.8

eS₁ 08 58 51.3

D = 61 km

JANUARY 10

Mould Bay

eP 09 27 (52)

JANUARY 10

U. S. C. G. S.

52.6N, 157.2E

Kamchatka

H = 17 14 07.3

h = about 125 km

Yellowknife

eP 17 22 09

JANUARY 10

U. S. C. G. S.

13.1N, 146.5E

Mariana Islands

H = 18 54 46.1

h = about 61 km

Alert

eP 19 07 10 c

Mould Bay

iP 19 06 41 c

Resolute

eP 19 07 14 c

Yellowknife

iP 19 07 03

JANUARY 11

U. S. C. G. S.

37.7N, 101.6E

Tsinghai Province,
China

H = 01 07 28.0

h = about 33 km

Mould Bay

eP 01 17 56

Resolute

eP 01 18 22 (d)

Yellowknife

eP 01 19 (14)

JANUARY 11

Resolute

eP 05 06 (00)

DOMINION OBSERVATORIES

JANUARY 11
 U. S. C. G. S.
 7.5N, 82.5W
 Near south coast
 of Panama
 H = 06 42 41.8
 h = about 33 km
 Yellowknife
 eP 06 52 43 d

JANUARY 11
 Canadian Arctic
 H = 07 18 09.2
 Mag 2.1
 Resolute
 P₁ 07 18 19
 S₁ 07 18 26.5
 D = 61.5 km

JANUARY 11
 U. S. C. G. S.
 35.7N, 70.7E
 Hindu Kush
 H = 11 41 40.0
 h = about 127 km
 Mould Bay
 eP 11 52 28 d

JANUARY 11
 U. S. C. G. S.
 45.0S, 75.7W
 Near coast of
 Southern Chile
 H = 12 12 16.2
 h = about 33 km
 Alert
 iP' 12 31 17
 London
 iP 12 25 04 (c)
 Mould Bay
 eP' 12 31 10
 i 12 31 12
 Ottawa
 eP 12 25 13
 Shawinigan Falls
 eP 12 25 21
 Yellowknife
 eP' 12 30 46

JANUARY 11
 U. S. C. G. S.
 12.6N, 88.2W
 Off coast of
 El Salvador
 H = 14 36 11.0
 h = about 33 km
 Alert
 iP 14 47 23
 Banff
 eP 14 44 18
 Mould Bay
 eP 14 46 53
 Penticton
 eP 14 44 24
 Resolute
 eP 14 46 29
 Schefferville
 eP 14 44 27 d
 Shawinigan Falls
 eP 14 43 12
 Yellowknife
 iP 14 45 27

JANUARY 11
 U. S. C. G. S.
 29.4S, 178.6W
 Kermadec Islands
 H = 17 05 42.3
 h = about 225 km
 Mould Bay
 eP' 17 23 49
 Resolute
 eP' 17 23 58

JANUARY 11
 H = 23 21 07
 Mag 2.0
 Penticton
 eP_n 23 21 41.9
 eS_n 23 22 09.7
 D = 228 km

JANUARY 12
 Victoria
 eP 00 33 10 d

JANUARY 12
 Mould Bay
 eP 02 03 24
 Resolute
 e(P) 02 03 52 d

JANUARY 12
 Mould Bay
 eP 03 50 26

JANUARY 12
 U. S. C. G. S.
 4.8N, 76.7W
 Northern Colombia
 H = 03 40 34.8
 h = about 102 km
 Alert
 iP 03 53 23 c
 Banff
 iP 03 50 07 c
 Halifax
 eP 03 48 13
 London
 iP 03 47 47 c
 Mould Bay
 iP 03 52 06 c
 Penticton
 iP 03 50 14 c
 Port Hardy
 iP 03 50 48 c
 Resolute
 eP 03 51 39 c
 Schefferville
 iP 03 49 25 c
 Shawinigan Falls
 iP 03 48 17 c
 Victoria
 iP 03 50 26 c
 Yellowknife
 iP 03 50 58 c

SEISMOLOGICAL BULLETIN - 1963

JANUARY 12
U. S. C. G. S.
15.1N, 120.5E
Luzon, Philippine
Islands
H = 04 19 27.8
h = about 83 km
Mould Bay
eP 04 31 40
Resolute
e(P) 04 32 08 d

JANUARY 12
U. S. C. G. S.
1.8N, 129.3E
Halmahera region
H = 09 13 04.2
h = about 112 km
Mould Bay
eP 09 26 08
Resolute
eP 09 26 35 (d)

JANUARY 12
U. S. C. G. S.
7.1N, 125.2E
Mindanao, Philippine
Islands
H = 23 21 52.1
h = about 84 km
Mould Bay
eP 23 34 39
Resolute
eP 23 35 06

JANUARY 12
U. S. C. G. S.
16.7N, 98.3W
Near coast of
Oaxaca, Mexico
H = 06 02 10
h = about 33 km
Banff
eP 06 09 28
Mould Bay
eP 06 12 18
Penticton
iP 06 09 17
Resolute
eP 06 12 (03)
Yellowknife
eP 06 10 39

JANUARY 12
Penticton
iP 10 54 27

JANUARY 13
Penticton
eP 09 01 16

JANUARY 12
H = 13 12 36
Mag 0.6
Victoria
iP₁ 13 12 37.6
iS₁ 13 12 38.9
D = 10 km

JANUARY 13
Yellowknife
e(P) 11 52 04

JANUARY 12
H = 14 43 10
Mag 2.6
Penticton
iP_n 14 43 55.4
iS_n 14 44 33.9
D = 315 km

JANUARY 13
U. S. C. G. S.
14.0S, 171.2E
New Hebrides Islands
region
H = 13 43 42.1
h = about 634 km
Penticton
iP 13 55 26

JANUARY 12
U. S. C. G. S.
36.1N, 69.6E
Hinda Kush
H = 06 20 13.6
h = about 97 km
Alert
e(P) 06 30 06
Mould Bay
eP 06 31 02 c
Penticton
iP 06 33 24
Yellowknife
iP 06 32 22 d

JANUARY 12
Penticton
eP 14 58 47

JANUARY 13
U. S. C. G. S.
49.7S, 163.7E
Auckland Island region
H = 16 21 13.1
h = about 33 km
Alert
eP' 16 40 44

JANUARY 12
Alert
e(P) 20 22 (07)

DOMINION OBSERVATORIES

JANUARY 14

U. S. C. G. S.
62. 2N, 150. 1W
Central Alaska
H = 02 18 02. 0
h = about 91 km
Banff
eP 02 22 46
Mould Bay
eP 02 22 01 d
Penticton
iP 02 22 42
Resolute
eP 02 23 01
Shawinigan Falls
eP 02 26 08
Yellowknife
eP 02 21 46 c

JANUARY 14

U. S. C. G. S.
21. 2S, 169. 3E
Loyalty Islands
H = 11 19 47. 5
h = about 33 km
Ottawa
eP' 11 38 39
Penticton
eP 11 33 06

JANUARY 14

Mould Bay
eP 12 42 33

JANUARY 14

Resolute
eP 12 43 09 c

JANUARY 14

Mould Bay
eP 12 47 20 c
Resolute
eP 12 47 56 c
Yellowknife
eP 12 48 12

JANUARY 14

Mould Bay
eP 13 51 10 c
Resolute
eP 13 51 46 c

JANUARY 14

U. S. C. G. S.
45. 7N, 26. 6E
Romania
H = 18 33 25. 3
h = about 132 km
Alert
eP 18 41 28
Mould Bay
eP 18 42 54
Resolute
eP 18 42 36
Yellowknife
eP 18 44 09

JANUARY 14

Yellowknife
e 21 49 44

JANUARY 15

U. S. C. G. S.
68. 9N, 17. 1W
Denmark Strait
H = 01 32 20. 0
h = about 33 km
Alert
eP 01 36 06
Banff
eP 01 40 44
Mould Bay
eP 01 38 06
S 01 42 56
Penticton
eP 01 41 08
Resolute
eP 01 37 25 d
Yellowknife
eP 01 39 (23)

JANUARY 15

U. S. C. G. S.
13. 4N, 145. 3E
Mariana Islands
H = 02 32 39. 9
h = about 38 km
Alert
eP 02 45 05
Banff
eP 02 45 14
Mould Bay
eP 02 44 37 c
Penticton
eP 02 45 04
Resolute
eP 02 45 11 c
Victoria
eP 02 44 56
Yellowknife
iP 02 45 01 c

JANUARY 15

Mould Bay
eP 03 23 10

JANUARY 15

Mould Bay
eP 03 33 28
Resolute
eP 03 33 05 (d)
Schefferville
eP 03 31 02

JANUARY 15

Mould Bay
eP 04 47 47

JANUARY 15

U. S. C. G. S.
69. 0N, 16. 6W
Jan Mayen Island region
H = 05 23 10. 4
h = about 33 km
Alert
eP 05 26 56

SEISMOLOGICAL BULLETIN - 1963

Mould Bay eP 05 28 55 S 05 33 44 Penticton eP 05 31 (56) Resolute eP 05 28 15 d Schefferville eP 05 28 46 Yellowknife eP 05 30 13 c	Mould Bay eP 14 01 19 d Resolute eP 14 00 55 d Yellowknife eP 13 59 53 c	JANUARY 15 U. S. C. G. S. 17. 1S, 179. 6W Fiji Islands H = 17 39 19. 2 h = about 276 km Banff eP 17 51 40 Penticton iP 17 51 26
JANUARY 15 Mould Bay eP 11 59 40 i 12 00 30 Yellowknife eP 12 00 04	JANUARY 15 Mould Bay eP 14 49 31	JANUARY 15 U. S. C. G. S. 38. 2N, 75. 8E Northern India H = 19 11 09 h = about 153 km Mould Bay iP 19 21 35 c
JANUARY 15 U. S. C. G. S. 36. 7N, 102. 1E Tsinghai, China H = 12 22 29. 9 h = about 33 km Mould Bay eP 12 33 (05)	JANUARY 15 U. S. C. G. S. 36. 0N, 23. 9E Mediterranean Sea H = 15 04 15. 0 h = about 81 km Alert eP 15 13 32 c Banff eP 15 16 50 c Halifax iP 15 14 44 c Mould Bay eP 15 14 51 c Resolute eP 15 14 32 Yellowknife iP 15 15 56 c	JANUARY 15 U. S. C. G. S. 20. 5S, 177. 9W Fiji Islands H = 19 26 34. 3 h = about 496 km Alert eP' 19 44 14 c Banff eP 19 38 39 Mould Bay eP 19 39 (32) eP' 19 43 53 Penticton iP 19 38 25 d Resolute eP' 19 44 02 c Schefferville eP' 19 44 24 Shawinigan Falls iP' 19 44 17 Victoria eP 19 38 13 d Yellowknife iP 19 39 09 c
JANUARY 15 U. S. C. G. S. 24. 9N, 122. 0E Near coast of Formosa H = 13 08 57. 2 h = about 47 km Mould Bay eP 13 20 19 Yellowknife eP 13 21 13	JANUARY 15 Mould Bay eP 15 47 31	
JANUARY 15 U. S. C. G. S. 11. 5N, 87. 8W Off west coast of Nicaragua H = 13 50 28. 3 h = about 33 km	JANUARY 15 Mould Bay eP 16 52 (47)	

DOMINION OBSERVATORIES

JANUARY 15
 U. S. C. G. S.
 31. 3S, 13. 4W
 South Atlantic Ocean
 H = 22 17 50.9
 h = about 33 km
 Yellowknife
 eP' 22 36 43

JANUARY 15
 76. 9°N, 117. 5°W
 Prince Patrick Island,
 N. W. T.
 H = 23 59 01. 3
 Mag 3. 8
 Mould Bay
 P₁ 23 59 17 D,N,E
 S₁ 23 59 29
 D = 98 km
 Resolute
 P_n 24 00 27. 0
 S_n 24 01 35
 D = 660 km

JANUARY 16
 U. S. C. G. S.
 54. 0S, 133. 5W
 South Pacific Ocean
 H = 03 14 05. 9
 h = about 33 km
 Mould Bay
 eP' 03 33 11

JANUARY 16
 U. S. C. G. S.
 7. 5N, 74. 5W
 Colombia
 H = 03 52 56. 1
 h = about 33 km
 Mould Bay
 eP 04 04 11
 Yellowknife
 iP 04 03 10 c

JANUARY 16
 U. S. C. G. S.
 9. 7N, 93. 9E
 Nicobar Islands
 H = 04 49 11. 9
 h = about 70 km
 Mould Bay
 eP 05 02 14

JANUARY 16
 Penticton
 eP 05 36 40

JANUARY 16
 U. S. C. G. S.
 51. 3N, 179. 9W
 Andreevof Islands,
 Aleutian Islands
 H = 05 44 52. 3
 h = about 38 km
 Alert
 iP 05 52 49
 Banff
 eP 05 52 16
 Mould Bay
 iP 05 51 35 c
 Penticton
 iP 05 52 05 c
 Resolute
 eP 05 52 26 c
 Schefferville
 eP 05 54 59 c
 Shawinigan Falls
 eP 05 55 23 d
 Victoria
 eP 05 51 50 c
 Yellowknife
 iP 05 51 49 c

JANUARY 16
 U. S. C. G. S.
 54. 2N, 34. 9W
 1300 km southwest
 of Iceland
 H = 06 38 40. 4
 h = about 33 km

Halifax
 eP 06 43 19
 Mould Bay
 eP 06 45 48
 Schefferville
 eP 06 42 52
 Shawinigan Falls
 eP 06 44 02
 Yellowknife
 eP 06 46 12

JANUARY 16
 48°16'N, 122°48'W
 In the vicinity of
 Whidbey Island, U. S. A.
 H = 06 43 13
 Mag 2. 3
 Alberni
 eP_n 06 43 43. 6
 D = 197 km
 Penticton
 eP_n 06 43 53
 D = 273 km
 Victoria
 eP₁ 06 43 22. 9
 eS₁ 06 43 30. 7
 D = 63 km

JANUARY 16
 U. S. C. G. S.
 54. 3N, 35. 2W
 1300 km southwest
 of Iceland
 H = 06 44 56. 8
 h = about 33 km
 Alert
 eP 06 50 58
 Halifax
 eP 06 49 35
 Mould Bay
 eP 06 52 03
 Ottawa
 eP 06 50 39
 Resolute
 eP 06 51 11
 Schefferville
 eP 06 49 08

SEISMOLOGICAL BULLETIN - 1963

Shawinigan Falls	JANUARY 16	Mould Bay
eP 06 50 17	Mould Bay	eP 03 59 33 d
Yellowknife	eP 16 16 07	Penticton
eP 06 52 29	i 16 16 09	iP 04 01 11
	Penticton	
	iP 16 17 30	
JANUARY 16	Resolute	JANUARY 17
U. S. C. G. S.	eP 16 16 49 c	U. S. C. G. S.
54. 4N, 35. 0W	Yellowknife	10. 6S, 78. 7W
1300 km southwest	iP 16 17 01 c	Off coast of Peru
of Iceland		H = 04 22 22.5
H = 12 32 37.6		h = about 46 km
h = about 33 km		Mould Bay
Halifax	JANUARY 16	eP 04 35 17
eP 12 37 21	U. S. C. G. S.	Yellowknife
Mould Bay	4. 2S, 76. 2W	eP 04 34 16 c
eP 12 39 45	Peru	
Penticton	H = 20 20 56	
eP 12 41 26	h = about 190 km	
Resolute	Penticton	JANUARY 17
eP 12 38 51 d	iP 20 31 22	U. S. C. G. S.
Shawinigan Falls		14. 0N, 120. 6E
eP 12 37 58		Luzon, Philippine
Yellowknife	JANUARY 16	Islands
eP 12 40 09	U. S. C. G. S.	H = 05 56 54.8
	11. 1S, 111. 6E	h = about 207 km
	South of Java	Mould Bay
	H = 21 08 38.8	eP 06 09 00 c
	h = about 94 km	Resolute
JANUARY 16	Halifax	eP 06 09 26 c
U. S. C. G. S.	eP' 21 28 14	Yellowknife
24. 0S, 68. 2W	London	iP 06 09 44
Northern Chile	iP' 21 28 13 (c)	
H = 15 09 16.6	Penticton	JANUARY 17
h = about 150 km	eP' 21 27 26	Alert
Penticton	Shawinigan Falls	e(P) 12 20 19
iP 15 21 41 d	eP' 21 28 07	
Yellowknife	Yellowknife	
iP 15 22 16 d	eP' 21 27 19	
JANUARY 16	JANUARY 17	JANUARY 17
U. S. C. G. S.	U. S. C. G. S.	Alert
36. 3N, 70. 3E	52. 3N, 152. 5E	i 13 50 17
Hindu Kush	Sea of Okhotsk	
H = 15 30 10.0	H = 03 52 42.2	JANUARY 17
h = about 243 km	h = about 454 km	Yellowknife
Mould Bay	Banff	eP 17 50 50
eP 15 40 41 c	eP 04 01 16	
Yellowknife		
eP 15 42 00		

DOMINION OBSERVATORIES

JANUARY 17
Mould Bay
eP 18 12 (56)

JANUARY 17
U. S. C. G. S.
7. 6S, 75. 3W
Peru
H = 19 31 12. 6
h = about 201 km
Mould Bay
eP 19 43 39 d
Penticton
iP 19 41 57
Yellowknife
iP 19 42 39 d

JANUARY 17
U. S. C. G. S.
25. 6N, 125. 2E
Ryukyu Islands
H = 20 41 14. 8
h = about 140 km
Alert
iP 20 52 24 d
Mould Bay
iP 20 52 18 d
S 21 01 27
Penticton
eP 20 53 (40)
Resolute
iP 20 52 51 d
Schefferville
eP 20 54 42 d
Victoria
eP 20 53 32 d
Yellowknife
iP 20 53 11 d

JANUARY 17
Penticton
eP 22 54 44
Victoria
eP 22 54 57

JANUARY 18
Mould Bay
eP 00 29 (42)

JANUARY 18
U. S. C. G. S.
33. 1N, 135. 8E
South of Honshu,
Japan
H = 03 12 05. 7
h = about 425 km
Alert
iP 03 21 59 c
i 03 22 55
Mould Bay
iP 03 21 41 c
Resolute
iP 03 22 19 c
Victoria
eP 03 22 49 c
Yellowknife
iP 03 22 30 c

JANUARY 18
Mould Bay
eP 08 06 23

JANUARY 18
Resolute
eP 13 47 38 d

JANUARY 18
Canadian Arctic
H = 14 59 22. 2
Mag 1. 5
Resolute
P₁ 14 59 34
S₁ 14 59 43
D = 74 km

JANUARY 18
H = 16 13 05
Mag 2. 9
Penticton
iP_n 16 13 49. 7
iS_n 16 14 28. 2
D = 315 km

JANUARY 18
H = 20 49 12
Mag 2. 9
Penticton
iP_n 20 49 58. 2
iS_n 20 50 37. 5
D = 322 km

JANUARY 18
H = 21 24 28
Port Hardy
iP_n 21 25 02. 5
iS_n 21 25 30. 8
D = 231 km

JANUARY 19
U. S. C. G. S.
38. 8N, 74. 8E
Sinkiang Province,
China
H = 02 35 06. 8
h = about 33 km
Mould Bay
eP 02 45 43 c
Yellowknife
iP 02 47 07 d

JANUARY 19
Yellowknife
eP 03 45 (23)

JANUARY 19
Yellowknife
e 04 26 38

SEISMOLOGICAL BULLETIN - 1963

JANUARY 19
Mould Bay
eP 05 56 33

JANUARY 19
H = 05 57 21
In Queen Charlotte
Sound
Mag 3.5
Alberni
eP_n 05 58 39.8
Penticton
eP_n 05 59 20
Port Hardy
iP_n 05 57 49.3
iS_n 05 58 11.0
D = 178 km
Victoria
eP_n 05 58 47
Yellowknife
eP 06 00 49

JANUARY 19
Mould Bay
eP 06 28 30

JANUARY 19
U. S. C. G. S.
40.9N, 142.4E
South of Hokkaido,
Japan
H = 07 22 24.5
h = about 33 km
Alert
eP 07 32 02
Mould Bay
eP 07 31 36 c
Penticton
eP 07 33 02
Resolute
eP 07 32 19 (c)
Yellowknife
eP 07 32 29 c

JANUARY 19
Penticton
eP 11 54 33

JANUARY 19
Penticton
eP 12 55 28

JANUARY 19
Penticton
eP 14 40 59

JANUARY 19
Penticton
eP 19 02 12

JANUARY 19
U. S. C. G. S.
16.9N, 85.0W
Off north coast
of Honduras
H = 19 29 03.6
h = about 33 km
Mould Bay
eP 19 39 22

JANUARY 19
U. S. C. G. S.
17.0N, 85.0W
Off north coast of
Honduras
H = 19 50 59.4
h = about 33 km
Mould Bay
eP 20 01 17
Penticton
eP 19 58 55

JANUARY 20
Mould Bay
eP 02 56 (18)

JANUARY 20
U. S. C. G. S.
51.9N, 173.2W
Andreanof Islands,
Aleutian Islands
H = 08 56 06.2
h = about 30 km

Alert
eP 09 03 53
Banff
eP 09 02 59
Mould Bay
eP 09 02 30
i 09 05 18
Ottawa
eP 09 06 11
Penticton
iP 09 02 45
Resolute
eP 09 03 22 (d)
Shawinigan Falls
eP 09 06 16 d
Yellowknife
eP 09 02 35

JANUARY 20
50.3°N, 129.6°W
West of Vancouver Island
H = 10 56 48
Mag 3.9

Alberni
eP_n 10 57 38.7
D = 357 km

Banff
eP_n 10 59 05
D = 1068 km

Penticton
eP_n 10 58 25
D = 740 km

Port Hardy
iP₁ 10 57 15.0
iS₁ 10 57 35.3
D = 166 km

Victoria
eP_n 10 57 56
D = 502 km

Yellowknife
eP 11 00 18

JANUARY 20
U. S. C. G. S.
26.4N, 110.7W
Gulf of California
H = 13 16 27.0
h = about 27 km
Penticton
eP 13 21 41

DOMINION OBSERVATORIES

JANUARY 20
Penticton
eP 15 01 49

JANUARY 20
H = 19 19 08
Port Hardy
iP₁ 19 19 34.8
iS₁ 19 19 55.3
D = 168 km

JANUARY 20
Penticton
eP 19 30 25

JANUARY 21
U. S. C. G. S.
53.3N, 157.4E
Southern Kamchatka
H = 04 25 04.6
h = about 33 km
Mould Bay
eP 04 32 16 d
Penticton
iP 04 33 50
Resolute
eP 04 33 08 d
Yellowknife
eP 04 33 08

JANUARY 21
Penticton
eP 05 52 53

JANUARY 21
U. S. C. G. S.
60.5S, 27.2W
Sandwich Islands
region
H = 07 00 45
h = about 33 km
Alert
eP' 07 20 13

Mould Bay
eP' 07 20 (22)
i 07 20 25

Penticton
eP' 07 19 56
Resolute
eP' 07 20 (07)
Yellowknife
iP' 07 20 09

JANUARY 21
U. S. C. G. S.
9.3N, 83.0W
Panama-Costa Rica
border
H = 07 38 56.9
h = about 88 km

Mould Bay
eP 07 49 58 d
Penticton
iP 07 47 47
Resolute
eP 07 49 32 (d)

JANUARY 21
U. S. C. G. S.
3.0S, 136.2E
Western New Guinea
H = 10 35 39.0
h = about 57 km
Mould Bay
eP 10 49 02 d

JANUARY 21
U. S. C. G. S.
59.5N, 151.2W
Kenai Peninsula,
Alaska
H = 14 47 05.4
h = about 67 km
Alert
eP 14 53 (24)
Mould Bay
eP 14 51 36
i 14 51 39

Penticton
iP 14 51 44
Resolute
eP 14 52 29 d
Yellowknife
eP 14 51 11

JANUARY 21
U. S. C. G. S.
18.0S, 175.4W
Tonga Islands
H = 18 35 41.5
h = about 64 km
Penticton
iP 18 48 05

JANUARY 22
48°53'N, 122°13'W
H = 04 13 46
Mag 2.2
Northeast of Bellingham,
U. S. A.
Alberni
iP_n 04 14 15.4
D = 199 km
Penticton
eP_n 04 14 16.6
eS_n 04 14 44.6
D = 209 km
Port Hardy
e 04 14 50.0
D = 425 km
Victoria
iP₁ 04 13 58.5
iS₁ 04 14 08.8
D = 91 km

JANUARY 22
U. S. C. G. S.
31.5N, 89.3E
Tibet
H = 04 55 16.4
h = about 33 km
Mould Bay
eP 05 06 32
Yellowknife
eP 05 07 46

SEISMOLOGICAL BULLETIN - 1963

JANUARY 22
Yellowknife
eP 08 12 50 d

JANUARY 22
U. S. C. G. S.
11.3S, 74.7W
Peru
H= 08 32 33.2
h = about 33 km
Mould Bay
eP 08 45 37
Penticton
eP 08 43 58
Yellowknife
eP 08 44 38

JANUARY 22
U. S. C. G. S.
48.3N, 155.2E
Kurile Islands
H = 16 07 14.0
h = about 50 km
Mould Bay
eP 16 15 07
Resolute
eP 16 15 57 (c)
Yellowknife
eP 16 20 23

JANUARY 22
U. S. C. G. S.
48.4N, 155.2E
Kurile Islands
H = 16 11 42.1
h = about 50 km
Mould Bay
iP 16 19 35
Resolute
e(P) 16 20 25 (c)
Yellowknife
eP 16 15 56 d

JANUARY 23
U. S. C. G. S.
48.9N, 156.0E
Kurile Islands
H = 04 39 23.3
h = about 50 km
Alert
eP 04 47 56
Mould Bay
eP 04 47 12
Resolute
eP 04 48 02 d
Yellowknife
iP 04 47 59 (d)

JANUARY 23
Mould Bay
eP 05 09 21

JANUARY 23
Mould Bay
eP 13 06 21
i 13 06 28

JANUARY 23
Mould Bay
eP 17 40 12 c

JANUARY 23
Penticton
eP 20 04 06

JANUARY 23
Mould Bay
eP 21 22 02

JANUARY 23
Victoria
iP 22 25 04 d

JANUARY 24
U. S. C. G. S.
8.4N, 60.8W
Near coast of
Venezuela
H = 02 52 09.0
h = about 66 km
Alert
eP 03 03 39 (d)
Banff
eP 03 02 23
Mould Bay
eP 03 03 44 d
Ottawa
eP 02 59 32
Penticton
eP 03 02 36
Schefferville
eP 03 00 34 d
Shawinigan Falls
iP 02 59 36 d
Victoria
eP 03 02 45
Yellowknife
iP 03 02 52

