



SEISMOLOGICAL SERIES

of the

DOMINION OBSERVATORY

1961-1

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1961

**Seismological Service
of Canada**

OTTAWA, CANADA

Department of Mines and Technical Surveys

DOMINION OBSERVATORIES

1961

SEISMOLOGICAL BULLETIN - 1961

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

Halifax, Nova Scotia -

Operated by Dalhousie University for the Dominion Observatory.

Ottawa, Ontario -

Dominion Observatory, Department of Mines and Technical Surveys.

Resolute, Northwest Territories -

Owned and operated by the Dominion Observatory.

M. Strader in charge.

Seven Falls, Quebec -

Owned by the Quebec Power Company; operated by the Company for the Dominion Observatory.

Shawinigan Falls, Quebec -

Owned by the Shawinigan Water and Power Co., operated by the Company for the Dominion Observatory.

Local earthquakes are interpreted by means of travel-time curves

based on rockburst studies. (See J. H. Hodgson, Publications of the Dominion Observatory, XVI, Nos. 5 and 6.)

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de la publication originale.

DOMINION OBSERVATORIES

Western Division

Alberni, British Columbia -

Owned and operated by the Dominion Observatory.

W. N. Burgess in charge.

Banff, Alberta -

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

Penticton -

Owned and operated by the Dominion Observatory.

Victoria, British Columbia -

Dominion Astrophysical Observatory, Department of Mines and Technical Surveys, Royal Oak, 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 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.

SEISMOLOGICAL BULLETIN - 1961

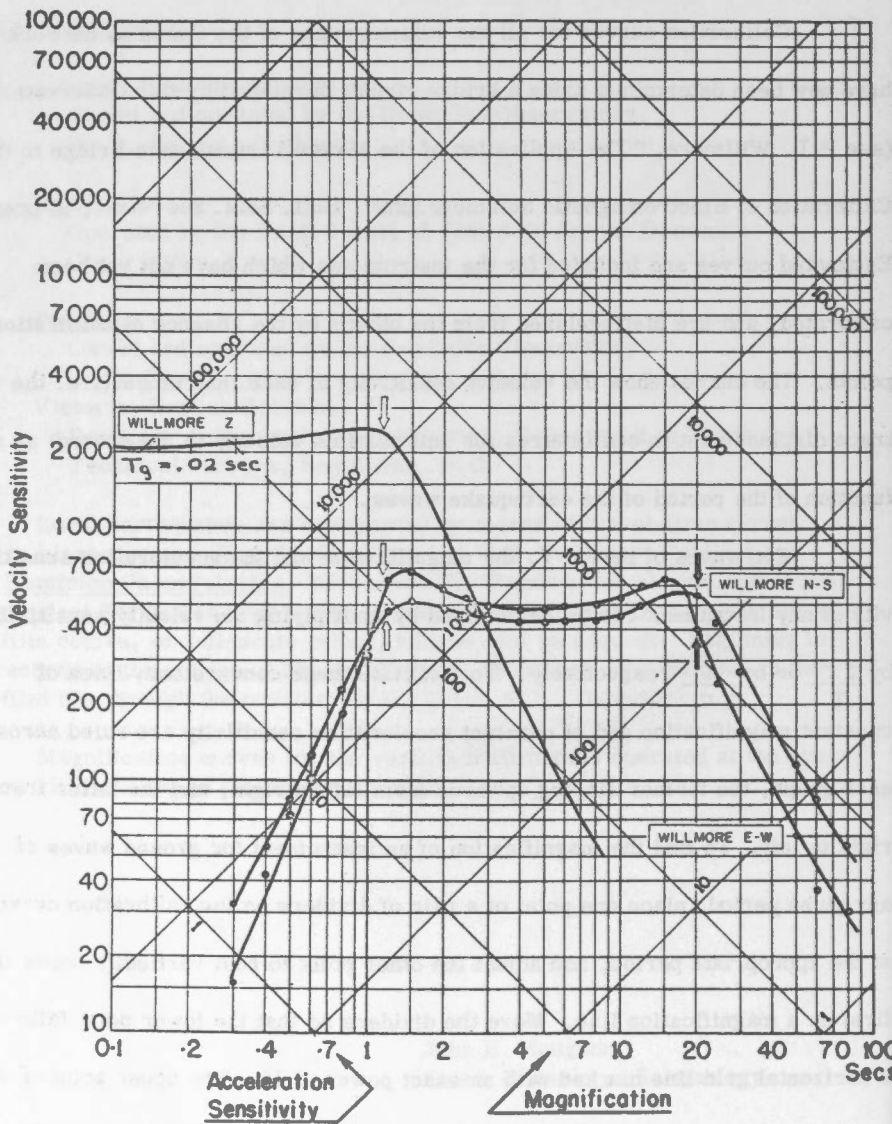
Explanation of Calibration Curves

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., in press). 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 $\frac{T}{2\pi}$ 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.

CALIBRATION CURVES

STATION: ALBERNI



$\phi = 49^\circ 16'14''\text{N}$ $\lambda = 124^\circ 49'18''\text{W}$ Altitude

Foundation : Basic volcanic rock

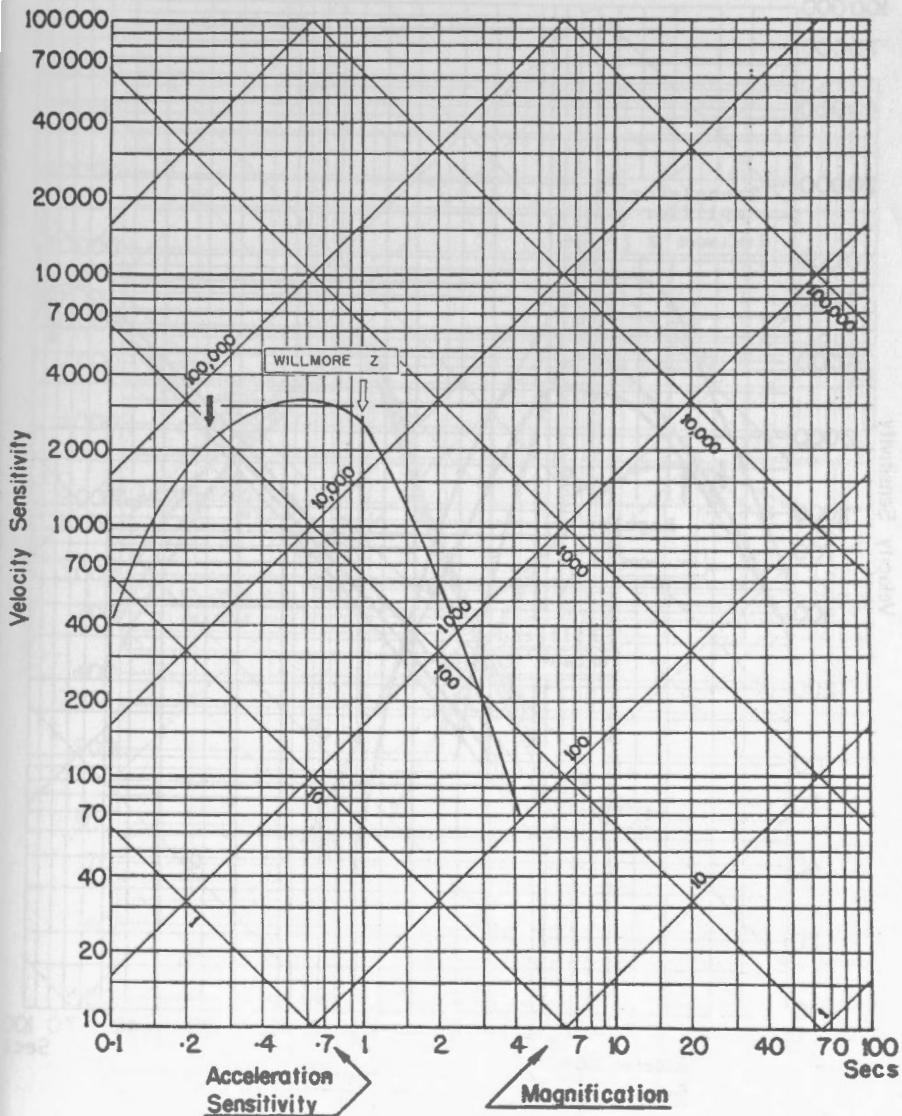
$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: July 9 1957.

CALIBRATION CURVES

STATION: BANFF



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

Foundation: Bedrock

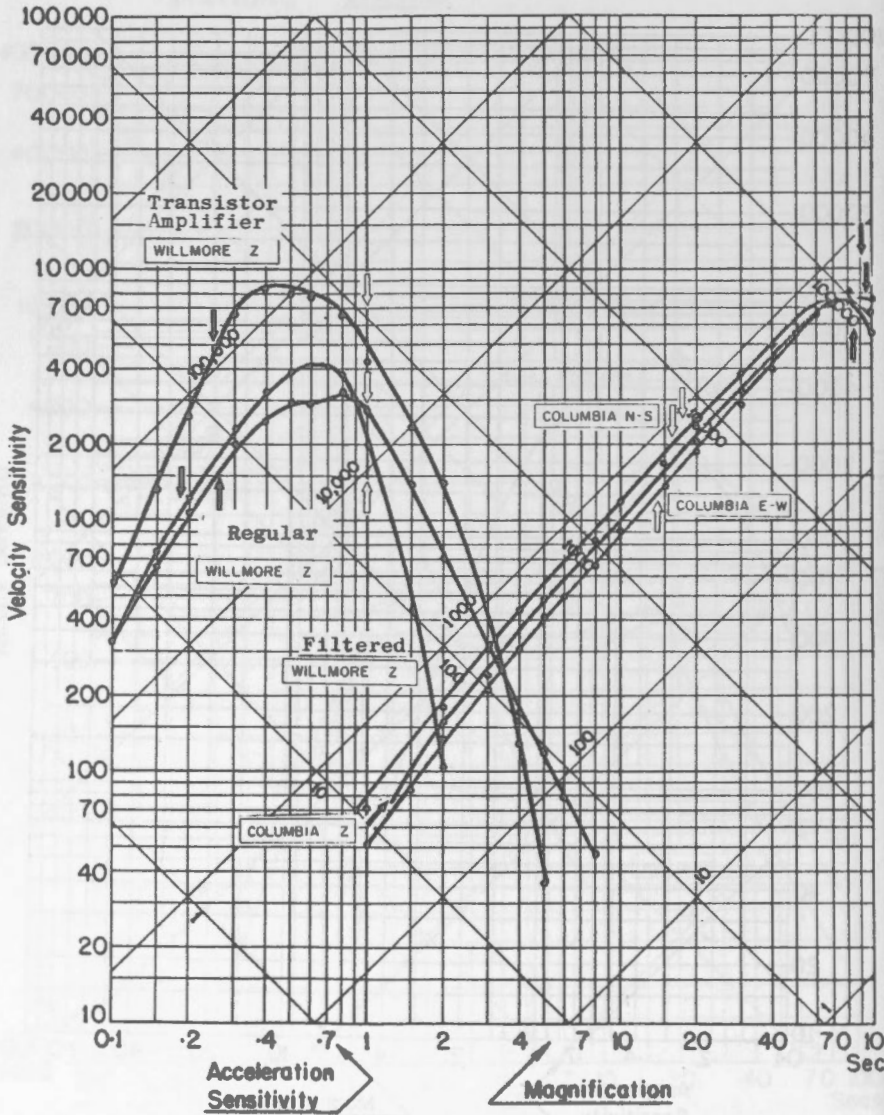
$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: Estimated Curve

CALIBRATION CURVES

STATION: HALIFAX



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

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

Altitude 56 M

Foundation : Carbonaceous slate

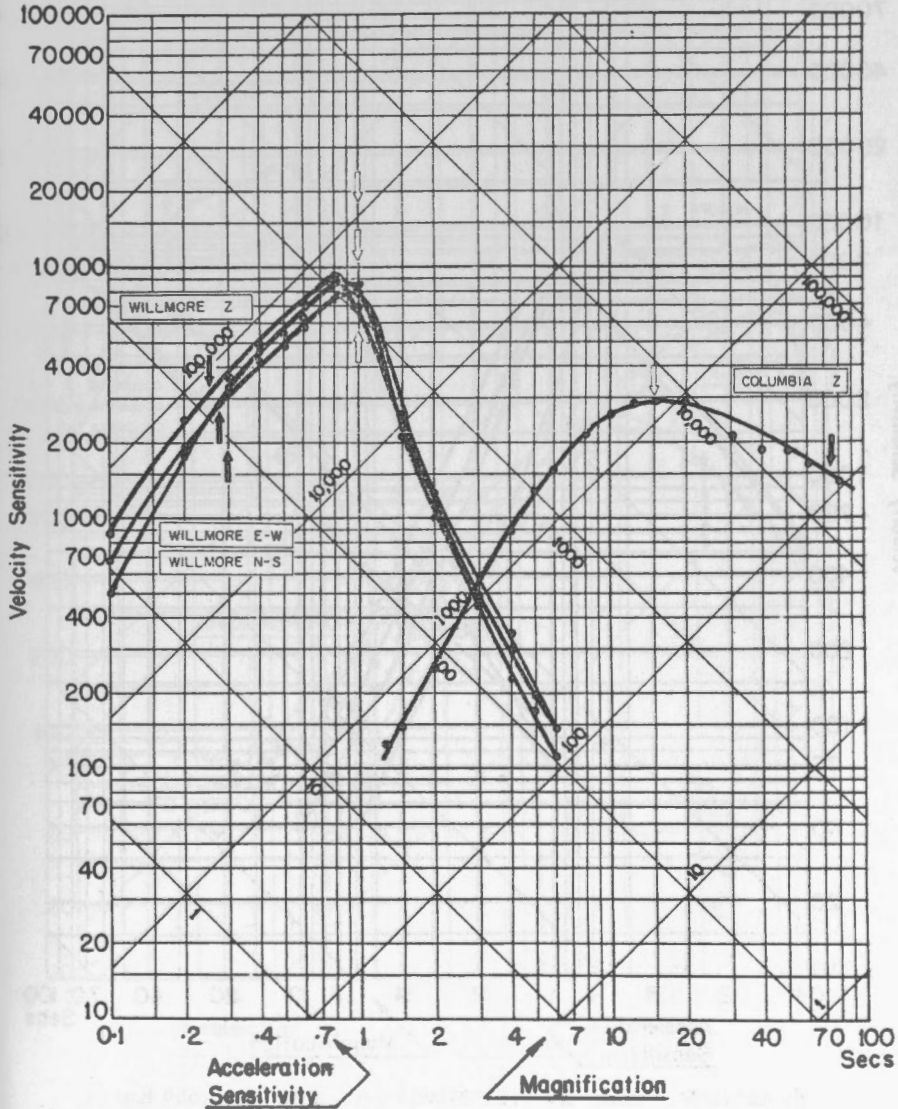
$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: June 1960

CALIBRATION CURVES

STATION: OTTAWA



$\phi = 45^{\circ} 23' 38'' N$

$\lambda = 75^{\circ} 42' 57'' W$

Altitude 83 M

Foundation : Boulder clay on limestone

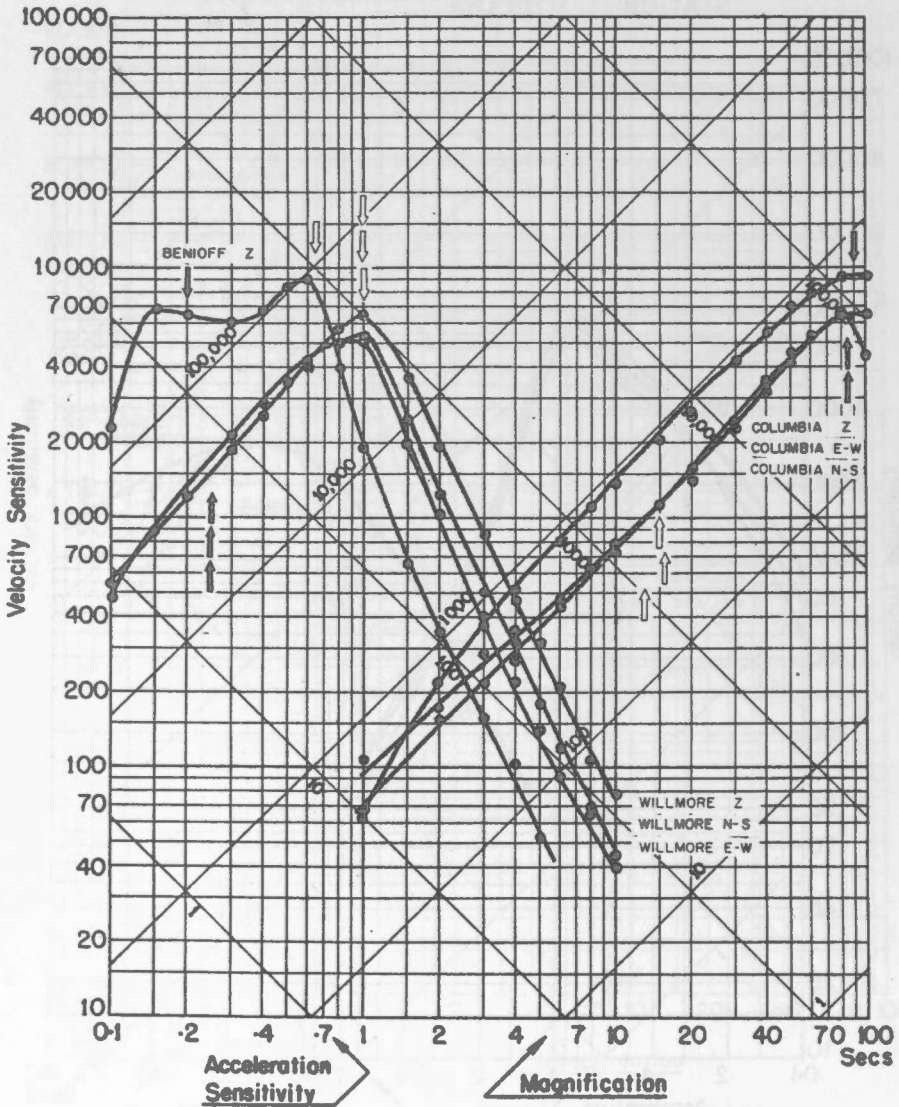
$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: Columbia Dec-12-1956
Willmore Dec-2-1960
Willmore N-S-Dec-9-1960
Willmore E-W-Dec-9-1960

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

Benioff

S. P. -Z Feb-19

Columbia's

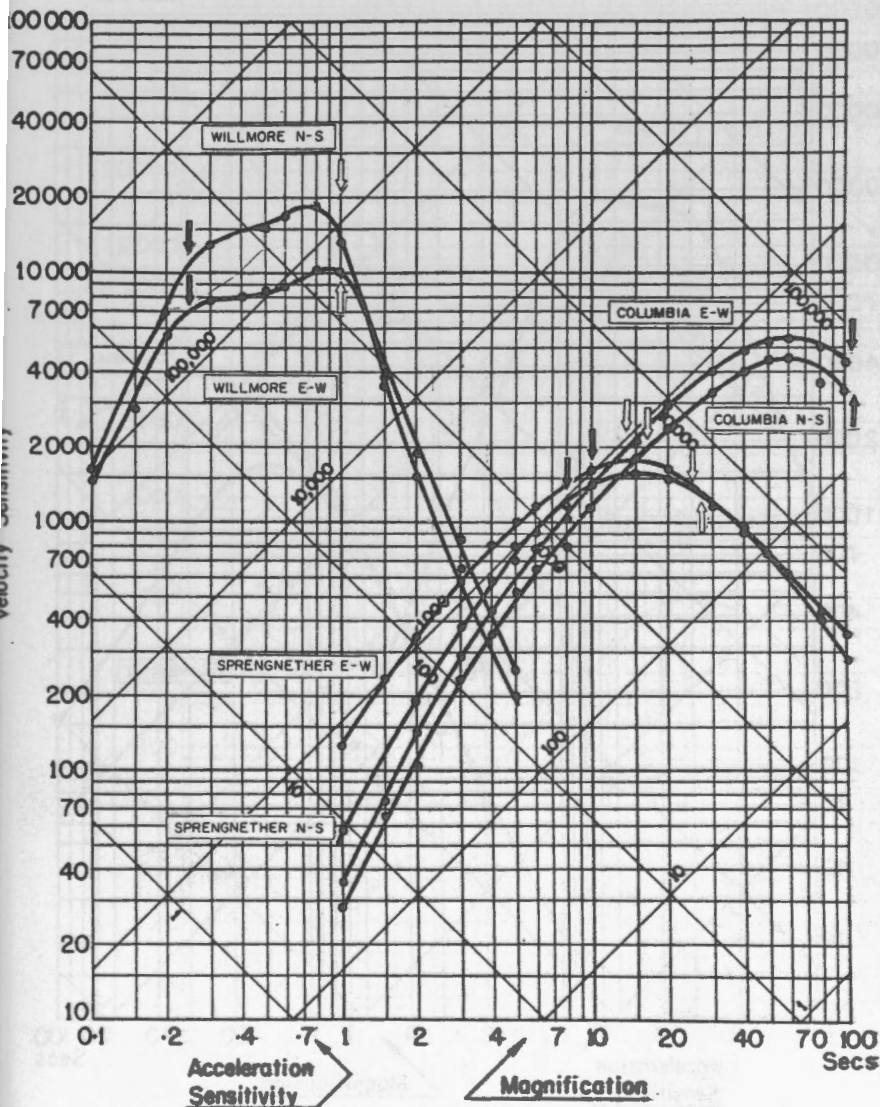
L. P. -Z Feb-19

L. P. H. - N.S. Feb-18

L. P. H. -E.W. Feb-18

CALIBRATION CURVES

STATION: RESOLUTE (Horizontals)