JANUARY 24
Mould Bay
eP 04 09 (12)

JANUARY 24
U. S. C. G. S.
6.0S, 112.6E
Java Sea
H = 09 29 11.6
h = about 493 km
Penticton
eP' 09 47 01

DOMINION OBSERVATORIES

JANUARY 24
U.S.C.G.S.
15.2S, 173.6W
Tonga Islands region
H = 12 09 01.2
h = about 33 km
Banff
eP 12 21 35
Mould Bay
eP 12 22 (30)
Penticton
eP 12 21 07
Victoria
eP 12 20 56

JANUARY 24
Mould Bay
eP 15 06 50

JANUARY 24
U.S.C.G.S.
28.6N, 56.4E
Southern Iran
H = 15 42 23.5
h = about 100 km
Mould Bay
eP 15 53 56 c

JANUARY 24
Mould Bay
eP 20 26 32

JANUARY 24
Mould Bay
eP 20 40 19 d

JANUARY 24
U.S.C.G.S.
47.5N, 121.9W
King County, Washington
H = 21 43 13
h = about 33 km
Alberni
iP 21 43 53.5

Banff
eP 21 44 37
Mould Bay
eP 21 49 12
Penticton
iP 21 43 51 d
Port Hardy
eP 21 44 27
Victoria
iP 21 43 35
Yellowknife
eP 21 46 49

JANUARY 24
Mould Bay
eP 22 04 07

JANUARY 24
Alert
eP 22 40 26
i 22 43 52
Mould Bay
eP 22 40 17
i 22 45 27
Resolute
eP 22 40 44
Yellowknife
eP 22 40 53

JANUARY 24
U.S.C.G.S.
8.0N, 126.6E
Near east coast
of Mindanao,
Philippine Islands
H = 22 44 16.5
h = about 44 km
Mould Bay
eP 22 57 03

JANUARY 24
U.S.C.G.S.
7.7N, 126.0E
Near east coast of
Mindanao, Philippine
Islands
H = 23 22 16.2
h = about 150 km
Mould Bay
eP 23 34 51

JANUARY 25
U.S.C.G.S.
61.9N, 148.9W
Southern Alaska
H = 00 05 34.8
h = about 78 km
Banff
eP 00 10 15
Mould Bay
eP 00 09 35
Penticton
eP 00 10 09
Resolute
eP 00 10 (31)

JANUARY 25
U.S.C.G.S.
20.3S, 169.6E
Loyalty Islands region
H = 00 16 05.7
h = about 135 km
Mould Bay
eP' 00 34 11
Penticton
eP 00 29 06

JANUARY 25
U.S.C.G.S.
8.0N, 127.0E
Near east coast of
Mindanao, Philippine
Islands
H = 04 10 36.2
h = about 70 km
Mould Bay
eP 04 23 20

SEISMOLOGICAL BULLETIN - 1963

JANUARY 25
Mould Bay
eP 05 16 03

JANUARY 25
Mould Bay
eP 09 02 04

JANUARY 25
Mould Bay
eP 09 14 40

JANUARY 25
Mould Bay
eP 09 27 27

JANUARY 25
U. S. C. G. S.
21. 8N, 143. 8E
Mariana Islands region
H = 12 49 42. 0
h = about 190 km

Alert
iP 13 01 05 c
i 13 01 56

Banff
eP 13 01 29 c

Mould Bay
iP 13 00 39 c
i 13 01 25

Penticton
iP 13 01 20 c

Resolute
iP 13 01 14 c

Victoria
eP 13 01 08 c

Yellowknife
iP 13 01 10 c

JANUARY 25
U. S. C. G. S.
51. 4N, 178. 1E
Rat Islands,
Aleutian Islands
H = 13 01 53. 3
h = about 33 km
Mould Bay
eP 13 08 39

JANUARY 25
Mould Bay
eP 16 07 01
i 16 07 02

JANUARY 26
Alert
eP 06 07 22 (c)
Mould Bay
eP 06 07 34 d

JANUARY 26
Canadian Arctic
H = 06 22 01. 6
h = 20 km
Mag 2. 4
Resolute
P_n 06 22 36. 3
P₁ 06 22 40. 9
i 06 22 41. 7
S_n 06 23 03
S₁ 06 23 10. 5
D = 242 km

JANUARY 26
Penticton
eP 07 50 14

OCTOBER 26
Mould Bay
eP 07 56 56

JANUARY 26
Penticton
eP 09 52 36

JANUARY 26
Dominion Observatory
44. 1°N, 129. 1°W
Pacific Ocean about
400 miles south of
Vancouver Island,
British Columbia
H = 09 58 52

Banff
eP_n 10 01 (37)
D = 1290 km

Mould Bay
P 10 05 20
D = 3570 km

Penticton
iP_n 10 00 53
D = 950 km

Port Hardy
eP_n 10 00 29
D = 750 km

Resolute
eP 10 05 36
D = 3770 km

Victoria
iP_n 10 00 18
iS_n 10 01 25
D = 660 km

Yellowknife
eP_n 10 03 24
D = 2205 km

JANUARY 26
Mould Bay
eP 10 14 25

JANUARY 26
Resolute
e(P) 12 32 28

JANUARY 26
Mould Bay
eP 13 25 58

DOMINION OBSERVATORIES

JANUARY 26 Mould Bay eP 14 54 46	JANUARY 26 Mould Bay eP 22 36 42	Penticton eP 03 04 52 Victoria eP 03 04 51
JANUARY 26 Mould Bay eP 16 54 12	JANUARY 27 U. S. C. G. S. 25. 6N, 128. 3E Ryukyu Islands H = 01 06 55. 4 h = about 61 km Alert eP 01 18 14 i 01 18 30 Banff eP 01 19 25 Mould Bay iP 01 18 04 d Penticton iP 01 19 21 Resolute iP 01 18 38 d Victoria eP 01. 19 12 d Yellowknife iP 01 18 54 d	JANUARY 27 U. S. C. G. S. 59. 4N, 153. 4W Gulf of Alaska H = 11 47 36. 3 h = about 94 km Alert eP 11 53 53 i 11 54 13 Banff eP 11 52 31 Mould Bay eP 11 52 10 d Penticton eP 11 52 22 Resolute iP 11 53 02 d Shawinigan Falls e 11 56 21 Victoria eP 11 52 07 Yellowknife iP 11 51 50 d
JANUARY 26 Mould Bay eP 17 21 (50)	JANUARY 27 U. S. C. G. S. 66. 9N, 162. 4W Seeward Peninsula, Alaska H = 01 44 34. 2 h = about 33 km Mould Bay eP 01 48 18 Yellowknife eP 01 49 12	JANUARY 27 Mould Bay eP 13 48 34
JANUARY 26 U. S. C. G. S. 15. 7S, 172. 9W Tonga Islands region H = 19 12 02. 5 h = about 33 km Mould Bay eP 19 25 37 Penticton iP 19 24 10 d	JANUARY 27 U. S. C. G. S. 4. 6N, 76. 5W Colombia H = 21 20 41. 2 h = about 92 km Mould Bay eP 21 32 15 d Penticton iP 21 30 24 c Schefferville iP 21 29 33 c Yellowknife iP 21 31 06 d	JANUARY 27 U. S. C. G. S. 44. 3N, 114. 5W Idaho H = 15 24 46. 5 h = about 31 km Alert eP 15 32 33 Banff eP 15 26 28 London eP 15 30 02 i 15 30 12

SEISMOLOGICAL BULLETIN - 1963

Mould Bay
eP 15 31 13 d
Penticton
iP 15 26 11
Resolute
eP 15 31 09 d
Schefferville
eP 15 31 13
Victoria
eP 15 26 35
Yellowknife
iP 15 28 57 c

JANUARY 27

U. S. C. G. S.
26. 2N, 127. 9E
Ryukyu Islands
H = 15 38 15. 7
h = about 109 km
Mould Bay
iP 15 49 16 c
Yellowknife
iP 15 50 18

JANUARY 27

Penticton
eP 16 36 26

JANUARY 27

Canadian Arctic
H = 18 01 40
Yellowknife
eP₁ 18 02 01
S₁ 18 02 17
D = 131 km

JANUARY 27

U. S. C. G. S.
5. 2S, 152. 3E
New Britain
H = 18 46 14. 6
h = about 72 km
Banff
eP 18 59 33

Mould Bay
eP 18 59 28
Penticton
eP 18 59 07
Victoria
eP 18 59 20
Yellowknife
eP 18 59 36

JANUARY 27

Yellowknife
eP 19 41 58

JANUARY 27

U. S. C. G. S.
41. 2N, 49. 8E
Caspian Sea near
Azerbaijan SSR
H = 19 35 14. 3
h = about 33 km
Alert
eP 19 44 24
S 19 51 (47)

Banff
eP 19 47 58
London
iP 19 47 49
Mould Bay
iP 19 45 37 d
Ottawa
eP 19 47 27 d
Penticton
eP 19 48 09
Resolute
eP 19 45 33
Schefferville
eP 19 46 25 d
Victoria
eP 19 48 14
Yellowknife
iP 19 46 58 d

JANUARY 28

Yellowknife
e 01 30 43

JANUARY 28

U. S. C. G. S.
10. 8S, 76. 7W
Central Peru
H = 02 12 14. 3
h = about 105 km
Alert
iP 02 25 19
Banff
eP 02 23 17
Mould Bay
iP 02 25 06 c
Penticton
iP 02 23 21 c
Resolute
eP 02 24 44 c
Schefferville
eP 02 22 52 c
Victoria
eP 02 23 28 c
Yellowknife
iP 02 24 06

JANUARY 28

U. S. C. G. S.
43. 5N, 144. 6E
Near south coast of
Hokkaido, Japan
H = 04 05 30. 9
h = about 33 km
Alert
iP 04 14 48
Banff
eP 04 15 56
Penticton
eP 04 15 46
Resolute
eP 04 15 04
Schefferville
eP 04 17 30
Victoria
eP 04 15 38
Yellowknife
eP 04 15 14

DOMINION OBSERVATORIES

JANUARY 28	Victoria	JANUARY 28
U. S. C. G. S.	eP 13 06 07 d	U. S. C. G. S.
2. 6S, 149. 9E	Yellowknife	31. 2S, 177. 7W
New Britian	iP 13 06 15 c	Kermadec Islands
H = 12 12 19. 8		H = 16 07 19
h = about 33 km		h = about 33 km
Mag 6 1/2 (PAS)	JANUARY 28	Alert
Alert	Mould Bay	iP' 16 26 13
eP 12 25 58	eP 13 35 03	Mould Bay
Banff	Yellowknife	eP' 16 25 52
eP 12 25 41	eP 13 35 55	
Mould Bay		
eP 12 25 30	JANUARY 28	JANUARY 28
Penticton	Mould Bay	Mould Bay
eP 12 25 29	eP 13 39 10	eP 16 32 18
Resolute	Yellowknife	
eP 12 26 (00)	eP 13 39 14	
Yellowknife		
eP 12 25 40		
	JANUARY 28	JANUARY 29
JANUARY 28	U. S. C. G. S.	U. S. C. G. S.
U. S. C. G. S.	55. 8N, 162. 9W	5. 8N, 78. 4W
54. 7N, 161. 6W	Alaska Peninsula	South of Panama
Alaska Peninsula	H = 13 49 54. 7	H = 04 31 29. 6
H = 13 00 50. 7	h = about 33 km	h = about 31 km
h = about 33 km	Mould Bay	Yellowknife
Mag 6 - 6 1/2 (PAS)	eP 13 55 26	iP 04 41 51 d
Alert	Yellowknife	
eP 13 08 03 c	eP 13 55 11	
Banff		
eP 13 06 38	JANUARY 28	JANUARY 29
Halifax	U. S. C. G. S.	U. S. C. G. S.
iP 13 10 51 (d)	19. 7S, 178. 1W	40. 3N, 144. 2 E
London	Fiji Islands	Off coast of Honshu,
iP 13 09 54	H = 13 50 28. 3	Japan
Mould Bay	h = about 587 km	H = 08 01 26. 8
iP 13 06 29 c	Banff	h = about 27 km
Ottawa	eP 14 02 23	Mould Bay
iP 13 10 03	Penticton	eP 08 10 42
Penticton	eP 14 02 04	Resolute
eP 13 06 22		eP 08 11 25 d
Resolute		Yellowknife
eP 13 07 19 c		eP 08 11 31
Schefferville		
iP 13 09 48 d		
Shawinigan Falls		
eP 13 10 08		
		JANUARY 29
		U. S. C. G. S.
		49. 7N, 154. 9E
		Kurile Islands
		H = 09 21 14. 3
		h = about 126 km
		Alert
		iP 09 29 32 c
		iS 09 36 10

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Banff		JANUARY 29		Mould Bay
eP	09 30 22 c	U. S. C. G. S.		eP 22 56 30
Halifax		21. 5S, 68. 6W		
iP	09 33 12 c	Chile-Bolivia border		
London		H = 20 33 27. 0		JANUARY 30
iP	09 32 46 c	h = about 73 km		Alert
Mould Bay		Banff		eP 02 03 (29)
iP	09 28 50 c	iP 20 45 47 d		Mould Bay
iS	09 34 55	Halifax		eP 02 03 39
Ottawa		eP 20 44 12		Yellowknife
iP	09 32 45 c	London		eP 02 03 20
Penticton		iP 20 44 04 d		
iP	09 30 16	Mould Bay		JANUARY 30
Resolute		eP 20 47 17		U. S. C. G. S.
iP	09 29 39 c	Penticton		54. 8N, 161. 6W
Schefferville		iP 20 45 51		Alaska Peninsula
iP	09 32 15 c	Schefferville		H = 04 39 56. 3
Shawinigan Falls		eP 20 45 12 d		h = about 33 km
iP	09 32 46 c	Shawinigan Falls		Alert
Victoria		iP 20 44 23 d		eP 04 47 08 c
iP	09 30 04 c	Yellowknife		Banff
Yellowknife		iP 20 46 26 d		eP 04 45 43
iP	09 29 41 c			Mould Bay
				eP 04 45 36 c
JANUARY 29		JANUARY 29		Ottawa
Mould Bay		U. S. C. G. S.		eP 04 49 07
eP	12 21 17	12. 9N, 143. 2E		Penticton
Yellowknife		Mariana Islands		eP 04 45 30
eP	12 20 42	H = 21 07 57. 7		Resolute
		h = about 144 km		eP 04 46 23 c
JANUARY 29		Alert		Schefferville
H = 18 45 37		eP 21 20 (14)		eP 04 48 53 (c)
Mag 1. 6		Mould Bay		Shawinigan Falls
Penticton		eP 21 19 (46)		eP 04 49 12
iP ₁	18 46 04. 6	Yellowknife		Victoria
iS ₁	18 46 25. 7	eP 21 20 14		eP 04 45 13 c
D = 172 km				Yellowknife
JANUARY 29		JANUARY 29		iP 04 45 21 c
Mould Bay		Yellowknife		
iP	19 14 00 c	eP 21 45 38		JANUARY 30
				U. S. C. G. S.
JANUARY 29		JANUARY 29		44. 9N, 110. 8W
Penticton		U. S. C. G. S.		Yellowstone National
eP	20 19 25	52. 7N, 168. 4W		Park, Wyoming
		Fox Islands,		H = 05 51 00. 9
		Aleutian Islands		h = about 33 km
		H = 22 50 22. 7		
		h = about 33 km		

DOMINION OBSERVATORIES

Penticton eP 05 52 59 Yellowknife eP 05 55 14	Banff eP' 10 29 08 London iP' 10 28 48 Mould Bay eP' 10 29 31 Ottawa eP' 10 28 (36) Penticton eP' 10 29 09 Resolute eP' 10 29 15 Schefferville eP' 10 28 40 Victoria eP' 10 29 13 Yellowknife eP' 10 29 06	JANUARY 30 Mould Bay eP 11 50 (49) Yellowknife iP 11 50 37 d
JANUARY 30 U. S. C. G. S. 00. 2N, 123. 4E Northern Celebes H = 06 08 25. 4 h = about 33 km Mould Bay eP 06 21 52	JANUARY 30 Mould Bay eP 12 44 (04) Yellowknife eP 12 43 51	JANUARY 30 Mould Bay eP 13 02 14 Yellowknife eP 13 02 04
JANUARY 30 Penticton iP 07 15 18	JANUARY 30 U. S. C. G. S. 29. 7N, 80. 5E India-Nepal border H = 10 33 59. 1 h = about 57 km Mould Bay eP 10 45 27 Yellowknife iP 10 46 41 c	JANUARY 30 Penticton eP 13 15 29
JANUARY 30 Yellowknife eP 08 11 28	JANUARY 30 Mould Bay eP 11 04 42 Yellowknife eP 11 04 32	JANUARY 30 Penticton eP 13 46 26
JANUARY 30 U. S. C. G. S. 50. 8N, 157. 4E Near coast of southern Kamchatka H = 09 51 23. 7 h = about 31 km Mould Bay eP 09 58 55 Resolute eP 09 59 45 (d)	JANUARY 30 Mould Bay eP 11 04 58	JANUARY 30 Mould Bay eP 14 51 (03) Yellowknife iP 14 51 06 d
JANUARY 30 U. S. C. G. S. 55. 6S, 28. 3W Sandwich Islands region H = 10 10 04. 1 h = about 33 km Mag 6 1/2 (PAS) Alert eP' 10 29 (19) i 10 29 34	JANUARY 30 Yellowknife e 11 07 58	JANUARY 30 Yellowknife eP 15 35 58
	JANUARY 30 Mould Bay eP 11 43 (10) Yellowknife eP 11 42 56	JANUARY 30 Mould Bay eP 15 56 (54) Resolute e(P) 15 56 (52)

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JANUARY 30 Mould Bay eP 16 37 (09) Yellowknife eP 16 37 04	JANUARY 31 Mould Bay eP 01 02 00	JANUARY 31 Mould Bay eP 07 40 32
JANUARY 30 Yellowknife eP 16 43 15	JANUARY 31 Penticton eP 02 56 47	JANUARY 31 Resolute e(P) 09 55 06
JANUARY 30 Penticton eP 19 18 19	JANUARY 31 U. S. C. G. S. 63. 5N, 149. 4W Central Alaska H = 03 09 58.3 h = about 56 km Alert eP 03 15 40 c London iP 03 17 55 d Penticton eP 03 14 42 Resolute eP 03 14 42 Yellowknife eP 03 13 34	JANUARY 31 U. S. C. G. S. 54. 7N, 161. 7W Alaska Peninsula H = 11 27 30.7 h = about 33 km Penticton eP 11 32 52 Resolute eP 11 33 58 (d) Yellowknife eP 11 32 55
JANUARY 30 Yellowknife eP 19 35 34		
JANUARY 30 Yellowknife eP 22 03 18		JANUARY 31 U. S. C. G. S. 35. 8N, 21. 9E Ionian Sea, west of Crete H = 15 07 00.4 h = about 33 km
JANUARY 30 Yellowknife eP 22 30 29	JANUARY 31 Alert eP 05 17 57 Penticton iP 05 19 10 d Resolute eP 05 18 21 Schefferville eP 05 20 (17) Victoria iP 05 19 02 c Yellowknife iP 05 18 40 d	Mould Bay eP 15 17 42 Penticton iP 15 19 53 Resolute eP 15 17 22 (d) Schefferville eP 15 17 12
JANUARY 31 50°36'N, 129°45'W Off west coast of Vancouver Island H = 00 27 33 Mag 2.5 Alberni eP _n 00 28 20.5 D = 387 km Port Hardy iP ₁ 00 27 59.2 iS ₁ 00 28 19.5 D = 166 km	JANUARY 31 Penticton eP 07 28 18	JANUARY 31 U. S. C. G. S. 21. 5S, 178. 1W Fiji Islands H = 16 21 52.8 h = about 373 km Penticton iP 16 34 02
JANUARY 31 Mould Bay eP 00 49 (49)		

DOMINION OBSERVATORIES

JANUARY 31
Mould Bay
eP 16 59 49

JANUARY 31
U. S. C. G. S.
41. 4N, 50. 2E
Turkmen S. S. R.
H = 17 06 04. 4
h = about 33 km
Banff
iP 17 18 47 d
Mould Bay
iP 17 16 26 d
Penticton
eP 17 18 47
Resolute
eP 17 16 23 (d)
Schefferville
eP 17 17 14
Yellowknife
iP 17 17 48 d

JANUARY 31
U. S. C. G. S.
52. 7N, 168. 7W
Fox Islands,
Aleutian Islands
H = 18 44 00. 2
h = about 33 km
Mould Bay
eP 18 50 08

JANUARY 31
Shawinigan Falls
eP 19 10 (54)

JANUARY 31
U. S. C. G. S.
54. 2N, 167. 5E
Bering Sea
H = 19 10 22. 6
h = about 53 km
Mould Bay
eP 19 17 05 c

JANUARY 31
Mould Bay
eP 22 15 38

JANUARY 31
H = 22 54 08
Mag less than 2
Port Hardy
iP₁ 22 54 24. 2
iS₁ 22 54 36. 8
D = 104 km

FEBRUARY 1
Mould Bay
eP 01 26 17

FEBRUARY 1
Mould Bay
eP 08 27 (35)

FEBRUARY 1
U. S. C. G. S.
3. 0S, 131. 0E
Ceram Region
H = 10 16 34. 1
h = about 33 km
Mould Bay
eP 10 30 05

FEBRUARY 1
Mould Bay
eP 12 38 33

FEBRUARY 1
U. S. C. G. S.
44. 2N, 114. 6W
Central Idaho
H = 16 38 58. 3
h = about 33 km
Banff
eP 16 40 42
Mould Bay
eP 16 45 21

Penticton
eP 16 40 29
Resolute
eP 16 45 (21)
Yellowknife
eP 16 43 10

FEBRUARY 1
Resolute
eP 16 52 27

FEBRUARY 1
Mould Bay
eP 17 19 30

FEBRUARY 1
Penticton
eP 17 35 08

FEBRUARY 1
Mould Bay
eP 19 52 (25)

FEBRUARY 1
Mould Bay
eP 21 03 40

FEBRUARY 2
183 miles from London,
Ontario, probably to
the west or south
H = 02 59 43. 1
Mag 2. 7

London
P₁ 03 00 30. 5 d
S₁ 03 01 06. 5
D = 295 km

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FEBRUARY 2

Mould Bay
eP 04 53 (04)
Schefferville
eP 04 49 56

FEBRUARY 2

Mould Bay
eP 06 01 24

FEBRUARY 2

H = 08 18 48
Mag 1.8
Penticton
iP 08 19 18.3
iS 08 19 42.2
D = 196 km

FEBRUARY 2

U.S.C.G.S.
19.7S, 174.6W
Tonga Islands
H = 11 48 20.0
h = about 77 km
Penticton
eP 12 00 45

FEBRUARY 2

Mould Bay
eP 15 04 06

FEBRUARY 2

U.S.C.G.S.
51.3N, 179.1W
Andreanof Islands,
Aleutian Islands
H = 18 01 13
h = about 33 km
Mould Bay
eP 18 07 54

FEBRUARY 2

67°50'N, 91°00'W
Keewatin Territory
about 32 miles
southwest of Pelly
Bay, N.W.T.
H = 18 38 11.8
Mag 4.6

Alert

P_n 18 41 54
S_n 18 44 44
L_g 18 46 30
D = 1740 km

Mould Bay

P_n 18 40 52.7
S_n 18 42 57.7
L_g 18 44 10
D = 1250 km

Resolute

P_n 18 39 47
S_n 18 41 05
L_g 18 41 45
D = 775 km

Schefferville

P_n 18 41 02
S_n 18 44 58
L_g 18 46 49
D = 1850 km

Yellowknife

P_n 18 40 35
D = 1250 km

FEBRUARY 2

Penticton
eP 18 48 01

FEBRUARY 2

U.S.C.G.S.
18.8N, 81.5W
Cayman Islands
H = 19 32 15.1
h = about 71 km
Mould Bay
eP 19 42 20

FEBRUARY 2

U.S.C.G.S.
13.9N, 92.1W
Off west coast of
Guatemala
H = 21 25 38
h = about 33 km
Banff
eP 21 33 27
Mould Bay
eP 21 36 11
Ottawa
iP 21 32 25 (d)
Penticton
iP 21 33 28
Schefferville
eP 21 33 56
Shawinigan Falls
eP 21 32 43
Victoria
eP 21 33 38
Yellowknife
eP 21 34 40 c

FEBRUARY 2

Mould Bay
eP 22 17 07

FEBRUARY 2

Mould Bay
eP 23 27 29

FEBRUARY 3

Penticton
eP 01 47 06

FEBRUARY 3

U.S.C.G.S.
15.1N, 92.0W
Off west coast of
Guatemala
H = 04 23 28
h = about 166 km
Mould Bay
eP 04 33 35

DOMINION OBSERVATORIES

Ottawa		FEBRUARY 3	FEBRUARY 3
iP	04 30 06 d	Dominion Observatory	Alert
Penticton		72.9°N, 23.8°W	e(P) 21 37 (02)
iP	04 30 56 d	Northeastern Greenland	i 21 40 01
Shawinigan Falls		H = 14 25 41	
eP	04 30 24	Mag 4.9	
Victoria		An aftershock at	FEBRUARY 4
eP	04 31 06 d	15 36 57	U. S. C. G. S.
Yellowknife		Alert	6.3S, 149.1E
iP	04 32 05 c	P _n 14 27 19	New Britain region
		S _n 14 28 36	H = 01 17 03.1
		L _g 14 29 15	h = about 36 km
		D = 760 km	Ottawa
FEBRUARY 3		Mould Bay	iP' 01 36 01
Mould Bay		eP _n 14 29 55.5	Schefferville
eP	08 17 00	D = 2040 km	eP' 01 35 59 c
		Resolute	
FEBRUARY 3		P _n 14 29 19	
U. S. C. G. S.		S _n 14 32 10	FEBRUARY 4
8.8S, 75.8W		e 14 33 55	Mould Bay
Peru		D = 1740 km	eP 04 33 56 c
H = 11 18 08			Resolute
h = about 33 km			eP 04 34 25
Mould Bay			
eP	11 30 58 d	FEBRUARY 3	
		Dominion Observatory	
		72.9°N, 23.8°W	FEBRUARY 4
		Northeastern Greenland	U. S. C. G. S.
		H = 15 36 57	27.3N, 54.2E
		Mag 4.2	Southern Iran
		Aftershock of earthquake	H = 05 14 25.6
		14 25 41	h = about 34 km
		Alert	Mould Bay
		P _n 15 38 35	eP 05 26 14
		S _n 15 39 51	Schefferville
		L _g 15 40 30	eP 05 26 (46)
		D = 760 km	
		Mould Bay	
		eP 15 41 10	FEBRUARY 4
		D = 2030	Mould Bay
		Resolute	eP 07 14 53 c
		P _n 15 40 35	
		S _n 15 43 26	
		D = 1740 km	
		FEBRUARY 3	
		Mould Bay	
		i 18 44 19	
			FEBRUARY 4
			U. S. C. G. S.
			27.7N, 54.6E
			Southern Iran
			H = 07 18 06.9
			h = about 33 km
			Schefferville
			eP 07 30 33 d