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

Foundation: Early Palaeozoic limestone

$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: Aug.-Sept. 1958

Willmore N-S - August 18/58

Columbia N-S - September 15/58

Willmore E-W - September 20/58

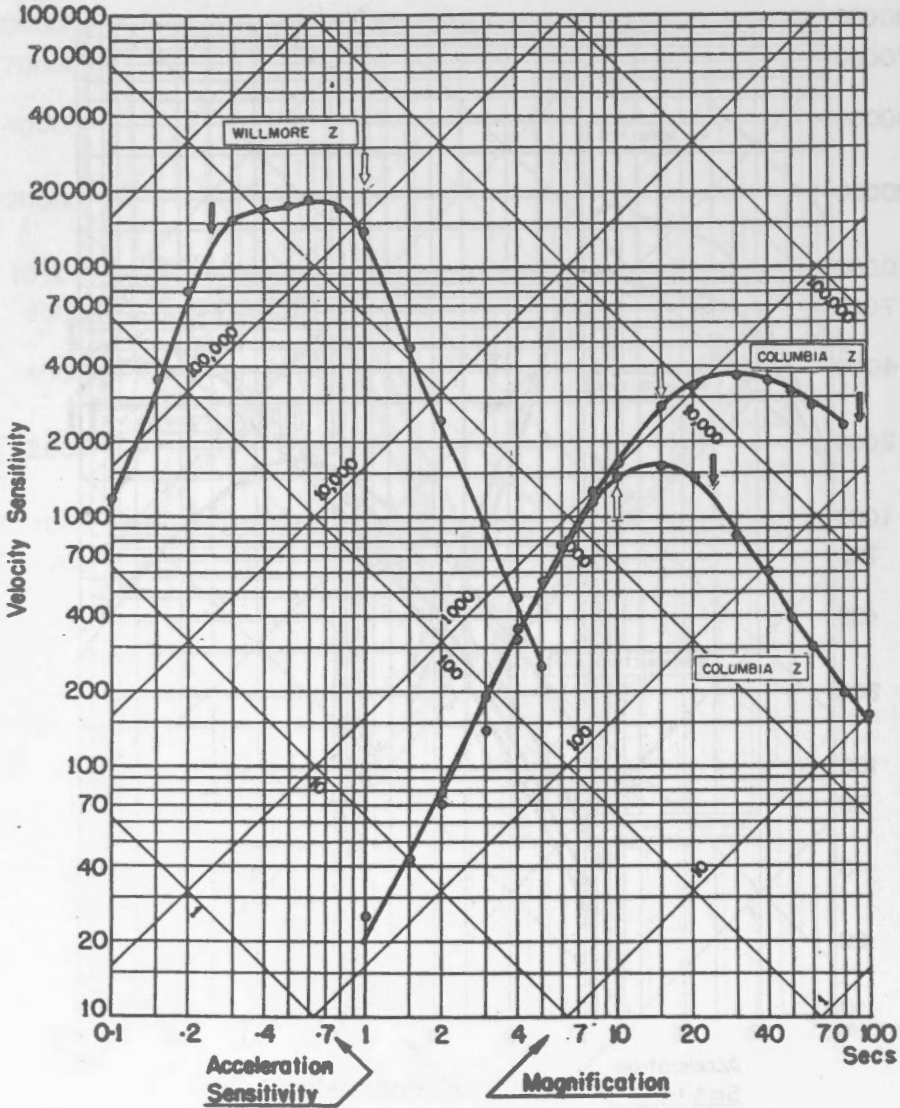
Columbia E-W - September 15/58

Sprengnether N-S - September 7/58

Sprengnether E-W - September 8/58

CALIBRATION CURVES

STATION: RESOLUTE (Verticals)



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

Foundation : Early Palaeozoic limestone

$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: September 1958

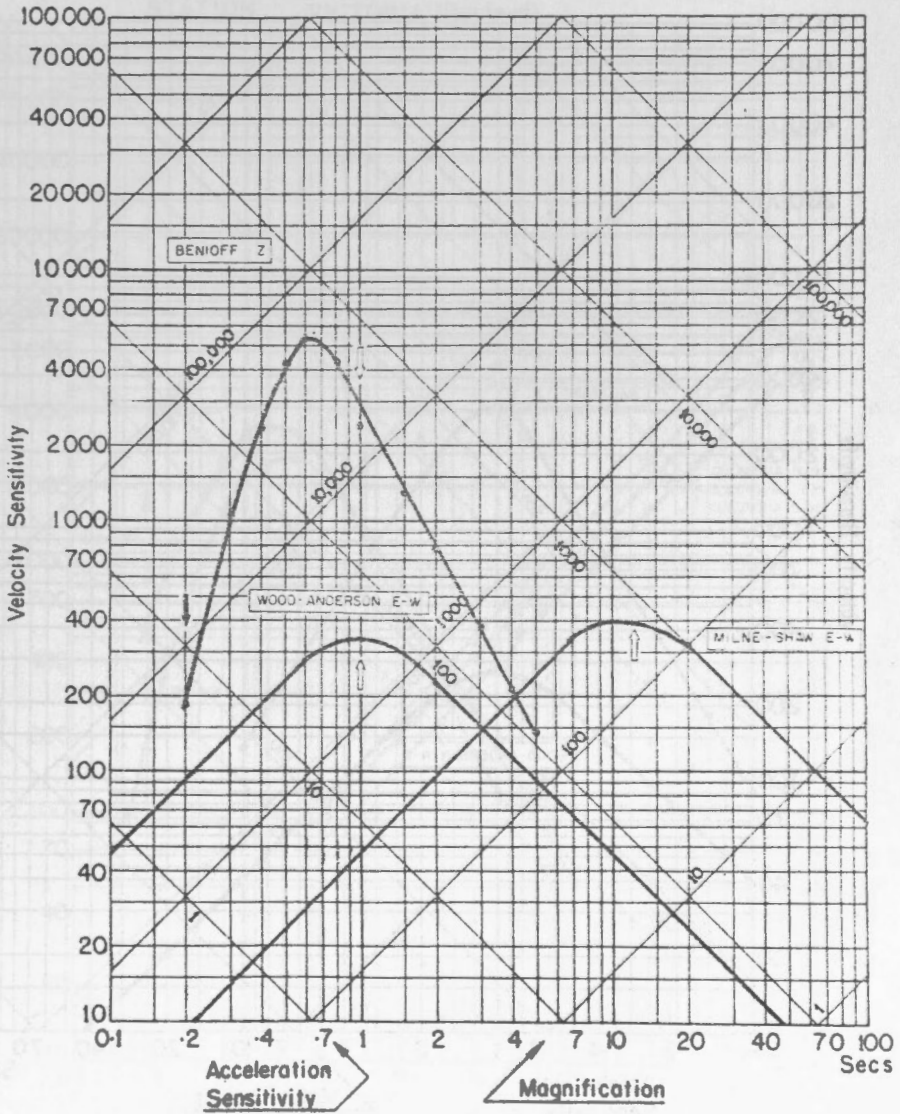
Willmore Z - August 18-58

Columbia LPZ - September 17-58

Columbia Z - September 13-58

CALIBRATION CURVES

STATION: SEVEN FALLS



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

Foundation : Precambrian basement rock

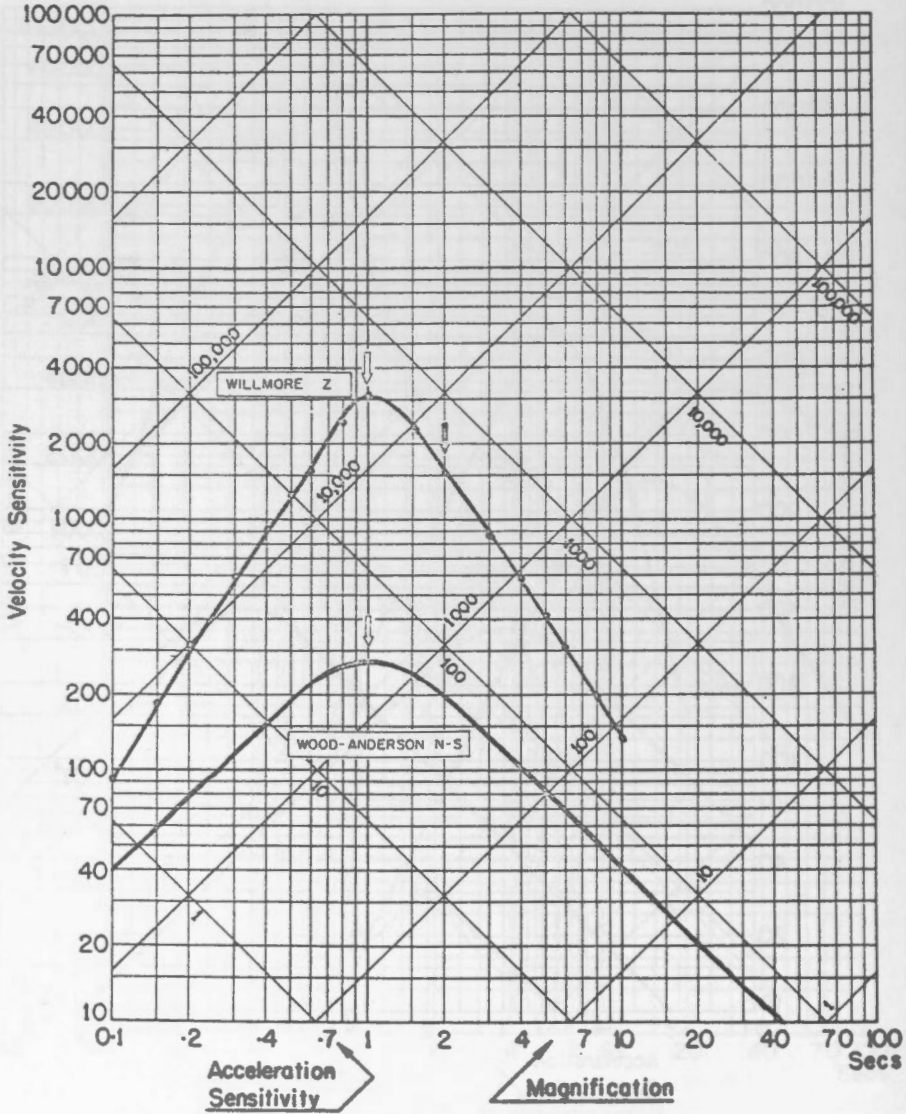
$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: May 28, 1960

CALIBRATION CURVES

STATION : SHAWINIGAN FALLS



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

Foundation : PRECAMBRIAN BASEMENT

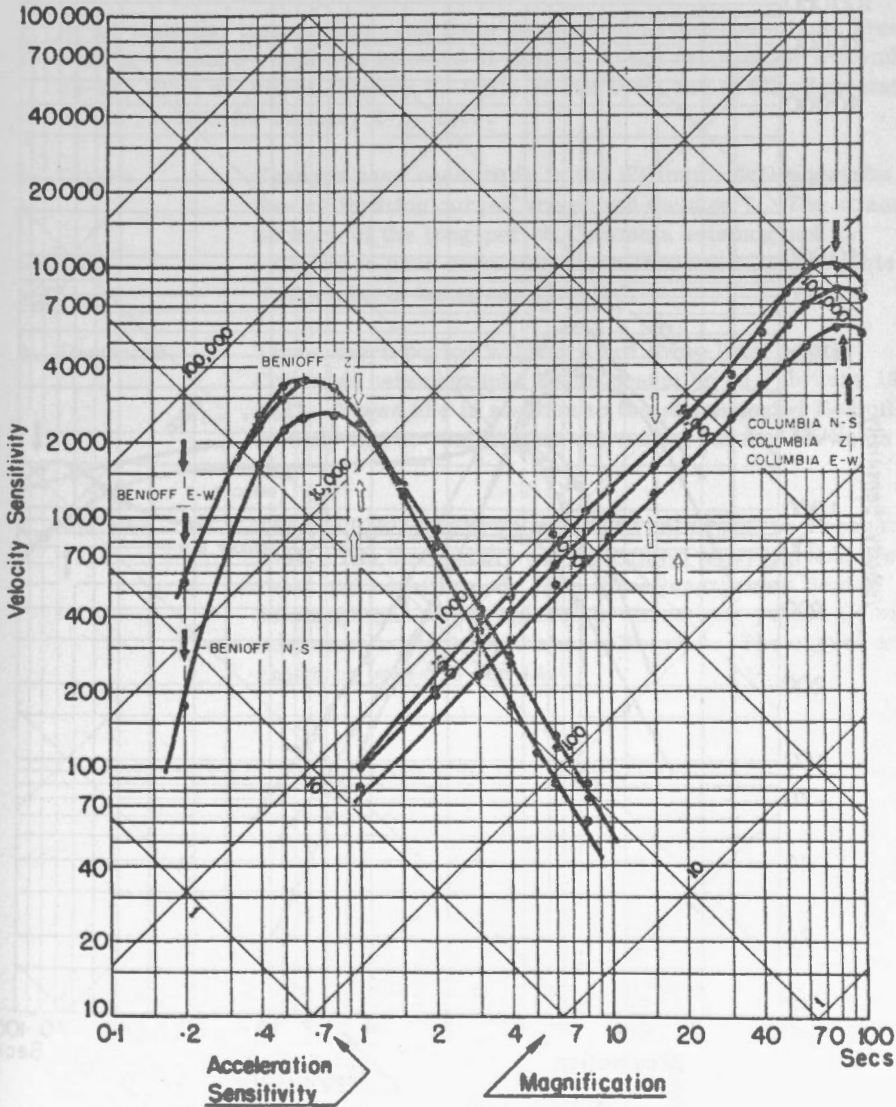
$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: November 6, 1959

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

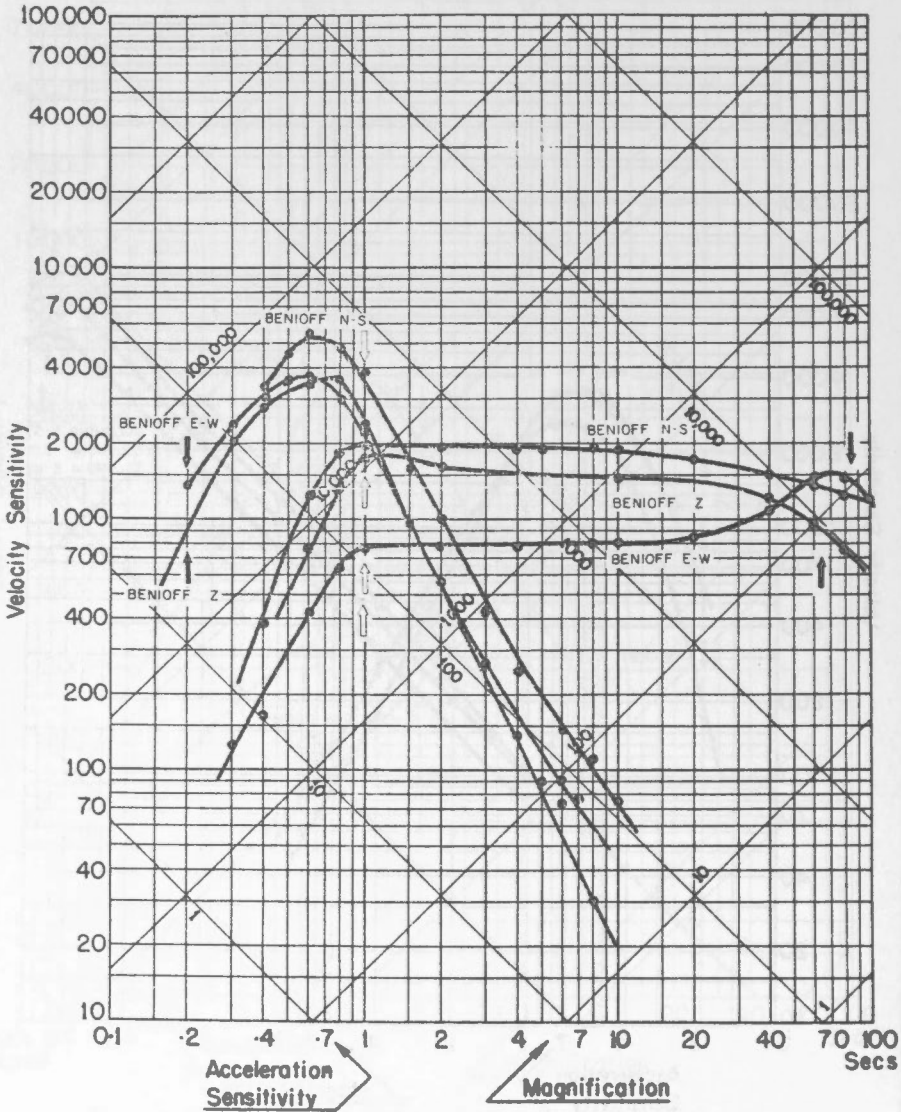
Columbia's

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

CALIBRATION CURVES

STATION: VICTORIA



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

Foundation : Quartz Diorite

$T_s \uparrow$

$T_g \uparrow$

Date of Calibration: February - 1961

Benioff's

Benioff's

S. P. Z. Feb. 7

L. P. Z. Feb. 8

S. P. H. - N.S. Feb. 9

L. P. H. - N.S. Feb. 9

S. P. H. - E.W. Feb. 11

L. P. H. - E.W. Feb. 11

DOMINION OBSERVATORIES

JANUARY - MARCH 1961

NOTES

1. At all stations, time is now read from the BEGINNING of the minute break. This is a change which was effected at Halifax on the records for December 28-29, 1960; at Ottawa January 4, 1961, at 20h 06m; and at all other stations on the records for January 1-2, 1961.
2. Ottawa Changes have been made in the Willmore seismographs and new calibration curves are shown on page 7. The attenuator network of the long-period Columbia seismograph is believed to have been altered on January 9, 1959. This instrument is being recalibrated.
3. Penticton Three short-period Willmore and three long-period Columbia seismographs began operation on February 18, 1961. These are in addition to the short-period Benioff already there. Calibration curves for all are shown on page 8.
4. Victoria The six Benioff instruments were calibrated on February 7, 1961. The three short-period Benioff seismographs were reset and recalibrated. The three long-period Benioff seismographs were replaced by three long-period Columbia instruments which were also calibrated. The curves are shown on pages 13 and 14.

DOMINION OBSERVATORIES

JANUARY 1	JANUARY 2	JANUARY 2
U.S.C.G.S.	U.S.C.G.S.	U.S.C.G.S.
19.4N, 121.0E	12.4S, 166.4E	52.0N, 157.9E
Philippine Islands	Santa Cruz Islands	Near east coast of
H = 13 52 37.6	region	Kamchatka
h = 77 km	H = 10 11 56.9	H = 16 21 34.0
Resolute	h = 161 km	h = 43 km
eP 14 05 01	Mag 6 3/4	Banff
	Alberni	eP 16 30 30
	eP 10 24 41	Ottawa
	Banff	eP 16 32 57 d
	eP 10 24 52	Penticton
	Halifax	eP 16 31 23
	iP' 10 30 45.5 d	Resolute
	Ottawa	iP 16 29 47 c?
	eP' 10 30 29 d	Victoria
	Penticton	eP 16 31 10
	eP 10 24 37	
	Resolute	
	eP 10 25 50 ?	JANUARY 2
	Seven Falls	Resolute
	eP' 10 30 38 c	eP 23 11 46?
	Shawinigan Falls	
	eP' 10 30 33	
	Victoria	
	eP 10 24 25	
JANUARY 1	JANUARY 2	JANUARY 3
U.S.C.G.S.	46.2N, 122.7W	Penticton
54.1S, 7.4E	Near Longview	eP 00 44 28
Bouvet Island region	Washington, U.S.A.	Victoria
H = 19 33 20.1	H = 15 54 36	eP 00 44 07
h = 91 km	Mag 2.9	
Resolute	Penticton	
iP' 19 52 47 d?	eP _n 15 55 34.6	
	eS _n 15 56 26.0	
	D = 428 km	
	Victoria	
	eP _n 15 55 15.6	
	eS _n 15 55 49.7	
	D = 272 km	
JANUARY 1		JANUARY 3
U.S.C.G.S.		U.S.C.G.S.
49.5S, 125.5E		1.1N, 29.2W
South of Australia		Mid - Atlantic Ocean
H = 20 22 14.6		H = 08 10 40.4
h = 59 km		h = 25 km
Resolute		Resolute
iP' 20 42 02 d?		eP 08 23 06?

SEISMOLOGICAL BULLETIN - 1961

JANUARY 3
 U. S. C. G. S.
 6. 8S, 129. 3E
 Banda Sea
 H = 11 40 42.5
 h = 72 km
 Resolute
 eP 11 54 58 ?
 Seven Falls
 eP' 11 59 59 c
 i 12 03 21

JANUARY 3
 U. S. C. G. S.
 24. 0S, 67. 0W
 Chile-Argentina
 border
 H = 19 08 08.9
 h = 207 km
 Seven Falls
 eP 19 20 04

JANUARY 3
 Canadian Arctic
 H = 23 30 45.2
 h = 4 km
 Mag 2.7
 Resolute
 eP_n 23 31 18
 iP₁ 23 31 19
 i 23 31 20.7
 i 23 31 34.5
 iS_n 23 31 42.5
 S₁ 23 31 44.3
 D = 210 km

JANUARY 3
 Canadian Arctic
 H = 12 05 24.5
 h = 25 km ?
 Mag 3.4
 Resolute
 e 12 06 40.5
 i 12 06 43.5
 iP₁ 12 06 52
 iS_n 12 07 28.5
 S₁ 12 07 59
 D = 550 km

JANUARY 3
 U. S. C. G. S.
 6. 4S, 130. 4E
 Banda Sea
 H = 19 27 00.4
 h = 100 km
 Seven Falls
 eP' 19 46 15
 i 19 49 35

JANUARY 4
 Penticton
 eP 01 06 26

JANUARY 3
 Resolute
 eP 14 53 00?

JANUARY 3
 Canadian Arctic
 H = 20 47 48
 Mag 4.3
 Resolute
 eP_n 20 50 28
 iS_n 20 52 24.5
 L_g 20 53 35
 D = 1250 km

JANUARY 4
 H = 01 53 04
 Mag 3.1
 Penticton
 eP_n 01 53 57.4
 eS_n 01 54 49.4
 D = 425 km

JANUARY 3
 Resolute
 eP 16 21 34?

JANUARY 3
 Alberni
 eP 22 05 12
 Penticton
 eP 22 06 00

JANUARY 4
 50°55'N, 124°52'W
 At the head of Butte
 Inlet
 H = 07 26 04
 Mag 3.3
 Alberni
 eP_n 07 26 35.0
 D = 196 km
 Penticton
 eP_n 07 27 03.6
 eS_n 07 27 57.4
 D = 430 km
 Victoria
 eP_n 07 26 47.2
 eS_n 07 27 23.4
 D = 296 km

JANUARY 3
 Shawinigan Falls
 eP 16 32 58

JANUARY 3
 U. S. C. G. S.
 20. 3S, 68. 2W
 Southern Bolivia
 H = 17 41 58.7
 h = 211 km
 Penticton
 eP 17 54 07
 Seven Falls
 eP 17 52 37

DOMINION OBSERVATORIES

JANUARY 4
 48. 3N, 121. 6W
 South of Mount Baker
 Washington, U. S. A.
 H = 10 00 57
 Mag 1. 8
 Penticton
 eP_n 10 01 27. 1
 eS_n 10 01 49. 3
 D = 181 km
 Victoria
 eP₁ 10 01 19. 2
 eS₁ 10 01 36. 6
 D = 136 km

JANUARY 4
 U. S. C. G. S.
 17. 6N, 101. 2W
 Near coast of
 Mexico
 H = 12 04 33. 8
 h = 40 km
 Ottawa
 eP 12 11 24
 Penticton
 eP 12 11 24
 Resolute
 eP 12 14 18
 Seven Falls
 eP 12 12 04
 Shawinigan Falls
 eP 12 11 51

JANUARY 4
 U. S. C. G. S.
 17. 4S, 178. 9W
 Fiji Islands
 H = 13 25 35. 6
 h = 591 km
 Penticton
 eP 13 37 12

JANUARY 4
 Seven Falls
 eP 19 02 13

JANUARY 4
 Resolute
 eP 19 22 57

JANUARY 4
 U. S. C. G. S.
 5. 5S, 128. 7E
 Banda Sea
 H = 19 16 19. 5
 h = 173 km
 Seven Falls
 iSKP 19 38 23

JANUARY 4
 H = 20 34 29
 Mag 2. 6
 Penticton
 eP₁ 20 34 49. 9
 eS₁ 20 35 05. 5
 D = 128 km

JANUARY 5
 H = 06 20 06
 Mag 1. 8
 Victoria
 eP₁ 06 20 13. 7
 eS₁ 06 20 19. 8
 D = 50 km

JANUARY 5
 U. S. C. G. S.
 51. 6N, 176. 3W
 Andreanof Islands
 H = 14 06 25. 9
 h = 37 km
 Mag 6 1/4
 Alberni
 eP 14 12 57
 Banff
 iP 14 13 36 c
 Halifax
 iP 14 17 24. 5 d
 Ottawa
 eP 14 16 43 c
 Penticton
 iP 14 13 22 c

Resolute
 eP 14 13 52 c?
 PP 14 15 22
 eS 14 19 43
 Seven Falls
 iP 14 16 50 c
 Shawinigan Falls
 eP 14 16 47 c
 Victoria
 eP 14 13 06 c

JANUARY 5
 U. S. C. G. S.
 45. 7N, 149. 3E
 Kurile Islands
 H = 15 09 37. 9
 h = 19 km
 Ottawa
 eP 15 21 52
 Penticton
 eP 15 19 30
 Resolute
 iP 15 18 54 c
 Seven Falls
 eP 15 21 59
 Shawinigan Falls
 eP 15 21 55

JANUARY 5
 U. S. C. G. S.
 4. 1S, 143. 0E
 New Guinea
 H = 15 53 56. 0
 h = 108 km
 Mag 6 3/4
 Ottawa
 eP' 16 12 50 d
 Penticton
 iP 16 07 27
 Resolute
 eP 16 07 42 d?
 i 16 19 09
 Seven Falls
 eP' 16 12 53 d
 Shawinigan Falls
 eP' 16 12 52 d
 Victoria
 eP 16 07 19

SEISMOLOGICAL BULLETIN - 1961

JANUARY 5
 Resolute
 eP 16 23 46

JANUARY 5
 U. S. C. G. S.
 21. 2S, 169. 3E
 Loyalty Islands
 region
 H = 17 57 56. 6
 h = 123 km
 Mag 6 3/4

Alberni
 eP 18 10 56
 Halifax
 eP' 18 16 59 c
 Ottawa
 eP' 18 16 40 c

Penticton
 eP 18 11 07
 Resolute
 eP? 18 12 30 ?
 P' 18 16 21
 i 18 26 37
 PKKP 18 27 16?

Seven Falls
 eP' 18 16 47 c
 Shawinigan Falls
 eP' 18 16 43
 Victoria
 eP 18 10 56

JANUARY 5
 U. S. C. G. S.
 21. 0S, 169. 1E
 Loyalty Islands
 H = 18 14 43. 0
 h = 124 km
 Mag 6 3/4
 Alberni
 eP 18 27 40
 Halifax
 iP' 18 33 45. 6 d
 Ottawa
 eP' 18 33 27 d
 Penticton
 eP 18 27 56

Resolute
 eP' 18 33 08
 e 18 44 00?
 Seven Falls
 eP' 18 33 33
 Shawinigan Falls
 eP' 18 33 31 c
 Victoria
 eP 18 27 42

JANUARY 5
 U. S. C. G. S.
 51. 3N, 176. 6W
 Andreanof Islands
 H = 18 37 48. 3
 h = 30 km
 Penticton
 eP 18 44 48

JANUARY 5
 U. S. C. G. S.
 8. 2N, 83. 1W
 Costa Rica -
 Panama border
 region
 H = 18 47 33. 5
 h = 82 km
 Penticton
 eP 18 56 32
 Resolute
 eP 18 58 19
 Seven Falls
 eP 18 55 04

JANUARY 5
 U. S. C. G. S.
 11. 5N, 143. 5E
 Mariana Islands
 region
 H = 20 05 12. 2
 h = 25 km
 Resolute
 iP 20 17 57

JANUARY 6
 U. S. C. G. S.
 42. 5N, 143. 4E
 Hokkaido Japan
 H = 01 20 30. 8
 h = 21 km
 Ottawa
 eP 01 33 10 c
 Penticton
 eP 01 31 00
 Resolute
 iP 01 30 16 c

JANUARY 6
 Penticton
 eP 01 50 46

JANUARY 6
 U. S. C. G. S.
 51. 8N, 176. 2W
 Andreanof Islands
 H = 06 21 38. 6
 h = 48 km
 Ottawa
 eP 06 31 52
 Penticton
 eP 06 28 32
 Resolute
 eP 06 29 02
 i 06 31 12
 Seven Falls
 eP 06 32 00
 Shawinigan Falls
 eP 06 31 57
 Victoria
 eP 06 28 17

JANUARY 6
 U. S. C. G. S.
 53. 3N, 159. 7E
 Kamchatka
 H = 07 05 47. 7
 h = 24 km
 Ottawa
 eP 07 17 04 c

DOMINION OBSERVATORIES

Penticton eP 07 14 27 Resolute eP 07 13 50 c Seven Falls eP 07 17 06 c Shawinigan Falls eP 07 17 06	JANUARY 7 Resolute iP 13 38 35 c?	JANUARY 8 Resolute eP 00 58 46?
JANUARY 6 U. S. C. G. S. 14. 2N, 95. 8W Off south coast of Mexico H = 10 48 22. 9 h = 45 km Ottawa eP 10 55 19 Resolute eP 10 58 34 Seven Falls eP 10 55 50 d Shawinigan Falls eP 10 55 39	JANUARY 7 U. S. C. G. S. 37. 7N, 21. 1E Near west coast of Greece H = 15 52 54. 0 h = 22 km Resolute iP 16 03 03 c? Seven Falls eP 16 03 33	JANUARY 8 U. S. C. G. S. 4. 1N, 129. 3E Halmahera region H = 01 15 25. 6 h = 106 km Resolute iP 01 28 50
JANUARY 6 Resolute eP 19 21 03?	JANUARY 7 U. S. C. G. S. 57. 2S, 25. 3W Sandwich Islands H = 18 16 51. 2 h = 94 km Penticton eP' 18 36 04 Resolute eP' 18 36 09 Victoria eP' 18 36 08	JANUARY 8 U. S. C. G. S. 3. 5N, 129. 6E Halmahera region H = 02 56 34. 1 h = 117 km Resolute eP 03 09 57
JANUARY 7 U. S. C. G. S. 35. 9N, 27. 0E Dodecanese Islands H = 10 30 58. 0 h = 127 km Ottawa eP 10 42 18 c Resolute iP 10 41 17 c Seven Falls iP 10 41 55 c Shawinigan Falls eP 10 42 04 c	JANUARY 7 H = 19 31 04 Mag 2. 7 Penticton iP _n 19 31 43. 6 iS _n 19 32 16. 4 D = 268 km	JANUARY 8 Alberni eP 07 43 13
JANUARY 8 Resolute eP 00 02 06	JANUARY 7 Resolute eP 21 49 29	JANUARY 8 Alberni eP 07 56 57
	JANUARY 8 Resolute eP 00 02 06	JANUARY 8 U. S. C. G. S. 44. 8N, 110. 3W Yellowstone National Park, Wyoming H = 09 49 06. 9 h = 27 km Penticton eP 09 51 02. 1

SEISMOLOGICAL BULLETIN - 1961

JANUARY 8

H = 11 46 15
Mag 3.3
Penticton
eP_n 11 47 05.0
eS_n 11 47 48.0
D = 352 km

JANUARY 8

Resolute
eP 15 07 55?

JANUARY 8

Resolute
eP 19 50 38?

JANUARY 8

Resolute
eP 21 38 45

JANUARY 9

Penticton
eP 00 00 57
Resolute
eP 00 03 18?

JANUARY 9

U.S.C.G.S.
31.2N, 41.0W
North Atlantic Ocean
H = 03 08 37.7
h = 49 km
Halifax
eP 03 13 34?
Resolute
eP 03 17 36
Shawinigan Falls
eP 03 14 47

JANUARY 9

H = 08 40 48
Mag 2.6
Penticton
eP_n 08 41 32.1
eS_n 08 42 09.9
D = 310 km

JANUARY 9

U.S.C.G.S.
17.7N, 61.1W
Leeward Islands
H = 11 06 56.9
h = 31 km
Ottawa
eP 11 13 10
Resolute
eP 11 17 04
Shawinigan Falls
eP 11 13 12

JANUARY 9

U.S.C.G.S.
17.6N, 61.0W
Leeward Islands
H = 11 11 12.5
h = 52 km
Ottawa
eP 11 17 22
Resolute
eP 11 21 15?
Shawinigan Falls
eP 11 17 37

JANUARY 9

U.S.C.G.S.
17.8N, 61.0W
Leeward Islands
H = 19 22 05.6
h = 31 km
Ottawa
eP 19 28 16
Resolute
eP 19 32 10
Shawinigan Falls
eP 19 28 18

JANUARY 9

U.S.C.G.S.
17.7N, 61.6W
Leeward Islands
H = 19 24 59.5
h = 31 km
Ottawa
eP 19 31 09

JANUARY 9

Penticton
eP 21 20 08
Resolute
eP 21 19 23?
Victoria
eP 21 19 57

JANUARY 9

Resolute
eP 22 07 54?

JANUARY 9

U.S.C.G.S.
43.4N, 103.8E
Outer Mongolia
H = 22 16 32.3
h = 38 km
Resolute
eP 22 26 48

JANUARY 9

H = 23 24 56
Mag 2.0
Penticton
eP_n 23 25 23.5
eS_n 23 25 44.2
D = 169 km

DOMINION OBSERVATORIES

JANUARY 10
 Resolute
 eP 02 30 02

JANUARY 10
 Resolute
 eP 07 34 22

JANUARY 10
 Resolute
 eP 11 44 33

JANUARY 10
 U. S. C. G. S.
 49. 9N, 156. 2E
 Kurile Islands region
 H = 14 22 18. 2
 h = 29 km
 Alberni
 eP 14 31 05
 Halifax
 iP 14 34 25. 5 c
 Ottawa
 iP 14 33 57 c
 Pentiction
 iP 14 31 25 c
 Resolute
 iP 14 30 51 c
 eS 14 37 41
 i 14 41 28
 Shawinigan Falls
 iP 14 33 59 c
 Victoria
 eP 14 31 40

JANUARY 10
 Pentiction
 eP 15 36 47. 1

JANUARY 11
 Resolute
 eP 09 25 10

JANUARY 11
 U. S. C. G. S.
 52. 3N, 170. 7W
 Fox Islands
 H = 11 58 23. 8
 h = 42 km
 Resolute
 eP 12 05 29

JANUARY 11
 U. S. C. G. S.
 51. 8N, 171. 0W
 Fox Islands
 H = 11 59 55. 0
 h = 47 km
 Halifax
 eP 12 10 37 c
 Ottawa
 eP 12 09 52
 Pentiction
 eP 12 06 22
 Resolute
 eP 12 07 04 c
 PP? 12 08 31?
 eS 12 12 58?
 Shawinigan Falls
 eP 12 09 57
 Victoria
 eP 12 06 06

JANUARY 11
 Resolute
 eP 13 39 34?

JANUARY 11
 U. S. C. G. S.
 54. 7S, 162. 9E
 Macquarie Islands
 H = 16 31 50. 6
 h = 27 km
 Resolute
 eP' 16 51 41?

JANUARY 11
 U. S. C. G. S.
 52. 3S, 160. 3E
 Near Maquarie Islands
 H = 21 37 05. 1
 h = 25 km
 Resolute
 eP' 21 56 38?

JANUARY 12
 Resolute
 eP 01 26 31

JANUARY 12
 U. S. C. G. S.
 57. 4N, 155. 9W
 Alaska Peninsula
 H = 14 13 27. 7
 h = 40 km
 Pentiction
 eP 14 18 31
 Resolute
 iP 14 19 19 c
 Victoria
 eP 14 18 15

JANUARY 13
 H = 00 44 36
 Mag 2. 0
 Pentiction
 eP₁ 00 44 56. 3
 eS₁ 00 45 12. 0
 D = 129 km

JANUARY 13
 Resolute
 eP 07 57 21?

JANUARY 13
 Resolute
 eP 15 10 28?

SEISMOLOGICAL BULLETIN - 1961

JANUARY 13

U.S.C.G.S.
46.5S, 34.1E
Near Prince Edward
Islands
H = 19 18 44.7
h = 60 km
Resolute
eP' 19 38 14
i 19 38 16

JANUARY 14

U.S.C.G.S.
53.9N, 163.7W
Unimak Island
region
H = 16 38 55.6
h = 41 km
Mag 5 3/4
Ottawa
eP 16 48 18
Penticton
eP 16 44 41

JANUARY 15

U.S.C.G.S.
17.4N, 61.2W
Leeward Islands
H = 05 56 15.1
h = 60 km
Resolute
eP? 06 06 18?

JANUARY 14

U.S.C.G.S.
53.4N, 172.4E
Near Islands
H = 02 26 30.6
h = 90 km
Resolute
eP 02 34 00

Resolute

eP 16 45 34
i 16 45 35
PP? 16 46 39?
eS 16 50 55
Shawinigan Falls
eP 16 48 23

JANUARY 15

U.S.C.G.S.
39.5N, 143.3E
Near east coast of
Honshu, Japan
H = 11 53 10.9
h = 75 km
Resolute
eP 12 03 09

JANUARY 14

H = 06 44 26
Mag 2.7
Alberni
eP₁ 06 44 50.8
eS₁ 06 45 10.1
D = 158 km

JANUARY 15

U.S.C.G.S.
53.6S, 139.6E
South of Australia
H = 01 02 50.2
h = 25 km
Resolute
eP' 01 22 38?
e 01 30 06?

JANUARY 15

U.S.C.G.S.
20.4N, 169.5E
Loyalty Islands
region
H = 16 44 44.8
h = 182 km
Ottawa
eP' 17 03 20
Penticton
eP 16 57 45
Resolute
eP' 17 03 00
e 17 14 00

JANUARY 14

U.S.C.G.S.
6.7N, 73.0W
Colombia
H = 16 17 25.5
Ottawa
iP 16 24 35 c
Penticton
eP 16 27 01
Resolute
iP 16 28 15 c
Shawinigan Falls
eP 16 24 45 c

JANUARY 15

U.S.C.G.S.
30.0N, 140.4E
South of Honshu,
Japan
H = 04 06 15.8
h = 285 km
Resolute
eP 04 17 01

JANUARY 15

Ottawa
eP 18 30 32

JANUARY 15

Resolute
eP 20 12 27?

DOMINION OBSERVATORIES

JANUARY 15
 U. S. C. G. S.
 5. 2S, 110. 0E
 Java Sea
 H = 20 34 14. 3
 h = 565 km
 Resolute
 eP' 20 51 45
 Shawinigan Falls
 eP' 20 52 39

JANUARY 16
 U. S. C. G. S.
 13. 0N, 99. 4W
 Off coast of Mexico
 H = 01 48 50. 2
 h = 25 km
 Resolute
 eP 01 59 17?

JANUARY 16
 U. S. C. G. S.
 18. 2N, 102. 4W
 Near coast of Mexico
 H = 03 58 52. 5
 h = 153 km
 Penticton
 eP 04 05 26
 Resolute
 eP 04 08 27
 Shawinigan Falls
 eP 04 06 10
 P_CP 04 08 25

JANUARY 16
 U. S. C. G. S.
 36. 0N, 141. 1E
 Near east coast of
 Honshu, Japan
 H = 07 20 18. 6
 h = 131 km
 Mag 6 3/4
 Alberni
 eP 07 30 55
 Ottawa
 eP 07 33 19

Penticton
 eP 07 31 13
 Resolute
 iP 07 30 39 c
 eS 07 39 11
 Shawinigan Falls
 eP 07 33 22
 Victoria
 eP 07 31 02

JANUARY 16
 Resolute
 eP 07 59 07?

JANUARY 16
 Resolute
 eP 08 11 06

JANUARY 16
 U. S. C. G. S.
 35. 0N, 141. 3E
 Near east coast of
 Honshu, Japan
 H = 08 48 17. 7
 h = 188 km
 Penticton
 eP 08 59 11
 Resolute
 iP 08 58 37 c ?

JANUARY 16
 Resolute
 eP 09 33 31?

JANUARY 16
 U. S. C. G. S.
 36. 4N, 141. 4E
 Near east coast of
 Honshu, Japan
 H = 10 14 09. 6
 h = 131 km
 Resolute
 iP 10 24 28

JANUARY 16
 Resolute
 eP 10 33 07?

JANUARY 16
 U. S. C. G. S.
 35. 7N, 140. 6E
 Near east coast of
 Honshu, Japan
 H = 11 19 46. 5
 h = 157 km
 Penticton
 eP 11 30 40
 Resolute
 iP 11 30 06c
 eS 11 38 37?
 Shawinigan Falls
 eP 11 33 12
 Victoria
 eP 11 30 31

JANUARY 16
 U. S. C. G. S.
 35. 2N, 141. 0E
 Near east coast of
 Honshu, Japan
 H = 11 41 06. 2
 h = 149 km
 Resolute
 eP 11 51 28 c

JANUARY 16
 Resolute
 eP 12 10 31

JANUARY 16
 U. S. C. G. S.
 36. 2N, 141. 7E
 Honshu Japan
 H = 12 12 34. 4
 h = 105 km
 Mag 6 1/2
 Ottawa
 eP 12 25 37
 Penticton
 eP 12 23 29

SEISMOLOGICAL BULLETIN - 1961

Resolute iP 12 22 55 c eS 12 31 25	JANUARY 16 Resolute eP 14 10 48?	JANUARY 16 U. S. C. G. S. 36.4N, 140.6E Near east coast of Honshu, Japan H = 15 41 23.3 h = 147 km
Shawinigan Falls eP 12 25 47	JANUARY 16 U. S. C. G. S. 36.3N, 141.2E Near east coast of Honshu, Japan H = 14 04 05.3 h = 127 km	Penticton eP 15 52 15
Victoria eP 12 23 19	JANUARY 16 U. S. C. G. S. 36.3N, 141.2E Near east coast of Honshu, Japan H = 14 04 05.3 h = 127 km	Resolute iP 15 51 39 c eS 16 00 09 ?
JANUARY 16 Resolute eP 12 41 47?	Resolute iP 14 14 24 eS 14 22 56	Shawinigan Falls eP 15 54 21
JANUARY 16 Resolute eP 12 45 23	JANUARY 16 U. S. C. G. S. 36.7N, 141.8E Honshu, Japan H = 14 44 15.1 h = 108 km	Victoria eP 15 52 05
JANUARY 16 Resolute eP 12 47 14	Resolute eP 14 54 33	JANUARY 16 Resolute eP 16 20 21?
JANUARY 16 Resolute eP 12 51 53?	JANUARY 16 Resolute eP 15 33 26	JANUARY 16 Resolute eP 16 32 20
JANUARY 16 Resolute eP 12 55 12?	JANUARY 16 U. S. C. G. S. 36.5N, 141.2E Near east coast of Honshu, Japan H = 15 26 21.2 h = 143 km	JANUARY 16 Resolute eP 19 08 17?
JANUARY 16 Resolute eP 13 08 20?	Resolute eP 15 36 39	JANUARY 16 Resolute eP 21 22 19
JANUARY 16 U. S. C. G. S. 35.6N, 140.8E Near east coast of Honshu, Japan H = 13 09 17.7 h = 144 km	JANUARY 16 U. S. C. G. S. 36.5N, 141.2E Near east coast of Honshu, Japan H = 15 26 21.2 h = 143 km	JANUARY 17 U. S. C. G. S. 36.5N, 141.8E Near east coast of Honshu, Japan H = 00 29 35.7 h = 100 km
Penticton eP 13 20 13	Resolute eP 15 36 39	Resolute iP 00 39 57 c?
Resolute iP 13 19 39		

DOMINION OBSERVATORIES

JANUARY 17
 Resolute
 eP 00 51 27?

JANUARY 17
 Resolute
 eP 01 57 05?
 Shawinigan Falls
 eP 01 57 21

JANUARY 17
 Resolute
 eP? 02 46 14?

JANUARY 17
 U. S. C. G. S.
 58. 8N, 135. 9W
 Southeastern Alaska
 H = 04 23 36. 3
 h = 109 km
 Resolute
 eP 04 28 24
 i 04 35 02

JANUARY 17
 U. S. C. G. S.
 36. 2N, 141. 6E
 Honshu Japan
 H = 06 41 36. 8
 h = 99 km
 Penticton
 eP 06 52 34
 Resolute
 iP 06 52 00 d

JANUARY 17
 Resolute
 eP 09 08 06?