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FEBRUARY 4 U. S. C. G. S. 51. 6N, 176. 6W Andreanof Islands, Aleutian Islands H = 51. 6N, 176. 6W h = about 33 km Mould Bay eP 10 10 36 Penticton eP 10 10 59	FEBRUARY 4 U. S. C. G. S. 48. 5N, 154. 9E Kurile Islands H = 23 21 09. 0 h = about 85 km Alert iP 23 29 40 c Banff iP 23 30 27 d Mould Bay iP 23 28 58 c Ottawa eP 23 32 (52) Penticton iP 23 30 19 d Resolute iP 23 29 47 c Schefferville eP 23 32 21 c Shawinigan Falls eP 23 32 52 Victoria eP 23 30 07 Yellowknife iP 23 29 47 d	Penticton iP 05 15 59 Resolute eP 05 16 01 d Yellowknife iP 05 15 52 d
FEBRUARY 4 U. S. C. G. S. 5. 1N, 82. 4W South of Panama H = 12 28 38. 1 h = about 45 km Schefferville eP 12 37 39 (c)	FEBRUARY 5 U. S. C. G. S. 0. 0, 123. 8E Celebes region H = 01 47 49. 8 h = about 164 km Mould Bay eP 02 01 00	FEBRUARY 5 U. S. C. G. S. 59. 4N, 156. 4W Alaska H = 07 19 30. 0 h = about 33 km Mould Bay eP 07 24 15 i 07 24 18 Yellowknife iP 07 23 51 d
FEBRUARY 4 U. S. C. G. S. 26. 1N, 124. 1E Ryukyu Islands region H = 16 15 22. 9 h = about 33 km Mould Bay eP 16 26 37 d	FEBRUARY 5 U. S. C. G. S. 19. 2N, 147. 1E Mariana Islands region H = 05 04 03. 4 h = about 38 km Alert eP 05 15 (55) Mould Bay iP 05 15 25	FEBRUARY 5 U. S. C. G. S. 44. 3N, 114. 5W Central Idaho H = 07 29 00. 3 h = about 33 km Penticton eP 07 30 30 Yellowknife eP 07 33 11
FEBRUARY 4 U. S. C. G. S. 48. 2N, 153. 9E Kurile Islands H = 20 57 10. 9 h = about 57 km Mould Bay eP 21 05 07 c Resolute eP 21 05 56 c	FEBRUARY 5 U. S. C. G. S. 53. 7N, 165. 4W Fox Islands, Aleutian Islands H = 12 08 20. 6 h = about 33 km Mould Bay eP 12 14 14 Penticton eP 12 14 15 Resolute eP 12 15 04 Yellowknife eP 12 14 07	

DOMINION OBSERVATORIES

FEBRUARY 5

U. S. C. G. S.
14.2N, 94.0W
Off coast of
Chiapas, Mexico
H = 17 49 38
h = about 33 km
Mould Bay
eP 18 00 07 d
Resolute
eP 17 59 (47)

FEBRUARY 5

U. S. C. G. S.
31.9S, 179.0W
Kermadec Islands
H = 19 29 30.0
h = about 68 km
Mould Bay
eP' 19 48 00 c
Resolute
eP' 19 48 09 c
Schefferville
eP' 19 48 (27)

FEBRUARY 5

U. S. C. G. S.
38.4S, 73.2W
Near coast of
Central Chile
H = 20 39 21.6
h = about 41 km
Mag 6 1/4 - 6 1/2 (PAS)
6 - 6 1/4 (BRK)
5 3/4 - 6 (PAL)
Halifax
eP 20 51 45
London
eP 20 51 33 c
Ottawa
iP 20 51 46 d
Shawinigan Falls
eP 20 51 50

FEBRUARY 5

Canadian Arctic
H = 22 23 45.1
Mag 1.2
Resolute
P₁ 22 33 53
S₁ 22 33 59
D = 49 km

FEBRUARY 6

U. S. C. G. S.
38.4S, 73.6W
Near coast of
Central Chile
H = 01 21 29.0
h = about 33 km
London
eP 01 33 43 c
Mould Bay
eP' 01 40 (12)
Ottawa
iP 01 33 55 d
Shawinigan Falls
eP 01 34 01 (c)

FEBRUARY 6

U. S. C. G. S.
7.9S, 119.9E
Flores Sea
H = 01 55 59.2
h = about 306 km
Halifax
eP' 02 14 59
London
eP' 02 14 48
Penticton
eP' 02 14 09
Resolute
eP' 02 13 (59)
Schefferville
eP' 02 14 40
Yellowknife
iP' 02 14 03

FEBRUARY 6

U. S. C. G. S.
6.8N, 73.2W
Colombia-Venezuela
Border region
H = 03 27 55.8
h = about 108 km
Mould Bay
eP 03 39 19
Penticton
iP 03 37 36
Resolute
eP 03 38 (50)
Schefferville
iP 03 36 26 c
Shawinigan Falls
eP 03 35 20
Yellowknife
iP 03 38 13 d

FEBRUARY 6

U. S. C. G. S.
18.1S, 177.6W
Fiji Islands region
H = 05 53 53.9
h = about 500 km
Penticton
iP 06 05 34 c

FEBRUARY 6

U. S. C. G. S.
14.9N, 95.0W
Off coast of
Chiapas, Mexico
H = 06 16 39
h = about 33 km
Mould Bay
eP 06 27 03 c

FEBRUARY 6

U. S. C. G. S.
7.4N, 82.6W
Near south coast of
Panama
H = 07 01 47.0
h = about 61 km

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London eP 07 08 39	FEBRUARY 6 Ottawa iP 16 00 24	FEBRUARY 6 U.S.C.G.S. 28.2S, 67.4W La Rioja Province, Argentina H = 21 43 16.3 h = about 19 km
Mould Bay eP 07 13 03		Mould Bay eP' 22 01 52
Ottawa iP 07 09 03 d	FEBRUARY 6 Mould Bay eP 18 00 32	Penticton eP 21 56 18
Penticton iP 07 10 53 c		Schefferville eP 21 55 48
Resolute eP 07 12 38 d	FEBRUARY 6 U.S.C.G.S. 55.6N, 166.1E Komandorskie Islands region H = 18 17 10.9 h = about 33 km	Shawinigan Falls eP 21 55 04
Schefferville eP 07 10 29 c		Yellowknife iP 21 56 55 (c)
Shawinigan Falls eP 07 09 17		
Victoria iP 07 11 04 c	Alert eP 18 24 43 c	
FEBRUARY 6 U.S.C.G.S. 3.5S, 146.0E	Banff eP 18 25 20	FEBRUARY 6 Dominion Observatory About 85°N, 7°W North Polar region H = 21 43 53 Mag 4.2
Bismarck Sea H = 10 20 25.5 h = about 33 km	London eP 18 27 57	Alert eP _n 21 45 28 S _n 21 46 44 D = 745 km
Mould Bay eP 10 33 45	Mould Bay eP 18 23 51	Mould Bay iP _n 21 47 45.5 D = 1870 km
	Penticton eP 18 25 14	Resolute P _n 21 47 39 D = 1805 km
FEBRUARY 6 Mould Bay eP 11 22 19 d	Resolute eP 18 24 41	
	Schefferville eP 18 27 (25)	
	Shawinigan Falls eP 18 28 00	
FEBRUARY 6 Mould Bay eP 12 57 (15)	FEBRUARY 6 U.S.C.G.S. 56.7S, 28.8W	FEBRUARY 17 U.S.C.G.S. 17.7S, 178.7W
Penticton eP 12 57 15	Sandwich Islands region H = 20 46 50.7 h = about 33 km	Fiji Islands region H = 01 23 41.7 h = about 559 km Mag 4.3 (C.G.S.)
Resolute eP 12 57 00	Mould Bay eP' 21 06 15	Penticton iP 01 35 18
FEBRUARY 6 Mould Bay eP 14 38 28 d	Yellowknife eP' 21 06 03	

DOMINION OBSERVATORIES

FEBRUARY 7
 U. S. C. G. S.
 59. 6S, 147. 9E
 1000 km southwest
 of MacQuarie Islands
 H = 03 29 41. 9
 h = about 33 km
 Mag 5. 0 (CGS)
 London
 eP' 03 49 17
 Mould Bay
 eP' 03 49 20

FEBRUARY 7
 Mould Bay
 eP 09 35 32

FEBRUARY 7
 U. S. C. G. S.
 36. 4N, 70. 8E
 Hindu Kush
 H = 12 12 31. 4
 h = about 214 km
 Mag 3. 7 (CGS)
 Mould Bay
 eP 12 23 06
 i 12 23 53

FEBRUARY 7
 U. S. C. G. S.
 14. 4N, 53. 3E
 Gulf of Aden
 H = 16 44 45. 3
 h = about 33 km
 Mould Bay
 eP 16 57 (39)

FEBRUARY 7
 U. S. C. G. S.
 14. 7 N, 119. 6E
 Off west coast of
 Central Luzon,
 Philippine Islands
 H = 17 36 52. 8
 h = about 151 km
 Mag 4. 5 (C. G. S.)

Mould Bay
 eP 17 49 01 c
 Resolute
 eP 17 49 (28)
 Yellowknife
 eP 17 49 48 d

FEBRUARY 7
 Penticton
 eP 18 13 34
 Victoria
 iP 18 13 06c

FEBRUARY 7
 Mould Bay
 eP 20 13 29
 Yellowknife
 eP 20 10 07

FEBRUARY 7
 Mould Bay
 iP 21 19 08 d

FEBRUARY 7
 Mould Bay
 eP 22 04 (07)

FEBRUARY 8
 Canadian Arctic
 H = 02 00 53. 2
 Mag 2. 4
 Yellowknife
 P₁ 02 01 26
 S₁ 02 01 56
 D = 205 km

FEBRUARY 8
 U. S. C. G. S.
 54. 2N, 35. 0W
 North Atlantic Ocean
 H = 04 07 28. 1
 h = about 33 km
 Shawinigan Falls
 eP 04 12 50

FEBRUARY 8
 U. S. C. G. S.
 26. 6N, 55. 2E
 Persian Gulf
 H = 06 03 09. 9
 h = about 33 km
 Mag 4. 1 (C. G. S.)
 Mould Bay
 eP 06 15 02

FEBRUARY 8
 Mould Bay
 eP 07 38 (00)

FEBRUARY 8
 Penticton
 eP 09 52 24

FEBRUARY 8
 U. S. C. G. S.
 54. 1N, 159. 8E
 Near east coast of
 Kamchatka
 H = 10 02 15. 0
 h = about 33 km
 Mag 4. 1 (C. G. S.)
 Alert
 eP 10 10 05
 Mould Bay
 iP 10 09 16
 Resolute
 eP 10 10 09

FEBRUARY 8
 U. S. C. G. S.
 50. 9N, 156. 6E
 Southern Kamchatka
 H = 13 26 20. 5
 h = about 63 km
 Mag 4. 4 (C. G. S.)
 Mould Bay
 eP 13 33 49
 Resolute
 eP 13 34 41

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FEBRUARY 8
Mould Bay
eP 16 07 30

FEBRUARY 8
U. S. C. G. S.
12.9S, 170.2E
New Hebrides Islands
region
H = 18 18 07.3
h = about 628 km
Mould Bay
eP' 18 37 31
Resolute
eP' 18 37 (28)

FEBRUARY 8
Penticton
eP 19 04 03

FEBRUARY 9
Mould Bay
eP 01 41 59
Resolute
eP 01 42 42 c

FEBRUARY 9
U. S. C. G. S.
36.4N, 137.9E
Central Honshu,
Japan
H = 03 53 06
h = about 33 km
Mag 4.4 (C. G. S.)
Mould Bay
eP 04 02 56
Resolute
eP 04 03 36 (c)

FEBRUARY 9
Alert
eP 04 18 17

FEBRUARY 9
U. S. C. G. S.
51.2N, 179.8W
Andreanof Islands,
Aleutian Islands
H = 07 59 52.9
h = about 33 km
Mag 4.5 (C. G. S.)
Banff
eP 08 07 18
London
eP 08 10 15
Mould Bay
eP 08 06 36 c
Penticton
eP 08 07 06
Resolute
eP 08 07 27 (d)
Schefferville
eP 08 10 01
Victoria
eP 08 06 51
Yellowknife
iP 08 06 50 (c)

FEBRUARY 9
U. S. C. G. S.
43.7N, 150.6E
Kurile Islands region
H = 16 05 03.0
h = about 33 km
Mag 4.8 (C. G. S.)
Alert
eP 16 14 18
London
eP 16 17 21
Mould Bay
eP 16 13 41
Penticton
iP 16 14 58 c
Resolute
eP 16 14 27 c
Schefferville
eP 16 16 (55)
Yellowknife
eP 16 14 28 d

FEBRUARY 9
Penticton
eP 17 03 54

FEBRUARY 9
U. S. C. G. S.
44.5N, 27.9W
Azores Islands region
H = 20 40 20
h = about 33 km
Mould Bay
eP 20 48 52 c

FEBRUARY 10
Mould Bay
eP 03 38 01

FEBRUARY 10
U. S. C. G. S.
7.8N, 83.4W
South of Panama
H = 05 02 34
h = about 33 km
Mag 4.0 (C. G. S.)
Mould Bay
eP 05 13 50

FEBRUARY 10
U. S. C. G. S.
54.1N, 166.5W
Fox Islands,
Aleutian Islands
H = 05 10 40
h = about 33 km
Mag 4.1 (C. G. S.)
Mould Bay
eP 05 16 51

DOMINION OBSERVATORIES

FEBRUARY 10
 U. S. C. G. S.
 52. 0N, 108. 1E
 Lake Baikal region
 H = 06 48 31. 2
 h = about 27 km
 Mould Bay
 eP 06 57 08
 Resolute
 eP 06 57 41 d

FEBRUARY 10
 U. S. C. G. S.
 42. 4N, 142. 1E
 Near south coast
 of Hokkaido, Japan
 H = 12 00 42. 2
 h = about 54 km
 Mag 4. 3 (C. G. S.)
 Mould Bay
 eP 12 09 41 c
 Resolute
 eP 12 10 26 c

FEBRUARY 10
 U. S. C. G. S.
 53. 5N, 33. 4W
 North Atlantic Ocean
 H = 15 05 25. 3
 h = about 41 km
 Mag 4. 9 (C. G. S.)
 Alert
 eP 15 11 33
 Halifax
 eP 15 10 14
 Mould Bay
 eP 15 12 41 c
 Penticton
 eP 15 14 23
 Resolute
 eP 15 11 49 (c)
 Schefferville
 eP 15 09 50 c

Shawinigan Falls
 eP 15 10 56
 Yellowknife
 eP 15 13 07

FEBRUARY 10
 U. S. C. G. S.
 44. 6N, 28. 1W
 Azores Islands region
 H = 16 36 11. 1
 h = about 33 km
 Mould Bay
 eP 16 44 43

FEBRUARY 10
 Mould Bay
 eP 17 57 51

FEBRUARY 10
 U. S. C. G. S.
 44. 6N, 147. 8E
 Kurile Islands region
 H = 21 35 48. 7
 h = about 67 km
 Mag 5. 0 (C. G. S.)
 Alert
 eP 21 44 54
 Banff
 eP 21 45 54
 Mould Bay
 eP 21 44 22
 Penticton
 IP 21 45 47 c
 Resolute
 eP 21 45 08 c
 Schefferville
 eP 21 47 35
 Victoria
 eP 21 45 35
 Yellowknife
 eP 21 45 14 d

FEBRUARY 11
 Mould Bay
 eP 02 06 12

FEBRUARY 11
 Penticton
 eP 08 10 15

FEBRUARY 11
 U. S. C. G. S.
 67. 6N, 146. 7W
 Alaska
 H = 15 05 38. 8
 h = about 33 km
 Mag 4. 8 (Ott)

Penticton
 eP 15 10 40
 Mould Bay
 P_n 15 08 28
 S_n 15 10 36
 D = 1300 km

Resolute
 eP_n 15 09 42
 S_n 15 12 51
 D = 1925 km

Schefferville
 eP_n 15 12 53
 Yellowknife
 eP_n 15 08 52
 S_n 15 11 23
 L_g 15 13 00
 D = 1525 km

FEBRUARY 11
 Mould Bay
 eP 16 58 35

FEBRUARY 12
 U. S. C. G. S.
 17. 7N, 122. 3E
 Near west coast of
 Luzon, Philippine
 Islands
 H = 00 26 19
 h = about 33 km
 Mag 4. 5 (C. G. S.)

SEISMOLOGICAL BULLETIN - 1963

Mould Bay eP 00 38 22	FEBRUARY 12 Alert	London (e)P 00 28 55 d
Resolute eP 00 38 52	eP 21 43 01	i 00 29 18
Yellowknife eP 00 39 13		Mould Bay eP 00 33 18
FEBRUARY 12	FEBRUARY 12	Ottawa eP 00 29 29 c
U. S. C. G. S.	Mould Bay	Penticton iP 00 30 41 d
19.0N, 107.4W	eP 21 45 02	Resolute eP 00 32 55
Revilla Gigedo	Resolute	Schefferville iP 00 31 00 d
Islands region	eP 21 45 (08)	Seven Falls eP 00 29 57 d
H = 08 43 37.9	FEBRUARY 12	Shawinigan Falls eP 00 29 46
h = about 33 km	U. S. C. G. S.	Victoria eP 00 30 50 d
Mag 4.4 (C. G. S.)	17.8S, 178.6W	Yellowknife iP 00 31 49 c
Mould Bay	Fiji Islands	
eP 08 53 26 d	H = 23 07 28.9	
	h = about 583 km	
	Mag 5.5 (C. G. S.)	
	Banff	
FEBRUARY 12	eP 23 19 19	
U. S. C. G. S.	Mould Bay	FEBRUARY 13
51.5N, 177.9W	eP 23 20 13	U. S. C. G. S.
Andreanof Islands	Penticton	13.0N, 57.9E
Aleutian Islands	iP 23 19 04 c	Arabian Sea
H = 15 09 46.0	Yellowknife	H = 01 34 40.4
h = about 33 km	iP 23 19 46 c	h = about 33 km
Mag 3.7 (C. G. S.)		Alert
Mould Bay	FEBRUARY 13	eP 01 46 53
eP 15 16 23 c	Mould Bay	Mould Bay
Penticton	iP 00 26 25 c	eP 01 47 41 d
iP 15 16 50	i 00 29 56	
Resolute	Yellowknife	
e 15 19 22	eP 00 26 12	
Yellowknife		FEBRUARY 13
eP 15 16 33		U. S. C. G. S.
		27.6N, 55.1E
FEBRUARY 12	FEBRUARY 13	Southern Iran
U. S. C. G. S.	U. S. C. G. S.	H = 03 06 38.1
6.7S, 147.1E	13.4N, 91.0W	h = about 33 km
Near north coast	Near south coast	Mag 3.9 (C. G. S.)
of New Guinea	of Guatemala	Mould Bay
H = 17 43 59.2	H = 00 22 51.3	eP 03 18 26 c
h = about 120 km	h = about 116 km	
Mag 4.8 (C. G. S.)	Mag 5.0 (C. G. S.)	
Mould Bay	Alert	
eP 17 57 19	eP 00 33 (52)	
	Banff	
	eP 00 30 38	

DOMINION OBSERVATORIES

FEBRUARY 13
Mould Bay
eP 03 39 11

FEBRUARY 13
U. S. C. G. S.
24.5N, 121.8E
Northern Formosa
H = 08 50 02.2
h = about 33 km
Mag 7 1/4 (PAS)
7 1/4 (BRK)
7 - 7 1/4 (PAL)

Alert
iP 09 01 32 c
S 09 10 56
Banff
iP 09 02 57 c
Mould Bay
eP 09 01 28 d
S 09 10 50
Ottawa
eP 09 04 (22)
Penticton
iP 09 02 53 c
Resolute
eP 09 01 59 d
Schefferville
eP 09 03 48 c
Seven Falls
eP' 09 08 (27)
Victoria
iP 09 02 45 c
Yellowknife
iP 09 02 22 c

FEBRUARY 13
Mould Bay
iP 09 20 54 c
Yellowknife
iP 09 20 48
i 09 21 48

FEBRUARY 13
U. S. C. G. S.
24.8N, 121.7E
Northern Formosa
H = 09 30 34.6
h = about 33 km
Alert
eP 09 42 03
Mould Bay
iP 09 41 57
Yellowknife
eP 09 42 51

FEBRUARY 13
U. S. C. G. S.
9.9S, 160.8E
Solomon Islands
H = 18 13 55.1
h = about 29 km
Mag 6 1/2 (PAS)
6 1/2 (BKS)
6 - 6 1/4 (PAL)
5.8 (CGS)

Alert
eP 18 27 (56)
Banff
eP 18 27 08
Mould Bay
eP 18 27 25
Ottawa
eP' 18 32 (48)
Penticton
eP 18 26 56
Resolute
eP 18 27 54 d
Schefferville
eP' 18 32 (52)
Seven Falls
eP' 18 32 51
Shawinigan Falls
eP' 18 32 52
Victoria
eP 18 26 45
Yellowknife
eP 18 27 20

FEBRUARY 13
U. S. C. G. S.
24.6N, 122.1E
Northern Formosa
H = 19 02 06.7
h = about 33 km
Mag 5.0 (C. G. S.)
Alert
e(P) 19 13 55
Mould Bay
eP 19 13 31 c
Penticton
iP 19 14 57

FEBRUARY 13
Seven Falls
eP 19 13 46

FEBRUARY 13
U. S. C. G. S.
11.6N, 57.7E
Socotra region
H = 19 55 36.0
h = about 33 km
Mould Bay
eP 20 08 45

FEBRUARY 14
Mould Bay
eP 06 57 (22)

FEBRUARY 14
U. S. C. G. S.
10.1S, 160.3E
Solomon Islands
H = 06 48 30.3
h = about 64 km
Mag 5.1 (C. G. S.)
Penticton
eP 07 01 29

SEISMOLOGICAL BULLETIN - 1963

FEBRUARY 14

Alert
eP 07 12 (04)
Mould Bay
eP 07 10 25
Resolute
eP 07 11 32
Yellowknife
eP 07 11 14

FEBRUARY 14

U. S. C. G. S.
7.2S, 128.2E
Banda Sea
H = 07 04 40.8
h = about 197 km
Mag 6 1/2 (PAS)
5.8 (CGS)

Banff

eP' 07 22 55

Halifax

eP' 07 23 47

London

P' 07 23 30

Mould Bay

eP 07 18 16

iP' 07 22 41

Ottawa

eP' 07 23 32

i 07 23 43

Penticton

eP 07 18 52

Schefferville

eP' 07 23 (25)

Seven Falls

eP' 07 23 (31)

Shawinigan Falls

eP' 07 23 (37)

Victoria

eP 07 18 41

eP' 07 22 48

Yellowknife

eP 07 18 44

iP' 07 22 49

FEBRUARY 14

U. S. C. G. S.
6.2N, 82.5W
South of Panama
H = 08 31 59.5
h = about 33 km
Mag 4.2 (C. G. S.)
Mould Bay
eP 08 43 26 c
Penticton
eP 08 41 16
Resolute
eP 08 43 (00)
Schefferville
eP 08 40 53
Yellowknife
iP 08 42 10 c

FEBRUARY 14

U. S. C. G. S.
11.0N, 61.3W
Near north coast of
Trinidad
H = 08 50 36.5
h = about 33 km
Mag 4.0 (C. G. S.)
Mould Bay
eP 09 02 (02)

FEBRUARY 14

U. S. C. G. S.
00.9N, 30.0W
Mid-Atlantic Ocean
H = 12 09 11.4
h = about 33 km
Mag 4.6 (C. G. S.)
Alert
eP 12 21 (34)
S 12 31 52
Halifax
(eP) 12 18 30
London
eP 12 19 31 d
Mould Bay
eP 12 22 04 c
S 12 32 48

Ottawa

eP 12 19 (19)
Penticton
eP 12 22 04
Resolute
eP 12 21 33
Schefferville
eP 12 19 30
Seven Falls
eP 12 19 (04)
Shawinigan Falls
eP 12 19 (09)
Yellowknife
eP 12 21 52

FEBRUARY 14

U. S. C. G. S.
40.4N, 19.9E
Near coast of Albania
H = 12 48 02
h = about 33 km
Mag 4.4 (C. G. S.)
Mould Bay
eP 12 58 12

FEBRUARY 14

U. S. C. G. S.
44.5N, 15.5E
Near coast of
Yugoslavia
H = 13 18 56.4
h = about 36 km
Alert
eP 13 27 07
Mould Bay
eP 13 28 33 c
Penticton
eP 13 30 57

FEBRUARY 14

U. S. C. G. S.
45.2N, 148.6E
Kurile Islands
H = 14 09 29.8
h = about 97 km
Mag 5.1 (C. G. S.)
Mould Bay
eP 14 17 52

DOMINION OBSERVATORIES

Resolute eP 14 18 40 c	FEBRUARY 14 U. S. C. G. S. 3. 1S, 134. 3E Western New Guinea H = 22 41 51. 1 h = about 49 km Mag 4. 6 (CGS) Mould Bay iP 22 55 16 c	FEBRUARY 15 U. S. C. G. S. 40. 6N, 20. 3E Albania H = 10 18 26. 3 h = about 33 km Mag 4. 6 (CGS) Alert eP 10 27 12 Mould Bay eP 10 28 36 Penticton eP 10 30 53 Resolute eP 10 28 14
FEBRUARY 14 Penticton eP 14 48 08	FEBRUARY 15 U. S. C. G. S. 33. 2S, 179. 2W Kermadec Islands H = 00 48 51. 9 h = about 42 km Mag 5. 3 (CGS) Alert eP' 01 07 48 Mould Bay eP' 01 07 27 Resolute eP' 01 07 36 c Seven Falls eP' 01 07 47 c	FEBRUARY 15 Mould Bay eP 15 57 51 d Resolute eP 15 58 (31)
FEBRUARY 14 Resolute eP 22 06 30	FEBRUARY 15 U. S. C. G. S. 4. 3N, 96. 3E Sumatra H = 16 29 19. 0 h = about 33 km Mag 5. 7 (CGS) Mould Bay eP 16 42 49 c	FEBRUARY 15 Mould Bay eP 18 26 10
FEBRUARY 14 U. S. C. G. S. 5. 0S, 144. 6E Eastern New Guinea H = 22 07 54. 3 h = about 80 km Mag 6 1/2 (PAS) 6 (PAL) 6. 0 (CGS) Halifax eP' 22 27 04 London eP' 22 26 45 Mould Bay eP 22 21 14 Ottawa eP' 22 26 49 Penticton eP 22 21 20 Resolute eP 22 21 (44) Schefferville eP' 22 26 45 c Seven Falls eP' 22 26 52 (c) Victoria eP 22 21 10 Yellowknife eP 22 21 28	FEBRUARY 15 U. S. C. G. S. 14. 9S, 178. 7W Fiji Islands region H = 06 54 51. 8 h = about 33 km Mag 5. 0 (CGS) Penticton iP 07 07 14	FEBRUARY 15 Mould Bay eP 18 26 10
	FEBRUARY 15 Mould Bay eP 09 10 00	FEBRUARY 15 U. S. C. G. S. 15. 4S, 174. 3W Samoa Islands region H = 18 30 36. 0 h = about 140 km Mag 5. 0 (CGS) Penticton eP 18 42 33