JANUARY 17
 51. 8N, 125. 5W
 Northwest of
 Mount Waddington
 H = 11 27 50
 Mag 3 to 3. 5
 Alberni
 eP_n 11 28 32. 7
 eS_n 11 29 08. 2
 D = 290 km
 Penticton
 eP_n 11 29 08. 6
 eS_n 11 29 57. 2
 D = 503 km

JANUARY 17
 Resolute
 eP 13 54 39?

JANUARY 17
 H = 15 31 39
 Mag less than 2
 Alberni
 eP₁ 15 32 03. 1
 eS₁ 15 32 18. 9
 D = 130 km
 Victoria
 eP₁ 15 31 40. 5
 eS₁ 15 31 44. 3
 D = 31 km

JANUARY 17
 Resolute
 eP 18 14 25?

JANUARY 18
 U. S. C. G. S.
 36. 1N, 141. 4E
 Near east coast of
 Honshu, Japan
 H = 07 12 46. 0
 h = 100 km
 Resolute
 eP 07 23 06

JANUARY 18
 U. S. C. G. S.
 34. 9N, 142. 2E
 Near east coast of
 Honshu, Japan
 H = 07 27 46. 6
 h = 100 km
 Resolute
 eP 07 38 13

JANUARY 18
 H = 09 14 25
 Mag 2. 7
 Alberni
 eP₁ 09 14 45. 4
 eS₁ 09 15 00. 7
 D = 125 km

JANUARY 18
 U. S. C. G. S.
 35. 9N, 141. 7E
 Near east coast of
 Honshu, Japan
 H = 16 48 34. 5
 Resolute
 eP 16 58 54

JANUARY 18
 U. S. C. G. S.
 61. 7N, 150. 4W
 Southern Alaska
 H = 19 55 12. 8
 h = 150 km
 Ottawa
 iP 20 03 15
 Penticton
 eP 19 59 54
 Resolute
 eP 20 00 10
 Shawinigan Falls
 eP 20 03 20

SEISMOLOGICAL BULLETIN - 1961

JANUARY 19
 U. S. C. G. S.
 14. 4S, 166. 7E
 New Hebrides Islands
 region
 H = 04 21 16. 0
 h = 26 km
 Ottawa
 eP' 04 40 06
 Resolute
 eP' 04 39 40

JANUARY 19
 U. S. C. G. S.
 49. 7N, 155. 8E
 Kurile Islands
 H = 17 22 16. 9
 h = 31 km
 Mag 5 1/4
 Halifax
 iP 17 34 26. 5 d
 Ottawa
 eP 17 33 58 c
 Penticton
 eP 17 31 26
 Resolute
 iP 17 30 52 c
 eS 17 37 43 ?
 Shawinigan Falls
 iP 17 33 55 c

JANUARY 19
 Resolute
 eP 21 00 10

JANUARY 19
 Resolute
 eP 21 15 47

JANUARY 19
 Resolute
 eP 23 13 15

JANUARY 20
 Resolute
 eP 00 55 18

JANUARY 20
 U. S. C. G. S.
 56. 5N, 152. 1W
 Near Kodiak Island
 Alaska
 H = 00 56 59. 7
 h = 55 km
 Resolute
 eP 01 02 50

JANUARY 20
 U. S. C. G. S.
 20. 3N, 108. 6W
 Off coast of Mexico
 H = 01 51 56. 6
 h = 84 km
 Resolute
 eP 02 01 12?

JANUARY 20
 U. S. C. G. S.
 56. 4N, 152. 0W
 Near Kodiak Island
 Alaska
 H = 05 23 16. 1
 h = 58 km
 Resolute
 eP 05 29 05

JANUARY 20
 Canadian Arctic
 H = 11 30 25. 9
 Mag 1. 0
 Resolute
 iP₁ 11 30 31
 iS₁ 11 30 37
 D = 49 km

JANUARY 20
 U. S. C. G. S.
 56. 5N, 152. 2W
 Near Kodiak Island
 Alaska
 H = 13 33 12. 8
 h = 44 km
 Resolute
 eP 13 39 13?

JANUARY 20
 U. S. C. G. S.
 56. 4N, 152. 3W
 Kodiak Island
 H = 17 09 15. 7
 h = 46 km
 Mag 6 3/4
 Alberni
 eP 17 13 26
 Ottawa
 eP 17 17 45
 Resolute
 eP 17 15 08
 eS 17 19 53?
 Shawinigan Falls
 eP 17 17 52
 Victoria
 eP 17 12 39

JANUARY 20
 Resolute
 eP 19 49 17?

JANUARY 20
 U. S. C. G. S.
 56. 8N, 152. 1W
 Near Kodiak Island
 H = 21 31 08. 7
 h = 43 km
 Resolute
 eP 21 36 57

DOMINION OBSERVATORIES

JANUARY 20

H = 21 40 27

Mag 2.0

Penticton

eP₁ 21 40 50.3

eS₁ 21 41 08.2

D = 146 km

JANUARY 20

U. S. C. G. S.

56.5N, 153.1W

Near Kodiak Island

H = 21 37 23.4

h = 14 km

Resolute

eP 21 43 19?

JANUARY 20

U. S. C. G. S.

38.1N, 141.2E

Near east coast of

Honshu, Japan

H = 22 34 51.1

h = 52 km

Resolute

eP 22 45 07

JANUARY 21

Resolute

eP 05 40 01

JANUARY 21

Resolute

eP 08 04 55

JANUARY 21

H = 09 01 34

Mag 2.1

Penticton

eP_n 09 02 03.5

eS_n 09 02 25.9

D = 183 km

JANUARY 21

U. S. C. G. S.

56.3N, 152.1W

Near Kodiak Island

H = 13 19 28.2

h = 63 km

Resolute

eP 13 25 16?

JANUARY 21

U. S. C. G. S.

8.6N, 82.8W

Costa Rica-Panama

border

H = 14 47 57.0

h = 40 km

Penticton

eP 14 56 59

Resolute

eP 14 58 43

JANUARY 21

U. S. C. G. S.

36.3N, 141.7E

Honshu Japan

H = 17 42 56.2

h = 25 km

Resolute

eP 17 53 26

JANUARY 21

Ottawa

eP' 22 11 39

Resolute

eP 22 15 04

Shawinigan Falls

eP 22 11 57

JANUARY 22

U. S. C. G. S.

11.9S, 166.2E

Santa Cruz Islands

H = 03 24 04.5

h = 25 km

Mag 7

Halifax

eP' 03 43 12 d

Penticton

eP 03 37 10

Resolute

eP 03 38 16?

Victoria

eP 03 36 55

JANUARY 22

U. S. C. G. S.

28.5S, 174.8W

Kermadec Islands

H = 16 09 37.3

h = 68 km

Resolute

eP' 16 28 04?

JANUARY 22

Resolute

eP 18 19 15

JANUARY 22

U. S. C. G. S.

10.9N, 124.6E

Philippine Islands

H = 19 22 51.0

h = 185 km

Resolute

iP 19 35 39 c?

SEISMOLOGICAL BULLETIN - 1961

JANUARY 23

U. S. C. G. S.
42.9N, 145.3E

Hokkaido Japan

H = 04 48 21.4

h = 46 km

Ottawa

eP 05 00 53

Resolute

iP 04 57 58

Shawinigan Falls

eP 05 00 53 d

JANUARY 24

Resolute

eP 00 13 34

JANUARY 24

U. S. C. G. S.

15.6S, 167.6E

New Hebrides Islands

H = 07 25 03.5

h = 198 km

Ottawa

iP' 07 43 33 d

Penticton

eP 07 37 44

Resolute

eP' 07 43 33?

Shawinigan Falls

eP' 07 43 37

JANUARY 24

U. S. C. G. S.

61.1S, 152.1E

Antarctic Ocean

H = 08 02 28.7

h = 25 km

Resolute

eP₁' 08 22 25

Shawinigan Falls

eP₁' 08 22 20

JANUARY 24

H = 11 54 50

Mag 1.6

Victoria

eP₁ 11 55 02.8

eS₁ 11 55 12.8

D = 82 km

JANUARY 24

H = 17 13 00

Mag 2.0

Penticton

eP_n 17 13 39.5

eS_n 17 14 22.3

D = 268 km

JANUARY 24

U. S. C. G. S.

8.3N, 82.9W

Panama-Costa Rica
border

H = 23 12 49.0

h = 78 km

Ottawa

eP 23 19 57 d

Resolute

eP 23 23 33 c?

Shawinigan Falls

eP 23 20 11

JANUARY 25

U. S. C. G. S.

14.1S, 165.4E

New Hebrides Islands

H = 05 21 42.2

h = 195 km

Ottawa

eP' 05 40 15

Penticton

eP 05 34 29

Shawinigan Falls

eP' 05 40 19

Victoria

eP 05 34 17

JANUARY 25

H = 08 45 12

Mag 2.2

Penticton

eP_n 08 45 54.6

eS_n 08 46 30.4

D = 293 km

JANUARY 25

Penticton

eP 11 24 34

JANUARY 25

H = 15 43 36

Mag 1.3

Penticton

eP₁ 15 43 57.4

eS₁ 15 44 13.9

D = 135 km

JANUARY 25

U. S. C. G. S.

49.8N, 156.0E

Kurile Islands

H = 19 04 22.8

h = 98 km

Ottawa

eP 19 15 57

Penticton

eP 19 13 25

Resolute

iP 19 12 50 c

Shawinigan Falls

eP 19 15 58

Victoria

eP 19 13 12

DOMINION OBSERVATORIES

JANUARY 26
 U. S. C. G. S.
 15. 3N, 93. 7E
 Southern Burma
 H = 01 47 01. 4
 h = 67 km
 Resolute
 eP 01 59 58
 e 02 11 38?

JANUARY 26
 48. 8N, 125. 0W
 Barkley Sound
 H = 04 21 57
 Mag 2. 3
 Albern
 eP₁ 04 22 04. 8
 eS₁ 04 22 16. 9
 D = 50 km
 Victoria
 eP₁ 04 22 16. 9
 eS₁ 04 22 35. 8
 D = 155 km

JANUARY 26
 Resolute
 eP 07 58 09?

JANUARY 26
 Resolute
 eP 11 01 51

JANUARY 26
 U. S. C. G. S.
 21. 4S, 169. 5E
 Loyalty Islands
 H = 16 13 25. 1
 h = 119 km
 Mag 6 1/2
 Halifax
 e 16 35 31
 Penticton
 eP 16 26 36
 Resolute
 eP' 16 31 35?

Shawinigan Falls
 eP' 16 32 17
 Victoria
 eP 16 26 19

JANUARY 26
 U. S. C. G. S.
 12. 2S, 78. 1W
 Near coast of Peru
 H = 17 45 42. 9
 h = 60 km
 Resolute
 eP 17 58 30?
 Shawinigan Falls
 eP 17 55 44

JANUARY 26
 U. S. C. G. S.
 20. 7S, 169. 5E
 Loyalty Islands
 H = 18 48 56. 9
 h = 106 km
 Penticton
 eP 19 02 16
 Resolute
 eP' 19 07 21
 e 19 18 20?
 Shawinigan Falls
 eP' 19 07 46
 Victoria
 eP 19 01 55

JANUARY 26
 Penticton
 eP 21 42 13

JANUARY 27
 H = 00 47 35
 Mag 1. 8
 Penticton
 eP₁ 00 47 56
 eS₁ 00 48 12
 D = 131 km

JANUARY 27
 Resolute
 eP 09 12 26

JANUARY 27
 Penticton
 eP 10 57 54

JANUARY 27
 Penticton
 eP 15 24 06

JANUARY 27
 Resolute
 eP 16 04 23

JANUARY 27
 U. S. C. G. S.
 45. 4N, 149. 3E
 Kurile Islands
 H = 20 07 00. 4
 h = 60 km
 Resolute
 eP 20 16 14

JANUARY 27
 Resolute
 eP 22 10 53?

JANUARY 28
 Penticton
 eP 02 04 24
 Victoria
 eP 02 03 56

SEISMOLOGICAL BULLETIN - 1961

JANUARY 28	JANUARY 28	JANUARY 29
U. S. C. G. S.	Penticton	46°23'N, 66°56'W
13.6S, 76.6W	eP 10 29 45	Near Napadogan,
Near coast of Peru		New Brunswick
H = 03 24 39.2		H = 00 49 39.2
h = 35 km	JANUARY 28	h = 24 km
Mag 5	Resolute	Mag 3.8
Halifax	eP 11 30 34	Halifax
eP 03 34 38		iP _n 00 50 24.5
Ottawa		iP ₁ 00 50 32.1
eP 03 34 36	JANUARY 28	i 00 50 52.5
Penticton	47.9N, 122.9W	iS _n 00 50 56.9
eP 03 36 13	Eastern Puget Sound	S ₁ 00 51 11.8
Resolute	Washington, U. S. A.	D = 326 km
iP 03 37 32 c	H = 11 52 18	Montreal
Victoria	Mag 2.8	iP _n 00 50 49.3
eP 03 36 18	Alberni	i 00 51 35.0
	eP _n 11 52 51.5	iS _n 00 51 42.7
	eS _n 11 53 14.9	i 00 51 56.2
	D = 216 km	iS ₁ 00 52 09.5
JANUARY 28	Penticton	D = 530 km
Resolute	eP _n 11 53 00.5	Ottawa
eP 05 30 59	eS _n 11 53 33.9	eP _n 00 51 08.7
	D = 290 km	eS _n 00 52 14.2
	Victoria	iS ₁ 00 52 52.7
JANUARY 28	eP ₁ 11 52 30.8	D = 690 km
U. S. C. G. S.	eS ₁ 11 52 40.2	Seven Falls
39.3N, 22.0E	D = 79 km	eP _n 00 50 17.1?
Northern Greece		i 00 50 43.6?
H = 07 18 16.2		S _n 00 50 49.3?
h = 89 km		S ₁ 00 51 01.6?
Ottawa	JANUARY 28	D = 310 km
iP 07 29 11 c	U. S. C. G. S.	Shawinigan Falls
Penticton	45.0S, 105.8W	eP _n 00 50 39.1
eP 07 30 48	South Pacific Ocean	eS _n 00 51 23.4
Resolute	H = 14 06 21.0	S ₁ 00 51 43.2
eP 07 28 11 d?	h = 144 km	D = 448 km
	Penticton	
	eP 14 19 34	
	e 14 34 56	
	Resolute	JANUARY 29
	eP' 14 25 00?	Resolute
	Victoria	eP 03 24 36?
	eP 14 19 29	
JANUARY 28		
U. S. C. G. S.		
35.5N, 118.1W		
California		
H = 08 12 45.3		
h = 21 km		
Mag 5 1/4		
Penticton		
eP 08 16 04		
Resolute		
eP 08 20 26 d		
Victoria		
eP 08 16 06		

DOMINION OBSERVATORIES

JANUARY 29 U. S. C. G. S. 51. 8N, 175. 9W Andreanof Islands H = 13 23 54. 7 h = 41 km Alberni eP 13 30 14 Penticton eP 13 30 49 Resolute eP 13 31 17 Shawinigan Falls eP 13 34 18 Victoria eP 13 30 32	JANUARY 30 Victoria eP 12 24 06 JANUARY 30 Resolute eP 22 54 11 JANUARY 30 Resolute eP 23 04 20? JANUARY 31 Resolute eP 00 36 16 JANUARY 31 U. S. C. G. S. 55. 8N, 153. 9W Near Kodiak Island H = 00 48 36. 5 h = 26 km Mag 6 1/2 Alberni eP 00 53 00 Halifax eP 00 58 06 Ottawa eP 00 57 19 Penticton eP 00 53 25 Resolute iP 00 54 37 c iS 00 59 28 Shawinigan Falls eP 00 57 22 Victoria eP 00 53 13 JANUARY 31 Resolute iP 02 09 35	JANUARY 31 Canadian Arctic H = 04 09 00. 5 Mag 1. 7 Resolute P ₁ 04 09 18. 0 S ₁ 04 09 31. 3 D = 109 km JANUARY 31 Resolute eP 07 11 13 JANUARY 31 Resolute eP 13 47 04 JANUARY 31 U. S. C. G. S. 51. 4N, 178. 4W Andreanof Islands H = 18 32 19. 5 h = 53 km Penticton eP 18 39 26 Resolute eP 18 39 50 e 18 41 56 e 18 45 40 JANUARY 31 Resolute eP 21 47 17? JANUARY 31 Penticton eP 22 38 26 Resolute eP 22 39 00?
JANUARY 30 H = 08 17 22 Mag 2. 0 Penticton eP _n 08 18 01. 4 eS _n 08 18 33. 9 D = 266 km		
JANUARY 30 U. S. C. G. S. 65. 2N, 149. 9W Central Alaska H = 12 12 39. 7 h = 34 km Mag 5 1/2 Alberni eP 12 17 28 Halifax eP 12 21 27 Ottawa eP 12 20 43 d Penticton eP 12 17 41 Resolute iP 12 17 13 i? 12 20 55 eS 12 21 06 Shawinigan Falls eP 12 20 46 Victoria eP 12 17 34		

SEISMOLOGICAL BULLETIN - 1961

FEBRUARY 1
Penticton
eP 00 21 21

FEBRUARY 1
Alberni
iP₁ 00 31 51.9
iS₁ 00 31 58.7
D = 56 km

FEBRUARY 1
U. S. C. G. S.
50.2N, 129.7W
Off coast of Vancouver
Island
H = 00 36 00.3
h = 42 km
Mag 3.9

Alberni
eP_n 00 36 51.9
D = 368 km

Penticton
eP_n 00 37 37.6
D = 745 km

Resolute
eP 00 41 56
eS 00 46 50

Victoria
eP_n 00 37 08.0
D = 500 km

FEBRUARY 1
Resolute
eP 02 59 06 c ?

FEBRUARY 1
U. S. C. G. S.
11.9N, 143.7E
Mariana Islands region
H = 04 53 44.4
h = 95 km
Penticton
eP 05 06 16
Resolute
eP 05 06 21 c

FEBRUARY 1
Alberni
eP 07 48 34
Penticton
eP 07 49 17

FEBRUARY 1
Victoria
eP 07 54 52

FEBRUARY 1
Penticton
eP 08 59 49

FEBRUARY 1
Canadian Arctic
H = 10 43 55.5
h = 29 km
Mag 3.2
Resolute
iP_n 10 44 28.2
iP₁ 10 44 33.4
iS_n 10 44 53.5
iS₁ 10 45 02.0
D = 234 km

FEBRUARY 1
U. S. C. G. S.
37.4N, 138.4E
Near coast of
Honshu Japan
H = 18 39 03.6
h = 38 km
Resolute
iP 18 49 27

FEBRUARY 1
U. S. C. G. S.
18.0S, 178.4W
Fiji Islands
H = 20 09 13.8
h = 599 km
Penticton
eP 20 20 51

FEBRUARY 1
Alberni
eP 20 32 00
Penticton
eP 20 32 47

FEBRUARY 2
U. S. C. G. S.
37.2N, 118.6W
California
H = 00 04 16.3
h = 25 km
Mag 5
Penticton
eP 00 07 13
Resolute
eP 00 11 43?

FEBRUARY 2
H = 00 44 42
Mag 1.4
Penticton
eP₁ 00 45 04.8
eS₁ 00 45 22.4
D = 144 km

FEBRUARY 2
U. S. C. G. S.
7.3N, 127.3E
Mindanao, Philippine
Islands
H = 00 42 07.2
h = 157 km
Resolute
eP 00 55 11?

FEBRUARY 2
Penticton
eP 01 37 59

DOMINION OBSERVATORIES

FEBRUARY 2

46.8N, 121.5W
Near Mt. Ranier,
Washington, U. S. A.

H = 05 50 16

Mag 3.1

Alberni

eP_n 05 51 08.4

eS_n 05 51 44.2

D = 375 km

Penticton

eP_n 05 51 00.6

eS_n 05 52 06.4

D = 311 km

Victoria

eP_n 05 50 49.7

eS_n 05 51 16.8

D = 222 km

FEBRUARY 2

Resolute

eP 06 06 03?

FEBRUARY 2

H = 11 04 57

Mag 1.9

Alberni

iP₁ 11 05 06.0

iS₁ 11 05 12.8

D = 56 km

Victoria

iP₁ 11 05 22.2

D = 158 km

FEBRUARY 2

Penticton

eP 11 10 49

FEBRUARY 2

U. S. C. G. S.

13.6N, 145.3E

Mariana Islands

H = 11 13 31.8

h = 131 km

Resolute

iP 11 25 53 c?

FEBRUARY 2

H = 17 07 55

Mag 2.4

Penticton

eP_n 17 08 35.0

eS_n 17 09 08.4

D = 273 km

FEBRUARY 2

Resolute

eP 22 23 40

FEBRUARY 3

Victoria

iP 01 25 14

FEBRUARY 3

Resolute

eP 02 35 49

FEBRUARY 3

U. S. C. G. S.

36.9S, 176.8E

Off north coast of

New Zealand

H = 12 33 22.8

h = 300 km

Penticton

eP 12 47 48

Resolute

eP' 12 51 48

FEBRUARY 3

U. S. C. G. S.

36.4N, 141.0E

Honshu, Japan

H = 13 31 44.7

h = 103 km

Resolute

eP 13 42 06c

FEBRUARY 3

Resolute

eP 14 18 26?

FEBRUARY 3

U. S. C. G. S.

23.4S, 67.3W

Argentina

H = 14 25 41.7

h = 181 km

Shawinigan Falls

eP 14 36 38

FEBRUARY 3

Resolute

eP 23 52 53

FEBRUARY 4

U. S. C. G. S.

18.3S, 69.3W

Chile-Bolivia border

H = 01 13 05.0

h = 178 km

Halifax

eP 01 23 17c

Ottawa

eP 01 23 22

Penticton

eP 01 25 04

Resolute

eP 01 26 07d?

Shawinigan Falls

eP 01 23 29

FEBRUARY 4

Halifax

eP 06 56 12 c

Ottawa

eP 06 55 36

Penticton

eP 06 56 59

Resolute

eP 06 59 06

Shawinigan Falls

eP 06 55 53

Victoria

eP 06 57 08

SEISMOLOGICAL BULLETIN - 1961

FEBRUARY 4
 U. S. C. G. S.
 24. 7N, 95. 3E
 Northern Burma
 H = 08 51 48.9
 h = 162 km
 Penticton
 eP 09 05 54
 Resolute
 eP 09 03 46c
 i 09 04 20
 eS 09 13 40

FEBRUARY 4
 Resolute
 eP 10 24 43

FEBRUARY 4
 Ottawa
 eP 12 53 10
 Shawinigan Falls
 eP 12 53 38

FEBRUARY 4
 U. S. C. G. S.
 50. 3N, 156. 4E
 Kamchatka
 H = 12 49 37.7
 h = 161 km
 Penticton
 eP 12 58 28
 Resolute
 eP 12 57 54
 Shawinigan Falls
 eP 13 01 02

FEBRUARY 4
 Resolute
 eP 15 23 29?

FEBRUARY 4
 Halifax
 iP 15 36 28 c
 Ottawa
 eP 15 36 30
 Penticton
 eP 15 37 40

FEBRUARY 4
 U. S. C. G. S.
 17. 0S, 176. 8W
 Fiji Islands region
 H = 15 29 11.7
 h = 57 km
 Resolute
 eP? 15 43 07?

FEBRUARY 4
 Resolute
 eP? 15 54 05

FEBRUARY 4
 Penticton
 eP 16 04 43
 Resolute
 eP? 16 04 32?

FEBRUARY 4
 U. S. C. G. S.
 11. 8N, 87. 5W
 Near coast of
 Nicaragua
 H = 16 11 23.6
 h = 79 km
 Resolute
 eP 16 21 46

FEBRUARY 4
 Penticton
 eP 17 43 01

FEBRUARY 4
 U. S. C. G. S.
 24. 0N, 122. 7E
 Off coast of Formosa
 H = 19 09 12.9
 h = 14 km
 Alberni
 eP 19 22 54
 Penticton
 eP 19 22 07
 Resolute
 eP 19 21 15c
 eS 19 31 05?

Victoria
 eP 19 22 02

FEBRUARY 5
 Penticton
 eP 07 36 35

FEBRUARY 5
 Penticton
 eP 07 47 45

FEBRUARY 5
 Resolute
 eP 10 30 14?

FEBRUARY 5
 Resolute
 eP 11 31 12

FEBRUARY 5
 Penticton
 eP 15 32 40

FEBRUARY 5
 U. S. C. G. S.
 8. 0N, 82. 8W
 South of Panama
 H = 15 38 34.0
 h = 49 km
 Ottawa
 eP 15 45 49 d
 Resolute
 eP 15 49 23
 iP 15 49 24 d
 eS 15 58 22 ?
 Shawinigan Falls
 eP 15 46 03

DOMINION OBSERVATORIES

FEBRUARY 5 U. S. C. G. S. 38. 4S, 78. 2E Indian Ocean H = 17 50 51. 1 h = 25 km Resolute eP' 18 10 26	Victoria eP _N 05 20 15. 0 eS _N 05 21 00. 1 D = 269 km	Shawinigan Falls eP 12 22 39 Victoria eP 12 18 56
FEBRUARY 5 Resolute eP 19 33 25?	FEBRUARY 6 Resolute eP 05 46 38?	FEBRUARY 6 Resolute eP 12 21 57
FEBRUARY 5 Resolute eP? 19 38 48?	FEBRUARY 6 U. S. C. G. S. 19. 2S, 68. 6W Chile-Bolivia border H = 10 30 07. 2 h = 181 km Halifax iP 10 40 24 d Ottawa iP 10 40 30 d Penticton eP 10 42 21 Resolute eP 10 43 15 Shawinigan Falls eP 10 40 36 Victoria eP 10 42 19	FEBRUARY 6 Resolute eP 12 33 30 FEBRUARY 6 Resolute eP 14 57 35?
FEBRUARY 5 Resolute eP? 19 46 40	FEBRUARY 6 U. S. C. G. S. 44. 8N, 149. 1E Kurile Islands H = 18 15 21. 6 h = 25 km Halifax iP 18 28 03 d Ottawa eP 18 27 39 Penticton eP 18 25 18 Resolute iP 18 24 42 c Shawinigan Falls eP 18 27 41 Victoria eP 18 25 07	FEBRUARY 6 U. S. C. G. S. 44. 8S, 154. 2E Solomon Islands region H = 19 29 33. 2 h = 470 km Resolute eP 19 42 31
FEBRUARY 5 Resolute eP? 23 12 57?	FEBRUARY 6 Resolute eP 11 20 03	
FEBRUARY 6 U. S. C. G. S. 14. 1N, 145. 5E Mariana Islands H = 04 06 08. 9 h = 22 km Resolute eP 04 18 40	FEBRUARY 6 U. S. C. G. S. 51. 6N, 174. 8W Andreanof Islands H = 12 12 26. 0 h = 77 km Halifax eP 12 23 16 d Ottawa iP 12 22 34 c Penticton eP 12 19 21 Resolute eP 12 19 44	
FEBRUARY 6 47. 5N, 126. 9W Off west coast of Washington, U. S. A. H = 05 19 23 Mag 3. 3 Alberni iP _N 05 19 58. 1 iS _N 05 20 27. 2 D = 238 km Penticton eP _N 05 20 41. 2 eS _N 05 21 42. 0 D = 582 km		

SEISMOLOGICAL BULLETIN - 1961

FEBRUARY 6
Resolute
eP 20 38 09?

FEBRUARY 6
Resolute
eP 20 58 59

FEBRUARY 6
U. S. C. G. S.
6. 8S, 155. 3E
Solomon Islands
H = 21 45 13. 5
h = 59 km
Halifax
iP' 22 04 17 d
Ottawa
eP' 22 04 02
Penticton
eP 21 58 18
Resolute
iP 21 59 02 c?
Shawinigan Falls
eP' 22 04 05 c
Victoria
eP 21 58 08

FEBRUARY 6
Resolute
eP 22 15 08?

FEBRUARY 7
Resolute
eP 03 10 48?

FEBRUARY 7
Resolute
iP 03 31 17
i 03 31 35

FEBRUARY 7
Resolute
iP 04 28 51
i 04 28 57

FEBRUARY 7
U. S. C. G. S.
4. 1S, 103. 3E
Sumatra
H = 05 11 45. 0
h = 82 km
Resolute
eP' 05 30 07

FEBRUARY 7
U. S. C. G. S.
48. 8N, 129. 3W
Off coast of
Vancouver Island
H = 06 08 31. 2
h = 46 km
Mag 3
Alberni
eP 06 09 11
Victoria
eP 06 09 28

FEBRUARY 7
U. S. C. G. S.
33. 1N, 137. 6E
Off coast of
Honshu, Japan
H = 14 36 53. 5
h = 25 km
Resolute
eP 14 47 40

FEBRUARY 7
U. S. C. G. S.
23. 5N, 121. 0E
Near coast of
Formosa
H = 15 28 33. 3
h = 38 km
Resolute
eP 15 40 37

FEBRUARY 7
U. S. C. G. S.
43. 9N, 147. 1E
Kurile Islands
H = 21 01 37. 3
h = 36 km
Ottawa
eP 21 14 03
Penticton
eP 21 11 56
Resolute
iP 21 11 06

FEBRUARY 7
U. S. C. G. S.
49. 3N, 156. 3E
Kurile Islands
H = 22 09 41. 5
h = 60 km
Resolute
eP 22 18 14 c

FEBRUARY 7
U. S. C. G. S.
51. 4N, 177. 2W
Andreanof Islands
H = 23 27 10. 8
h = 15 km
Ottawa
eP 23 37 34
Penticton
eP 23 34 15
Resolute
eP 23 34 42
Shawinigan Falls
eP 23 37 39

FEBRUARY 8
U. S. C. G. S.
15. 3S, 167. 5E
New Hebrides Islands
H = 02 36 40. 5
h = 162 km
Ottawa
eP' 02 55 14

DOMINION OBSERVATORIES

Penticton eP 02 49 30	FEBRUARY 8 H = 16 34 14	Resolute eP 02 23 11?
Resolute eP' 02 54 50	Mag 2.3	eP' 02 26 54
e 03 06 25?	Alberni	PKKP 02 37 30
Shawinigan Falls eP' 02 55 18	iP ₁ 16 34 25.8	Shawinigan Falls
	eS ₁ 16 35 04.5	eP' 02 27 04 c
	D = 85 km	PKKP 02 37 17
	Victoria	Victoria
	iP ₁ 16 34 18.0	iP 02 21 17
	iS ₁ 16 34 22.4	
	D = 36 km	
FEBRUARY 8 U. S. C. G. S. 10.6S, 71.0W Brazil-Peru border H = 08 04 13.8 h = 699 km Mag 5 3/4	FEBRUARY 8 Resolute eP 17 49 41?	FEBRUARY 9 Resolute eP 03 00 05?
Halifax eP 08 12 52.5 d		FEBRUARY 9 U. S. C. G. S. 38.9S, 72.6W Near coast of Chile H = 13 14 45.6 h = 25 km Shawinigan Falls eP 13 27 21
Ottawa eP 08 12 56 c	FEBRUARY 8 U. S. C. G. S. 20.4S, 178.1W	
Resolute iP 08 15 53 d	Tonga Islands H = 17 50 45.2 h = 543 km	
eS 08 25 36	Penticton eP 18 02 35	
Shawinigan Falls eP 08 13 03	Resolute eP' 18 08 11?	
		FEBRUARY 9 U. S. C. G. S. 9.9S, 111.3E Off coast of Java H = 20 21 20.1 h = 73 km Halifax iP' 20 40 55 c
FEBRUARY 8 Penticton eP 08 29 46	FEBRUARY 8 Resolute eP 18 37 21?	
FEBRUARY 8 Resolute eP 08 41 12?		
FEBRUARY 8 U. S. C. G. S. 18.8S, 174.9W Tonga Islands H = 11 59 52.3 h = 76 km Penticton eP 12 12 18	FEBRUARY 9 U. S. C. G. S. 28.2S, 177.4W Kermadec Islands H = 02 08 15.9 h = 37 km Mag 6 3/4 Halifax eP' 02 27 09 c Ottawa eP' 02 26 59 Penticton eP 02 21 28	FEBRUARY 9 Resolute eP 20 45 15
FEBRUARY 8 Resolute eP 13 04 46?		FEBRUARY 10 Resolute eP 01 27 27?

SEISMOLOGICAL BULLETIN - 1961

FEBRUARY 10
Resolute
eP 03 30 56

FEBRUARY 10
Resolute
eP 03 52 11

FEBRUARY 10
Resolute
eP 04 51 26

FEBRUARY 10
Penticton
eP 09 00 43

FEBRUARY 10
Resolute
eP 09 56 42

FEBRUARY 10
Resolute
eP 10 56 04

FEBRUARY 10
Resolute
eP 12 20 53

FEBRUARY 10
U.S.C.G.S.
3.5N, 126.1E
East of Celebes Sea
H = 16 58 18.4
h = 25 km
Resolute
eP 17 11 55

FEBRUARY 11
Resolute
eP 00 29 54?

FEBRUARY 11
H = 01 02 26
Mag 2.1
Penticton
eP_n 01 02 54.2
eS_n 01 03 16.0
D = 177 km

FEBRUARY 11
Penticton
eP 01 14 32

FEBRUARY 11
U.S.C.G.S.
22.9N, 144.2E
Mariana Islands
H = 02 34 37.2
h = 60 km
Resolute
eP 02 46 19

FEBRUARY 11
Penticton
eP 03 58 29
Resolute
eP 03 59 05

FEBRUARY 11
U.S.C.G.S.
28.8N, 139.5E
North of Bonin Islands
H = 06 12 23.2
h = 358 km
Ottawa
e 06 27 22
Penticton
eP 06 23 31
Resolute
eP 06 23 06

FEBRUARY 11
U.S.C.G.S.
23.3S, 65.9W
Argentina
H = 11 27 59.4
h = 195 km
Ottawa
eP 11 38 49
Penticton
eP 11 40 24
Shawinigan Falls
eP 11 38 55

FEBRUARY 11
U.S.C.G.S.
5.2N, 126.3E
Mindanao Philippine
Islands
H = 12 23 55.8
h = 200 km
Ottawa
eP' 12 42 41 d
Resolute
eP 12 37 07
Shawinigan Falls
eP' 12 42 41

FEBRUARY 11
H = 16 44 53
Mag 1.2
Penticton
eP₁ 16 45 16.7
eS₁ 16 45 35.0
D = 150 km

FEBRUARY 11
U.S.C.G.S.
19.8S, 176.2W
Fiji Islands
H = 16 46 24.6
h = 261 km
Penticton
eP 16 58 36

FEBRUARY 11
Resolute
eP 20 20 14 d

DOMINION OBSERVATORIES

FEBRUARY 11	FEBRUARY 12	Resolute
Resolute	H = 01 58 58	iP 13 59 47 c?
eP 21 16 03?	Mag 2.5	
	Penticton	FEBRUARY 12
	eP _n 01 59 44.7	Resolute
FEBRUARY 11	eS _n 02 00 24.6	eP 16 33 26
U.S.C.G.S.	D = 327 km	
28.2S, 177.5W		FEBRUARY 12
Kermadec Islands	FEBRUARY 12	Resolute
H = 21 01 06.4	Penticton	eP 16 36 55?
h = 41 km	eP 02 54 34.1	FEBRUARY 12
Halifax		Alberni
iP' 21 20 06 d		iP 21 29 30
Ottawa	FEBRUARY 12	
eP' 21 19 49 d	U.S.C.G.S.	FEBRUARY 12
PKKP 21 30 11	15.0S, 175.2W	U.S.C.G.S.
Penticton	Samoa Islands region	43.7N, 147.6E
eP 21 14 18	H = 12 09 22.0	Kurile Islands
Resolute	h = 281 km	H = 21 53 43.5
eP' 21 19 43	Penticton	h = 45 km
PKKP 21 30 21	eP 12 21 08	Mag 6 3/4
Shawinigan Falls		Halifax
eP' 21 19 54		eP 22 06 32 d
PKKP 21 30 07		Ottawa
	FEBRUARY 12	eP 22 06 08
	U.S.C.G.S.	Penticton
FEBRUARY 11	13.1S, 171.8E	eP 22 03 39
Penticton	New Hebrides	Resolute
eP 21 39 35	H = 12 57 15.3	eP? 22 03 10
	h = 598 km	iP 22 03 11
FEBRUARY 11	Ottawa	iS 22 10 49
U.S.C.G.S.	eP' 13 14 52	Shawinigan Falls
24.2S, 66.6W	e 13 17 31	eP 22 06 08
Argentina	Penticton	Victoria
H = 22 44 04.8	eP 13 09 00	eP 22 03 39
h = 100 km	Shawinigan Falls	
Penticton	eP' 13 14 56	
eP 22 56 34	e 13 17 35	
	Victoria	
	eP 13 08 48	
FEBRUARY 12		FEBRUARY 12
U.S.C.G.S.		Resolute
34.8S, 106.9W	FEBRUARY 12	eP 22 28 49
Easter Island	U.S.C.G.S.	
region	59.4N, 150.1W	FEBRUARY 12
H = 01 19 21.8	Alaska	Resolute
h = 100 km	H = 13 54 30.6	eP 22 31 47
Penticton	h = 79 km	
eP 01 31 52	Penticton	FEBRUARY 12
	eP 13 58 56	Resolute
		eP 22 37 03

SEISMOLOGICAL BULLETIN - 1961

FEBRUARY 12
 U. S. C. G. S.
 43. 7N, 148. 0E
 Kurile Islands
 H = 22 51 27. 7
 h = 17 km
 Resolute
 iP 23 00 58

FEBRUARY 12
 Penticton
 eP 23 03 46
 Resolute
 eP 23 03 46

FEBRUARY 12
 Resolute
 iP 23 22 33

FEBRUARY 12
 U. S. C. G. S.
 44. 0N, 147. 7E
 Kurile Islands
 H = 23 26 34. 5
 h = 23 km
 Halifax
 eP 23 39 22. 5c
 Ottawa
 eP 23 38 58
 Penticton
 eP 23 36 38
 Resolute
 iP 23 36 02
 Shawinigan Falls
 eP 23 38 59
 Victoria
 eP 23 36 29

FEBRUARY 13
 Penticton
 eP 00 11 07

FEBRUARY 13
 Penticton
 eP 00 36 31

FEBRUARY 13
 Penticton
 eP₁ 00 37 31. 9
 eS₁ 00 37 49. 3
 D = 142 km

FEBRUARY 13
 U. S. C. G. S.
 43. 5N, 148. 2E
 Kurile Islands
 H = 00 31 51. 1
 h = 25 km
 Resolute
 iP 00 41 23

FEBRUARY 13
 Resolute
 eP 01 37 21

FEBRUARY 13
 H = 02 04 33
 Mag 1. 9
 Penticton
 eP_n 02 05 15. 9
 eS_n 02 05 51. 9
 D = 295 km

FEBRUARY 13
 U. S. C. G. S.
 43. 7N, 147. 8E
 Kurile Islands
 H = 02 30 01. 7
 h = 18 km
 Resolute
 eP 02 39 33

FEBRUARY 13
 U. S. C. G. S.
 43. 5N, 148. 1E
 Kurile Islands
 H = 02 31 19. 4
 h = 60 km
 Resolute
 eP 02 40 45

FEBRUARY 13
 U. S. C. G. S.
 43. 8N, 147. 4E
 Kurile Islands
 H = 04 43 24. 6
 h = 46 km
 Resolute
 eP 04 52 52

FEBRUARY 13
 Resolute
 eP 05 44 30?

FEBRUARY 13
 Resolute
 iP 06 22 00

FEBRUARY 13
 U. S. C. G. S.
 17. 0S, 173. 7W
 Tonga Islands region
 H = 06 45 25. 0
 h = 43 km
 Mag 5 3/4
 Resolute
 eP 06 59 27?

FEBRUARY 13
 Penticton
 eP 07 57 40

FEBRUARY 13
 U. S. C. G. S.
 43. 8N, 147. 0E
 Kurile Islands
 H = 09 06 55. 9
 h = 25 km
 Resolute
 iP 09 16 26 c ?

DOMINION OBSERVATORIES

FEBRUARY 13
H = 10 05 58
Mag 2.8
Penticton
eP_n 10 06 35.7
eS_n 10 07 06.8
D = 254 km

FEBRUARY 13
Resolute
eP 12 18 13?

FEBRUARY 13
Resolute
eP 13 14 18?

FEBRUARY 13
U. S. C. G. S.
29.7N, 81.0E
Nepal-Tibet border
H = 16 10 19.8
h = 35 km
Resolute
eP 16 22 06

FEBRUARY 13
U. S. C. G. S.
5.1S, 128.7E
Banda Sea
H = 16 17 20.1
h = 66 km
Resolute
eP 16 31 27
e 16 35 37?

FEBRUARY 13
U. S. C. G. S.
43.7N, 149.6E
Kurile Islands
H = 16 27 20.9
h = 25 km
Mag 6
Halifax
eP 16 40 13 d

Ottawa
eP 16 39 47 c
Resolute
iP 16 36 52c?
eS 16 44 18?
Shawinigan Falls
eP 16 39 49

FEBRUARY 13
Penticton
eP 17 37 28

FEBRUARY 13
U. S. C. G. S.
44.1N, 147.4E
Kurile Islands
H = 17 50 16.5
h = 42 km
Resolute
eP 17 59 42

FEBRUARY 13
U. S. C. G. S.
43.6N, 147.8E
Kurile Islands
H = 21 11 40.9
h = 51 km
Resolute
iP 21 21 08

FEBRUARY 13
Ottawa
eP 22 49 38
Resolute
eP 22 46 41
Shawinigan Falls
eP 22 49 39

FEBRUARY 13
Resolute
eP 23 05 43?

FEBRUARY 14
U. S. C. G. S.
44.2N, 147.8E
Kurile Islands
H = 02 51 15.3
h = 98 km
Penticton
eP 03 01 10
Resolute
iP 03 00 35

FEBRUARY 14
U. S. C. G. S.
43.8N, 147.4E
Kurile Islands
H = 03 15 25.0
h = 25 km
Resolute
eP 03 24 56 c

FEBRUARY 14
U. S. C. G. S.
43.8N, 147.9E
Kurile Islands
H = 03 22 00.7
h = 20 km
Halifax
eP 03 34 46
Ottawa
eP 03 34 28
Penticton
eP 03 32 09
Resolute
iP 03 31 32 c
eS 03 39 02?
Shawinigan Falls
eP 03 34 28

FEBRUARY 14
Resolute
eP 03 56 11

FEBRUARY 14
Resolute
eP 03 58 57

SEISMOLOGICAL BULLETIN - 1961

FEBRUARY 14 U. S. C. G. S. 42. 3S, 73. 1W Near coast of southern Chile H = 05 44 24. 3 h = 58 km Halifax iP 05 57 08. 5c Ottawa iP 05 57 08 Resolute eP' 06 03 06? Shawinigan Falls eP 05 57 15	FEBRUARY 14 Resolute eP 16 45 39 FEBRUARY 14 Resolute eP 20 20 07 FEBRUARY 14 Resolute eP 23 31 18 FEBRUARY 15 Resolute eP 01 46 18 FEBRUARY 15 Resolute eP 02 20 50 FEBRUARY 15 Resolute eP 04 05 30? FEBRUARY 15 Resolute eP 08 18 42 FEBRUARY 15 Resolute eP 10 18 48 FEBRUARY 15 U. S. C. G. S. 43. 7N, 147. 4E Kurile Islands H = 10 45 15. 9 h = 69 km Mag 6 Halifax eP 10 58 01	Ottawa eP 10 57 38 Resolute eP 10 54 42 c eS 11 02 20 Shawinigan Falls eP 10 57 40 Victoria eP 10 55 09 FEBRUARY 15 U. S. C. G. S. 30. 8N, 84. 4E Tibet H = 11 28 55. 0 h = 66 km Resolute eP 11 40 30 FEBRUARY 15 Resolute eP 12 06 30 FEBRUARY 15 Resolute eP 12 07 21? FEBRUARY 15 Resolute eP 14 23 38?
FEBRUARY 14 Resolute eP 06 54 03		
FEBRUARY 14 Resolute eP 06 56 47		
FEBRUARY 14 H = 14 27 19 Mag 2. 2 Penticton eP _n 14 27 48. 9 eS _n 14 28 11. 8 D = 188 km		
FEBRUARY 14 U. S. C. G. S. 15. 4S, 175. 1W Samoa Islands region H = 15 50 52. 2 h = 25 km Penticton eP 16 03 13		
		FEBRUARY 15 Resolute eP 18 43 48 FEBRUARY 15 Resolute eP 20 47 38

DOMINION OBSERVATORIES

FEBRUARY 15
H = 21 18 00
Mag 2.3
Penticton
eP_n 21 18 35.9
eS_n 21 19 05.4
D = 241 km

FEBRUARY 16
Resolute
eP 12 01 35

FEBRUARY 17
U. S. C. G. S.
6.5N, 73.5W
Columbia
H = 06 11 35.7
h = 25 km
Resolute
eP 06 22 41

FEBRUARY 16
Shawinigan Falls
eP 13 14 54

FEBRUARY 16
H = 00 47 42
Mag 2.5
Penticton
eP₁ 00 48 05.4
eS₁ 00 48 12.9
D = 143 km

FEBRUARY 16
Penticton
eP 13 38 51

FEBRUARY 17
U. S. C. G. S.
43.5N, 148.0E
Kurile Islands
H = 06 48 58.5
h = 25 km
Resolute
eP 06 58 32 c

FEBRUARY 16
U. S. C. G. S.
43.2N, 148.0E

Kurile Islands
H = 13 54 53.7
h = 71 km

Mag 6
Halifax
eP 14 07 38

FEBRUARY 17
Resolute
eP 13 42 09

FEBRUARY 16
Resolute
eP 03 54 32?