SEISMOLOGICAL BULLETIN - 1963

FEBRUARY 15

Penticton
eP 20 33 21

FEBRUARY 15

Mould Bay
eP 22 47 49

FEBRUARY 16

Penticton
eP 00 01 10

FEBRUARY 16

U. S. C. G. S.
46. 2N, 111. 0W
South Western
Montana
H = 03 01 40.5
h = about 33 km

Banff

iP 03 03 07.1

Mould Bay
eP 03 07 (54)

Penticton
eP 03 03 16

Victoria
eP 03 03 53

Yellowknife
eP 03 05 27

FEBRUARY 16

49. 6°N, 127. 1°W
West of Vancouver Island
H = 04 06 45
Mag 2. 8

Penticton
eP_n 04 07 55
D = 527 km

Port Hardy
iP₁ 04 07 07.9
iS₁ 04 07 25.6
D = 145 km

Victoria
eP_n 04 07 28.2
D = 302 km

FEBRUARY 16

U. S. C. G. S.
5. 7N, 126. 5E
South of Mindanao,
Philippine Islands
H = 05 44 27.5
h = about 133 km
Mag 4. 3 (CGS)
Mould Bay
eP 05 57 (12)

FEBRUARY 16

U. S. C. G. S.
36. 7N, 38. 0E
Near coast of Turkey
H = 06 21 13.2
h = about 101 km
Mag 4. 1 (CGS)
Mould Bay
eP 06 31 (45)

FEBRUARY 16

44°53'N, 73°41'W
15 miles southwest
of Rouses Pt., N. Y.
H = 08 00 16.6
Mag 2. 6
London
e 08 03 11
Lg 08 03 18
D = 648 km

Montreal

P₁ 08 00 26.7
i 08 00 30
S₁ 08 00 35
D = 68.1km

Ottawa

P₁ 08 00 45
i 08 00 48.5
S₁ 08 01 06.0
D = 172 km

Seven Falls

P_n 08 01 03
S_n 08 01 36
S₁ 08 01 46
D = 325 km

Shawinigan Falls

P_n 08 00 46
S_n 08 01 08.5
S₁ 08 01 12.5
D = 200 km

FEBRUARY 16

U. S. C. G. S.
15. 1N, 46. 5W
North Atlantic Ocean
H = 08 04 13.4
h = about 33 km
Mag 4. 5 (CGS)
Penticton
iP 08 15 10

FEBRUARY 16

U. S. C. G. S.
17. 7S, 178. 6W
Fiji Islands region
H = 08 31 17.5
h = about 534 km
Mag 4. 5 (CGS)
Mould Bay
eP 08 44 05
Penticton
iP 08 42 56 c

FEBRUARY 16

U. S. C. G. S.
9. 7N, 122. 5E
Negros, Philippine
Islands
H = 08 31 51.1
h = about 28 km
Mould Bay
iP 08 44 36

FEBRUARY 16

Mould Bay
eP 11 02 31

DOMINION OBSERVATORIES

FEBRUARY 16	Penticton	Schefferville
U. S. C. G. S.	eP 12 32 21	eP 00 07 17
7. 0S, 117. 3E	Schefferville	Seven Falls
Flores Sea	eP 12 31 (28)	eP 00 08 (10)
H = 10 46 22. 0	Yellowknife	
h = about 561 km	iP 12 31 24 c	
Mag 4. 6 (C. G. S.)		
Mould Bay	FEBRUARY 16	FEBRUARY 17
eP' 11 03 38	Mould Bay	U. S. C. G. S.
Ottawa	eP 14 15 24	24. 1N, 122. 5E
eP' 11 04 40		Ryukyu Islands
e 11 07 27		H = 02 31 40. 8
Penticton		h = about 33 km
iP' 11 04 03	FEBRUARY 16	Mag 4. 6 (CGS)
Resolute	U. S. C. G. S.	Banff
eP' 11 03 49 d	17. 8S, 178. 5W	eP 02 44 36
Schefferville	Fiji Islands region	Mould Bay
eP' 11 04 32	H = 17 54 41. 3	eP 02 43 07
Seven Falls	h = about 564 km	Penticton
eP' 11 04 39	Mag 4. 4 (CGS)	iP 02 44 31 c
	Penticton	Victoria
	iP 18 06 17	eP 02 44 23
		Yellowknife
		eP 02 44 00
FEBRUARY 16		
U. S. C. G. S.	FEBRUARY 16	FEBRUARY 17
0. 6S, 147. 5E	H = 20 17 19	U. S. C. G. S.
Admiralty Islands	Mag 1. 9	17. 2N, 100. 8W
region	Penticton	Guerrero, Mexico
H = 12 12 39. 1	eP _n 20 17 56. 2	H = 03 50 41. 2
h = about 33 km	eS _n 20 18 27. 1	h = about 33 km
Mag 5. 0 (CGS)	D = 253 km	Mag 4. 1 (CGS)
Mould Bay		Mould Bay
eP 12 25 43	FEBRUARY 16	eP 04 00 46 c
i 12 26 22	U. S. C. G. S.	Resolute
Resolute	8. 5S, 80. 1W	eP 04 00 30 d
eP 12 26 08 d	Off coast of Peru	Yellowknife
	H = 21 32 22. 4	eP 03 59 05
	h = about 33 km	
	Mag 4. 8 (CGS)	
FEBRUARY 16	Mould Bay	FEBRUARY 17
U. S. C. G. S.	eP 21 45 09 c	U. S. C. G. S.
36. 5N, 70. 5E		36. 9N, 71. 3E
Hindu Kush	FEBRUARY 17	Hindu Kush region
H = 12 19 31. 1	U. S. C. G. S.	H = 05 38 17. 1
h = about 216 km	54. 0N, 35. 1W	h = about 174 km
Mag 5. 2 (CGS)	North Atlantic Ocean	Mag 4. 7 (CGS)
Alert	H = 00 03 03. 7	Mould Bay
eP 12 29 10 c	h = about 32 km	eP 05 48 53 d
Mould Bay	Mag 3. 8 (CGS)	i 05 49 41
iP 12 30 04 c		Penticton
S 12 38. 44		eP 05 51 16

SEISMOLOGICAL BULLETIN - 1963

FEBRUARY 17

U. S. C. G. S.

4. 8S, 144. 2E

Northeast New Guinea

H = 06 53 20. 3

h = about 35 km

Mag 5. 7 (CGS)

Mould Bay

eP 07 06 45

FEBRUARY 17

U. S. C. G. S.

42. 1N, 37. 2E

Black Sea

H = 08 28 24. 9

h = about 33 km

Mag 4. 8 (CGS)

Mould Bay

eP 08 38 37

Penticton

eP 08 41 08

Victoria

eP 08 41 15

FEBRUARY 17

Mould Bay

eP 09 19 49 c

FEBRUARY 17

Mould Bay

eP 14 04 46

Penticton

eP 14 06 10

FEBRUARY 17

U. S. C. G. S.

23. 9S, 179. 8W

Fiji Islands region

H = 19 26 31. 5

h = about 520 km

Mag 5. 1 (CGS)

Penticton

iP 19 38 39

FEBRUARY 17

U. S. C. G. S.

43. 9N, 17. 2E

Yugoslavia

H = 20 12 11. 4

h = about 33 km

Mag 5. 2 (CGS)

Penticton

eP 20 24 19

FEBRUARY 18

H = 02 44 08

Mag 1. 2

Penticton

iP₁ 02 44 23. 2

iS₁ 02 44 35. 1

D = 98 km

FEBRUARY 18

U. S. C. G. S.

25. 3N, 121. 8E

Near north coast of

Formosa

H = 07 08 29

h = about 33 km

Mould Bay

iP 07 19 51 d

FEBRUARY 18

Mould Bay

eP 14 14 (16)

FEBRUARY 18

U. S. C. G. S.

36. 2S, 90. 4W

West of Chile

H = 14 12 36. 0

h = about 33 km

Mag 5. 2 (CGS)

Mould Bay

eP' 14 30 51 c

Seven Falls

iP 14 25 01 c

Shawinigan Falls

eP 14 24 57

FEBRUARY 18

U. S. C. G. S.

36. 4N, 70. 9E

Hindu Kush

H = 14 25 18. 9

h = about 225 km

Mag 4. 9 (CGS)

Alert

eP 14 34 58

Mould Bay

iP 14 35 50 c

Resolute

e(P) 14 36 (00)

Schefferville

eP 14 37 16

Yellowknife

iP 14 37 11 c

FEBRUARY 18

U. S. C. G. S.

58. 2N, 32. 4W

North Atlantic Ocean

H = 18 24 05. 5

h = about 33 km

Mag 4. 6 (CGS)

Mould Bay

eP 18 30 36

Schefferville

eP 18 28 30

FEBRUARY 18

U. S. C. G. S.

57. 9N, 32. 2W

North Atlantic Ocean

H = 19 03 01

h = about 33 km

Mould Bay

eP 19 09 (41)

i 19 09 53

Penticton

eP 19 11 39

Schefferville

eP 19 07 27

Shawinigan Falls

eP 19 08 (45)

DOMINION OBSERVATORIES

FEBRUARY 18
 U. S. C. G. S.
 33.7N, 137.7E
 Near south coast
 of Honshu, Japan
 H = 21 53 57.6
 h = about 317 km
 Mag 4.1 (CGS)
 Mould Bay
 eP 22 03 46
 Pentiction
 iP 22 04 53 d

FEBRUARY 19
 Mould Bay
 eP 01 01 48

FEBRUARY 19
 U. S. C. G. S.
 11.1N, 124.2E
 Cebu, Philippine
 Islands region
 H = 01 22 23
 h = about 33 km
 Mould Bay
 eP 01 34 52

FEBRUARY 19
 Mould Bay
 iP 03 37 47 d

FEBRUARY 19
 Mould Bay
 eP 08 18 17

FEBRUARY 19
 Alert
 eP 11 22 25 (d)

FEBRUARY 19
 U. S. C. G. S.
 41.1N, 142.8E
 South of Hokkaido,
 Japan
 H = 12 12 47.5
 h = about 32 km
 Mag 4.2 (CGS)
 Mould Bay
 eP 12 21 58 d
 Resolute
 eP 12 22 41 d

FEBRUARY 19
 U. S. C. G. S.
 55.3S, 28.8W
 Sandwich Islands region
 H = 16 39 15.1
 h = about 33 km
 Mould Bay
 eP' 16 58 41
 Pentiction
 eP' 16 58 20
 Resolute
 eP' 16 58 (35)
 Yellowknife
 eP' 16 58 31

FEBRUARY 19
 Mould Bay
 eP 20 57 42

FEBRUARY 19
 U. S. C. G. S.
 24.0N, 122.9E
 Off east coast of
 Formosa
 H = 22 28 14
 h = about 33 km
 Mould Bay
 eP 22 39 40
 Resolute
 eP 22 40 12 c

FEBRUARY 19
 Mould Bay
 eP 22 53 (45)

FEBRUARY 19
 Mould Bay
 iP 23 11 05 c

FEBRUARY 20
 U. S. C. G. S.
 17.2S, 178.2W
 Fiji Islands region
 H = 06 46 19.5
 h = about 612 km
 Mag 4.4 (CGS)
 Pentiction
 eP 06 57 48

FEBRUARY 20
 Mould Bay
 eP 07 47 39

FEBRUARY 20
 Mould Bay
 eP 12 03 12

FEBRUARY 20
 U. S. C. G. S.
 51.9N, 177.9E
 Rat Islands,
 Aleutian Islands
 H = 14 32 07.7
 h = about 33 km
 Mag 4.7 (CGS)
 Mould Bay
 iP 14 38 49 c
 Pentiction
 iP 14 39 29 c
 Resolute
 eP 14 39 42 c
 Victoria
 eP 14 39 14
 Yellowknife
 iP 14 39 10 c

SEISMOLOGICAL BULLETIN - 1963

FEBRUARY 20	Mould Bay	Mould Bay
U. S. C. G. S.	eP 19 51 55	eP 13 12 31 d
7. 2N, 73. 4W	Penticton	Resolute
Northern Colombia	eP 19 53 19	eP 13 13 07 (d)
H = 14 51 17. 8	Resolute	
h = about 127 km	e(P) 19 52 (28)	
Mag 4. 2 (CGS)		
Mould Bay		FEBRUARY 21
eP 15 02 36		U. S. C. G. S.
	FEBRUARY 21	20. 6S, 175. 1W
FEBRUARY 20	U. S. C. G. S.	Tonga Islands region
Mould Bay	33. 4N, 139. 2E	H = 13 16 05. 6
eP 15 47 (59)	South of Honshu,	h = about 33 km
	Japan	Mag 5. 2 (CGS)
	H = 02 33 35. 9	Banff
	h = about 168 km	i 13 28 56
	Mag 4. 4 (CGS)	Penticton
FEBRUARY 20	Alert	iP 13 28 41 c
U. S. C. G. S.	eP 02 43 52 d	Victoria
38. 8N, 139. 0E	Mould Bay	eP 13 28 28
Off west coast of	iP 02 43 29 d	
Honshu, Japan	Penticton	FEBRUARY 21
H = 16 45 51. 0	iP 02 44 43	Resolute
h = about 175 km	Resolute	eP 13 59 49 c
Mould Bay	iP 02 44 09 d	
eP 16 55 08 d	Victoria	
i 16 55 50	eP 02 44 33	
Resolute		FEBRUARY 21
eP 16 55 49 d		Mould Bay
	FEBRUARY 21	eP 14 21 43
FEBRUARY 20	U. S. C. G. S.	
U. S. C. G. S.	42. 3N, 142. 5E	FEBRUARY 21
45. 7S, 78. 7W	Near south coast	U. S. C. G. S.
Off coast of	of Hokkaido, Japan	20. 5S, 173. 9W
southern Chile	H = 07 49 28. 8	Tonga Islands region
H = 17 07 32. 5	h = about 33 km	H = 14 28 29
h = about 33 km	Mag 4. 5 (CGS)	h = about 29 km
Mag 4. 6 (CGS)	Mould Bay	Mag 5. 0 (CGS)
Mould Bay	eP 07 58 30	Penticton
eP ¹ 17 26 29	Resolute	eP 14 41 01
	eP 07 59 14 c	Yellowknife
		eP 14 41 50
FEBRUARY 20	FEBRUARY 21	
U. S. C. G. S.	U. S. C. G. S.	
24. 6N, 122. 1E	17. 9N, 146. 5E	
Near northeast	Mariana Islands region	
coast of Formosa	H = 13 01 06. 5	
H = 19 40 30. 9	h = about 88 km	
h = about 33 km	Mag 4. 4 (CGS)	
Mag 4. 7 (CGS)		

DOMINION OBSERVATORIES

FEBRUARY 21	FEBRUARY 21	Alert
U. S. C. G. S.	Penticton	eP 07 13 19
32.7N, 20.9E	eP 19 05 43	i 07 13 22
Near coast of		(S) 07 15 34
Libya	FEBRUARY 21	Banff
H = 17 14 35.7	U. S. C. G. S.	eP 07 18 27 c
h = about 33 km	32.6N, 21.0E	Mould Bay
Mag 5.0 (CGS)	Near coast of	eP 07 14 36
Alert	Libya	Ottawa
eP 17 24 19	H = 20 26 43.8	eP 07 19 18
S 17 32 19	h = about 33 km	S 07 26 30
Banff	Mag 4.4 (CGS)	Penticton
eP 17 27 34	Mould Bay	eP 07 18 41
Halifax	eP 20 37 44	Resolute
iP 17 25 10 c	Resolute	eP 07 15 03
London	eP 20 37 (24)	Schefferville
iP 17 26 23 (d)	Schefferville	eP 07 18 (04)
Mould Bay	eP 20 37 08	Seven Falls
eP 17 25 36		eP 07 19 06
S 17 34 44		Shawinigan Falls
Ottawa		eP 07 19 15
iP 17 25 57 (c)	FEBRUARY 21	Victoria
S 17 35 22	U. S. C. G. S.	eP 07 18 46
Penticton	12.7N, 84.9W	Yellowknife
eP 17 27 39	Nicaragua	iP 07 16 52 c
Resolute	H = 23 42 34.7	
eP 17 25 15 (d)	h = about 33 km	
Schefferville	Mag 4.3 (CGS)	FEBRUARY 22
eP 17 24 59	Mould Bay	U. S. C. G. S.
Seven Falls	eP 23 53 21	84.7N, 104.3E
eP 17 25 33		North Polar region
Shawinigan Falls		H = 07 23 14
iP 17 25 43 c	FEBRUARY 22	h = about 33 km
Victoria	U. S. C. G. S.	Mag 4.8 (CGS)
eP 17 27 49 c	27.5N, 87.7E	Mould Bay
Yellowknife	Nepal-Tibet	eP 07 27 25
eP 17 26 36	Border region	Yellowknife
	H = 01 32 25.4	iP 07 29 40 c
	h = about 33 km	
FEBRUARY 21	Mould Bay	
U. S. C. G. S.	eP 01 44 05	FEBRUARY 22
32.9N, 21.1E		U. S. C. G. S.
Near coast of		17.8S, 178.8W
Libya	FEBRUARY 22	Fiji Islands region
H = 18 33 06.8	U. S. C. G. S.	H = 07 58 57.0
h = about 33 km	85.0N, 98.9E	h = about 550 km
Mag 4.5 (CGS)	North Polar region	Mag 5.0 (CGS)
Schefferville	H = 07 10 28.0	Banff
eP 18 43 28	h = about 33 km	iP 08 10 50 c
	Mag 5.0 (CGS)	

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Mould Bay eP 08 11 44	Schefferville eP 14 22 36	FEBRUARY 22 Mould Bay eP 22 32 49
Penticton iP 08 10 35 c	Victoria eP 14 25 33 d	
Victoria eP 08 10 23	Yellowknife eP 14 24 11	FEBRUARY 22 Penticton eP 23 13 12
Yellowknife iP 08 11 18 c		
	FEBRUARY 22 Resolute eP 18 27 (35)	FEBRUARY 22 U. S. C. G. S. 58.8N, 137.2W Near coast of southeastern Alaska H = 23 19 57.7 h = about 33 km Mould Bay eP 23 24 14 Penticton i 23 27 10 Resolute eP 23 24 (56) Yellowknife iP 23 22 43
FEBRUARY 22 U. S. C. G. S. 21.1S, 68.1W Peru-Chile Border region H = 09 37 52.3 h = about 98 km Mag 4.4 (CGS) Yellowknife iP 09 50 46 d	FEBRUARY 22 U. S. C. G. S. 18.1N, 71.3W Near south coast of Dominican Republic H = 21 14 06.1 h = about 33 km Mag 5.5 (CGS) Alert eP 21 24 39 Banff eP 21 22 41 London eP 21 19 36 (d) Mould Bay eP 21 24 30 c Ottawa eP 21 19 (52) Penticton eP 21 22 55 Resolute eP 21 23 55 c Schefferville eP 21 21 11 Shawinigan Falls eP 21 19 58 Victoria eP 21 23 09 Yellowknife iP 21 23 22	
FEBRUARY 22 U. S. C. G. S. 30.3S, 178.6W Kermadec Islands H = 11 05 42.0 h = about 113 km Mag 5.0 (CGS) Mould Bay eP' 11 24 04		FEBRUARY 23 Mould Bay eP 02 51 50
FEBRUARY 22 U. S. C. G. S. 40.6N, 20.5E Albania - Greece Border H = 14 12 54.4 h = about 33 km Mag 4.4 (CGS) Alert eP 14 21 (39) Mould Bay eP 14 23 02 Penticton eP 14 25 21 Resolute eP 14 22 (22)	FEBRUARY 22 Ottawa eP 21 25 29 Shawinigan Falls eP 21 25 (38)	FEBRUARY 23 49°29'N, 123°37'W Sechelt Peninsula H = 06 19 17 Mag 2.3 Penticton eP _n 06 20 01.7 D = 298 km Port Hardy eP _n 06 20 03.5 D = 313 km Victoria iP ₁ 06 19 37.1 iS ₁ 06 19 52.3 D = 114 km

DOMINION OBSERVATORIES

FEBRUARY 23

U. S. C. G. S.
36. 0S, 102. 5W
South Pacific Ocean
H = 06 32 30
h = about 33 km
Mag 4. 7 (CGS)
Penticton
eP 06 45 06

FEBRUARY 23

U. S. C. G. S.
44. 8S, 76. 1W
Near coast of
southern Chile
H = 07 02 37. 9
h = about 33 km
Mag 4. 9 (CGS)
Mould Bay
eP' 07 21 32

FEBRUARY 23

Alert
eP 16 52 24
Mould Bay
eP 16 52 37

FEBRUARY 23

U. S. C. G. S.
49. 4N, 158. 6W
Kurile Islands region
H = 17 12 47. 4
h = about 50 km
Mag 4. 4 (CGS)
Alert
eP 17 21 (09)
i 17 21 14
Mould Bay
eP 17 20 25
Resolute
eP 17 21 17 d
Schefferville
eP 17 23 52 c
Yellowknife
iP 17 21 12 c

FEBRUARY 24

U. S. C. G. S.
19. 4N, 146. 2E
Mariana Islands region
H = 03 57 35. 8
h = about 51 km
Mould Bay
eP 04 08 58
Resolute
eP 04 09 33

FEBRUARY 24

U. S. C. G. S.
15. 1S, 72. 5W
Near coast of
southern Peru
H = 05 38 20. 6
h = about 105 km
Mag 5. 3 (CGS)
Mould Bay
eP 05 51 33
Penticton
eP 05 49 37
Resolute
eP 05 51 13
Schefferville
eP 05 49 19
Seven Falls
eP 05 48 30 (c)
Yellowknife
iP 05 50 40 c

FEBRUARY 24

U. S. C. G. S.
18. 3S, 175. 4W
Tonga Islands region
H = 13 07 26. 4
h = about 209 km
Mag 4. 5 (CGS)
Penticton
iP 13 19 32 c

FEBRUARY 24

U. S. C. G. S.
14. 6N, 91. 4W
Central Guatemala
H = 13 34 15. 7
h = about 135 km
Mag 5. 7 (CGS)
Alert
iP 13 45 06 c
Banff
eP 13 41 50
Halifax
iP 13 41 25 c
London
eP 13 40 09 c
Mould Bay
iP 13 44 32 c
S 13 54 14
Ottawa
iP 13 40 44 c
Penticton
iP 13 41 53 c
Port Hardy
iP 13 42 31 c
Resolute
eP 13 44 09 c
Schefferville
iP 13 42 15 c
Seven Falls
iP 13 41 11 c
Victoria
eP 13 42 03 c
Yellowknife
iP 13 43 02 c

FEBRUARY 24

U. S. C. G. S.
44. 9N, 112. 0W
Southwestern Montana
H = 15 24 56. 6
h = about 33 km
Penticton
eP 15 26 27

SEISMOLOGICAL BULLETIN - 1963

FEBRUARY 24
Mould Bay
eP 15 47 25

FEBRUARY 24
U. S. C. G. S.
19. 5S, 179. 0W
Fiji Islands region
H = 21 34 08.1
h = about 546 km
Mag 4. 8 (CGS)
Penticton
iP 21 45 54

FEBRUARY 24
U. S. C. G. S.
26. 4N, 44. 5W
North Atlantic Ocean
H = 22 35 00. 0
h = about 33 km
Mag 4. 6 (CGS)
Alert
eP 22 44 41
London
eP 22 41 45
Mould Bay
eP 22 45 12 d
Ottawa
e 22 41 (20)
Resolute
eP 22 44 28 d
Schefferville
eP 22 41 33
Seven Falls
eP 22 41 (00)
Shawinigan Falls
eP 22 41 08
Yellowknife
iP 22 44 49

FEBRUARY 25
Penticton
eP 00 01 49

FEBRUARY 25
U. S. C. G. S.
7. 6S, 112. 3E
Near south coast
of Java
H = 02 38 19
h = about 33 km
Mould Bay
eP 02 45 27 c
i 02 52 26

FEBRUARY 25
Resolute
eP 05 09 34

FEBRUARY 25
U. S. C. G. S.
72. 3N, 5. 5E
Greenland Sea
H = 07 23 53
h = about 33 km
Alert
eP 07 27 32

FEBRUARY 25
U. S. C. G. S.
28. 1S, 65. 4W
San Luis Province,
Argentina
H = 08 08 20. 1
h = about 32 km
Mag 5. 3 (CGS)
London
iP 08 19 43 c
Penticton
eP 08 21 16
Schefferville
eP 08 20 42
Seven Falls
eP 08 20 00
Yellowknife
eP 08 21 55

FEBRUARY 25
U. S. C. G. S.
12. 2N, 88. 2W
Off coast of El
Salvador
H = 08 58 40. 8
h = about 33 km
Mag 4. 2 (CGS)
Mould Bay
eP 09 09 26
Ottawa
eP 09 05 29
Penticton
eP 09 06 38
Resolute
eP 09 09 02
Schefferville
eP 09 06 59 c
Seven Falls
eP 09 05 55
Yellowknife
iP 09 07 59 c

FEBRUARY 25
U. S. C. G. S.
10. 4N, 121. 8E
Near west coast of
Panay, Philippine
Islands
H = 09 11 23. 7
h = about 46 km
Mag 4. 5 (CGS)
Mould Bay
eP 09 24 03

FEBRUARY 25
U. S. C. G. S.
24. 4N, 123. 4E
Near east coast of
Formosa
H = 17 11 01. 7
h = about 33 km
Mag 5. 3 (CGS)
Alert
eP 17 22 30
Banff
eP 17 23 53

DOMINION OBSERVATORIES

Mould Bay		FEBRUARY 26	FEBRUARY 26
iP	17 22 26	U. S. C. G. S.	U. S. C. G. S.
S	17 32 24	19. 3N, 121. 0E	7. 5S, 146. 2E
Penticton		Coast of northern	Eastern New Guinea
iP	17 23 49	Luzon, Philippine	H = 20 14 08. 7
Resolute		Islands	h = about 171 km
eP	17 22 58 d	H = 02 13 20. 5	Mag 7 1/4 - 7 1/2 (PAS)
Victoria		h = about 56 km	7 - 7 1/4 (BRK)
eP	17 23 41 d	Mag 4. 3 (CGS)	6 3/4 - 7 (PAL)
Yellowknife		Mould Bay	7. 1 (CGS)
iP	17 23 19 d	eP	02 25 14 c
		Resolute	
		eP	02 25 44 c
FEBRUARY 25		Yellowknife	
U. S. C. G. S.		iP	02 26 04 c
19. 5N, 121. 8E			
Off coast of		FEBRUARY 26	
northern Luzon,		U. S. C. G. S.	
Philippine Islands		12. 8N, 144. 1E	
H = 19 21 49. 6		Mariana Islands	
Mag 3. 9 (CGS)		H = 07 52 13. 6	
Mould Bay		h = about 98 km	
eP	19 33 43	Alert	
Yellowknife		eP	08 04 35
eP	19 34 33	Mould Bay	
		eP	08 04 08
		Resolute	
FEBRUARY 25		eP	08 04 42 d
Mould Bay			
eP	22 36 45	FEBRUARY 26	
Yellowknife		U. S. C. G. S.	
eP	22 37 01	12. 4N, 87. 4W	
		Near coast of	
		Nicaragua	
FEBRUARY 25		H = 16 30 13	
U. S. C. G. S.		h = about 33 km	
15. 5N, 121. 3E		Mag. 4. 2 (CGS)	
Central Luzon,		Mould Bay	
Philippine Islands		eP	16 40 58
H = 23 45 16. 8		Resolute	
h = about 33 km		eP	16 40 36 c
Mag 4. 3 (CGS)		Schefferville	
Mould Bay		eP	16 38 34
eP	23 57 34	Yellowknife	
Resolute		iP	16 39 33 c
eP	23 58 01		
		FEBRUARY 27	
		U. S. C. G. S.	
		1. 0S, 78. 8W	
		Ecuador	
		H = 00 10 07. 6	
		h = about 89 km	
		Mag 4. 1 (CGS)	
		Mould Bay	
		eP	00 22 11
		Penticton	
		iP	00 20 12 d

SEISMOLOGICAL BULLETIN - 1963

FEBRUARY 27

Penticton
eP 01 23 01
Victoria
eP 01 22 48.8

FEBRUARY 27

80.9N, 85.8W
Near Hare Flord,
Ellesmere Island,
N. W. T.