FEBRUARY 16
Penticton
eP 04 08 36

Ottawa
eP 14 07 15 c

Penticton
eP 14 04 56

FEBRUARY 17
Resolute
eP 17 14 19

FEBRUARY 16
Penticton
eP 05 30 11
Resolute
eP 05 32 13

Resolute
iP 14 04 19 c

Shawinigan Falls
eP 14 07 16 c

Victoria
iP 14 04 45

FEBRUARY 18
U. S. C. G. S.
44.0N, 147.5E
Kurile Islands
H = 01 04 00.8
h = 28 km

FEBRUARY 16
Resolute
eP 05 32 36

FEBRUARY 16
Resolute
iP 15 03 54

Ottawa
eP 01 16 26 d
Resolute
eP 01 13 30

FEBRUARY 16
U. S. C. G. S.
32.7N, 137.7E
South of Honshu Japan
H = 08 54 59.9
h = 303 km
Resolute
eP 09 05 24

FEBRUARY 16
Resolute
eP? 15 43 27

FEBRUARY 18
Resolute
eP 02 00 48

FEBRUARY 17
Penticton
eP 06 10 01

SEISMOLOGICAL BULLETIN - 1961

FEBRUARY 18
Resolute
eP 07 27 03

FEBRUARY 18
Resolute
eP 08 22 28

FEBRUARY 18
Resolute
iP 08 32 00

FEBRUARY 18
Ottawa
eP 08 34 56

FEBRUARY 18
Resolute
eP 12 35 06?

FEBRUARY 18
Resolute
eP? 15 18 00?

FEBRUARY 18
U. S. C. G. S.
43.6N, 148.2E
Kurile Islands
H = 15 54 01.6
h = 25 km
Resolute
eP 16 03 31

FEBRUARY 18
Resolute
eP? 16 39 37

FEBRUARY 18
U. S. C. G. S.
1.3S, 15.7W
Atlantic Ocean
H = 17 02 10.0
h = 25 km
Resolute
eP 17 15 03?

FEBRUARY 18
U. S. C. G. S.
4.3N, 126.6E
Philippine Islands
H = 20 00 28.7
h = 74 km
Resolute
eP 20 13 56?

FEBRUARY 19
Alberni
iP₁ 02 25 17.0
iS₁ 02 25 29.8
D = 105 km
Victoria
eP 02 25 39.6
D = 268 km

FEBRUARY 19
U. S. C. G. S.
56.1N, 153.4W
Kodiak Island
H = 07 55 27.6
h = 61 km
Resolute
eP 08 01 23 d?
Shawinigan Falls
eP 08 04 08 d

FEBRUARY 19
U. S. C. G. S.
56.1N, 153.5W
Kodiak Island
H = 12 11 15.7
h = 39 km
Resolute
iP 12 17 13

FEBRUARY 19
U. S. C. G. S.
56.1N, 153.4W
Kodiak Island
H = 13 07 45.5
h = 44 km
Ottawa
eP 13 16 21
Resolute
iP 13 13 43 d?
Shawinigan Falls
iP 13 16 27 c

FEBRUARY 19
Resolute
eP 16 51 31

FEBRUARY 19
Resolute
eP 20 47 58

FEBRUARY 19
Resolute
eP 21 44 18

FEBRUARY 20
Resolute
eP 00 15 42

FEBRUARY 20
Resolute
eP? 04 45 27

FEBRUARY 20
Resolute
eP 09 08 01?

FEBRUARY 20
Resolute
eP 11 03 20?

DOMINION OBSERVATORIES

FEBRUARY 20
 Resolute
 eP 13 11 08 d

FEBRUARY 20
 Resolute
 eP 13 14 56
 Shawinigan Falls
 eP 13 12 15

FEBRUARY 20
 Resolute
 eP 14 20 47

FEBRUARY 20
 Resolute
 eP? 18 17 00
 eP 18 17 13 ?

FEBRUARY 20
 Halifax
 iP 18 37 21.5 d
 Ottawa
 eP 18 37 27 d
 Shawinigan Falls
 iP 18 37 33 d

FEBRUARY 20
 Resolute
 eP 18 43 34?

FEBRUARY 20
 Resolute
 eP 18 55 12?

FEBRUARY 20
 Resolute
 eP? 19 04 37

FEBRUARY 20
 U. S. C. G. S.
 2.5S, 77.6W
 Ecuador
 H = 22 27 00.4
 h = 50 km
 Ottawa
 eP 22 35 35
 Resolute
 eP 22 38 53
 Victoria
 eP 22 37 40

FEBRUARY 21
 U. S. C. G. S.
 36.5N, 23.3E
 Near coast of Greece
 H = 03 01 55.3
 h = 49 km
 Halifax
 P 03 12 39
 Ottawa
 eP 03 13 09
 Resolute
 eP 03 12 13
 Shawinigan Falls
 eP 03 12 54

FEBRUARY 21
 Resolute
 eP 07 11 55

FEBRUARY 21
 Resolute
 eP 15 28 59?

FEBRUARY 21
 Resolute
 eP 19 26 22?

FEBRUARY 21
 U. S. C. G. S.
 48.8S, 106.2E
 Indian Ocean
 H = 19 10 56.8
 h = 52 km
 Penticton
 eP₁' 19 30 43
 Resolute
 eP₁' 19 30 48?

FEBRUARY 22
 51.5N, 179.8E
 Andeanof Islands
 H = 02 49 18.2
 h = 99 km
 Penticton
 eP 02 56 26
 Resolute
 eP 02 56 47

FEBRUARY 22
 Penticton
 eP 09 24 10

FEBRUARY 22
 U. S. C. G. S.
 28.4S, 177.2W
 Kermadec Islands
 region
 H = 21 53 34.5
 h = 78 km
 Mag 5 3/4
 Ottawa
 eP' 22 12 14
 Resolute
 eP' 22 12 09
 e 22 22 54?
 Shawinigan Falls
 eP' 22 12 18
 Victoria
 eP 22 06 33

SEISMOLOGICAL BULLETIN - 1961

FEBRUARY 23

Resolute
eP 03 27 57?

FEBRUARY 23

U.S.C.G.S.
38.2N, 142.7E
Honshu Japan
H = 04 16 25.0
h = 119 km

Ottawa

eP 04 29 14

Resolute

iP 04 26 30 c

eS 04 34 48

Shawinigan Falls

eP 04 29 14

Victoria

eP 04 26 59

FEBRUARY 23

Resolute
iP 07 58 17 c?

FEBRUARY 23

H = 12 48 56

Mag 2.5

Penticton

eP_n 12 49 31.8

eS_n 12 50 01.0

D = 238 km

FEBRUARY 23

Penticton

eP 14 39 29

Resolute

eP 14 41 52

FEBRUARY 23

U.S.C.G.S.
37.3N, 27.5E
Dodecanese Islands
H = 21 45 51.5
h = 25 km

Resolute

eP 21 56 15?

Shawinigan Falls

eP 21 57 06

FEBRUARY 24

Resolute

eP 02 46 53

FEBRUARY 24

U.S.C.G.S.
26.1N, 125.4E
Ryukyu Islands
H = 03 04 11.7
h = 25 km

Resolute

iP 03 15 59 d

FEBRUARY 24

U.S.C.G.S.
17.8S, 68.5W
Western Bolivia
H = 08 16 05.4
h = 100 km

Penticton

eP 08 28 06

FEBRUARY 24

H = 11 22 08

Mag 2.2

Alberni

iP₁ 11 22 19.6

iS₁ 11 22 28.8

D = 75 km

FEBRUARY 25

Resolute

eP 02 15 40?

FEBRUARY 25

Penticton
eP 11 15 50

FEBRUARY 25

Resolute
eP 11 34 53

FEBRUARY 25

H = 12 03 21

Mag 2.4

Penticton

eP_n 12 03 59.6

eS_n 12 04 32.0

D = 266 km

FEBRUARY 25

U.S.C.G.S.
15.4S, 175.8W

Samoa Islands region

H = 15 02 04.8

h = 62 km

Penticton

eP 15 14 11

Resolute

eP 15 15 58?

Victoria

eP 15 14 06 c

FEBRUARY 25

Resolute

iP 15 33 36 d?

FEBRUARY 25

Resolute

eP? 20 34 18.

FEBRUARY 25

Resolute

eP? 22 03 17

DOMINION OBSERVATORIES

FEBRUARY 26 U. S. C. G. S. 32. 7S, 111. 2W Easter Island region H = 05 48 46. 3 h = 29 km Mag 6 1/2 Ottawa eP 06 01 20 Penticton eP 06 01 08 Shawinigan Falls eP 06 01 29 Victoria eP 06 01 05 d	FEBRUARY 26 Resolute eP 18 59 10	FEBRUARY 27 Penticton eP 11 09 00
	FEBRUARY 26 Ottawa eP 19 56 33 Resolute eP 19 54 15	FEBRUARY 27 Penticton eP 12 08 34 Resolute eP 12 28 19
	FEBRUARY 26 Resolute iP 21 13 48 c	FEBRUARY 27 Resolute eP 12 32 11
FEBRUARY 26 Penticton eP 09 37 59 Resolute eP? 09 32 46	FEBRUARY 27 U. S. C. G. S. 6. 7N, 73. 0W Columbia H = 01 07 51. 3 h = 200 km Ottawa eP 01 15 00 Penticton eP 01 17 26 Resolute eP 01 18 40 d Victoria iP 01 17 39	FEBRUARY 27 U. S. C. G. S. 52. 5N, 168. 8W Fox Islands H = 13 06 35. 8 h = 56 km Ottawa eP 13 16 21 Resolute eP 13 13 34
FEBRUARY 26 Resolute iP 17 59 20 c		
FEBRUARY 26 U. S. C. G. S. 31. 4N, 131. 2E Near coast of Kyushu, Japan H = 18 10 48. 7 h = 54 km Mag 7 Alberni eP 18 22 29 Halifax iP 18 24 47 d Ottawa eP 18 24 29 Penticton eP 18 22 43 Resolute iP 18 21 56 c iS 18 31 01 Victoria eP 18 22 36	FEBRUARY 27 Resolute eP 06 41 21	FEBRUARY 27 U. S. C. G. S. 9. 8N, 84. 4W Near coast of Costa Rica H = 15 44 19. 8 Ottawa eP 15 51 19 Resolute eP 15 54 54 Shawinigan Falls eP 15 51 32
	FEBRUARY 27 Resolute eP 10 42 15	FEBRUARY 27 Resolute eP 16 45 26?

SEISMOLOGICAL BULLETIN - 1961

FEBRUARY 27

U. S. C. G. S.
38. 4N, 74. 7E
Tadzhik S. S. R.
H = 17 53 35. 9
h = 48 km
Resolute
eP 18 04 28

FEBRUARY 28

Resolute
eP 02 14 57?

MARCH 1

U. S. C. G. S.
18. 7S, 177. 9W
Fiji Islands region
H = 06 41 43. 5
h = 513 km
Penticton
eP 06 53 32

FEBRUARY 27

H = 18 50 21
Mag 2. 6
Alberni
eP 18 50 51. 5
D = 207 km
Victoria
eP₁ 18 50 34. 6
eS₁ 18 50 45. 3
D = 88 km

FEBRUARY 28

U. S. C. G. S.
46. 5N, 152. 2E
Kurile Islands
H = 12 33 32. 1
h = 29 km
Penticton
eP 12 43 09
Resolute
iP 12 42 35
Shawinigan Falls
eP 12 45 37

MARCH 1

Resolute
eP 13 03 37

FEBRUARY 27

Resolute
eP? 19 46 41

FEBRUARY 28

U. S. C. G. S.
24. 1S, 66. 6W
Argentina
H = 21 18 11. 3
h = 30 km
Penticton
eP 21 30 57

MARCH 1

Resolute
eP 15 06 00

FEBRUARY 27

Halifax
iP 21 50 46 c
Resolute
eP 21 50 31?

MARCH 1

Resolute
eP 16 13 25?

FEBRUARY 27

U. S. C. G. S.
36. 2N, 26. 9E
Aegean Sea
H = 21 54 30. 6
h = 32 km
Resolute
eP 22 04 57?

FEBRUARY 28

Resolute
iP 23 45 25

MARCH 1

U. S. C. G. S.
13. 7N, 146. 2E
Mariana Islands
H = 19 26 13. 5
h = 73 km
Resolute
eP 19 38 40?

MARCH 1

U. S. C. G. S.
13. 2N, 143. 2E
Mariana Islands region
H = 00 23 42. 5
h = 221 km
Resolute
eP 00 35 59

FEBRUARY 28

Resolute
eP 00 13 44

DOMINION OBSERVATORIES

MARCH 1

U. S. C. G. S.
2. 8S, 105. 7W
West of Galapagos
Islands
H = 23 42 43. 8
Penticton
eP 23 51 59
Resolute
eP 23 54 32?
Shawinigan Falls
eP 23 52 27

MARCH 2

U. S. C. G. S.
4. 7S, 106. 3W
West of Galapagos
Islands
H = 15 18 54. 3
h = 25 km
Penticton
eP 15 28 29
Resolute
eP 15 31 04
Shawinigan Falls
eP 15 28 57

MARCH 4

U. S. C. G. S.
51. 8N, 179. 3E
Rat Islands
H = 07 41 37. 3
h = 49 km
Resolute
eP 07 49 11?

MARCH 2

U. S. C. G. S.
15. 7N, 92. 2W
Mexico-Guatemala
border
H = 00 04 12. 7
h = 98 km
Ottawa
eP 00 10 37
Penticton
eP 00 11 43 c
Resolute
eP 00 14 01
Shawinigan Falls
eP 00 10 56

MARCH 3

Resolute
eP 02 17 47

MARCH 4

Resolute
eP 08 04 19?

MARCH 3

U. S. C. G. S.
42. 3N, 143. 9E
Hokkaido Japan
H = 05 15 55. 8
Resolute
iP 05 25 40 c

MARCH 4

48°57'N, 125°26'W
Barkley Sound
H = 09 44 12
Mag 2. 7
Alberni
iP₁ 09 44 21. 7
iS₁ 09 44 28. 9
D = 59 km
Penticton
eP_n 09 45 11. 7
eS_n 09 45 53. 2
D = 431 km
Victoria
iP₁ 09 44 37. 6
iS₁ 09 44 56. 2
D = 157 km

MARCH 2

Resolute
iP 12 01 32
i 12 01 48

MARCH 3

U. S. C. G. S.
31. 8S, 178. 0W
Kermadec Islands
region
H = 08 17 30. 6
h = 63 km
Resolute
eP' 08 36 12 ?

MARCH 4

48°57'N, 125°30'W
Barkley sound aftershock
of previous earthquake
H = 09 50 50
Mag 2. 4
Alberni
eP₁ 09 51 00. 2
eS₁ 09 51 07. 8
D = 62 km

MARCH 2

Penticton
eP 13 54 00
Resolute
eP 13 56 32 d?

MARCH 3

U. S. C. G. S.
5. 7S, 147. 4E
Near coast of
New Guinea
H = 09 46 16. 7
h = 25 km
Penticton
eP 09 59 43

SEISMOLOGICAL BULLETIN - 1961

Victoria	MARCH 4	Penticton
eP ₁ 09 51 16.0	Resolute	iP 01 39 23 d
eS ₁ 09 51 35.8	eP 20 46 56	Resolute
D = 162 km		eP 01 40 31 ?
		Shawinigan Falls
	MARCH 4	eP' 01 45 12
MARCH 4	U.S.C.G.S.	Victoria
U.S.C.G.S.	12.6N, 88.0W	eP 01 39 12
Chile-Bolivia border	Near coast of	
H = 10 19 33.7	El Salvador	
h = 109 km	H = 21 09 09.9	MARCH 5
Ottawa	h = 85 km	Resolute
eP 10 30 42	Penticton	eP? 06 12 22
Penticton	eP 21 17 20	
eP 10 31 52	Resolute	
Shawinigan Falls	eP 21 19 27?	MARCH 5
eP 10 30 48	Shawinigan Falls	Resolute
Victoria	eP 21 16 08	eP 12 09 19
eP 10 31 59	Victoria	
	eP 21 17 32	
		MARCH 5
MARCH 4		U.S.C.G.S.
Resolute	MARCH 4	20.6S, 176.1W
eP 10 54 10	U.S.C.G.S.	Tonga Islands region
	37.8N, 141.6E	H = 21 25 55.6
	Near coast of	h = 58 km
MARCH 4	Honshu, Japan	Penticton
H = 18 04 51	H = 22 26 01.2	eP 21 38 33
Mag 3.4	h = 61 km	
Penticton	Ottawa	
eP _n 18 05 43.7	eP 22 39 01	MARCH 6
eS _n 18 06 30.1	Penticton	48°09'N, 80°02'W
D = 380 km	eP 22 36 53	Rockburst at Kirkland
	Resolute	Lake, Ontario
	iP 22 36 17 c?	H = 12 13 29
MARCH 4	Shawinigan Falls	Halifax
Resolute	eP 22 39 03	L _g 12 19 47.4
eP 19 02 50	Victoria	D = 1320 km
	eP 22 36 43	Montreal
		P _n 12 14 46
MARCH 4		i 12 14 59.5
U.S.C.G.S.	MARCH 5	S _n 12 15 43.8
51.8N, 167.3W	U.S.C.G.S.	L _g 12 16 05.5
Fox Islands	10.7S, 161.6E	D = 569 km
H = 18 59 58.2	Solomon Islands	Ottawa
h = 99 km	region	P _n 12 14 31.5
Resolute	H = 01 26 26.1	P ₁ 12 14 40.5
eP 19 06 55	h = 99 km	S _n 12 15 15
	Mag 6 1/4	S ₁ 12 15 31
	Ottawa	D = 451 km
	eP' 01 45 09	

DOMINION OBSERVATORIES

Resolute		MARCH 7	Shawinigan Falls
L _g	12 27 32	U. S. C. G. S.	eP' 10 29 24
D = 3000 km		28. 0N, 142. 8E	Victoria
Seven Falls		Bonin Islands	eP 10 23 36
P _n	12 15 01.2	region	
S _n	12 16 12.5	H = 04 16 44.1	
L _g	12 16 44.7	h = 123 km	
D = 700 km		Resolute	MARCH 7
Shawinigan Falls		eP 04 27 52	Resolute
P _n	12 14 46		eP 19 12 22
S _n	12 15 45		
L _g	12 16 08		
Weston		MARCH 7	MARCH 7
P	12 15 31	Resolute	U. S. C. G. S.
S	12 17 44	eP 05 55 45?	38. 2S, 78. 1E
D = 934 km			Indian Ocean
			H = 19 08 36.1
			h = 30 km
			Resolute
MARCH 6		MARCH 7	eP' 19 27 44 ?
Resolute		Resolute	
eP 12 24 43 ?		eP 08 27 12 ?	
		MARCH 7	MARCH 7
		Resolute	U. S. C. G. S.
MARCH 6		eP 08 31 28?	4. 7S, 153. 2E
Resolute			New Britain region
eP? 13 27 03			H = 23 11 59. 6
			h = 90 km
		MARCH 7	Resolute
		U. S. C. G. S.	eP? 23 25 39
		28. 2S, 175. 7W	i ? 23 25 42
		Kermadec Islands	
		region	
		H = 10 10 38.9	
		h = 43 km	
		Mag 7 1/4	MARCH 8
		Alberni	U. S. C. G. S.
		eP 10 22 58	52. 2N, 165. 2W
		Halifax	Fox Islands
		eP' 10 29 37	H = 00 17 58. 4
		Ottawa	h = 63 km
		eP' 10 29 19	Ottawa
		i 10 39 51	eP 00 27 29
		Penticton	Resolute
		iP 10 23 47 d	eP 00 24 50
		Resolute	Shawinigan Falls
		eP 10 25 32?	eP 00 27 34
		eP' 10 29 15?	
		i 10 30 15	
		i 10 38 10	
		e 10 40 01	
		i 10 46 20	
MARCH 7			
U. S. C. G. S.			
28. 8N, 139. 1E			
West of Bonin Islands			
H = 02 47 25. 8			
h = 25 km			
Penticton			
eP 02 59 09			
Resolute			
eP 02 58 42			

SEISMOLOGICAL BULLETIN - 1961

MARCH 8
 U.S.C.G.S.
 4.0S, 141.8E
 New Guinea
 H = 03 27 16.2
 h = 217 km
 Resolute
 eP 03 40 51?