H = 01 50 20.3

Mag 3.7

Alert

P_n 01 51 16
S_n 01 52 02
S₁ 01 52 21
D = 440 km

Mould Bay

eP_n 01 52 14.8
eS_n 01 53 45.5
D = 900 km

Resolute

P_n 01 51 58
S_n 01 53 12
D = 740 km

FEBRUARY 27

U. S. C. G. S.

6.0S, 149.4E

New Britain region

H = 04 30 00.8

h = about 52 km

Mag 6 1/2 - 6 3/4 (PAL)
5.2 (CGS)

Alert

eP 04 43 (55)

Halifax

eP' 04 49 (30)

Mould Bay

eP 04 43 27

Ottawa

eP' 04 48 58

Penticton

eP 04 43 22

Resolute

eP 04 43 (55)

Schefferville

eP' 04 48 56

Seven Falls

eP' 04 49 01

Shawinigan Falls

eP' 04 49 00

Yellowknife

eP 04 43 37

FEBRUARY 27

U. S. C. G. S.

16.2S, 173.3W

Tonga Islands region

H = 07 34 23.8

h = about 33 km

Mag 5.4 (CGS)

Penticton

iP 07 46 36

FEBRUARY 27

Mould Bay

iP 10 52 12 c

FEBRUARY 27

U. S. C. G. S.

14.7S, 73.3W

Southern Peru

H = 11 00 45.3

h = about 110 km

Mag 5.4 (CGS)

Mould Bay

eP 11 13 55

Penticton

iP 11 12 21 d

Resolute

eP 11 13 35 d

Schefferville

eP 11 11 43

Seven Falls

iP 11 10 53 d

Shawinigan Falls

eP 11 10 48

Yellowknife

iP 11 13 01 d

FEBRUARY 27

U. S. C. G. S.

16.9N, 100.5W

Off coast of

Guerrero, Mexico

H = 16 01 11.2

h = about 33 km

Mag 4.5 (CGS)

Mould Bay

eP 16 11 17

Resolute

eP 16 11 (00)

Schefferville

eP 16 09 34

Seven Falls

eP 16 08 35

Yellowknife

eP 16 09 37

FEBRUARY 27

U. S. C. G. S.

38.1N, 69.6E

Tadzhik, S. S. R.

H = 17 28 00.6

h = about 157 km

Mag 3.9 (CGS)

Mould Bay

eP 17 38 30

FEBRUARY 27

Mould Bay

eP 20 07 50

FEBRUARY 27

U. S. C. G. S.

4.6S, 152.9E

New Britain

H = 20 28 34.9

h = about 100 km

Mag 5.0 (CGS)

Mould Bay

eP 20 41 40

Resolute

e(P) 20 42 (12)

Yellowknife

eP 20 41 49

DOMINION OBSERVATORIES

FEBRUARY 27
 H = 20 40 59
 Mag 1.5
 Port Hardy
 eP₁ 20 41 08.0
 eS₁ 20 41 15.0
 D = 57 km

FEBRUARY 27
 U. S. C. G. S.
 5.6S, 79.3W
 Northern Peru
 H = 21 11 32.5
 h = about 33 km
 Mould Bay
 eP 21 24 06
 Seven Falls
 eP 21 20 53

FEBRUARY 27
 U. S. C. G. S.
 54.8N, 161.6W
 Alaska Peninsula
 H = 23 36 20.4
 h = about 33 km
 Mag 5.3 (CGS)
 Alert
 eP 23 43 32 c
 Mould Bay
 iP 23 41 58 c
 i 23 45 20
 Penticton
 eP 23 41 53
 Resolute
 eP 23 42 47 c
 Schefferville
 eP 23 45 17
 Yellowknife
 iP 23 41 44 c

FEBRUARY 28
 Mould Bay
 eP 05 15 19

FEBRUARY 28
 U. S. C. G. S.
 38.2N, 141.7E
 Near coast of
 northern Honshu,
 Japan
 H = 06 15 09.5
 h = about 61 km
 Mag 3.8 (CGS)
 Mould Bay
 eP 06 24 49
 Resolute
 eP 06 25 21 c

FEBRUARY 28
 Resolute
 eP 15 32 10 (d)

FEBRUARY 28
 H = 20 10 24
 Mag 1.5
 Penticton
 eP₁ 20 10 51.4
 eS₁ 20 11 12.0
 D = 168 km

MARCH 1
 U. S. C. G. S.
 34.8N, 119.3W
 Ventura County,
 California
 H = 00 25 57.4
 h = about 16 km
 Mag 4 3/4 - 5 (PAS)
 Penticton
 iP 00 29 25
 Mould Bay
 eP 00 33 44

MARCH 1
 U. S. C. G. S.
 35.7N, 59.9E
 Northeastern Iran
 H = 03 20 02.4
 h = about 33 km
 Mag 4.8 (CGS)

Mould Bay
 eP 03 31 02

MARCH 1
 U. S. C. G. S.
 15.6N, 93.1W
 Near coast of
 Chiapas, Mexico
 H = 04 02 34
 h = about 33 km
 Mag 4.4 (CGS)
 Mould Bay
 eP 04 12 44 c
 i 04 13 23
 Yellowknife
 i 04 11 20

MARCH 1
 U. S. C. G. S.
 18.2S, 177.9W
 Fiji Islands region
 H = 04 39 34.3
 h = about 568 km
 Mag 4.6 (CGS)
 Penticton
 iP 04 51 10 c

MARCH 1
 Yellowknife
 eP 09 58 55

MARCH 1
 U. S. C. G. S.
 41.2N, 142.9E
 South of Hokkaido,
 Japan
 H = 10 45 55.7
 h = about 41 km
 Mag 5.1 (CGS)
 Alert
 eP 10 55 31
 Mould Bay
 eP 10 55 04
 Penticton
 eP 10 56 28

SEISMOLOGICAL BULLETIN - 1963

Resolute
eP 10 55 47 c
Schefferville
eP 10 58 07
Yellowknife
eP 10 55 57

MARCH 1
U. S. C. G. S.
41.9N, 80.8E
Sinkiang Province,
China
H = 11 55 22.5
h = about 33 km
Mould Bay
iP 12 05 37 c

MARCH 1
Mould Bay
eP 14 01 05

MARCH 1
U. S. C. G. S.
42.2N, 141.2E
Near south coast
of Hokkaido, Japan
H = 14 32 20
h = about 33 km
Mag 4.5 (CGS)
Mould Bay
eP 14 41 25
Resolute
eP 14 42 07 c

MARCH 1
Mould Bay
eP 19 07 31

MARCH 1
U. S. C. G. S.
1.4N, 29.6W
Atlantic Ocean
H = 19 14 13.1
h = about 33 km

Alert
eP 19 26 35
Mould Bay
eP 19 27 05
Resolute
eP 19 26 (35)
Shawinigan Falls
eP 19 24 11
Yellowknife
eP 19 26 58

MARCH 1
Yellowknife
e 21 10 12

MARCH 1
Canadian Arctic
H = 21 54 50.2
h = 30 km
Mag 1.8
Resolute
P_n 21 55 13.7
P₁ 21 55 15.9
S_n 21 55 32.0
S₁ 21 55 35.4
D = 160 km

MARCH 1
U. S. C. G. S.
22.9N, 144.2E
Volcano Islands region
H = 23 03 30.7
h = about 72 km
Mag 4.4 (CGS)
Mould Bay
eP 23 14 33

MARCH 2
H = 00 25 46
Mag 1.3
Penticton
iP₁ 00 26 13.1
iS₁ 00 26 33.8
D = 171 km

MARCH 2
U. S. C. G. S.
1.8S, 143.6E
North of New Guinea
H = 05 39 07.4
h = about 129 km
Mag 5.3 (CGS)
Mould Bay
eP 05 52 09

MARCH 2
Alert
eP 09 34 50
Banff
eP 09 35 37
Mould Bay
eP 09 34 11 c
S 09 40 46
Penticton
iP 09 35 29 c
Resolute
eP 09 34 58 c
Yellowknife
eP 09 34 58

MARCH 2
U. S. C. G. S.
46.0N, 153.0E
Kurile Islands region
H = 11 12 01.3
h = about 33 km
Mould Bay
eP 11 20 18
Resolute
eP 11 21 05 c
Yellowknife
eP 11 21 05

MARCH 2
U. S. C. G. S.
10.1N, 126.1E
Mindanao, Philippine
Islands region
H = 16 06 56.3
h = about 92 km
Mag 4.0 (CGS)

DOMINION OBSERVATORIES

Mould Bay eP 16 19 29	MARCH 2 41°31'N, 75°46'W	MARCH 3 U. S. C. G. S.
Resolute eP 16 19 56 c	A few miles north of Scranton, Penn.	36.7N, 71.4E
Yellowknife eP 16 20 07	H = 20 24 32	Hindu Kush
	Mag 3.4	H = 01 48 09.4
	Montreal	h = about 209 km
	P _n 20 25 37	Mag 4.3 (CGS)
MARCH 2	e 20 26 20	Mould Bay
Penticton	S ₁ 20 26 45	iP 01 58 42 c
eP 16 31 09	D = 475 km	
Port Hardy	Ottawa	MARCH 3
eP 16 31 32	P _n 20 25 30	U. S. C. G. S.
Victoria	S _n 20 26 14	20.4S, 69.0W
eP 16 30 48.3	S ₁ 20 26 33	Northern Chile
	D = 430 km	H = 02 08 14.6
	Seven Falls	h = about 110 km
MARCH 2	L _g 20 27 56	Mag 4.3 (CGS)
Yellowknife	D = 725 km	Penticton
eP 17 37 23	Shawinigan Falls	eP 02 20 28
	e 20 27 06	Yellowknife
	L _g 20 27 24	iP 02 21 03
	D = 605 km	
MARCH 2		
U. S. C. G. S.		
10.0N, 126.0E		
Mindanao, Philippine Islands region	MARCH 2	MARCH 3
H = 17 27 38.3	U. S. C. G. S.	U. S. C. G. S.
h = about 67 km	14.8N, 94.0W	54.5N, 164.9W
Mag 3.9 (CGS)	Off coast of	Unimak Island,
Mould Bay	Chiapas, Mexico	Aleutian Islands
eP 17 40 13	H = 22 09 17	H = 09 39 55.8
	h = about 33 km	h = about 103 km
	Mag 4.1 (CGS)	Mag 3.8 (CGS)
	Mould Bay	Mould Bay
	eP 22 19 42	eP 09 45 37
MARCH 2		
U. S. C. G. S.		
6.8N, 73.0W		
Colombia	MARCH 2	MARCH 3
H = 19 41 55.4	U. S. C. G. S.	H = 11 21 16
h = about 173 km	17.1S, 175.0W	Mag 1.8
Mag 4.1 (CGS)	Tonga Islands	Port Hardy
Mould Bay	H = 22 16 35.4	iP ₁ 11 21 38.6 d
eP 19 53 13 c	h = about 240 km	iS ₁ 11 21 55.6
	Mag 5.1 (CGS)	
	Mould Bay	MARCH 3
	eP 22 29 49	H = 11 22 10
	Penticton	Mag 1.8
	iP 22 28 31 d	Port Hardy
		iP ₁ 11 22 32.6 c
		iS ₁ 11 22 49.6

SEISMOLOGICAL BULLETIN - 1963

MARCH 3

U.S.C.G.S.
36.4N, 71.3E
Hindu Kush
H = 17 05 03.7
h = about 156 km
Mould Bay
eP 17 15 43 d

MARCH 3

U.S.C.G.S.
36.7N, 90.1W
Slight damage
southeast Missouri
H = 17 30 13.0
h = about 18 km
Mag 4 1/2 (PAL)
4.5 (CGS)
Banff
eP 17 35 23
Halifax
e 17 40 26
London
iP 17 32 23 c
Mould Bay
eP 17 38 00
S 17 47 05
Ottawa
eP 17 33 22
Penticton
eP 17 35 35
Resolute
eP 17 37 (20)
Schefferville
eP 17 35 27 d
Seven Falls
eP 17 34 14
Shawinigan Falls
eP 17 33 (57)
Yellowknife
eP 17 36 17

MARCH 3

U.S.C.G.S.
30.7N, 136.9E
South of Honshu,
Japan
H = 22 59 44.9
h = about 491 km
Alert
iP 23 09 48 c
Banff
eP 23 10 44
Mould Bay
iP 23 09 28 c
Penticton
iP 23 10 38 c
Port Hardy
eP 23 10 09 c
Resolute
iP 23 10 05 c
Victoria
eP 23 10 28
Yellowknife
iP 23 10 13 c

MARCH 4

49.6°N, 114.8°W
Crowsnest Pass region
H = 06 08 23
Mag 2.3
Banff
eP₁ 06 08 52.0
eS₁ 06 09 14.1
D = 181 km
Penticton
eP_n 06 09 13.0
D = 353 km

MARCH 4

U.S.C.G.S.
82.9N, 7.7W
North Polar region
H = 07 41 51.0
h = about 33 km
Mag 5.0 (CGS)

Alert

iP 07 43 26 d
iS 07 44 52
Banff
eP 07 49 37
Halifax
eP 07 49 (44)
London
iP 07 50 10 (c)
Mould Bay
iP 07 45 53
S 07 49 16
Ottawa
eP 07 49 46
Penticton
eP 07 49 57
Resolute
eP 07 45 36 (d)
Schefferville
eP 07 48 18
Seven Falls
eP 07 49 28 c
Shawinigan Falls
eP 07 49 34 c
Victoria
eP 07 50 04
Yellowknife
eP 07 48 02 d

MARCH 4

H = 10 23 14
Mag 85 km
Port Hardy
eP₁ 10 23 31.5
eS₁ 10 23 41.9
D = 85 km

MARCH 4

H = 10 40 59
Mag 2.0
Port Hardy
eP₁ 10 41 28.2
eS₁ 10 41 50.6
D = 184 km

DOMINION OBSERVATORIES

MARCH 4
 U. S. C. G. S.
 47. 7N, 152. 5E
 Kurile Islands region
 H = 12 37 44. 6
 h = about 140 km
 Mag 4. 3 (CGS)
 Mould Bay
 iP 12 45 39

MARCH 4
 U. S. C. G. S.
 46. 3N, 153. 1E
 Kurile Islands region
 H = 12 50 16. 2
 h = about 33 km
 Mag 4. 3 (CGS)
 Mould Bay
 eP 12 58 30
 Resolute
 e(P) 12 59 19 d

MARCH 4
 U. S. C. G. S.
 24. 2N, 121. 7E
 Formosa
 H = 13 38 41. 0
 h = about 33 km
 Mag 4. 8 (CGS)
 Alert
 eP 13 50 (11)
 Banff
 eP 13 51 38
 Mould Bay
 iP 13 49 57
 i 13 50 10
 S 13 59 31
 Penticton
 iP 13 51 33
 Resolute
 eP 13 50 40
 Victoria
 eP 13 51 26
 Yellowknife
 eP 13 51 02

MARCH 4
 U. S. C. G. S.
 35. 2N, 25. 4E
 Crete
 H = 15 10 19. 2
 h = about 42 km
 Mag 4. 8 (CGS)
 Alert
 eP 15 19 48
 Banff
 eP 15 23 04
 Halifax
 eP 15 21 00
 Mould Bay
 eP 15 21 06 d
 S 15 29 59
 Penticton
 eP 15 23 18
 Resolute
 eP 15 20 48
 Schefferville
 eP 15 20 44 c
 Seven Falls
 eP 15 21 21
 Shawinigan Falls
 eP 15 21 31
 Victoria
 eP 15 23 26
 Yellowknife
 iP 15 22 12

MARCH 4
 U. S. C. G. S.
 4. 5S, 81. 6W
 Off coast of northern
 Peru
 H = 15 43 04. 0
 h = about 33 km
 Mag 5. 4 (CGS)
 Alert
 eP 15 55 47
 S 16 06 (12)
 Banff
 eP 15 53 26
 London
 iP 15 51 35 c

Mould Bay
 eP 15 55 29
 i 15 58 42
 S 16 05 48
 Penticton
 iP 15 53 29 c
 Port Hardy
 eP 15 54 00 c
 Resolute
 eP 15 55 07 c
 Schefferville
 eP 15 53 10
 Seven Falls
 eP 15 52 13
 Shawinigan Falls
 eP 15 52 06
 Victoria
 eP 15 53 37 c
 Yellowknife
 eP 15 54 21

MARCH 4
 Mould Bay
 eP 17 07 23

MARCH 4
 H = 17 12 21
 Mag 1. 9
 Port Hardy
 iP₁ 17 12 49. 5 c
 eS₁ 17 13 11. 0
 D = 176 km

MARCH 4
 U. S. C. G. S.
 15. 7S, 75. 3W
 Near coast of
 southern Peru
 H = 18 31 51. 9
 h = about 45 km
 Mag 4. 9 (CGS)
 Mould Bay
 eP 18 45 13 c
 Penticton
 iP 18 43 36 c

SEISMOLOGICAL BULLETIN - 1963

Resolute eP 18 44 53 c	Alert eP 07 17 47 c	MARCH 5 Canadian Arctic H = 15 21 53.5 Mag 2.4
Schefferville eP 18 43 03	Banff eP 07 15 26	Resolute P ₁ 15 22 33 i 15 22 55 S ₁ 15 22 03 D = 246 km
Seven Falls eP 18 42 13	London iP 07 13 34	
Yellowknife iP 18 44 18	Mould Bay eP 07 17 27 c	
	Ottawa eP 07 13 52	
MARCH 5 U. S. C. G. S. 29. 2N, 81. 2E	Penticton iP 07 15 28 c	MARCH 5 Mould Bay eP 21 25 09
Nepal H = 02 35 07. 8 h = about 33 km	Port Hardy eP 07 15 59	
Mould Bay eP 02 46 40	Resolute eP 07 17 05 (d)	MARCH 6 Penticton eP 01 18 44
	Schefferville eP 07 15 09	
MARCH 5 U. S. C. G. S. 11. 0N, 90. 4W	Seven Falls eP 07 14 14	MARCH 6 Mould Bay eP 01 35 22
South of Guatemala H = 02 48 29. 9 h = about 33 km	Shawinigan Falls eP 07 14 04	
Mag 4. 1 (CGS)	Victoria eP 07 15 35	
Mould Bay eP 02 59 25	Yellowknife eP 07 16 19	MARCH 6 Canadian Arctic H = 01 50 38. 9 Mag 2. 2 Yellowknife P ₁ 01 50 56 i 01 50 59 S ₁ 01 51 09 D = 107 km
	MARCH 5 U. S. C. G. S. 36. 1N, 26. 2E	
MARCH 5 U. S. C. G. S. 11. 5N, 140. 6E	Aegean Sea H = 07 53 39. 2 h = about 77 km	
Mariana Islands region H = 04 54 51. 4 h = about 33 km	Mould Bay eP 08 04 18	MARCH 6 U. S. C. G. S. . 28. 9N, 132. 2E Ryukyu Islands H = 04 37 44. 5 h = about 55 km Mag 4. 4 (CGS)
Mag 4. 7 (CGS)	MARCH 5 U. S. C. G. S. 17. 5S, 178. 6W	Alert eP 04 48 44 d
Mould Bay iP 05 07 07 d	Fiji Islands region H = 09 12 16. 8 h = about 512 km	Mould Bay eP 04 48 29 d
	Mag 5. 0 (CGS)	
MARCH 5 U. S. C. G. S. 4. 5S, 81. 5W	Penticton iP 09 23 56 c	
Off coast of northern Peru H = 07 05 01. 7 h = about 31 km		
Mag 5. 6 (CGS)		

DOMINION OBSERVATORIES

Resolute eP 04 49 05 d	Mould Bay eP 23 32 41	MARCH 7 U. S. C. G. S. 27. 3S, 113. 0W Easter Island region H = 11 41 29. 6 h = about 33 km Mag 4. 9 (CGS) Penticton eP 11 53 19
MARCH 6 U. S. C. G. S. 53. 8N, 161. 2E Near east coast of Kamchatka H = 06 55 44. 3 h = about 33 km Mag 4. 1 (CGS) Mould Bay eP 07 02 44 c Resolute eP 07 03 37 c	MARCH 7 H = 01 57 48 Mag 1. 3 Penticton eP ₁ 01 58 14. 8 eS ₁ 01 58 35. 4 D = 168 km	MARCH 7 U. S. C. G. S. 44. 3S, 75. 3W Near coast of southern Chile H = 12 16 28. 5 h = about 45 km Mag 5. 6 (CGS) Alert eP' 12 35 (23) London eP 12 29 09 c Mould Bay eP' 12 35 20 Ottawa eP 12 29 20 Sept Iles eP 12 29 44 Seven Falls eP 12 29 29
MARCH 6 Yellowknife eP 08 11 09	MARCH 7 U. S. C. G. S. 27. 0S, 113. 5W Approximately 500 km west of Easter Island H = 05 22 01. 1 h = about 33 km Mag 6 3/4 (PAS) 6 3/4 (BRK) 5. 6 (CGS) London iP 05 33 46 c Mould Bay eP 05 35 58 Ottawa eP 05 34 14 iS 05 44 14 Penticton eP 05 33 46 Port Hardy P 05 34 01 Resolute eP 05 35 (54) Schefferville eP 05 35 02 Sept Iles iP 05 34 51 c Seven Falls eP 05 34 25 Shawinigan Falls eP 05 34 19 Victoria eP 05 33 45 Yellowknife eP 05 34 53	MARCH 7 U. S. C. G. S. 50. 8N, 178. 6E Rat Islands, Aleutian Islands H = 13 43 01. 2 h = about 33 km Mag 4. 1 (CGS) Mould Bay eP 13 49 50 c Penticton eP 13 50 27 Resolute eP 13 50 (42)
MARCH 6 U. S. C. G. S. 33. 8N, 72. 6E West Pakistan H = 08 35 03. 7 h = about 36 km Mag 4. 3 (CGS) Mould Bay eP 08 46 13 c		
MARCH 6 Yellowknife e 23 15 30		
MARCH 6 U. S. C. G. S. 37. 0N, 140. 8E Near east coast of Central Honshu, Japan H = 23 23 03. 1 h = about 71 km Mag 4. 1 (CGS)		

SEISMOLOGICAL BULLETIN - 1963

<p>Schefferville eP 13 53 (18) Sept Iles eP 13 53 41 Yellowknife eP 13 50 09</p> <p>MARCH 7 270 miles from London, Ontario H = 14 59 28 h = about 0 km Mag 3.4 London P_n 14 59 28 P₁ 15 00 37.6 S_n 15 01 16 S₁ 15 01 30.5 D = 435 km</p> <p>MARCH 7 Yellowknife eP 20 15 13</p> <p>MARCH 7 U. S. C. G. S. 36.1N, 71.2E Hindu Kush H = 21 49 32.6 h = about 202 km Alert e(P) 21 59 16 Mould Bay eP 22 00 09 i 22 00 36 Penticton iP 22 02 32 d Schefferville eP 22 01 36 (d) Yellowknife eP 22 01 30</p>	<p>MARCH 7 U. S. C. G. S. 44.8N, 123.4W Northwestern Oregon H = 23 53 25.8 h = about 33 km Mag 4.6 (CGS) Alert eP 24 01 26 c Mould Bay eP 23 59 56 Penticton eP 23 54 43 Port Hardy eP 23 55 00 Victoria iP 23 54 20</p> <p>MARCH 8 76°36'N, 94°20'W Grinnell Peninsula, Devon Island, N. W. T. H = 00 14 15.7 h = 33 km (USCGS) Unified magnitude 4.5 (USCGS) Alert P_n 00 16 12.1 S_n 00 17 42 D = 913 km London e 00 21 06 e 00 28 11 L_g 00 31 54 D = 3760 km Mould Bay eP_n 00 15 39.2 i 00 15 40 S_n 00 16 44 D = 645 km Ottawa P 00 20 43 e 00 27 04 L_g 00 30 52 D = 3535 km Penticton eP 00 20 12 e 00 26 55 L_g 00 29 25 D = 3170 km</p>	<p>Resolute P_n 00 14 46.0 S_n 00 15 - D = 210 km Schefferville eP 00 19 30 S 00 23 47 L_g 00 26 40 D = 2672 km Sept Iles e 00 20 27 i 00 25 43 L_g 00 29 00 D = 3135 Seven Falls e 00 21 (13) e 00 26 (30) e 00 30 (18) D = 3390 km</p> <p>MARCH 8 76°36'N, 94°20'W Aftershock of the earthquake on Devon Island at 00 14 15.7 H = 01 44 29.5 h = 32 km Mag 2.5 Resolute P_n 01 44 54 P₁ 01 44 59 i 01 45 16 S_n 01 45 18 S₁ 01 45 24 D = 210 km</p> <p>MARCH 8 U. S. C. G. S. 19.2S, 169.7E New Hebrides Islands H = 02 44 31.5 h = about 33 km Mag 5.3 (CGS) Penticton iP 02 57 41 c Schefferville eP' 03 03 28</p>
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DOMINION OBSERVATORIES

Sept Iles iP' 03 03 31 Shawinigan Falls eP' 03 03 23 Victoria eP 02 57 29	Resolute P _n 12 59 25 P ₁ 12 59 30 i 12 59 47 S _n 12 59 49 S ₁ 12 59 55 D = 210 km	London iP 15 16 24 Mould Bay eP 15 18 54 Ottawa eP 15 16 08 Resolute eP 15 18 26 (d) Schefferville eP 15 16 20 Sept Iles eP 15 15 58 Seven Falls eP 15 15 (56) Shawinigan Falls eP 15 16 01 Victoria eP 15 19 12 Yellowknife eP 15 18 46
MARCH 8 U. S. C. G. S. 19. 2S, 169. 6E New Hebrides Islands H = 03 24 57. 2 h = about 49 km Mag 4. 8 (CGS) Victoria eP 03 37 53	MARCH 8 U. S. C. G. S. 21. 8S, 176. 5W Tonga Islands region H = 13 59 40. 1 h = about 137 km Mag 4. 6 (CGS) Penticton iP 14 12 11 d	
MARCH 8 U. S. C. G. S. 19. 3S, 169. 6E New Hebrides Islands H = 03 33 03. 4 h = about 33 km Penticton eP 03 46 02	MARCH 8 76°36'N, 94°20'W Aftershock of the Devon Island earthquake at 00 14 15. 7 H = 13 59 59. 5 h = 32 km Mag 2. 2 Resolute P _n 14 00 24 P ₁ 14 00 29 i 14 00 46 S _n 14 00 48 S ₁ 14 00 54 D = 210 km	MARCH 8 Canadian Arctic H = 18 07 40. 1 Mag 1. 9 Alert P ₁ 18 08 02. 5 S ₁ 18 08 19. 5 D = 139 km
MARCH 8 U. S. C. G. S. 44. 8N, 110. 3W Yellowstone National Park, Wyoming H = 08 35 49. 2 h = about 33 km Mag 3. 8 (CGS) Penticton eP 08 37 44	MARCH 8 U. S. C. G. S. 1. 1N, 29. 9W Mid-Atlantic Ocean H = 15 06 05. 3 h = about 33 km Mag 5. 2 (CGS) Alert eP 15 18 26 Banff eP 15 18 44 Halifax eP 15 15 21	MARCH 8 U. S. C. G. S. 9. 0N, 84. 1W Near west coast of Costa Rica H = 22 26 26 h = about 33 km Mould Bay eP 22 37 35 Resolute eP 22 37 10 (d) Schefferville eP 22 35 01 Seven Falls eP 22 33 (57) Yellowknife eP 22 36 15
MARCH 8 76°36'N, 94°20'W Aftershock of the Devon Island earthquake at 00 14 15. 7 H = 12 59 00. 5 h = 32 km Mag 2. 4		

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MARCH 9

U. S. C. G. S.

21. 9N, 62. 0E

Arabian Sea

H = 02 17 39. 5

h = about 33 km

Mag 5. 1 (CGS)

Alert

eP 02 29 06 c

Mould Bay

iP 02 29 58 c

Resolute

eP 02 30 01 (d)

Yellowknife

iP 02 31 05 d

MARCH 9

U. S. C. G. S.

8. 9N, 126. 3E

Near coast of

Mindanao, Philippine

Islands

H = 05 26 58. 4

h = about 87 km

Mag 4. 3 (CGS)

Mould Bay

eP 05 39 35 c

Resolute

eP 05 40 02

MARCH 9

U. S. C. G. S.

46. 1N, 141. 0E

Kurile Islands region

H = 06 44 28. 2

h = about 31 km

Mag 4. 8 (CGS)

Alert

eP 06 53 29

Mould Bay

eP 06 53 05

S 07 00 03

Resolute

eP 06 53 50 (d)

Schefferville

eP 06 56 17

Sept Iles

eP 06 56 42

MARCH 9

H = 06 54 50

Mag 2. 0

Port Hardy

iP₁ 06 55 18. 0 c

eS₁ 06 55 39. 3

D = 175 km

MARCH 9

U. S. C. G. S.

3. 2S, 147. 0E

Bismarck Sea

H = 16 23 44. 3

h = about 33 km

Mag 4. 8 (CGS)

Mould Bay

eP 16 37 (00)

Penticton

eP 16 37 01

Yellowknife

eP 16 37 12

MARCH 9

U. S. C. G. S.

6. 7N, 123. 9E

Near south coast of

Mindanao, Philippine

Islands

H = 16 56 13

h = about 33 km

Mould Bay

eP 17 09 08

MARCH 9

U. S. C. G. S.

3. 2S, 147. 1E

New Britain region

H = 18 55 49. 0

h = about 33 km

Mag 4. 9 (CGS)

Mould Bay

eP 19 09 12

MARCH 9

U. S. C. G. S.

21. 5S, 179. 0W

Fiji Islands region

H = 22 43 50. 5

h = about 529 km

Mag 4. 4 (CGS)

Penticton

iP 22 55 45

MARCH 10

U. S. C. G. S.

56. 2N, 153. 8W

Kodiak Islands, Alaska

H = 01 26 04. 1

h = about 33 km

Mag 5. 1 (CGS)

Alert

iP 01 32 55 c

S 01 38 (25)

London

iP 01 34 31 c

Mould Bay

iP 01 31 16 d

S 01 35 30

Ottawa

eP 01 34 40

Penticton

iP 01 30 53 c

Port Hardy

eP 01 29 54

Resolute

eP 01 32 01 c

Schefferville

eP 01 34 26 c

Sept Iles

iP 01 34 51 c

Seven Falls

eP 01 34 49

Shawinigan Falls

eP 01 34 45

Yellowknife

iP 01 30 43 d

DOMINION OBSERVATORIES

MARCH 10
 U. S. C. G. S.
 24.7N, 122.1E
 Near east coast
 of Formosa
 H = 02 53 33.0
 Mag 4.9 (CGS)
 Alert
 eP 03 05 01
 Mould Bay
 eP 03 04 57
 Penticton
 eP 03 06 20
 Resolute
 eP 03 05 29
 Yellowknife
 iP 03 05 52 d

MARCH 10
 U. S. C. G. S.
 14.2N, 89.5W
 Near coast of
 El Salvador
 H = 06 04 33
 h = about 33 km
 Mag 4.3 (CGS)
 Mould Bay
 eP 06 15 05
 Penticton
 iP 06 12 29
 Resolute
 eP 06 14 42 d
 Schefferville
 eP 06 12 48
 Yellowknife
 iP 06 13 36 c

MARCH 10
 49.6°N, 127.6°W
 West of Vancouver Island
 H = 06 21 29
 Mag 2.4
 Alberni
 iP_n 06 22 00.8
 iS_n 06 22 35.3
 D = 204 km

Port Hardy
 eP₁ 06 21 49.4
 iS₁ 06 22 04.7
 D = 125 km
 Victoria
 eP_n 06 22 18.0
 D = 344 km

MARCH 10
 U. S. C. G. S.
 29.9S, 71.2W
 Near coast of
 Central Chile
 H = 10 51 48.1
 h = about 70 km
 Mag 6 - 6 1/4 (PAS)
 5.5 (CGS)

Halifax
 eP 11 03 22 c
 London
 (e)P 11 03 12
 Mould Bay
 eP 11 06 (14)
 Ottawa
 eP 11 03 24
 Penticton
 eP 11 04 38
 Schefferville
 eP 11 04 15
 Sept Iles
 eP 11 03 51
 Seven Falls
 iP 11 03 34 c
 Shawinigan Falls
 eP 11 03 31
 Yellowknife
 eP 11 05 19

MARCH 10
 U. S. C. G. S.
 39.4N, 141.7E
 Near coast of
 Honshu, Japan
 H = 11 50 26.3
 h = about 60 km
 Mag 4.6 (CGS)

Mould Bay
 eP 11 59 47 c
 Penticton
 iP 12 01 09
 Resolute
 eP 12 00 29 c
 Sept Iles
 eP 12 03 09

MARCH 10
 U. S. C. G. S.
 2.4N, 126.6E
 Celebes Sea
 H = 13 51 04.3
 h = about 41 km
 Mould Bay
 eP 14 04 16
 Resolute
 eP 14 04 43 c

MARCH 10
 Mould Bay
 eP 21 58 28
 i 21 59 22

MARCH 11
 U. S. C. G. S.
 38.1N, 29.3E
 Turkey
 H = 07 27 22.0
 h = about 33 km
 Mag 5.5 (CGS)
 Alert
 eP 07 36 35 (c)
 London
 iP 07 39 17 c
 Mould Bay
 eP 07 37 55
 Ottawa
 iP 07 38 51 c
 Penticton
 eP 07 40 07
 Resolute
 eP 07 37 38 d
 Schefferville
 eP 07 37 46
 Sept Iles
 iP 07 38 02 c

SEISMOLOGICAL BULLETIN - 1963

Seven Falls eP 07 38 27	MARCH 11 U. S. C. G. S. 17.6N, 100.8W Guerrero Mexico H = 15 30 07.6 h = about 33 km Mag 4.8 (CGS) Mould Bay eP 15 40 06 Penticton iP 15 37 00 d Yellowknife iP 15 38 28 d	Schefferville P _n 07 07 13 S _n 07 08 03.5 L _g 07 08 27 D = 490 km Sept Iles e 07 08 02 S _n 07 09 21 L _g 07 10 08 D = 850 km Seven Falls L _g 07 12 10 D = 1275 km
MARCH 11 U. S. C. G. S. 18.7S, 177.6W Fiji Islands region H = 09 02 19.8 h = about 402 km Mag 4.8 (CGS) Penticton eP 09 14 12	MARCH 11 Mould Bay eP 19 06 48 Yellowknife eP 19 07 08	MARCH 12 U. S. C. G. S. 53.9N, 160.6E Kamchatka H = 08 05 49.8 h = about 33 km Mag 4.7 (CGS) Alert eP 08 13 40 Mould Bay iP 08 12 51c Penticton eP 08 14 18 Resolute eP 08 13 43 c Schefferville eP 08 16 25 Sept Iles eP 08 16 53 Seven Falls eP 08 17 00 Yellowknife iP 08 13 42 d
MARCH 11 U. S. C. G. S. 36.7N, 71.1E Hindu Kush H = 10 27 42.1 h = about 189 km Mag 4.7 (CGS) Mould Bay eP 10 38 17 c i 10 39 15 Yellowknife iP 10 39 37	MARCH 11 Schefferville eP 19 24 10 Seven Falls e 19 25 33	MARCH 12 Resolute e(P) 08 49 (05)
MARCH 11 U. S. C. G. S. 5.1N, 76.4W Central Colombia H = 11 30 16.0 h = about 95 km Mag 4.3 (CGS) Yellowknife eP 11 40 32	MARCH 11 Schefferville eP 19 24 10 Seven Falls e 19 25 33	MARCH 12 Resolute e(P) 08 49 (05)
MARCH 11 Mould Bay eP 15 32 16 Resolute eP 15 32 58 c	MARCH 12 57.0°N, 60.0°W About 50 miles off the coast of Labrador, Nfld. H = 07 06 08.5 Mag 3.8	

DOMINION OBSERVATORIES

MARCH 12	Mould Bay	MARCH 14
U. S. C. G. S.	P _n 20 07 02.3	Mould Bay
16.0S, 172.6W	S _n 20 09 03.2	eP 00 36 17
Tonga Islands region	D = 1235 km	Schefferville
H = 13 21 39.2	Resolute	eP 00 34 34
h = about 33 km	P _n 20 07 55.5	Yellowknife
Mag 5.3 (CGS)	S _n 20 10 40	eP 00 35 54
Penticton	D = 1690 km	
iP 13 33 47 c	Yellowknife	
	P _n 20 06 22.5	MARCH 14
	S _n 20 07 56.5	Resolute
	D = 885 km	eP 01 15 (53)
MARCH 12		Yellowknife
Resolute		eP 01 16 08
eP 14 07 (56)		
	MARCH 13	
	Penticton	
MARCH 12	eP 01 15 02	MARCH 14
U. S. C. G. S.		U. S. C. G. S.
71.7N, 1.4W		25.6S, 137.6E
Jan Mayen Island	MARCH 13	Northern Territory,
region	Resolute	Australia
H = 15 18 00.0	e(P) 03 13 40	H = 01 57 29.3
h = about 33 km		h = about 33 km
Mag 3.9 (CGS)		Resolute
Mould Bay	MARCH 13	eP' 02 16 30 (d)
eP 15 23 (46)	U. S. C. G. S.	
Resolute	19.5N, 69.5W	MARCH 14
eP 15 23 (26)	Dominican Republic	U. S. C. G. S.
	H = 10 39 19.1	19.0N, 120.4E
MARCH 12	h = about 33 km	Off coast of northern
Resolute	Mag 4.1 (CGS)	Luzon, Philippine
e(P) 16 08 53	Mould Bay	Islands
	eP 10 49 37	H = 08 00 15.6
		h = about 51 km
		Mag 5.0 (CGS)
MARCH 12	MARCH 13	Alert
Resolute	U. S. C. G. S.	eP 08 12 13 (d)
eP 19 24 (18)	33.1N, 141.4E	Mould Bay
	Off coast of	eP 08 12 11 d
	southern Honshu,	Penticton
MARCH 12	Japan	iP 08 13 29
65°40'N, 132°00'W	H = 10 54 15.8	Port Hardy
About 100 miles east	h = about 47 km	eP 08 13 06
of Whitehorse, Yukon	Mag 4.1 (CGS)	Resolute
Territory	Mould Bay	eP 08 12 41 d
H = 20 04 24	eP 11 04 21	Yellowknife
Mag 4.3	Resolute	iP 08 13 02 d
	e(P) 11 05 (02)	

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MARCH 14

Mould Bay
eP 10 56 10
i 10 56 16
Resolute
eP 10 55 (54)

MARCH 14

U. S. C. G. S.
53.0N, 164.9W
Fox Islands,
Aleutian Islands
H = 18 13 19.1
h = about 33 km
Mag 4.6 (CGS)
Yellowknife
eP 18 19 08

MARCH 14

U. S. C. G. S.
46.5N, 153.4E
Kurile Islands
H = 18 30 40.6
h = about 32 km
Mag 4.7 (CGS)
Alert
eP 18 39 33 c
Resolute
eP 18 39 41 c
Yellowknife
iP 18 39 41

MARCH 15

U. S. C. G. S.
5.0S, 129.6E
Banda Sea
H = 00 04 01.3
h = about 295 km
Mag 4.8 (CGS)
Mould Bay
eP 00 17 13 d
Seven Falls
eP' 00 22 40

MARCH 15

U. S. C. G. S.
8.4N, 126.4E
Mindanao, Philippine
Islands
H = 00 16 01.3
h = about 117 km
Mag 5.0 (CGS)
Alert

eP 00 28 45
London
eP' 00 34 (46)
Mould Bay
eP 00 28 37 c
Penticton
eP 00 29 30
Resolute
eP 00 29 04 c
Sept Iles
eP' 00 34 41
Seven Falls
eP' 00 34 44
Yellowknife
eP 00 29 13

MARCH 15

Mould Bay
eP 00 46 24
Yellowknife
eP 00 45 51

MARCH 15

U. S. C. G. S.
21.7N, 45.4W
North Atlantic Ocean
H = 05 46 32.8
h = about 33 km
Mag 4.9 (CGS)
Alert
iP 05 56 46
London
iP 05 53 38 d
Mould Bay
eP 05 57 14
Penticton
eP 05 57 03
Schefferville
eP 05 53 39

Seven Falls

eP 05 53 04
Shawinigan Falls
eP 05 53 (11)
Yellowknife
eP 05 56 46

MARCH 15

Canadian Arctic
H = 06 54 50
Mag 1.7
Mould Bay
P₁ 06 55 13
S₁ 06 55 30.5

MARCH 15

U. S. C. G. S.
17.5N, 119.8E
Off west coast of
Luzon, Philippine
Islands
H = 10 53 59.8
h = about 33 km
Mag 4.4 (CGS)
Mould Bay
eP 11 06 05
Resolute
eP 11 06 35
Yellowknife
eP 11 06 54

MARCH 15

U. S. C. G. S.
42.3N, 142.3E
Near south coast of
Hokkaido, Japan
H = 18 50 34.7
h = about 33 km
Mag 4.0 (CGS)
Resolute
eP 19 00 21 c

DOMINION OBSERVATORIES

MARCH 15 H = 23 06 02 Mag 2.3 Penticton eP _n 23 06 41.0 eS _n 23 07 35 D = 266 km	MARCH 16 U. S. C. G. S. 46.5N, 154.7E Kurile Islands region H = 08 44 48.3 h = about 26 km Mag 7 (PAS) 7 3/4 (BRK) 6 3/4 (PAL) 6.2 (CGS)	MARCH 16 Penticton eP 09 31 40
MARCH 16 Resolute e(P) 02 11 35 Yellowknife eP 02 12 05	Alert eP 08 53 40 S 09 00 48 Banff eP 08 54 23 Halifax eP 08 57 14 London eP 08 56 46 Mould Bay iP 08 52 59 c eS 08 59 48 Ottawa eP 08 57 46 Penticton iP 08 54 15 Port Hardy eP 08 53 38 Resolute eP 08 53 47 c Schefferville eP 08 56 17 (d) Sept Iles iP 08 56 41 c Seven Falls eP 08 56 47 Shawinigan Falls iP 08 56 48 c Victoria eP 08 54 02 c Yellowknife iP 08 53 45 c	MARCH 16 Resolute eP 13 55 16 c
MARCH 16 Mould Bay eP 02 35 19 Resolute eP 02 35 (25)	MARCH 16 Resolute eP 08 56 46 Mould Bay iP 08 52 59 c eS 08 59 48 Ottawa eP 08 57 46 Penticton iP 08 54 15 Port Hardy eP 08 53 38 Resolute eP 08 53 47 c Schefferville eP 08 56 17 (d) Sept Iles iP 08 56 41 c Seven Falls eP 08 56 47 Shawinigan Falls iP 08 56 48 c Victoria eP 08 54 02 c Yellowknife iP 08 53 45 c	MARCH 16 Resolute eP 14 43 48 c
MARCH 16 U. S. C. G. S. 26.1N, 92.8E Assam, India H = 03 35 22.5 h = about 48 km Mag 4.5 (CGS) Mould Bay eP 03 47 06 c Resolute e(P) 03 47 25	MARCH 16 U. S. C. G. S. 20.7S, 174.6W Tonga Islands H = 21 40 09.0 h = about 33 km Mag 5.0 (CGS) Penticton eP 21 52 43	MARCH 16 Mould Bay eP 15 42 23
MARCH 16 Mould Bay eP 05 14 55 Resolute eP 05 15 38	MARCH 16 U. S. C. G. S. 20.7S, 174.6W Tonga Islands H = 21 40 09.0 h = about 33 km Mag 5.0 (CGS) Penticton eP 21 52 43	MARCH 16 Sept Iles eP 15 55 28
	MARCH 16 Mould Bay eP 18 35 42	MARCH 16 Mould Bay eP 18 35 42
	MARCH 16 Ottawa eP 09 23 (45) Sept Iles eP 09 23 43	MARCH 16 Mould Bay eP 18 35 42

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MARCH 16

U. S. C. G. S.
38.9N, 71.8E
Tadzhik, S. S. R.
H = 22 28 56.7
h = about 73 km
Mag 5.0 (CGS)
Mould Bay
iP 22 39 24 d
Penticton
iP 22 41 58 c
Resolute
eP 22 39 39 (d)
Schefferville
eP 22 41 (00)
Yellowknife
iP 22 40 53 d

MARCH 17

U. S. C. G. S.
7.1N, 82.2W
South of Panama
H = 06 18 52.4
h = about 53 km
Mag 4.6 (CGS)
Mould Bay
eP 06 30 11
Penticton
eP 06 27 59
Resolute
eP 06 29 46
Yellowknife
iP 06 28 55 d

MARCH 17

H = 08 23 17
Mag 1.3
Penticton
iP₁ 08 23 25.5
iS₁ 08 23 31.6
D = 50 km

MARCH 17

U. S. C. G. S.
46.0N, 155.0E
Kurile Islands region
H = 08 42 12.3
h = about 35 km
Mag 4.7 (CGS)
Alert
eP 08 51 09
Mould Bay
eP 08 50 (25)
Penticton
iP 08 51 39
Resolute
eP 08 51 13 d
Yellowknife
iP 08 51 10 c

MARCH 17

U. S. C. G. S.
37.4S, 78.2E
Indian Ocean
H = 10 32 19.7
h = about 33 km
Yellowknife
eP' 10 52 18

MARCH 17

U. S. C. G. S.
46.2N, 155.6E
Kurile Islands
H = 13 08 55.0
h = about 33 km
Resolute
eP 13 17 51

MARCH 17

U. S. C. G. S.
39.5N, 21.5E
Greece
H = 14 17 25.9
h = about 78 km
Mag 4.8 (CGS)
Alert
eP 14 26 16 d

Mould Bay

eP 14 27 39
Penticton
eP 14 29 56
Resolute
eP 14 27 17 d
Seven Falls
eP 14 27 45
Yellowknife
iP 14 28 45 d

MARCH 17

U. S. C. G. S.
64.9N, 174.9W
Eastern Siberia
H = 19 38 20.1
h = about 33 km
Mould Bay
eP 19 42 (58)
Yellowknife
eP 19 43 48

MARCH 17

U. S. C. G. S.
44.8N, 110.3W
Yellowstone National
Park, Wyoming
H = 22 10 36.2
h = about 33 km
Penticton
eP 22 14 13

MARCH 18

Mould Bay
eP 00 55 42

MARCH 18

Mould Bay
e 04 59 (51)

DOMINION OBSERVATORIES

MARCH 18	MARCH 19	Yellowknife
U. S. C. G. S.	U. S. C. G. S.	eP 04 55 32
30.7N, 42.1W	18.9N, 145.3E	e 04 57 45
North Atlantic Ocean	Mariana Islands region	
H = 09 47 59	H = 05 11 08.2	
h = about 33 km	h = about 220 km	MARCH 20
Mag 4.3 (CGS)	Mag 4.0 (CGS)	Yellowknife
Mould Bay	Alert	eP 06 45 40
eP 09 57 45	eP 05 22 45 c	e 06 47 18
	Mould Bay	
	eP 05 22 16	
MARCH 18	Yellowknife	MARCH 20
U. S. C. G. S.	eP 05 22 43	U. S. C. G. S.
24.1N, 5.0E		46.4N, 154.5E
Southern Algeria	MARCH 19	Kurile Islands region
H = 10 02 00.8	Mould Bay	H = 07 04 18.0
h = about 0	eP 18 37 16	h = about 16 km
Sept Iles	Penticton	Mag 5.2 (CGS)
iP 10 12 11 d	eP 18 37 46	Alert
Yellowknife	Yellowknife	eP 07 13 13 (d)
eP 10 14 19	eP 18 36 43	Mould Bay
		eP 07 12 31
		Penticton
		iP 07 13 48 c
MARCH 18	MARCH 19	Resolute
U. S. C. G. S.	U. S. C. G. S.	eP 07 13 20 d
15.7S, 178.4W	8.3N, 126.6E	Schefferville
Fiji Islands region	Near east coast of	eP 07 15 50 c
H = 13 16 23.5	Mindanao, Philippine	Seven Falls
h = about 561 km	Islands	eP 07 16 (20)
Penticton	H = 19 08 08.1	Yellowknife
iP 13 27 52 c	h = about 109 km	iP 07 13 18 c
Yellowknife	Mag 4.2 (CGS)	
eP 13 28 35	Mould Bay	
	eP 19 20 46	MARCH 20
	Resolute	U. S. C. G. S.
MARCH 18	eP 19 21 (13)	44.9N, 110.7W
Yellowknife		Yellowstone National
e 14 26 40		Park, Wyoming
		H = 11 38 33.1
		h = about 33 km
MARCH 19	MARCH 20	Mag 4.1 (CGS)
U. S. C. G. S.	U. S. C. G. S.	Penticton
79.1N, 2.0E	19.9S, 179.1W	eP 11 39 45
Arctic Ocean	Fiji Islands region	Yellowknife
H = 04 52 34.5	H = 04 43 13.5	eP 11 42 34
h = about 33 km	h = about 680 km	
Resolute	Mag 5.2 (CGS)	
eP 04 57 (09)	Penticton	
	iP 04 54 50 c	
	Resolute	
	eP' 05 00 (24)	

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MARCH 20 Penticton eP 11 49 01	MARCH 20 Penticton eP 21 35 37	Yellowknife P _n 09 25 18 i 09 26 57 e 09 28 36 D = 2122 km
MARCH 20 U. S. C. G. S. 44.6N, 110.5W Yellowstone National Park, Wyoming H = 12 32 26.0 h = about 33 km Mag 4.0 (CGS) Penticton eP 12 33 42 Yellowknife eP 12 36 30	MARCH 21 U. S. C. G. S. 36.5N, 140.9E Near east coast of Honshu, Japan H = 04 00 11.1 h = about 50 km Mag 5.2 (CGS) Alert eP 04 10 19 (c) Mould Bay iP 04 09 54 c i 04 13 05 Penticton iP 04 11 12 Resolute iP 04 10 35 c Schefferville eP 04 12 48 Sept Iles iP 04 13 09 c Yellowknife iP 04 10 43 c	MARCH 21 U. S. C. G. S. 50.6N, 129.4W Vancouver Island region H = 18 19 22.7 h = about 33 km Mag 4.0 (CGS) Alberni iP _n 18 20 07.6 D = 344 km Banff eP 18 21 33 Mould Bay eP 18 24 53 Penticton iP _n 18 20 58.6 D = 760 km Port Hardy iP ₁ 18 19 45.6 iS ₁ 18 20 05.9 D = 166 km Victoria eP 18 20 23.7 D = 476 km Yellowknife iP 18 22 43 d
MARCH 20 Resolute eP 13 31 35 (d)		
MARCH 20 U. S. C. G. S. 11.9N, 93.1E Andaman Islands region H = 14 41 48.2 h = about 33 km Mag 4.4 (CGS) Mould Bay eP 14 54 46 d Resolute eP 14 55 03 c	MARCH 21 81°18'N, 103°15'W About 100 miles north of Ellef Ringnes Island, N.W.T. H = 09 20 57.5 Mag 4.1 Alert P _n 09 22 23.5 S _n 09 23 25.0 D = 660 km Mould Bay P _n 09 22 23.8 S _n 09 23 25.1 D = 660 km Resolute P _n 09 22 36.5 S _n 09 23 50.5 D = 765 km	MARCH 21 U. S. C. G. S. 47.0N, 155.6E Kurile Islands H = 23 35 55.4 h = about 69 km Mag 4.9 (CGS) Mould Bay eP 23 43 56 Resolute eP 23 44 45 d Yellowknife iP 23 44 41 c
MARCH 20 U. S. C. G. S. 2.4S, 138.4E Western New Guinea H = 16 38 55.8 h = about 40 km Mag 5.5 (CGS) Mould Bay eP 16 52 16 Resolute eP 16 52 45 (d) Yellowknife iP 16 52 40 d		