MARCH 9
 U.S.C.G.S.
 10.9N, 41.7W
 Atlantic Ocean
 H = 03 59 08.7
 h = 27 km
 Halifax
 eP 04 06 33
 Ottawa
 eP 04 07 26
 Penticton
 eP 04 10 45
 Resolute
 eP 04 10 24
 i 04 10 33
 eS? 04 19 39
 Shawinigan Falls
 eP 04 07 20

MARCH 9
 Resolute
 eP 21 14 31

MARCH 9
 Resolute
 eP 21 59 59

MARCH 8
 U.S.C.G.S.
 2.2N, 128.3E
 Halmahera
 H = 19 45 43.0
 h = 370 km
 Resolute
 eP 19 58 45

MARCH 10
 H = 00 35 06
 Mag 2.4
 Penticton
 iP₁ 00 35 29.6
 iS₁ 00 35 47.7
 D = 148 km

MARCH 8
 U.S.C.G.S.
 32.5N, 141.7E
 Off coast of
 Honshu, Japan
 H = 23 01 55.9
 h = 37 km
 Resolute
 eP 23 12 45

MARCH 9
 Resolute
 eP 08 26 35

MARCH 10
 U.S.C.G.S.
 51.9S, 161.6E
 Macquarie Island
 region
 H = 03 00 43.3
 h = 25 km
 Resolute
 eP' 03 20 11?
 Shawinigan Falls
 eP' 03 20 25

MARCH 9
 Resolute
 eP 09 22 46

MARCH 8
 H = 23 16 54
 Mag 2.3
 Alberni
 iP₁ 23 17 01.5
 iS₁ 23 17 07.5
 D = 49 km
 Victoria
 eP 23 17 45

MARCH 9
 Alberni
 eP 09 55 17
 Penticton
 iP 09 55 33 d
 Victoria
 eP 09 55 04

MARCH 10
 Resolute
 eP 03 45 24

MARCH 9
 U.S.C.G.S.
 66.0N, 156.6W
 Central Alaska
 H = 12 51 02.1
 h = 85 km
 Penticton
 eP 12 56 25
 Resolute
 eP 12 55 46

MARCH 10
 H = 07 13 33
 Mag 2.1
 Penticton
 eP_n 07 14 12.4
 eS_n 07 14 44.9
 D = 266 km
 Victoria
 eP_n 07 13 52.1
 eS_n 07 14 15.1
 D = 188 km

DOMINION OBSERVATORIES

MARCH 10
Resolute
eP 10 00 53

MARCH 10
Resolute
eP 15 17 58?

MARCH 10
U. S. C. G
23. 5S, 65. 4W
Argentina
H = 15 31 37. 2
h = 118 km
Penticton
eP 15 44 15

MARCH 10
H = 21 35 55
Mag 2. 0
Penticton
iP₁ 21 36 19. 4
iS₁ 21 36 37. 9
D = 152 km

MARCH 10
U. S. C. G. S.
10. 1N, 83. 6W
Near coast of
Costa Rica
H = 23 12 20. 4
h = 56 km
Ottawa
iP 23 19 17 d
Penticton
eP 23 21 09 d
Resolute
eP 23 22 55 c?
Shawinigan Falls
eP 23 19 33

MARCH 10
Resolute
eP 23 29 25

MARCH 10
U. S. C. G. S.
10. 1S, 161. 4E
Solomon Islands
region
H = 23 36 08. 8
h = 139 km
Penticton
eP 23 49 00 c
Resolute
eP 23 49 56?
e 23 53 52?

MARCH 11
U. S. C. G. S.
52. 9N, 167. 3W
Fox Islands
H = 01 27 02. 3
h = 98 km
Resolute
eP 01 33 50

MARCH 11
U. S. C. G. S.
48. 7N, 154. 6E
Kurile Islands
H = 01 31 34. 4
h = 26 km
Mag 6 1/2
Halifax
eP 01 43 49. 5
Ottawa
eP 01 43 23
Resolute
eP 01 40 52 c
Resolute
iP 01 40 19
PP 01 42 12
eS 01 47 17
Shawinigan Falls
eP 01 43 25
Victoria
eP 01 40 40

MARCH 11
U. S. C. G. S.
16. 3S, 173. 0W
Tonga Islands region
H = 02 25 17. 0
h = 25 km
Penticton
eP 02 37 33

MARCH 11
H = 06 26 13
Mag 2. 1
Penticton
iP_n 06 26 43. 6
iS_n 06 27 07. 6
D = 196 km

MARCH 11
U. S. C. G. S.
52. 8N, 168. 6W
Fox Islands
H = 07 18 44. 9
h = 40 km
Resolute
eP 07 25 43

MARCH 11
U. S. C. G. S.
11. 2N, 43. 3E
Near coast of
British Somaliland
H = 08 41 00. 0
h = 18 km
Resolute
eP 08 54 06 d?
eS 09 05 04
PS 09 06 09?
SS 09 11 00?

MARCH 11
Resolute
eP? 10 07 28

SEISMOLOGICAL BULLETIN - 1961

MARCH 11
 48.8°N, 122.4°W
 East of Bellingham
 Washington, U.S.A.
 H = 17 06 10
 Mag 2.2
 Alberni
 $S_1 - P_1 = 22.7$ secs.
 D = 186 km
 Penticton
 eP_n 17 06 42.7
 eS_n 17 07 04.0
 D = 224 km
 Victoria
 eP₁ 17 06 24.5
 eS₁ 17 06 36.5
 D = 98 km

MARCH 11
 Resolute
 eP? 22 18 10

MARCH 12
 U.S.C.G.S.
 17.4N, 107.3W
 Off coast of Mexico
 H = 02 49 33.4
 h = 57 km
 Mag 5 1/4
 Resolute
 eP 02 59 23
 i 02 59 25

MARCH 12
 Resolute
 eP 03 11 39
 i 03 11 51

MARCH 12
 Resolute
 eP 10 49 18

MARCH 12
 U.S.C.G.S.
 19.2N, 107.1W
 Off coast of
 Mexico
 H = 12 09 10.7
 h = 64 km
 Resolute
 eP 12 18 42?

MARCH 12
 Resolute
 eP 14 42 04

MARCH 12
 U.S.C.G.S.
 43.8N, 129.1W
 Off coast of Oregon
 H = 14 59 16.8
 h = 19 km
 Resolute
 eP 15 06 12?

MARCH 12
 U.S.C.G.S.
 28.4S, 176.0W
 Tonga Islands region
 H = 23 21 42.5
 h = 113 km
 Mag 6 1/4
 Penticton
 eP 23 34 45 d
 Resolute
 eP' 23 40 14

MARCH 13
 U.S.C.G.S.
 5.2S, 153.3E
 New Britain
 H = 04 51 13.9
 h = 25 km
 Resolute
 eP 05 05 00?

MARCH 13
 Resolute
 eP? 07 43 36?

MARCH 13
 U.S.C.G.S.
 19.2N, 107.3W
 Off coast of Mexico
 H = 08 03 43.9
 h = 49 km
 Mag 6 1/4
 Penticton
 eP 08 10 05
 Resolute
 eP 08 13 17 c?
 eS 08 21 07
 S_cS? 08 23 04?
 SS? 08 25 02
 Shawinigan Falls
 eP 08 11 09

MARCH 13
 Provisional Epicentre
 45°08'N, 75°23'W
 Near Ormond, Ont.
 H = 10 55 45
 Montreal
 P 10 56 06.0
 i 10 56 09.0
 i 10 56 12.6
 i 10 56 21.4
 i 10 56 27.5
 D = approx. 144 km
 Ottawa
 P 10 55 51.2
 10 55 56.2 (?)
 D = approx. 41 km
 Shawinigan Falls
 P 10 56 24.1
 i 10 56 51.1
 i 10 56 52.9
 D = approx. 260 km

DOMINION OBSERVATORIES

MARCH 13
Resolute
eP 14 38 28

MARCH 13
U. S. C. G. S.
34. 4N, 26. 5E
Crete
H = 19 17 16.1
h = 25 km
Ottawa
P 19 28 52
Resolute
eP 19 27 51
Shawinigan Falls
eP 19 28 37

MARCH 13
Resolute
eP 19 43 14?

MARCH 13
U. S. C. G. S.
56. 2S, 27. 2W
Sandwich Islands
H = 20 35 15.4
h = 56 km
Resolute
eP' 20 54 31
e 20 57 59
Victoria
e 20 57 37

MARCH 14
U. S. C. G. S.
42. 9N, 140. 2E
Off coast of
Hokkaido, Japan
H = 01 05 06.2
h = 147 km
Penticton
eP 01 15 31
Resolute
eP 01 14 37 c?
Shawinigan Falls
eP 01 17 35

Victoria
eP 01 15 21

MARCH 14
U. S. C. G. S.
18. 8S, 172. 6W
Tonga Islands region
H = 04 18 06.5
h = 25 km
Penticton
eP 04 30 29

MARCH 14
Resolute
eP 07 05 07?

MARCH 14
Resolute
eP 07 38 26?

MARCH 14
U. S. C. G. S.
67. 8N, 164. 9W
Bering Strait
H = 11 58 53.9
h = 78 km
Resolute
eP 12 03 44

MARCH 14
Resolute
eP 12 07 51 ?

MARCH 14
H = 15 02 17
Mag 2. 3
Penticton
eP_n 15 02 55.4
eS_n 15 03 26.8
D = 256 km

MARCH 14
H = 19 48 13
Mag 2. 4
Penticton
eP_n 19 48 49.8
eS_n 19 49 19.8
D = 246 km

MARCH 14
48. 8°N, 122. 4°W
Near Bellingham,
Washington, U. S. A.
H = 23 22 45
Mag 1. 9
Penticton
eP_n 23 23 20.6
eS_n 23 23 44.4
D = 195 km

Victoria
eP₁ 23 22 58.0
D = 75 km

MARCH 15
H = 07 24 25
Mag 2. 6
Penticton
eP_n 07 25 08.1
eS_n 07 25 44.5
D = 298 km

MARCH 15
Resolute
eP 08 04 28?

MARCH 15
Resolute
eP? 10 27 05?

SEISMOLOGICAL BULLETIN - 1961

MARCH 15
 U.S.C.G.S.
 3.3S, 150.7E
 New Ireland region
 H = 10 14 55.5
 h = 21 km
 Mag 6
 Resolute
 eP 10 28 39?
 PP? 10 32 44
 eS? 10 40 10?
 SS? 10 47 05?
 Victoria
 eP 10 28 01

MARCH 15
 Resolute
 eP 23 31 34

Shawinigan Falls
 eP' 14 04 52

MARCH 16
 U.S.C.G.S.
 51.7N, 176.1E
 Rat Islands
 H = 04 58 00.4
 h = 39 km
 Resolute
 eP 05 05 41 c?
 Shawinigan Falls
 eP 05 08 43

MARCH 16
 U.S.C.G.S.
 49.6N, 154.3E
 Kurile Islands
 H = 15 26 56.2
 h = 42 km
 Ottawa
 P 15 38 41
 Resolute
 eP 15 35 34
 Shawinigan Falls
 eP 15 38 42

MARCH 15
 U.S.C.G.S.
 4.4S, 152.5E
 New Britain
 H = 13 01 02.2
 h = 99 km
 Penticton
 eP 13 14 03
 Resolute
 eP 13 14 40
 e 13 18 40?
 Shawinigan Falls
 eP' 13 19 50
 Victoria
 eP 13 13 52

MARCH 16
 Resolute
 eP 09 30 31

MARCH 16
 Resolute
 eP 17 08 32

MARCH 16
 U.S.C.G.S.
 6.4S, 130.7E
 Banda Sea
 H = 11 19 43.5
 h = 77 km
 Resolute
 eP 11 33 55?
 e 11 45 47

MARCH 16
 Resolute
 eP 17 59 00?

MARCH 16
 U.S.C.G.S.
 8.1S, 122.0E
 Flores Island
 H = 18 21 12.2
 h = 43 km
 Resolute
 eP' 18 39 47?
 Shawinigan Falls
 eP' 18 40 37

MARCH 15
 U.S.C.G.S.
 27.5N, 142.9E
 Bonin Islands
 H = 16 17 16.8
 h = 100 km
 Resolute
 eP 16 28 29?

MARCH 16
 Resolute
 eP 12 56 01?

MARCH 15
 Resolute
 eP 16 45 55?

MARCH 16
 U.S.C.G.S.
 8.2S, 122.0E
 Flores Island
 H = 13 45 35.6
 h = 74 km
 Mag 6 1/4
 Halifax
 iP' 14 05 02 c
 Resolute
 eP 14 00 05?
 e 14 04 04?
 i 14 14 08
 e 14 15 14?

MARCH 16
 H = 19 51 07
 Mag 1.3
 Penticton
 eP₁ 19 51 17.3
 eS₁ 19 51 25.2
 D = 64 km

DOMINION OBSERVATORIES

MARCH 16
Penticton
eP 20 19 37

MARCH 16
Resolute
eP 22 39 02?

MARCH 16
Penticton
eP 23 27 04

MARCH 16
U. S. C. G. S.
10. 5S, 74. 9W
Central Peru
H = 23 31 27. 2
h = 201 km
Resolute
eP 23 43 49 d?
Shawinigan Falls
eP 23 40 45

MARCH 16
Penticton
eP 23 43 48

MARCH 17
Penticton
eP 03 52 41

MARCH 17
H = 11 22 28
Mag 1. 7
Victoria
iP₁ 11 22 41. 7
iS₁ 11 22 52. 2
D = 86 km

MARCH 17
H = 11 23 54
Mag 1. 8
Penticton
eP_n 11 24 27. 1
eS_n 11 24 53. 6
D = 217 km
Penticton
eP 14 21 02
Resolute
eP? 14 23 14?

MARCH 17
Resolute
eP? 14 29 12?

MARCH 17
Resolute
eP 16 06 47

MARCH 17
Penticton
eP 16 16 17

MARCH 17
U. S. C. G. S.
24. 3S, 175. 6W
Tonga Islands region
H = 20 10 36. 4
h = 79 km
Mag 6
Penticton
e 20 23 26
Resolute
eP' 20 29 07

MARCH 17
Penticton
eP 22 33 46

MARCH 17
Penticton
eP 22 36 38

MARCH 17
U. S. C. G. S.
34. 1N, 141. 0E
Off coast of
Honshu, Japan
H = 22 40 21. 5
h = 120 km
Resolute
iP 22 50 56d?

MARCH 18
Penticton
eP 02 04 34
Resolute
iP 02 05 31 d?

MARCH 18
U. S. C. G. S.
8. 2S, 122. 0E
Flores Island
H = 02 08 38. 5
h = 35 km
Resolute
eP' 02 27 08?

MARCH 18
U. S. C. G. S.
24. 3S, 174. 2W
Tonga Islands region
H = 08 26 49. 0
h = 25 km
Penticton
eP 08 39 39

MARCH 18
U. S. C. G. S.
20. 6S, 175. 5W
Tonga Islands region
H = 09 29 23. 5
h = 667 km
Resolute
eP' 09 47 01

SEISMOLOGICAL BULLETIN - 1961

MARCH 18
 U. S. C. G. S.
 29. 5N, 138. 6E
 Bonin Islands region
 H = 10 16 48. 5
 h = 500 km
 Resolute
 iP 10 27 16 c

MARCH 18
 H = 11 18 50
 Mag 1. 9
 Penticton
 eP₁ 11 19 18. 4
 eS₁ 11 19 39. 8
 D = 175 km

MARCH 18
 Victoria
 eP 11 27 35
 Penticton
 eP 11 37 34

MARCH 18
 U. S. C. G. S.
 49. 9S, 163. 3E
 South of New Zealand
 H = 14 54 59. 3
 h = 38 km
 Mag 6 3 / 4
 Halifax
 eP' 15 14 45 d
 Ottawa
 P' 15 14 25
 Penticton
 eP' 15 13 49
 Resolute
 eP' 15 14 18
 Shawinigan Falls
 eP' 15 14 29
 Victoria
 eP' 15 13 53

MARCH 18
 U. S. C. G. S.
 7. 6N, 126. 9E
 Off coast of
 Mindanao,
 Philippine Islands
 H = 17 39 34. 3
 h = 63 km
 Resolute
 eP 17 52 50

MARCH 18
 U. S. C. G. S.
 25. 4N, 122. 6E
 Off coast of Formosa
 H = 20 06 57. 3
 h = 25 km
 Resolute
 iP 20 18 53 c?

MARCH 19
 U. S. C. G. S.
 40. 5N, 142. 9E
 North of Honshu
 Japan
 H = 04 51 52. 2
 h = 14 km
 Penticton
 eP 05 02 31
 Resolute
 iP 05 01 52 c?

MARCH 19
 U. S. C. G. S.
 6. 4S, 105. 5E
 Soenda Strait
 H = 04 59 19. 3
 h = 120 km
 Penticton
 eP' 05 18 06
 Resolute
 eP' 05 17 42
 Shawinigan Falls
 eP' 05 18 36
 Victoria
 eP' 05 18 04

MARCH 19
 U. S. C. G. S.
 16. 0S, 168. 2E
 New Hebrides Islands
 H = 07 14 57. 4
 h = 90 km
 Ottawa
 P' 07 33 50
 Penticton
 eP 07 27 21
 Resolute
 eP' 07 33 27?
 Shawinigan Falls
 eP' 07 33 55

MARCH 19
 U. S. C. G. S.
 2. 3N, 127. 4E
 Molucca Passage
 H = 07 51 35. 0
 h = 83 km
 Resolute
 eP 08 05 10 c
 i 08 05 27
 Shawinigan Falls
 eP' 08 10 36

MARCH 19
 U. S. C. G. S.
 37. 2N, 140. 7E
 Honshu Japan
 H = 09 18 53. 4
 h = 115 km
 Resolute
 iP 09 29 10 c

MARCH 19
 U. S. C. G. S.
 16. 4S, 167. 3E
 New Hebrides Islands
 H = 12 05 47. 7
 h = 16 km
 Resolute
 eP' 12 24 16?
 Shawinigan Falls
 eP' 12 24 47

DOMINION OBSERVATORIES

MARCH 19		MARCH 20	
Penticton		U. S. C. G. S.	Penticton
eP 14 30 04		11. 5N, 86. 3W	iP 11 48 21 c
Resolute		Off coast of	Resolute
eP 14 32 22?		Nicaragua	iP 11 47 27 c
Victoria		H = 06 16 23. 9	Shawinigan Falls
eP 14 30 15		h = 122 km	eP 11 50 26 c
		Mag 6	Victoria
		Alberni	eP 11 48 10
		eP 06 25 08	
MARCH 19		Halifax	MARCH 20
Resolute		eP 06 23 41. 4	U. S. C. G. S.
eP? 19 01 16		Ottawa	35. 5N, 77. 9E
		eP 06 23 10(c)	Northern India
MARCH 19		iP 06 23 10. 3 d	H = 14 00 29. 5
Resolute		Penticton	h = 74 km
eP 19 18 40?		iP 06 24 45 c	Resolute
		Resolute	eP 14 11 36
		eP 06 26 44 c	
		Shawinigan Falls	
MARCH 19		eP 06 23 26 c	MARCH 20
Penticton		Victoria	U. S. C. G. S.
eP 21 46 49		eP 06 24 57	18. 4S, 175. 2W
			Tonga Islands
			H = 15 53 09. 9
MARCH 20			h = 175 km
Resolute		MARCH 20	Mag 6 1/2
eP 01 34 57 c?		Resolute	Alberni
		eP 09 20 36?	eP 16 05 11
			Halifax
			eP' 16 11 41. 5
MARCH 20		MARCH 20	Ottawa
U. S. C. G. S.		U. S. C. G. S.	i 16 08 13
21. 6N, 145. 8E		16. 4N, 121. 5E	P' 16 11 24
Mariana Islands		Philippine Islands	Penticton
H = 02 17 34. 5		H = 11 27 05. 4	iP 16 05 22
h = 101 km		h = 30 km	Resolute
Resolute		Resolute	eP 16 07 02
iP 02 29 08		eP 11 39 45	i 16 07 04
			e 16 11 17
			i 16 17 26
MARCH 20		MARCH 20	i 16 18 41
U. S. C. G. S.		U. S. C. G. S.	i 16 20 08
36. 6N, 71. 1E		46. 3N, 142. 7E	e 16 22 45
Hindu Kush		Sakhalin Island	Shawinigan Falls
H = 03 30 27. 4		H = 11 38 39. 3	eP' 16 11 30 c
h = 121 km		h = 354 km	e 16 22 25
Penticton		Alberni	i 16 22 37
eP 03 43 38		eP 11 48 02	Victoria
Resolute		Ottawa	eP 16 05 08
iP 03 41 22 c?		iP 11 50 26 c	
Shawinigan Falls			
eP 03 43 26			

SEISMOLOGICAL BULLETIN - 1961

- MARCH 20
Resolute
eP? 21 30 51?
- MARCH 21
Resolute
eP 11 14 18?
- MARCH 22
Penticton
eP 14 25 57
- MARCH 20
U. S. C. G. S.
24. 2S, 175. 9W
Tonga Islands region
H = 23 42 33. 9
h = 25 km
Penticton
eP 23 55 28
Resolute
eP' 24 01 05?
eS? 24 09 31
e 24 12 20?
i 24 17 18
i 24 21 20
- MARCH 21
Resolute
eP 11 21 42
- MARCH 21
Resolute
eP? 16 34 27
- MARCH 21
Resolute
eP? 20 00 00?
- MARCH 21
Resolute
eP? 20 12 14
- MARCH 21
Resolute
eP? 03 01 08?
- MARCH 21
H = 05 49 32
Mag 3. 1
Penticton
eP_n 05 50 31. 0
eS_n 05 51 23. 2
D = 427 km
- MARCH 21
Penticton
eP 06 18 53
- MARCH 21
U. S. C. G. S.
21. 8S, 179. 9W
South of Fiji Islands
H = 09 22 31. 7
h = 599 km
Penticton
eP 09 34 27
Resolute
eP' 09 39 40
- MARCH 21
Resolute
eP 11 21 42
- MARCH 21
Resolute
eP? 16 34 27
- MARCH 21
Resolute
eP? 20 00 00?
- MARCH 21
Resolute
eP? 20 12 14
- MARCH 22
Penticton
eP 06 44 58
- MARCH 22
45°50'N, 77°05'W
Near Pembroke, Ont.
H = 12 02 56. 0
Mag 2. 2
Ottawa
P₁ 12 03 14. 6
S₁ 12 03 28. 8
D = 116. 5 km
- MARCH 22
Resolute
eP 12 19 47
- MARCH 22
Resolute
eP 12 46 22
- MARCH 22
U. S. C. G. S.
11. 8N, 86. 8W
Near coast of
Nicaragua
H = 14 19 46. 5
h = 172 km
Resolute
eP 14 29 57
i 14 30 18
Shawinigan Falls
eP 14 26 39
- MARCH 22
Resolute
eP 18 00 11
- MARCH 22
U. S. C. G. S.
24. 6S, 179. 3E
South of Fiji Islands
H = 21 28 41. 6
h = 517 km
Resolute
eP' 21 46 20
- MARCH 23
U. S. C. G. S.
43. 5N, 12. 9E
Near coast of Italy
H = 01 02 01. 6
h = 116 km
Resolute
eP? 01 11 09