DOMINION OBSERVATORIES

MARCH 22
U. S. C. G. S.
36. 7N, 139. 5E
Honshu, Japan
H = 02 38 50.1
h = about 83 km
Mag 4. 3 (CGS)
Mould Bay
eP 02 48 31
Resolute
eP 02 49 12 d

MARCH 22
U. S. C. G. S.
46. 0N, 148. 4E
Kurile Islands region
H = 03 57 23. 8
h = about 115 km
Mag 4. 9 (CGS)
Mould Bay
eP 04 05 40
Penticton
iP 04 07 07 c
Resolute
eP 04 06 27 (d)
Yellowknife
iP 04 06 34 d

MARCH 22
44. 7N, 110. 7W
Yellowstone National
Park, Wyoming
H = 04 34 43. 3
h = about 33 km
Mag 4. 1 (CGS)
Banff
eP 04 36 32
Penticton
eP 04 36 36
Schefferville
eP 04 41 (22)
Yellowknife
eP 04 38 50

MARCH 22
Alert
eP 13 02 45 (d)

Mould Bay
eP 13 04 (17)
MARCH 22
H = 16 18 27
Mag 1. 9
Port Hardy
iP₁ 16 18 52.7
iS₁ 16 19 12.1
D = 159 km

MARCH 22
U. S. C. G. S.
22. 7S, 68. 0W
Chile-Bolivia border
region
H = 21 18 27. 4
h = about 242 km
Mould Bay
eP 21 31 (33)
Yellowknife
eP 21 31 11

MARCH 22
80°N, 92°W
Axel Heiberg Island,
N. W. T.
H = 23 25 49
Mag 3. 3
Alert
L_g 23 28 33
D = 582 km
Mould Bay
L_g 23 29 16
D = 735 km
Resolute
e 23 27 55
S_n 23 28 09
L_g 23 28 36
D = 595 km

MARCH 22
U. S. C. G. S.
52. 7S, 137. 4E
1500 km southwest of
Tasmania
H = 23 36 19.1
h = about 33 km
Resolute
eP 23 56 07 d

MARCH 23
Yellowknife
iP 04 12 57

MARCH 23
Canadian Arctic
H = 04 26 10.1
Mag 1. 9
Mould Bay
P₁ 04 26 24.5
S₁ 04 26 35.5
D = 90.1 km

MARCH 23
U. S. C. G. S.
42. 3N, 84. 3E
Sinkiang Province,
China
H = 05 48 34
h = about 33 km
Mould Bay
eP 05 58 54
Yellowknife
eP 06 00 10

MARCH 23
Resolute
e(P) 06 35 (40)
Yellowknife
eP 06 35 54

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MARCH 23
Mould Bay
eP 12 19 23

MARCH 23
U. S. C. G. S.
45.0N, 111.4W
Hebgen Lake region,
Montana
H = 12 21 43.3
h = about 34 km
Penticton
eP 12 23 34

MARCH 23
Resolute
e(P) 14 01 (05)
Yellowknife
eP 14 01 08

MARCH 23
48°12'N, 124°36'W
Western Washington, USA
H = 22 38 28
Mag 2.1
Alberni
eP₁ 22 38 48.6
eS₁ 22 39 03.6
D = 123 km
Victoria
iP₁ 22 38 43.3
iS₁ 22 38 55.0
D = 96 km

MARCH 23
Resolute
eP 23 54 56 d

MARCH 24
Penticton
e 01 55 41

MARCH 24
U. S. C. G. S.
9.7S, 120.4E
Sumba Island region
H = 02 07 12.8
h = about 33 km
Mag 6 1/4 (PAS)
6 (PAL)
5.4 (CGS)

Banff
eP' 02 25 59
Halifax
eP' 02 26 49 c
London
eP' 02 26 39 (d)

Mould Bay
eP 02 21(25)
Ottawa
eP' 02 26 40
Penticton
iP' 02 25 56 c
Resolute
eP 02 21 (52)

Schefferville
eP' 02 26 31
Sept Iles
iP' 02 26 45 d
Seven Falls
eP' 02 26 31
Shawinigan Falls
eP' 02 26 44
Yellowknife
eP' 02 25 48
Victoria
eP' 02 25 53

MARCH 24
U. S. C. G. S.
51.6N, 173.3W
Andreanof Islands,
Aleutian Islands
H = 02 24 49.2
h = about 55 km
Mag 4.7 (CGS)
Alert
e(P) 02 32 34
Mould Bay
eP 02 31 13

Penticton
iP 02 31 25 c
Sept Iles
eP 02 35 08
Shawinigan Falls
iP 02 34 56

MARCH 24
Mould Bay
eP 05 36 47
Yellowknife
eP 05 36 32

MARCH 24
Mould Bay
eP 09 14 21
Yellowknife
eP 09 13 40

MARCH 24
U. S. C. G. S.
3.2S, 146.8E
Bismarck Sea
H = 09 31 50.4
h = about 33 km
Mag 5.0 (CGS)
Yellowknife
eP 09 45 18

MARCH 24
U. S. C. G. S.
9.0N, 125.6E
Mindanao Region,
Philippine Islands
H = 09 43 20.2
h = about 51 km
Mag 5.2 (CGS)
Alert
eP 09 56 09 d
Mould Bay
eP 09 56 02 d
Penticton
iP 09 56 57 c

DOMINION OBSERVATORIES

Resolute eP 09 56 28 d	MARCH 24 U. S. C. G. S. 34. 4N, 47. 9E	Halifax eP 21 46 22
Seven Falls iP' 10 02 05 c	Western Iran H = 12 44 03. 2	London iP 21 45 36 (c)
Shawinigan Falls eP' 10 02 11	h = about 33 km	Mould Bay iP 21 41 57 c
Yellowknife iP 09 56 39 d	Mag 5 1/2 - 5 3/4 (PAL) 5. 2	S 21 47 12
	(CGS)	Ottawa iP 21 45 41 c
	Alert eP 12 54 01	Penticton iP 21 42 25 c
MARCH 24 U. S. C. G. S. 36. 4N, 70. 8E	(S) 13 02 07	Resolute eP 21 42 49
Hindu Kush H = 10 58 55. 7	Banff eP 12 57 20	Schefferville eP 21 45 22 c
h = about 222 km	Halifax eP 12 56 11 d	Sept Iles iP 21 45 56
Mag 4. 1 (CGS)	Mould Bay eP 12 55 09	Seven Falls eP 21 45 48
Mould Bay eP 11 09 29 c	Ottawa eP 12 56 41	Shawinigan Falls eP 21 45 44
i 11 10 18	Penticton eP 12 57 27	Victoria iP 21 42 10 c
Yellowknife eP 11 10 38	Resolute eP 12 55 04	Yellowknife iP 21 42 09 c
	Seven Falls eP 12 56 22	
MARCH 24 Mould Bay eP 11 22 47 c	Shawinigan Falls eP 12 56 28	MARCH 24 Schefferville eP 22 14 (46)
	Victoria eP 12 57 36	
MARCH 24 U. S. C. G. S. 44. 8N, 141. 9E	Yellowknife iP 12 56 23	
Near coast of northern Hokkaido, Japan	MARCH 24 U. S. C. G. S. 51. 8N, 178. 1W	MARCH 25 U. S. C. G. S. 52. 2N, 171. 2W
H = 12 04 12. 7	Andeanof Islands, Aleutian Islands	Andeanof Islands, Aleutian Islands
h = about 195 km	H = 21 35 24. 4	H = 02 39 47. 9
Mag 4. 1 (CGS)	h = about 57 km	h = about 44 km
Mould Bay eP 12 12 40	Mag 6 (PAS) 5 (PAL)	Mag 3. 4 (CGS)
Resolute eP 12 13 23 (c)	5. 5 (CGS)	Mould Bay eP 02 46 04
Yellowknife iP 12 13 39	Alert iP 21 43 44 c	Yellowknife eP 02 46 02
	Banff eP 21 42 36 c	
	i 21 44 50	

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MARCH 25 U. S. C. G. S. 14. 0N, 121. 9E Southern Luzon, Philippine Islands H = 03 55 01 h = about 33 km Mould Bay eP 04 07 21 Resolute eP 04 07 51 (c) Yellowknife eP 04 08 10	Penticton eP 09 32 01 Resolute eP 09 36 17 d Schefferville eP 09 35 (58) Yellowknife iP 09 34 20	MARCH 25 Yellowknife eP 21 08 (24)
MARCH 25 U. S. C. G. S. 16. 3N, 119. 7E Near west coast of Luzon, Philippine Islands H = 08 08 56. 6 h = about 36 km Mag 4. 7 (CGS) Mould Bay eP 08 21 10 c Resolute eP 08 21 37 c Yellowknife iP 08 21 55	MARCH 25 U. S. C. G. S. 45. 0N, 111. 3W Southwestern Montana H = 17 43 55 h = about 33 km Penticton eP 17 46 04 Yellowknife eP 17 47 54	MARCH 25 U. S. C. G. S. 0. 7N, 96. 5E Off southwest coast of Sumatra H = 22 46 16. 2 h = about 30 km Mag 5. 6 (CGS) Alert eP 22 59 43 d Mould Bay eP 23 00 02 Ottawa eP' 23 05 30 Penticton iP' 23 05 07 d Resolute eP 23 00 20 Schefferville eP' 23 05 10 Seven Falls eP' 23 05 26 c Shawinigan Falls eP' 23 05 28 Yellowknife eP' 23 04 50
MARCH 25 Yellowknife eP 08 45 10	MARCH 25 U. S. C. G. S. 56. 3S, 149. 9E Macquarie Islands region H = 20 17 03. 8 h = about 39 km Mag 5. 0 (CGS) Alert eP' 20 36. 9 Mould Bay eP' 20 36 32 Resolute eP' 20 36 49 (d) Shawinigan Falls eP' 20 36 57 Yellowknife eP' 20 36 22	MARCH 25 Yellowknife eP 23 15 38
MARCH 25 U. S. C. G. S. 36. 0N, 114. 9W Southern Nevada H = 09 28 44. 1 h = about 17 km Mag 4. 3 (CGS) Alert eP 09 37 35 (d) Mould Bay eP 09 36 22 d	MARCH 26 U. S. C. G. S. 4. 2S, 152. 6E New Ireland region H = 08 50 45. 4 h = about 120 km Mag 5. 1 (CGS) Mould Bay eP 09 03 49	

DOMINION OBSERVATORIES

MARCH 26
Mould Bay
eP 10 00 14
Yellowknife
eP 10 00 56

MARCH 26
U. S. C. G. S.
29. 7S, 177. 8W
Kermadec Islands
H = 09 48 19.7
h = about 45 km
Mag 6 3/4 - 7 (PAS)
7 (BKS)
7 (PAL)

Alert
eP' 10 07 09
Banff
eP 10 01 48
Halifax
eP' 10 07 19 (d)
Mould Bay
eP 10 02 (57)
eP' 10 06 (48)

Ottawa
eP 10 03 (24)
eP' 10 07 03
Penticton
eP 10 01 34
Resolute
eP 10 03 (16)
Schefferville
eP' 10 07 16
Sept Iles
iP' 10 07 26 c

Seven Falls
eP' 10 07 12
Shawinigan Falls
eP' 10 07 08
i 10 17 16
Victoria
eP 10 01 24
Yellowknife
eP 10 02 28
i 10 02 39

MARCH 26
Alert
e(P) 10 17 07
Mould Bay
eP 10 17 (55)
Yellowknife
eP 10 15 58
i 10 18 08

MARCH 26
U. S. C. G. S.
30. 1S, 177. 4W
Kermadec Islands region
H = 11 46 02.5
h = about 50 km

Alert
eP' 12 04 52
Mould Bay
eP' 12 04 31
Resolute
eP' 12 04 40
Yellowknife
eP' 12 04 51

MARCH 26
U. S. C. G. S.
29. 9S, 177. 6W
Kermadec Islands
H = 12 51 29.7
h = about 60 km
Mag 4. 9 (CGS)
Mould Bay
eP' 13 10 06
Penticton
eP 13 04 54
Resolute
eP' 13 10 16

MARCH 26
U. S. C. G. S.
29. 8S, 177. 9W
Kermadec Islands
H = 13 25 02.6
h = about 42 km
Mag 7 1/4 (PAS)
6 1/2 (PAL)
5.9 (CGS)

Alert
eP' 13 43 53
Banff
eP 13 38 32
Halifax
iP' 13 44 02
Mould Bay
eP 13 39 (38)
eP' 13 43 31
Ottawa
eP' 13 43 (46)
Penticton
eP 13 38 17
Resolute
eP' 13 43 41 (d)
Schefferville
eP' 13 43 59
Sept Iles
iP' 13 44 10
Shawinigan Falls
eP' 13 43 50
Victoria
eP 13 38 08
Yellowknife
eP 13 39 09
iP' 13 43 28

MARCH 26
Mould Bay
eP 13 54 38
Yellowknife
i 13 54 48

MARCH 26
U. S. C. G. S.
51. 3N, 178. 8E
Rat Islands,
Aleutian Islands
H = 18 23 08.3
h = about 50 km
Mag 4. 4 (CGS)
Mould Bay
eP 18 29 50
Resolute
e(P) 18 30 42 (d)
Yellowknife
iP 18 30 08 d

SEISMOLOGICAL BULLETIN - 1963

MARCH 26	Alert	MARCH 27
Canadian Arctic	eP 21 44 55 c	U. S. C. G. S.
H = 19 25 44.2	i 21 44 56	6.8N, 73.8W
Mag 1.9	Banff	Colombia
Alert	eP 21 46 10 c	H = 02 31 51.5
P ₁ 19 25 56	Mould Bay	h = about 33 km
S ₁ 19 26 05	eP 21 44 36	Yellowknife
D = 73.8 km	S 21 52 44	iP 02 42 13 c
	Penticton	
	iP 21 46 03 c	
MARCH 26	Resolute	MARCH 27
U. S. C. G. S.	eP 21 45 16 (c)	U. S. C. G. S.
44.4N, 146.7E	Schefferville	37.0N, 71.9E
Kurile Islands	eP 21 47 27	Hindu Kush
H = 19 47 46.0	Shawinigan Falls	H = 03 39 04.9
h = about 110 km	eP 21 47 57 c	h = about 189 km
Mag 5.6 (CGS)	Victoria	Mould Bay
Alert	eP 21 45 54	eP 03 49 37 c
eP 19 56 48	Yellowknife	Penticton
Banff	iP 21 45 32	eP 03 50 36
eP 19 57 49		Resolute
Mould Bay		e(P) 03 51 (30)
eP 19 56 16	MARCH 26	Yellowknife
eS 20 03 04	Yellowknife	iP 03 50 16 c
Penticton	iP 22 13 57 c	
iP 19 57 42		
Resolute		
eP 19 57 01	MARCH 26	MARCH 27
Schefferville	U. S. C. G. S.	U. S. C. G. S.
eP 19 59 28 c	34.0N, 139.8E	44.5N, 145.6E
Victoria	Off coast of	Kurile Islands
eP 19 57 31	southern Honshu,	H = 05 12 07
Yellowknife	Japan	h = about 33 km
iP 19 57 09 c	H = 22 36 48.0	Mag 4.2 (CGS)
i 19 57 37	h = about 100 km	Resolute
	Mag 4.5 (CGS)	eP 05 21 33
	Alert	
MARCH 26	eP 22 47 (08)	MARCH 27
U. S. C. G. S.	Mould Bay	U. S. C. G. S.
36.0N, 135.7E	eP 22 46 44	35.6N, 135.8E
Near east coast of	Resolute	Southern Honshu,
Honshu, Japan	eP 22 47 24 (c)	Japan
H = 21 34 41.1		H = 06 49 23.0
h = about 33 km		h = about 33 km
Mag 6 1/2 (PAS)	MARCH 26	Mag 4.1 (CGS)
6 1/2 (BRK)	Yellowknife	Mould Bay
6 - 6 1/4 (PAL)	eP 23 48 02	eP 06 59 20
5.9 (CGS)		

DOMINION OBSERVATORIES

Resolute		The following minor	10 26 03.1
e(P) 07 00 01		earthquakes appear on	D = 189 km
Yellowknife		the Port Hardy records,	Mag 1.7
eP 07 00 08		and are assumed to be	11 30 50.0
		foreshocks or aftershocks	D = 192 km
		of the preceding event.	Mag 2.1
MARCH 27		Distances have been obtained	12 21 16.2
U. S. C. G. S.		from S-P values. Times	D = 191 km
44.3N, 110.6W		given are for the first	Mag 2.1
Yellowstone National		arrival at the Port Hardy	12 39 20.9
Park, Wyoming		station.	D = 189 km
H = 07 22 08.9		MARCH 27	Mag 1.7
h = about 33 km		01 41 12.8	15 00 48.0
Mag 4.2 (CGS)		D = 189 km	D = 190 km
Penticton		Mag 1.7	Mag 2.2
eP 07 23 55		03 25 14.0	15 52 33.8
Yellowknife		D = 192 km	D = 76 km
eP 07 26 20		Mag 1.9	Mag 2.1
		03 26 08.4	A very weak reading at
		D = 192 km	Alberni indicates an
		Mag 2.2	epicentre for the event
		04 34 23.6	at 06 34 at 51° 17'N
MARCH 27		D = 189 km	and 129° 51'W
50°38'N, 129°47'W		Mag 2.3	
West of Vancouver		04 37 56.1	
Island		D = 191 km	
H = 09 11 45		Mag 1.9	
Mag 4.1		04 42 47.5	MARCH 27
Alberni		D = 194 km	U. S. C. G. S.
eP _n 09 12 38.7		Mag 1.7	6.8N, 73.0W
D = 386 km		05 26 52.5	Colombia
Penticton		D = 194 km	H = 12 31 51.9
eP _n 09 13 24		Mag 2.0	h = about 176 km
D = 758 km		06 34 43.5	Mag 4.6 (CGS)
Port Hardy		D = 184 km	Alert
iP ₁ 09 12 11.0		Mag 2.7	iP 12 43 20 c
iS ₁ 09 12 30.9		06 46 38.2	Mould Bay
D = 163 km		D = 198 km	iP 12 43 08 c
Victoria		Mag 1.9	Penticton
eP _n 09 12 55.9		08 06 29.5	iP 12 41 26
D = 528 km		D = 201 km	Resolute
Yellowknife		Mag 2.1	eP 12 42 (39)
eP 09 15 02		09 05 21.1	Sept Iles
i 09 17 32		D = 201 km	iP 12 39 52 c
		Mag 2.1	Victoria
		09 53 00.0	eP 12 41 38
		D = 189 km	Yellowknife
		Mag 2.1	iP 12 42 03 c

SEISMOLOGICAL BULLETIN - 1963

MARCH 27	MARCH 27	Sept Iles
Mould Bay	H = 22 48 26	eP 00 21 44
eP 12 59 10 d	Mag 2.2	Shawinigan Falls
Yellowknife	Port Hardy	iP 00 22 31 (c)
eP 12 59 26	iP ₁ 22 48 56.0	Victoria
	iS ₁ 22 49 19.2	eP 00 24 57
	D = 190 km	Yellowknife
		iP 00 23 02 c
MARCH 27	MARCH 27	MARCH 28
U. S. C. G. S.	Penticton	U. S. C. G. S.
6. 3N, 73.1W	eP 24 00 22	66. 3N, 20.2W
Colombia	Victoria	Iceland
H = 13 15 30.2	eP 23 59 47	H = 00 26 27
h = about 147 km	Yellowknife	h = about 33 km
Mag 5.0 (CGS)	eP 24 02 55	Mag 4.6 (CGS)
Mould Bay		Penticton
eP 13 26 52 c		iP 00 35 18 d
Yellowknife		
iP 13 25 47 c		
MARCH 27	MARCH 28	MARCH 28
Yellowknife	U. S. C. G. S.	U. S. C. G. S.
eP 17 46 00	66. 3N, 19.6W	66. 4N, 19.6W
	Iceland	Iceland
	H = 00 15 47.5	H = 00 59 38.9
	h = about 15 km	h = about 33 km
	Mag 7 - 7 1/4 (PAS)	Mag 4.5 (CGS)
	6 1/2 (BKS)	Alert
	6 1/2 - 6 3/4 (PAL)	eP 00 20 06 d
	Alert	(S) 00 23 07
	eP 00 20 06 d	Banff
	(S) 00 23 07	iP 00 24 41 d
	Banff	Halifax
	iP 00 24 41 d	iP 00 22 17
	Halifax	Mould Bay
	iP 00 22 17	eP 00 21 52 d
	Mould Bay	S 00 26 50
	eP 00 21 52 d	Ottawa
	S 00 26 50	iP 00 22 49 c
	Ottawa	Penticton
	iP 00 22 49 c	iP 00 24 41 d
	Penticton	Port Hardy
	iP 00 24 41 d	eP 00 24 54
	Port Hardy	Resolute
	eP 00 24 54	eP 00 21 08 d
	Resolute	Schefferville
	eP 00 21 08 d	eP 00 21 12 c
	Schefferville	
	eP 00 21 12 c	
MARCH 27		MARCH 28
U. S. C. G. S.		U. S. C. G. S.
51. 4N, 179.1W		51. 9N, 156.5E
Andreanof Islands,		Southern Kamchatka
Aleutian Islands		H = 02 04 26.3
H = 21 19 01.2		h = about 147 km
h = about 33 km		Mag 4.3 (CGS)
Mag 4.2 (CGS)		
Mould Bay		
eP 21 25 40		
Yellowknife		
eP 21 25 53		

DOMINION OBSERVATORIES

Yellowknife eP 02 12 33	Penticton eP ₁ 10 26 22.1 eS ₁ 10 26 45.0 D = 184 km	MARCH 28 U. S. C. G. S. 30.8N, 70.0E Hindu Kush H = 17 12 23.1 h = about 24 km
MARCH 28 Mould Bay eP 04 05 29 c Penticton eP 04 07 58 Yellowknife iP 04 06 54	Victoria eP ₁ 10 26 10.7 eS ₁ 10 26 24.2 D = 111 km	Mould Bay eP 17 23 52 Resolute eP 17 24 53 (d) Yellowknife iP 17 25 03 c
MARCH 28 Resolute eP 04 26 27 Yellowknife iP 04 26 41 d	MARCH 28 U. S. C. G. S. 30.2S, 177.8W Kermadec Islands H = 11 12 31.3 h = about 38 km Alert eP' 11 31 22 c Mould Bay eP' 11 31 01	MARCH 28 Yellowknife eP 20 48 19
MARCH 28 Penticton eP 09 40 47	Penticton eP 11 25 48 Resolute eP' 11 31 10(c) Schefferville eP' 11 31 28 Sept Iles iP' 11 31 28 d Yellowknife eP 11 26 42 eP' 11 30 50	MARCH 28 Mould Bay eP 22 02 03
MARCH 28 U. S. C. G. S. 49.0N, 154.9E Kurile Islands region H = 09 47 10.5 h = about 53 km Mag 4.9 (CGS) Alert e(P) 09 55 42 Mould Bay eP 09 54 58 Penticton iP 09 56 23 Resolute eP 09 55 48 (d) Yellowknife eP 09 55 49	MARCH 28 U. S. C. G. S. 10.2N, 126.2E Near north coast of Mindanao, Philippine Islands H = 15 12 02.8 h = about 60 km Mag 4.4 (CGS) Mould Bay eP 15 24 36 Resolute eP 15 25 05 (c) Yellowknife iP 15 25 15 c	MARCH 28 U. S. C. G. S. 29.6S, 177.5W Kermadec Islands H = 23 29 14.6 h = about 54 km Mag 5.1 (CGS) Alert eP' 23 48 02 (d) Mould Bay eP' 23 47 (41) Resolute eP' 23 47 50 d Schefferville eP' 23 48 09
MARCH 28 48.8°N, 122.0°W South of Chilliwack, H = 10 25 53 Mag 1.9		MARCH 29 U. S. C. G. S. 55.4N, 166.0E Komandorskie Islands H = 00 23 31.8 h = about 33 km Mag 4.1 (CGS) Mould Bay eP 00 30 10

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MARCH 29	Penticton	Penticton
U. S. C. G. S.	eP 07 55 52	iP ₁ 17 14 57.2
40.4N, 26.6E	Yellowknife	iS ₁ 17 15 16.8
Northwestern Turkey	eP 07 57 02	D = 160 km
H = 03 09 11.2		Victoria
h = about 33 km		eP _n 17 15 06.3
Mag 4.4 (CGS)	MARCH 29	eS _n 17 15 30.6
Mould Bay	Resolute	D = 230 km
eP 03 19 33	e(P) 09 11 07	
Resolute	Yellowknife	
eP 03 19 (15)	eP 09 11 25	
Yellowknife		
eP 03 20 42		
		MARCH 29
MARCH 29		U. S. C. G. S.
U. S. C. G. S.		36.5N, 70.4E
13.8N, 91.8W	MARCH 29	Hindu Kush
Guatemala	Mould Bay	H = 20 04 51.7
H = 05 12 22	eP 13 32 38	h = about 200 km
h = about 33 km	Yellowknife	Mag 4.2 (CGS)
Mag 4.5 (CGS)	eP 13 32 11	Mould Bay
Mould Bay		eP 20 15 26
eP 05 22 54		Yellowknife
Penticton		eP 20 16 46
eP 05 20 12	MARCH 29	
Yellowknife	Mould Bay	MARCH 29
eP 05 21 23	eP 13 52 23	U. S. C. G. S.
	Yellowknife	30.2S, 177.7W
	eP 13 52 18	Kermadec Islands
		H = 21 16 43.7
		h = about 60 km
		Mag 5.0 (CGS)
	MARCH 29	Alert
	Yellowknife	eP' 21 35 32
	eP 15 54 30	Mould Bay
		eP' 21 35 11
		Resolute
		eP' 21 35 20 (d)
MARCH 29		
35.6N, 140.5E		
Near coast of		
Central Honshu,	MARCH 29	
Japan	Mould Bay	
H = 06 32 24.5	eP 16 28 22 d	
h = about 33 km		
Mag 4.2 (CGS)		
Resolute		
eP 06 42 56		
MARCH 29		
U. S. C. G. S.		
13.4N, 91.0W		
Guatemala		
H = 07 47 56.2		
h = about 33 km		
Mag 4.3 (CGS)		

DOMINION OBSERVATORIES

MARCH 30

50°38'N, 129°30'W
 West of Scott Islands
 H = 00 34 40
 Mag 4.1
 Alberni
 iP_n 00 35 31.8
 D = 370 km
 Mould Bay
 eP 00 40 08
 Penticton
 eP_n 00 36 17
 D = 731 km
 Port Hardy
 iP₁ 00 35 02.8
 D = 148 km
 Resolute
 eP 00 40 (26)
 Victoria
 eP_n 00 35 48.0
 D = 503 km
 Yellowknife
 eP 00 37 58

MARCH 30

U. S. C. G. S.
 19. 1S, 169. 1E
 New Hebrides Islands
 H = 01 53 28.8
 h = about 160 km
 Mag 6.1 (CGS)
 Banff
 eP 02 06 38
 Halifax
 iP' 02 12 20 d
 Mould Bay
 eP 02 07 14
 Penticton
 eP 02 06 24
 Port Hardy
 eP 02 06 07
 Resolute
 eP 02 07 40
 Schefferville
 eP' 02 12 09
 Sept Iles
 iP' 02 12 13 d
 i 02 14 07

Seven Falls

eP' 02 12 07
 i 02 13 53
 i 02 15 28
 Shawinigan Falls
 eP' 02 12 05
 Victoria
 eP 02 06 13
 Yellowknife
 iP 02 06 58
 i 02 07 42

MARCH 30

48°52'N, 122°23'W
 Northeast of Bellingham,
 USA
 H = 02 57 45
 Mag 2.3
 Alberni
 iP₁ 02 58 12.6
 iS₁ 02 58 34.1
 D = 184 km
 Penticton
 eP_n 02 58 15.0
 D = 207 km
 Victoria
 iP₁ 02 57 57.0
 iS₁ 02 58 06.2
 D = 87 km

MARCH 30

Yellowknife
 eP 05 10 15

MARCH 30

U. S. C. G. S.
 51. 8N, 170. 5W
 Fox Islands,
 Aleutian Islands
 H = 06 54 59.6
 h = about 33 km
 Mould Bay
 eP 07 01 18
 Schefferville
 eP 07 04 (39)
 Yellowknife
 iP 07 01 17 d

MARCH 30

U. S. C. G. S.
 44. 2N, 148. 0E
 Kurile Islands
 H = 16 51 56.6
 h = about 33 km
 Mag 5 1/4 - 5 1/2 (PAL)
 6.3 (CGS)

Alert
 eP 17 01 07 c
 Banff
 eP 17 02 06
 Halifax
 eP 17 04 42 c
 Mould Bay
 eP 17 00 35 c
 i 17 02 03
 Penticton
 iP 17 01 58
 Port Hardy
 iP 17 01 22 c
 Resolute
 iP 17 01 20 c
 Schefferville
 eP 17 03 47
 Sept Iles
 iP 17 04 11 c
 Seven Falls
 iP 17 04 18
 Shawinigan Falls
 iP 17 04 18 c
 Victoria
 eP 17 01 47
 Yellowknife
 iP 17 01 27 c

MARCH 30

Yellowknife
 eP 17 36 59

MARCH 30

U. S. C. G. S.
 38. 6N, 75. 8E
 Sinkiang Province,
 China
 H = 17 30 04.3
 h = about 33 km
 Mag 4.3 (CGS)

SEISMOLOGICAL BULLETIN - 1963

Mould Bay eP 17 40 44	MARCH 30 50.2°N, 127.5°W	Mould Bay eP 04 58 36
Yellowknife eP 17 42 05	Checleset Bay west coast of Vancouver Island	Ottawa eP 04 55 06
i 17 42 12	H = 23 58 32	Penticton eP 04 56 36
	Mag 2.3	Resolute eP 04 58 15 (c)
MARCH 30	Alberni	Schefferville eP 04 56 20 c
Shawinigan Falls	eP ₁ 23 59 04.7	Sept Iles eP 04 55 49
eP 19 23 01	eS ₁ 23 59 34.7	Seven Falls eP 04 55 24
	D = 214 km	Shawinigan Falls eP 04 55 18
	Port Hardy	Yellowknife eP 04 57 30
MARCH 30	iP ₁ 23 58 41.6	
H = 20 44 09	iS ₁ 23 58 49.0	
Mag 2.2	D = 63 km	
Port Hardy	Victoria	
eP ₁ 20 44 39.7	eP 23 59 28.1	
eS ₁ 20 45 03.2		
D = 192 km		
	MARCH 31	
MARCH 30	Mould Bay	MARCH 31
Mould Bay	eP 02 19 55 d	U. S. C. G. S.
eP 20 52 04		29.9S, 177.7W
Resolute		Kermadec Islands
eP 20 52 (58)	MARCH 31	H = 05 30 49.3
Yellowknife	U. S. C. G. S.	h = about 48 km
iP 20 51 48 d	36.9N, 57.7E	Mag 6 1/4 - 6 1/2 (PAS)
	Northeastern Iran	6 1/2 (BKS)
	H = 02 27 09.2	6 - 6 1/4 (PAL)
	h = about 33 km	
	Mag 4.6 (CGS)	
MARCH 30	Mould Bay	Alert eP' 05 49 39 c
U. S. C. G. S.	eP 02 38 00	Halifax eP' 05 49 50
8.7S, 109.2W	Yellowknife	Mould Bay iP' 05 49 18
About 2000 km southwest of Galapagos Islands	eP 02 39 19	Ottawa eP' 05 49 32
H = 21 13 54.1		Penticton eP 05 44 05
h = about 33 km	MARCH 31	Port Hardy eP 05 43 52
Mag 4.6 (CGS)	U. S. C. G. S.	Resolute eP' 05 49 27 (c)
Mould Bay	6.5S, 81.1W	Schefferville eP' 05 49 45
eP 21 26 35	Near coast of southern Peru	Yellowknife eP 05 45 02
Penticton	H = 04 46 00.8	eP' 05 49 10
eP 21 23 49	h = about 33 km	
	Mag 5.2 (CGS)	
	Alert	
	eP 04 58 55	

DOMINION OBSERVATORIES

MARCH 31
 U. S. C. G. S.
 10.7S, 78.5W
 Near coast of Peru
 H = 05 51 00.9
 h = about 33 km
 Mag 5.0 (CGS)
 Penticton
 iP 06 02 11 c
 Schefferville
 eP 06 01 45 c
 Yellowknife
 iP 06 02 57 c

MARCH 31
 U. S. C. G. S.
 6.1S, 149.0E
 New Britain
 H = 07 07 36.3
 h = about 60 km
 Mag 6 1/4 (PAS)
 6 (PAL)
 5.7 (CGS)
 Alert
 eP 07 21 28
 Mould Bay
 eP 07 21 00
 Ottawa
 eP' 07 26 32
 Shawinigan Falls
 eP' 07 26 34
 Yellowknife
 eP 07 21 09

MARCH 31
 U. S. C. G. S.
 30.1S, 177.7W
 Kermadec Islands
 H = 09 07 20.1
 h = about 48 km
 Mag 5.2 (CGS)
 Mould Bay
 eP' 09 25 49
 Resolute
 eP' 09 25 58 c

MARCH 31
 Yellowknife
 eP 09 37 04

MARCH 31
 Canadian Arctic
 H = 11 37 11.4
 Mag 2.2
 Resolute
 P₁ 11 37 43
 S₁ 11 38 07
 D = 197 km

MARCH 31
 U. S. C. G. S.
 35.8N, 132.6E
 Near coast of
 southern Honshu,
 Japan
 H = 12 26 11.6
 h = about 33 km
 Mag 4.7 (CGS)
 Mould Bay
 eP 12 36 14
 Resolute
 eP 12 36 (52)
 Yellowknife
 iP 12 37 11 c

MARCH 31
 Schefferville
 eP 13 11 (07)
 Yellowknife
 eP 13 14 31

MARCH 31
 Resolute
 eP 13 49 48 d
 Schefferville
 eP 13 48 (44)

MARCH 31
 Mould Bay
 eP 13 51 41
 Yellowknife
 eP 13 52 04

MARCH 31
 U. S. C. G. S.
 35.1N, 9.3W
 Off coast of Morocco
 H = 14 58 02.4
 h = about 33 km
 Mould Bay
 eP 15 08 12
 Resolute
 eP 15 07 34 (d)

MARCH 31
 U. S. C. G. S.
 53.1N, 167.2W
 Fox Islands,
 Aleutian Islands
 H = 15 33 25.3
 h = about 33 km
 Mag 4.3 (CGS)
 Mould Bay
 eP 15 39 26 c
 i 15 42 32
 Schefferville
 eP 15 42 47 d
 Yellowknife
 iP 15 39 21 d

MARCH 31
 Yellowknife
 iP 16 53 33 c

MARCH 31
 U. S. C. G. S.
 0.8N, 96.6E
 Nicobar Islands region
 H = 17 28 52.7
 h = about 33 km
 Alert
 eP 17 42 19

SEISMOLOGICAL BULLETIN - 1963

Penticton
eP' 17 47 43
Yellowknife
eP' 17 47 23

MARCH 31

U. S. C. G. S.

30.0S, 178.0W

Kermadec Islands

H = 19 22 53.3

h = about 50 km

Mag 6 1/4 - 6 1/2 (PAS)

6 1/2 (BKS)

5.8 (CGS)

Alert

eP' 19 41 43

Halifax

iP' 19 41 53 d

Mould Bay

eP' 19 41 22

i 19 52 24

Ottawa

eP' 19 41 36

Penticton

iP 19 36 09 c

Port Hardy

eP 19 35 58

Resolute

eP' 19 41 31 (c)

Sept Iles

eP' 19 41 49

Shawinigan Falls

eP' 19 41 40

Yellowknife

eP 19 37 (00)

DOMINION OBSERVATORIES

EARTHQUAKES IN THE CANADIAN ARCTIC

The following disturbances were recorded during the first quarter of 1963. The times of observed phases are given at their respective chronological positions in the text of this bulletin. M = magnitude.

JANUARY 4 11 14 21 77.5°N ± 0.2°, 118.1°W ± 1.0°. M = 2.5.
Foreshock of the earthquake at 12 43 01.

JANUARY 4 11 18 02 77.5°N ± 0.2°, 118.1°W ± 1.0°. M = 2.0.
Foreshock of the earthquake at 12 43 01.

JANUARY 4 11 21 51 77.5°N ± 0.2°, 118.1°W ± 1.0°. M = 2.0.
Foreshock of the earthquake at 12 43 01.

JANUARY 4 11 54 27 77.5°N ± 0.2°, 118.1°W ± 1.0°. M = 2.2.
Foreshock of the earthquake at 12 43 01.

JANUARY 4 12 13 11 77.5°N ± 0.2°, 118.1°W ± 1.0°. M = 2.0.
Foreshock of the earthquake at 12 43 01.

JANUARY 4 12 27 22 77.5°N ± 0.2°, 118.1°W ± 1.0°. M = 2.2
Foreshock of the earthquake at 12 43 01.

JANUARY 4 12 43 01 77.5°N ± 0.2°, 118.1°W ± 1.0°. M = 3.2.
Off the coast of Prince Patrick Island near Cape Leopold McClintock, N. W. T. There were six foreshocks and four aftershocks ranging in magnitude from 1.9 to 2.5. In addition, Mould Bay recorded about two dozen tiny disturbances apparently associated with this epicentre. Of these about half were foreshocks and the remainder aftershocks.

JANUARY 4 12 55 45 77.5°N ± 0.2°, 118.1°W ± 1.0°. M = 2.0.
Aftershock of the earthquake at 12 43 01.

JANUARY 4 13 23 21 77.5°N ± 0.2°, 118.1°W ± 1.0°. M = 2.0.
Aftershock of the earthquake at 12 43 01.

JANUARY 4 16 24 41. 77.5°N ± 0.2°, 118.1°W ± 1.0°. M = 1.9.
Aftershock of the earthquake at 12 43 01.

JANUARY 4 18 16 37 M = 2.1. 97 miles from Alert, N. W. T.

JANUARY 4 18 55 52 77.5°N ± 0.2°, 118.1°W ± 1.0°. M = 2.1.
Aftershock of the earthquake at 12 43 01.

JANUARY 11 07 18 09. M = 2.1. 38 miles from Resolute, N. W. T.

JANUARY 15 23 59 01 76.9°N ± 1.0°, 117.5°W ± 2.0°. M = 3.8.
Prince Patrick Island, N. W. T.

JANUARY 18 14 59 22. M = 1.5. 46 miles from Resolute, N. W. T.

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- JANUARY 26 06 22 02. Depth 20 km. $M = 2.4$. 150 miles from Resolute, N.W.T.
- JANUARY 27 18 01 40. 81 miles from Yellowknife, N.W.T.
- FEBRUARY 2 18 38 12 $67^{\circ}50'N \pm 1.0^{\circ}$, $91^{\circ}00'W \pm 2.0^{\circ}$. $M = 4.6$. About 32 miles southwest of Pelly Bay, N.W.T.
- FEBRUARY 5 22 33 45. $M = 1.2$. 30 miles from Resolute, N.W.T.
- FEBRUARY 8 02 00 53. $M = 2.4$. 127 miles from Yellowknife, N.W.T.
- FEBRUARY 27 01 50 20. $80.9^{\circ}N \pm 0.6^{\circ}$, $85.8^{\circ}W \pm 2.2^{\circ}$. $M = 3.7$. Near Hare Fiord, Ellesmere Island, N.W.T.
- MARCH 1 21 54 50. Depth 30 km. $M = 1.8$. 99 miles from Resolute, N.W.T.
- MARCH 5 15 21 54. $M = 2.4$. 153 miles from Resolute, N.W.T.
- MARCH 6 01 50 39. $M = 2.2$. 67 miles from Yellowknife, N.W.T.
- MARCH 8 00 14 16. $76^{\circ}36'N \pm 15'$, $94^{\circ}20'W \pm 1.0^{\circ}$. Depth 33 km (U.S.C.G.S.) $M = 5.7$. Grinnell Peninsula, Devon Island, N.W.T. Followed by three aftershocks.
- MARCH 8 01 44 30. $76^{\circ}36'N \pm 15'$, $94^{\circ}20'W \pm 1.0^{\circ}$. Depth 32 km. $M = 2.5$. Aftershock of the earthquake at 00 14 16.
- MARCH 8 12 59 01. $76^{\circ}36'N \pm 15'$, $94^{\circ}20'W \pm 1.0^{\circ}$. Depth 32 km. $M = 2.4$. Aftershock of the earthquake at 00 14 16.
- MARCH 8 14 00 00. $76^{\circ}36'N \pm 15'$, $94^{\circ}20'W \pm 1.0^{\circ}$. Depth 32 km. $M = 2.2$. Aftershock of the earthquake at 00 14 16.
- MARCH 8 18 07 40. $M = 1.9$. 86 miles from Alert, N.W.T.
- MARCH 12 20 04 24 $65^{\circ}40'N \pm 1.0^{\circ}$, $132^{\circ}00'W \pm 3.0^{\circ}$. $M = 4.3$. About 100 miles east of Whitehorse, Y.T.
- MARCH 15 06 54 50. $M = 1.7$. 89 miles from Mould Bay, N.W.T.
- MARCH 21 09 20 58. $81^{\circ}18'N \pm 15'$, $103^{\circ}15'W \pm 1.5^{\circ}$. $M = 4.1$. About 100 miles north of Ellef Ringnes Island, N.W.T.
- MARCH 22 23 25 49. $80^{\circ}N$, $92^{\circ}W$. Axel Heiberg Island, N.W.T. This epicentre is subject to considerable uncertainty as primary phases were not recorded.

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MARCH 23 04 26 10. M = 1.9. 56 miles from Mould Bay, N. W. T.

MARCH 26 19 25 44. M = 1.9. 46 miles from Alert, N. W. T.

MARCH 31 11 37 11. M = 2.2. 122 miles from Resolute, N. W. T.

SEISMOLOGICAL BULLETIN - 1963

EARTHQUAKES IN EASTERN CANADA
AND ADJACENT AREAS

The following disturbances were recorded during the first quarter of 1963. The times of observed phases are given at their respective chronological positions in the text of this bulletin. M = magnitude.

JANUARY 30 14 50 44.0°N, 75.9°W. M = 3.0. The Daily Times of Watertown, N. Y., reported that a shock was felt "sharply over all of the city." The seismographs at both Montreal and Ottawa were out of operation at the time of the shock.

FEBRUARY 2 02 59 43. M = 2.7. 183 miles from London, Ont., - probably to the south or west as it was not recorded at Ottawa.

FEBRUARY 16 08 00 17. 44°53'N ± 5', 73°41'W ± 8'. M = 2.6. About 15 miles southwest of Rouses Point, N. Y.

FEBRUARY 27 06 00. 43°12'N, 79°34'W. M = 3.0. Grimsby, Ont. Newspaper reports said that residents "came spilling outside" to investigate, and that the burglar alarm at the bank was tripped. London station was out of operation for the day, however the shock left a "record" at McMaster University where it caused an irregularity in a graphline depicting the regular compression of a muskeg sample.

MARCH 2 20 24 32. 41°31'N ± 30', 75°46'W ± 40'. M = 3.4. A few miles north of Scranton, Penn.

MARCH 7 14 59 28. M = 3.4. About 270 miles from London, Ont. Ottawa records were being changed at the time.

MARCH 12 07 06 08 57.0°N, ± 1.0°, 60.0°W ± 2.0°. M = 3.8. About 50 miles off the coast of Labrador, Nfld.

DOMINION OBSERVATORIES

EARTHQUAKES IN WESTERN CANADA
AND ADJACENT AREAS

The following disturbances were recorded during the first quarter of 1963. The times of observed phases are given at their respective chronological positions in the text of this bulletin. In some cases, although they are not included in the text, readings from U. S. C. G. S. stations were used to compute epicentres. The quality (Q) of the epicentre is indicated by a letter from "a" meaning an excellent fit of observed data to "d" meaning a very poor solution.

JANUARY 2 at 05 39 43 U. T. 150 km from Port Hardy.

JANUARY 4 at 08 29 02 U. T. 230 km from Port Hardy.

JANUARY 6 at 06 01 17 U. T. 173 km from Port Hardy.

JANUARY 7 at 18 59 21 U. T. 158 km from Port Hardy.

JANUARY 7 at 19 08 17 U. T. 173 km from Port Hardy.

JANUARY 9 at 16 59 33 U. T. 216 km from Port Hardy.

JANUARY 9 at 23 49 30 U. T. 69 km from Port Hardy.

JANUARY 9 at 00 01 27 U. T. Magnitude 1.3, 86 km from Penticton.

JANUARY 10 at 08 58 34 U. T. 61 km from Port Hardy.

JANUARY 11 at 23 21 07 U. T. Magnitude 2.0, 228 km from Penticton.

JANUARY 12 at 14 43 10 U. T. Magnitude 2.6, 315 km from Penticton.

JANUARY 16 at 06 43 13 U. T. Magnitude 2.3. Epicentre at 48°16'N, 122°48'W, near Whidbey Island, U. S. A.

JANUARY 18 at 16 13 05 U. T. 315 km from Penticton.

JANUARY 18 at 20 49 12 U. T. 322 km from Penticton, Magnitude 2.9.

JANUARY 18 at 21 24 28 U. T. 231 km from Port Hardy.

JANUARY 19 at 05 57 21 U. T. Magnitude 3.5. Probably a foreshock of next event. Epicentre uncertain.

JANUARY 20 at 10 56 48 U. T. Magnitude 3.9. Epicentre at 50.3°N, 129.6°W, in Queen Charlotte Sound. Q=b.

JANUARY 20 at 19 19 08 U. T. 168 km from Port Hardy.

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JANUARY 22 at 04 13 46 U. T. Magnitude 2.2. Epicentre at 48°53'N, 122°13'W, north east of Bellingham, U.S.A.

JANUARY 31 at 00 27 33 U. T. Magnitude 2.5. Epicentre at 50°36'N, 129°45'W, off west coast of Vancouver Island.

JANUARY 31 at 22 54 08 U. T. 104 km from Port Hardy.

FEBRUARY 16 at 04 06 44 U. T. Magnitude 2.8. Epicentre at 49.6°N, 127.1°W, west of Vancouver Island.

FEBRUARY 23 at 06 19 17 U. T. Magnitude 2.3. Epicentre at 49°29'N, 123°37'W, near Sechelt Peninsula. Q=a.

MARCH 4 at 06 08 23 U. T. Magnitude 2.3. Epicentre at 49.6°N, 114.8°W, in the Crowsnest Pass area. Q=c.

MARCH 4 at 10 40 59 U. T. Magnitude 2.0. Epicentre 184 km from Port Hardy.

MARCH 9 at 06 54 50 U. T. Magnitude 2.0. 175 km from Port Hardy.

MARCH 10 at 06 21 29 U. T. Magnitude 2.4. Epicentre at 49.6°N, 127.6°W, west of Vancouver Island.

MARCH 15 at 23 06 02 U. T. Magnitude 2.3. 266 km from Penticton.

MARCH 21 at 18 19 19 U. T. Magnitude 3.9. Epicentre at 50°05'N, 129° 45'W, west of Vancouver Island, Q=b.

MARCH 23 at 22 38 28 U. T. Magnitude 2.1. Epicentre at 48°12'N, 124°36'W, in western Washington, U.S.A. Q=b.

MARCH 27 at 09 11 45 U. T. Magnitude 4.1. Epicentre at 50°38'N, 129°47'W, west of Vancouver Island. Q=b. Many aftershocks for this earthquake are listed in the text.

MARCH 27 at 22 48 26 U. T. Magnitude 2.2. 190 km from Port Hardy.

MARCH 28 at 10 25 53 U. T. Magnitude 1.9. Epicentre at 48.8°N, 122.0°W, in Washington, U.S.A. Q=c.

MARCH 29 at 17 14 31 U. T. Magnitude 2.4. Epicentre at 48.0°N, 120.4°W, near Chelan, Washington, U.S.A. Q=c.

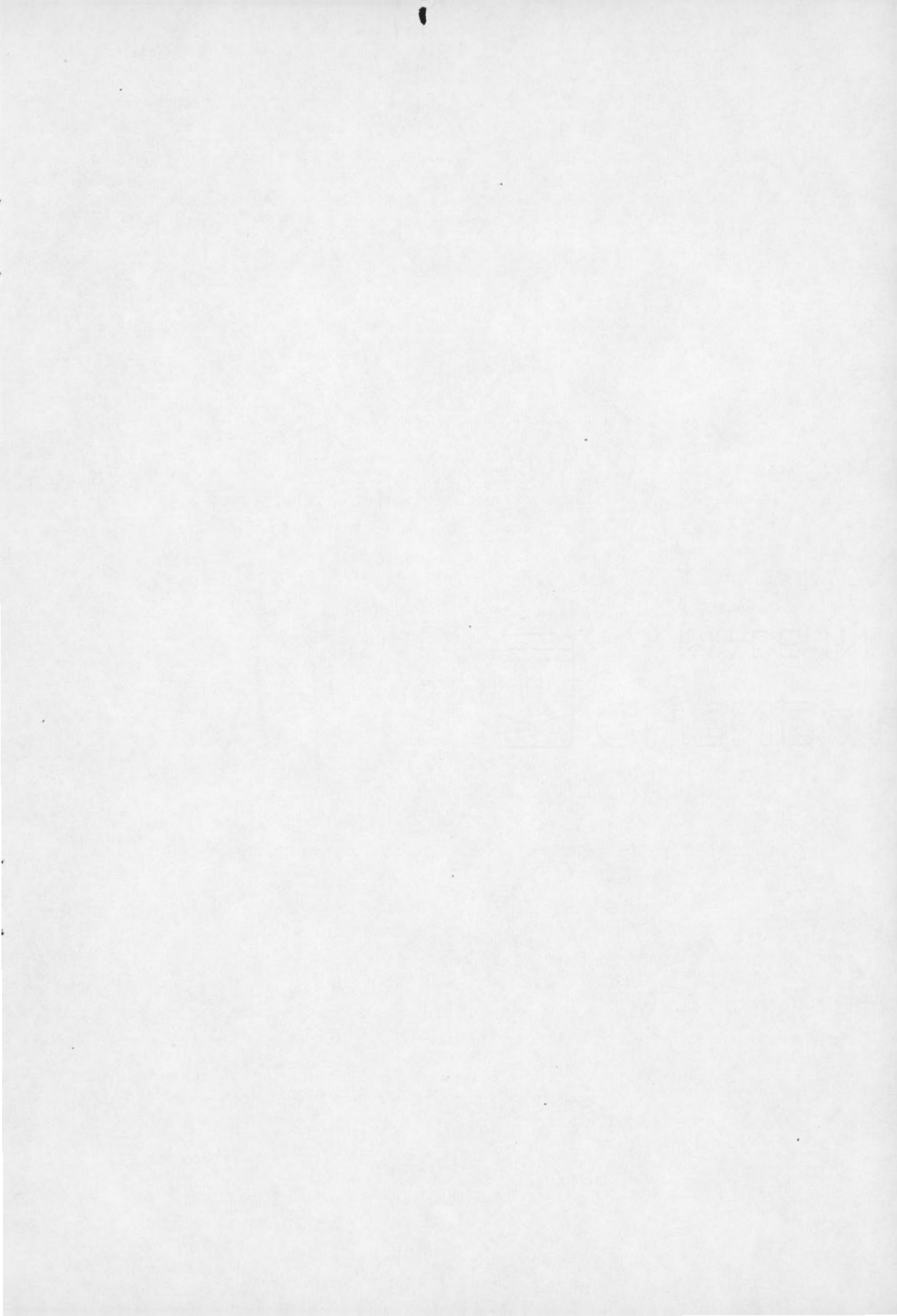
MARCH 30 at 00 34 45 U. T. Magnitude 4.1. Epicentre at 50°38'N, 129°30'W, west of Scott Islands. Q=b.

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MARCH 30 at 02 57 45 U. T. Magnitude 2.3. Epicentre at 48°52'N, 122°23'W, north east of Bellingham, Washington, U.S.A. Q=b.

MARCH 30 at 20 44 09 U. T. Magnitude 2.2. Epicentre 192 km from Port Hardy.

MARCH 30 at 23 58 32 U. T. Magnitude 2.3. Epicentre at 50.2°N, 127.5°W, west of Vancouver Island. Q=c.



ROGER DUHAMEL, F.R.S.C.
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY
OTTAWA, 1964