DOMINION OBSERVATORIES

MARCH 23	Shawinigan Falls	Shawinigan Falls
U. S. C. G. S.	eP 02 22 32	eP 23 10 21
1. 0S, 120. 2E	i 02 23 05	Victoria
Celebes		eP 23 08 06
H = 01 47 27. 6		
h = 10 km		
Shawinigan Falls	MARCH 24	MARCH 24
eP' 02 06 49	Canadian Arctic	U. S. C. G. S.
	H = 06 04 28. 3	2. 6S, 141. 9E
	Mag 2. 5	Near coast of
	Resolute	New Guinea
MARCH 23	iP ₁ 06 04 37. 5d	H = 23 37 17. 1
Resolute	iS ₁ 06 04 44. 5	h = 118 km
eP? 02 29 36	D = 57. 5 km	Resolute
		eP 23 50 56
MARCH 23	MARCH 24	MARCH 25
U. S. C. G. S.	Resolute	Resolute
6. 5S, 154. 7E	eP? 08 11 36?	eP 01 13 27
Solomon Islands		
H = 20 56 32. 1	MARCH 24	MARCH 25
h = 143 km	U. S. C. G. S.	U. S. C. G. S.
Shawinigan Falls	9. 8N, 128. 4E	2. 1S, 79. 4W
eP' 21 15 18	Off coast of	Ecuador
	Mindanao,	H = 02 09 59. 9
	Philippine Islands	h = 25 km
	H = 19 10 40. 6	Penticton
	h = 236 km	eP 02 20 22
	Resolute	Resolute
	eP 19 23 41 c	eP 02 21 53
MARCH 23		Victoria
H = 23 54 46		eP 02 20 30
Mag 2. 1	MARCH 24	
Alberni	Resolute	MARCH 25
iP ₁ 23 54 54. 9	eP 22 03 44	Resolute
iS ₁ 23 55 01. 6		eP 06 05 33
D = 55 km		
MARCH 24		MARCH 25
H = 00 13 27		Resolute
Mag 1. 9		eP 11 51 34
Penticton		
eP ₁ 00 13 50. 9	MARCH 24	
eS ₁ 00 14 09. 1	U. S. C. G. S.	
D = 149 km	35. 3N, 140. 9E	
	Near coast of	
	Honshu, Japan	
	H = 22 57 14. 2	
	h = 102 km	
MARCH 24	Ottawa	
U. S. C. G. S.	P 23 10 20	
8. 5S, 74. 7W	Penticton	
Peru	eP 23 08 15	
H = 02 13 14. 1	Resolute	
h = 175 km	iP 23 07 41 c	
Resolute	eS? 23 16 13?	
eP 02 25 29		
i 02 25 41		

SEISMOLOGICAL BULLETIN - 1961

- MARCH 25
 H = 12 25 59
 Mag 3.0
 Penticton
 eP_n 12 26 52.3
 eS_n 12 27 39.3
 D = 385 km
- MARCH 25
 Resolute
 eP 13 26 57
- MARCH 25
 U. S. C. G. S.
 17.5S, 179.0W
 Fiji Islands
 H = 14 15 38.1
 h = 688 km
 Penticton
 eP 14 27 08
- MARCH 25
 U. S. C. G. S.
 16.6N, 120.3E
 Near coast of
 Luzon,
 Philippine Islands
 H = 16 09 40.4
 h = 21 km
 Resolute
 eP 16 22 21
- MARCH 25
 Resolute
 eP? 20 03 10?
- MARCH 25
 U. S. C. G. S.
 37.1S, 51.6E
 Indian Ocean
 H = 20 58 41.9
 h = 137 km
 Resolute
 eP 21 18 01
- MARCH 26
 Resolute
 eP 00 56 17
- MARCH 26
 U. S. C. G. S.
 16.2N, 121.2E
 Philippine Islands
 H = 01 21 58.3
 h = 70 km
 Resolute
 iP 01 34 35
- MARCH 26
 Resolute
 eP? 06 12 10?
- MARCH 26
 U. S. C. G. S.
 5.7N, 126.4E
 Philippine Islands
 H = 14 29 23.8
 h = 147 km
 Resolute
 iP 14 42 39
- MARCH 26
 U. S. C. G. S.
 55.5N, 163.7W
 Bristol Bay
 H = 20 10 46.6
 h = 218 km
 Ottawa
 eP 20 19 46 d
 Resolute
 iP 20 16 56 d
 e 20 19 40
 Shawinigan Falls
 eP 20 19 51
- MARCH 26
 U. S. C. G. S.
 30.6N, 84.4E
 Southern Tibet
 H = 23 11 38.9
 h = 24 km
 Resolute
 eP 23 23 20 d?
- MARCH 27
 Resolute
 eP 16 30 58
- MARCH 27
 U. S. C. G. S.
 30.7S, 179.3E
 Kermadec Islands
 H = 16 29 52.9
 h = 514 km
 Resolute
 eP' 16 47 42
- MARCH 27
 Resolute
 eP 19 52 40?
- MARCH 27
 H = 20 57 52
 Mag 1.8
 Penticton
 eP₁ 20 58 15.9
 eS₁ 20 58 33.9
 D = 148 km
- MARCH 27
 U. S. C. G. S.
 8.8N, 104.2W
 Pacific Ocean
 H = 20 52 39.3
 h = 26 km
 Resolute
 eP 21 03 28

DOMINION OBSERVATORIES

MARCH 27	Victoria	MARCH 28
Ottawa	eP 09 49 58	Resolute
P 21 05 29		eP 14 34 35
Resolute	MARCH 28	MARCH 28
eP 21 07 53	Resolute	U. S. C. G. S.
Shawinigan Falls	eP? 12 06 22	22. 0S, 68. 0W
eP 21 05 47		Chile-Bolivia border
		H = 21 01 56. 2
MARCH 27	MARCH 28	h = 125 km
Resolute	U. S. C. G. S.	Mag 6
eP 22 30 21	51. 7N, 176. 2W	Alberni
	Andreanof Islands	eP 21 14 35
MARCH 28	H = 12 29 12. 7	Halifax
U. S. C. G. S.	h = 60 km	eP 21 12 41 d
52. 8N, 167. 7W	Alberni	Ottawa
Fox Islands	eP 12 35 40	iP 21 12 46
H = 05 59 50. 5	Halifax	Penticton
h = 49 km	eP 12 40 06 c	eP 21 13 46 d
Resolute	Ottawa	Resolute
iP 06 06 46 c?	P 12 39 25	eP 21 15 24
e 06 09 14	Penticton	i? 21 15 56
Shawinigan Falls	iP 12 36 06 c	eS 21 26 43?
eP 06 09 37	Resolute	e 21 31 57
	iP 12 36 34 c	Shawinigan Falls
	Shawinigan Falls	eP 21 12 52
	eP 12 39 29	Victoria
MARCH 28	Victoria	eP 21 14 28
U. S. C. G. S.	eP 12 35 49	
0. 2N, 123. 6E		
Northern Celebes	MARCH 28	MARCH 29
H = 09 35 55. 4	U. S. C. G. S.	U. S. C. G. S.
h = 83 km	52. 0N, 176. 3W	33. 5N, 140. 9E
Alberni	Andreanof Islands	Near coast of
eP 09 49 54	H = 13 59 03. 7	Honshu, Japan
Halifax	h = 89 km	H = 06 43 43. 3
eP' 09 54 57	Penticton	h = 116 km
Ottawa	eP 14 05 54	Resolute
P' 09 54 48	Resolute	iP 06 54 21
iP* 09 55 03 d	eP 14 06 22	
i 09 58 16 c	e 14 08 32	
Penticton	e 14 12 15	
eP 09 49 07 c	Shawinigan Falls	
Resolute	eP 14 09 18	
iP 09 49 43 c	Victoria	
PP? 09 53 56?	eP 14 05 38	
eS? 10 00 56?		
i 10 03 02		
Shawinigan Falls		
eP' 09 54 50		

SEISMOLOGICAL BULLETIN - 1961

MARCH 29

Resolute
eP? 17 24 50

MARCH 29

U.S.C.G.S.
37.1N, 141.3E
Near coast of
Honshu, Japan
H = 18 10 24.4
h = 127 km
Resolute
eP 18 20 39 c?
e 18 40 16

MARCH 29

48.2°N, 124.1°W
Olympic Mountain
Washington, U.S.A.
H = 21 30 01
Mag 2.6
Alberni
eP₁ 21 30 22.6
eS₁ 21 30 39.0
D = 134 km
Victoria
eP₁ 21 30 11.1
eS₁ 21 30 19.3
D = 67 km

MARCH 30

U.S.C.G.S.
0.3N, 123.9E
Northern Celebes
H = 01 22 19.1
h = 159 km
Resolute
eP 01 35 59

MARCH 30

U.S.C.G.S.
22.0N, 107.8W
Gulf of California
H = 07 42 59.4
h = 20 km
Mag 5 1/2
Ottawa
P 07 50 01
Resolute
eP 07 52 20 d
i 07 52 25
eS 07 59 43
SS 08 03 27?
Shawinigan Falls
eP 07 50 23

MARCH 30

U.S.C.G.S.
15.2S, 172.8W
Samoa Islands region
H = 08 49 45.6
h = 25 km
Mag 5 3/4
Resolute
eP 09 03 38
Victoria
eP 09 01 43

MARCH 30

U.S.C.G.S.
32.4N, 103.8E
Szechwan Province,
China
H = 12 00 12.8
h = 81 km
Resolute
eP 12 11 27?

MARCH 30

Resolute
iP 15 27 25 d?

MARCH 30

Resolute
eP 18 25 08 c?

MARCH 30

Resolute
eP? 20 11 00?

MARCH 31

Canadian Arctic
H = 00 57 57.2
Mag 1.6
Resolute
iP₁ 00 58 15.0
iS₁ 00 58 28.5
D = 111 km

MARCH 31

48.7°N, 124.8°W
Near Clo-ose Bay
H = 03 09 56
Mag 2.5
Alberni
eP₁ 03 10 06.2
eS₁ 03 10 14.1
D = 64 km
Victoria
eP₁ 03 10 12.8
eS₁ 03 10 26.2
D = 110 km

MARCH 31

Resolute
eP 04 26 33 d?

MARCH 31

U.S.C.G.S.
32.6N, 135.7E
South of Honshu,
Japan
H = 05 20 36.8
h = 300 km
Resolute
eP 05 31 17
Victoria
eP 05 31 35

DOMINION OBSERVATORIES

MARCH 31

Resolute

eP 06 36 50

MARCH 31

Resolute

eP 07 33 44 d?

MARCH 31

Resolute

eP 09 09 01

MARCH 31

U. S. C. G. S.

43. 5N, 101. 3E

Outer Mongolia

H = 11 02 34. 9

h = 79 km

Resolute

eP 11 12 44

MARCH 31

Resolute

eP 16 41 24 c

MARCH 31

Resolute

eP 21 09 02?

SEISMOLOGICAL BULLETIN - 1961

EARTHQUAKES IN THE CANADIAN ARCTIC

The following disturbances were recorded during the first quarter of 1961. The times of observed phases are given at their respective chronological positions in the text of this bulletin.

JANUARY 3 at 12 05 25 U. T. Magnitude 3.4. Originated 550 km from Resolute, N. W. T.

JANUARY 3 at 20 47 48 U. T. Magnitude 4.3. Originated 1250 km from Resolute, N. W. T.

JANUARY 3 at 23 30 45 U. T. Magnitude 2.7. Originated 210 km from Resolute, N. W. T., at a depth of about 4 km.

JANUARY 20 at 11 30 26 U. T. Magnitude 1.0. Originated 49 km from Resolute, N. W. T.

JANUARY 31 at 04 09 01 U. T. Magnitude 1.7. Originated 109 km from Resolute, N. W. T.

FEBRUARY 1 at 10 43 56 U. T. Magnitude 3.2. Originated 234 km from Resolute, N. W. T., at a depth of about 29 km.

MARCH 24 at 06 04 28 U. T. Magnitude 2.5. Originated 57.5 km from Resolute, N. W. T.

MARCH 31 at 00 57 57 U. T. Magnitude 1.6. Originated 111 km from Resolute, N. W. T.

DOMINION OBSERVATORIES

EARTHQUAKES IN EASTERN CANADA
AND ADJACENT AREAS

The following disturbances were recorded during the first quarter of 1961. The times of observed phases are given at their respective chronological positions in the text of this bulletin.

JANUARY 29 at 00 49 39 U. T. Magnitude 3.8. Epicentre 46°23'N; 66°56'W. Near Napadogan, N.B. Felt by very few persons as "a sudden jar and then a bump". Water pipes rattled. Direction estimated as "northeasterly".

MARCH 6 at 12 13 29 U. T. Rockburst at Kirkland Lake, Ont. (48°09'N; 80°02'W).

MARCH 13 at 10 55 45 U. T. A small shock provisionally located at 45°08'N; 75°23'W. Near Ormond, Ont. Felt for fifty kilometres around the centre, including the city of Ottawa, Ont.

MARCH 22 at 12 02 56 U. T. Magnitude 2.2. Epicentre 45°50'N; 77°05'W. Near Pembroke, Ont., where it was felt by a few people.

SEISMOLOGICAL BULLETIN - 1961

EARTHQUAKES IN WESTERN CANADA
AND ADJACENT AREAS

The following disturbances were recorded during the first quarter of 1961. The times of observed phases are given in their respective chronological position in the text of this bulletin. The quality (Q) of the epicentre is indicated by a letter from "a" meaning an excellent fit of the observed data to "d" meaning a very poor solution.

JANUARY 2 at 15 54 36 U. T. Magnitude 2.9. Epicentre at 46.2°N; 122.7°W. Near Longview, Washington, U.S.A. Q:b.

JANUARY 4 at 01 53 04 U. T. Magnitude 3.1. About 426 km from Penticton.

JANUARY 4 at 07 26 04 U. T. Magnitude 3.3. Epicentre at 50°55'N; 124°52'W. Head of Butte Inlet. Q:a.

JANUARY 4 at 10 00 57 U. T. Magnitude 1.8. Epicentre at 48.3°N; 121.6°W. South of Mount Baker, Washington, U.S.A. Q:c.

JANUARY 4 at 20 34 29 U. T. Magnitude 2.6. About 128 km from Penticton.

JANUARY 5 at 06 20 06 U. T. Magnitude 1.8. About 50 km from Victoria.

JANUARY 7 at 19 31 04 U. T. Magnitude 2.7. About 267 km from Penticton.

JANUARY 8 at 11 46 15 U. T. Magnitude 3.3. About 352 km from Penticton.

JANUARY 9 at 08 40 48 U. T. Magnitude 2.6. About 310 km from Penticton.

JANUARY 9 at 23 24 56 U. T. Magnitude 2.0. About 170 km from Penticton.

JANUARY 13 at 00 44 36 U. T. Magnitude 2.0. About 130 km from Penticton.

JANUARY 14 at 06 44 26 U. T. Magnitude 2.7. About 158 km from Alberni.

JANUARY 17 at 11 27 50 U. T. Magnitude 3 to 3 1/2. Epicentre at 51.8°N; 125.5°W. North west of Mount Waddington.

DOMINION OBSERVATORIES

JANUARY 17 at 15 31 39 U.T. Magnitude less than 2. About 32 km from Victoria.

JANUARY 18 at 09 14 25 U.T. Magnitude 2.7. About 125 km from Alberni.

JANUARY 20 at 21 40 27 U.T. Magnitude 2.0. About 146 km from Penticton.

JANUARY 21 at 09 01 34 U.T. Magnitude 2.1. About 182 km from Penticton.

JANUARY 24 at 11 54 50 U.T. Magnitude 1.6. About 82 km from Victoria.

JANUARY 24 at 17 13 00 U.T. Magnitude 2.0. About 269 km from Penticton.

JANUARY 25 at 08 45 12 U.T. Magnitude 2.2. About 293 km from Penticton.

JANUARY 25 at 15 43 36 U.T. Magnitude 1.3. About 134 km from Penticton.

JANUARY 26 at 04 21 57 U.T. Magnitude 2.3. Epicentre at 48.8°N; 125.0°W. In Barkley Sound. Q:c.

JANUARY 27 at 00 47 35 U.T. Magnitude 1.8. About 131 km from Penticton.

JANUARY 28 at 11 52 18 U.T. Magnitude 2.8. Epicentre at 47.9°N; 122.9°W. Eastern Puget Sound, Washington, U.S.A. Q:c.

JANUARY 30 at 08 17 22 U.T. Magnitude 2.0. About 266 km from Penticton.

FEBRUARY 1 at 00 31 43 U.T. Magnitude 2.0. About 56 km from Alberni.

FEBRUARY 1 at 00 36 00 U.T. Magnitude 3.9. Epicentre determined by U.S.C.G.S. and D.A.O. to be at 50.2°N; 129.7°W. Off coast of Vancouver Island. Q:b.

FEBRUARY 2 at 00 44 42 U.T. Magnitude 1.4. About 144 km from Penticton.

FEBRUARY 2 at 05 50 16 U.T. Magnitude 3.1. Epicentre at 46.8°N; 121.5°W. Near Mount Rainer, Washington, U.S.A. Q:c.

SEISMOLOGICAL BULLETIN - 1961

- FEBRUARY 2 at 11 04 57 U.T. Magnitude 1.9. About 56 km from Alberni.
- FEBRUARY 2 at 17 07 55 U.T. Magnitude 2.4. About 274 km from Penticton.
- FEBRUARY 6 at 05 19 23 U.T. Magnitude 3.3. Epicentre at 47.5°N; 126.9°W. Off west coast of Washington, U.S.A. Q:c.
- FEBRUARY 7 at 06 08 31 U.T. Magnitude 3. Epicentre at 48.8°N; 129.3°W. Off coast of Vancouver Island. Q:c.
- FEBRUARY 8 at 16 34 14 U.T. Magnitude 2.3. About 85 km from Alberni.
- FEBRUARY 11 at 01 02 26 U.T. Magnitude 2.1. About 178 km from Penticton.
- FEBRUARY 11 at 16 44 53 U.T. Magnitude 1.2. About 150 km from Penticton.
- FEBRUARY 12 at 01 58 58 U.T. Magnitude 2.5. About 326 km from Penticton.
- FEBRUARY 13 at 00 37 09 U.T. Magnitude 1.4. About 142 km from Penticton.
- FEBRUARY 13 at 02 04 33 U.T. Magnitude 1.9. About 294 km. from Penticton.
- FEBRUARY 13 at 10 05 58 U.T. Magnitude 2.8. About 254 km from Penticton.
- FEBRUARY 14 at 14 27 19 U.T. Magnitude 2.2. About 189 km from Penticton.
- FEBRUARY 15 at 21 18 00 U.T. Magnitude 2.3. About 242 km from Penticton.
- FEBRUARY 16 at 00 47 42 U.T. Magnitude 2.5. About 142 km from Penticton.
- FEBRUARY 19 at 02 25 00 U.T. Magnitude 2.6. About 106 km from Alberni.
- FEBRUARY 23 at 12 48 56 U.T. Magnitude 2.5. About 238 km from Penticton.

DOMINION OBSERVATORIES

- FEBRUARY 24 at 11 22 08 U. T. Magnitude 2.2. About 75 km from Alberni.
- FEBRUARY 25 at 12 03 21 U. T. Magnitude 2.4. About 266 km from Penticton.
- FEBRUARY 27 at 18 50 21 U. T. Magnitude 2.6. About 88 km from Victoria.
- MARCH 4 at 09 44 12 U. T. Magnitude 2.7. Epicentre at 48°57'N; 125°26'W. Barkley Sound. Q:a.
- MARCH 4 at 09 50 50 U. T. Magnitude 2.4. Epicentre at 48°57'N; 125°30'W. Barkley Sound. Q:a.
- MARCH 4 at 18 04 51 U. T. Magnitude 3.4. About 381 km from Penticton.
- MARCH 6 at 21 30 07 U. T. Magnitude 2.0. About 163 km from Penticton.
- MARCH 8 at 23 16 54 U. T. Magnitude 2.3. About 49 km from Alberni.
- MARCH 10 at 00 35 06. Magnitude 2.4. About 147 km from Penticton.
- MARCH 10 at 07 13 33 U. T. Magnitude 2.1. About 187 km from Victoria.
- MARCH 10 at 21 35 55 U. T. Magnitude 2.0. About 152 km from Penticton.
- MARCH 11 at 06 26 13 U. T. Magnitude 2.1. About 197 km from Penticton.
- MARCH 11 at 17 06 10 U. T. Magnitude 2.2. Epicentre at 48.8°N; 122.4°W. East of Bellingham, Washington, U.S.A. Q:c.
- MARCH 14 at 15 02 17 U. T. Magnitude 2.3. About 256 km from Penticton.
- MARCH 14 at 19 48 13 U. T. Magnitude 2.4. About 246 km from Penticton.
- MARCH 14 at 23 22 45 U. T. Magnitude 1.9. Epicentre at 48.8°N; 122.4°W. Near Bellingham, Washington, U.S.A. Q:c.

SEISMOLOGICAL BULLETIN - 1961

- MARCH 15 at 07 24 25 U. T. Magnitude 2.6. About 298 km from Penticton.
- MARCH 16 at 19 51 07 U. T. Magnitude 1.3. About 64 km from Penticton.
- MARCH 17 at 11 22 28 U. T. Magnitude 1.7. About 86 km from Victoria.
- MARCH 17 at 11 23 54 U. T. Magnitude 1.8. About 218 km from Penticton.
- MARCH 18 at 11 18 50 U. T. Magnitude 1.9. About 174 km from Penticton.
- MARCH 21 at 05 49 32 U. T. Magnitude 3.1. About 427 km from Penticton.
- MARCH 23 at 23 54 46 U. T. Magnitude 2.1. About 54 km from Alberni.
- MARCH 24 at 00 13 27 U. T. Magnitude 1.9. About 149 km from Penticton.
- MARCH 25 at 12 25 59 U. T. Magnitude 3.0. About 386 km from Penticton.
- MARCH 27 at 20 57 52 U. T. Magnitude 1.8. About 147 km from Penticton.
- MARCH 29 at 21 30 01 U. T. Magnitude 2.6. Epicentre at 48.2°N; 124.1°W. Olympic Mountain, Washington, U.S.A. Q:c.
- MARCH 31 at 03 09 56 U. T. Magnitude 2.5. Epicentre at 48.7°N; 124.8°W. Near Clooose Bay. Q:c.