SEISMOLOGICAL SERVICE OF CANADA

SEISMOLOGICAL BULLETIN
January
1945

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DOMINION OBSERVATORY
OTTAWA - CANADA

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SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer
Ernest A. Hodgson, Seismologist
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

ϕ = 45°23'38" N. λ = 75°42'57" W. h = 83m.

Time correction within 0.10s.

Foundation: boulder clay over limestone

Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

ϕ = 44°38' N. λ = 63°36' W. h = 46m.

Time correction from recorded radio time signals

Foundation: Carbonaceous slate

Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

ϕ = 47°07'.4 N. λ = 70°49'.6 W. h = 232m. ca.

Time correction from recorded radio time signals

Foundation: Solid granite of Canadian Shield

Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

ϕ = 48°31'14" N. λ = 123°24'56" W. h = 197m.

Time correction from recorded radio time signals

Foundation: rock

Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.

SHAWINIGAN FALLS

Shawinigan Water and Power Company

ϕ = 46°33'.1 N. λ = 72°45.8'W. h = 60m. ca.

Time correction from recorded radio time signals

Foundation: solid granite of Canadian Shield

Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15g.

SASKATOON

University of Saskatchewan

ϕ = 52°08' N. λ = 106°38' W. h = 515m.

Time correction from radio time signals

Foundation: clay and sand

Instrument: Milne-Shaw NE component, designated SN, photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

KIRKLAND LAKE

Lake Shore Mines

ϕ = 48°09' N. λ = 80°03' W. h = 320m.

Time correction from recorded radio time signals

Foundation: rock

Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

DETERMINED CONSTANTS

INSTRUMENT	To	V	ε	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR 10^{-6} g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2500			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	10.0	150	20:1	18 mm.	
KL (Kirkland Lake)	1/30	2×10^4	at 30	cycles	

NOTE:- Universal Time used throughout.

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM January 1, 1945 to January 12, 1945 No. 1

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
1 Jan. 1	H	1 20.8	3020	USCGS. gives:-
	P	1 26 33		ϕ = 73° N.
	i	1 27 00		λ = 70° W.
	S	1 31 18		
	iZ	1 31 45		
	L	1 34.7		
	F	2 34		
		Victoria		
	H	1 20.8	4310	
	ePE	1 28 23		
	eS	1 34 30		
	L	1 37		
	F	2 32		
		Saskatoon		
	H	1 20.9	2800	
	P	1 26 20		
	S	1 30 49		
	L	1 34.5		
	F	2 32		
		Halifax		
	H	(1 20.3)	2910	No clock correction.
	P	(1 25 53)		
	S	(1 30.5)		
	L	(1 34)		
	F	(2 14)		
		Seven Falls		
	H	1 20.7	2910	
	P	1 26 20		
	S	1 30 57		
	L	1 34		
	F	2 35		
		Shawinigan Falls		
	H	1 20.8	2900	
	P	1 26 21		
	S	1 30 57		
	L	1 34		
	F	2 06		
		Ottawa		
13 Jan. 12	H	18 38.5	10,550	USCGS. gives:-
	P_Z	18 51 49		ϕ = 34° N.
	SKS_N	19 02 26		λ = 139° E.
	S	19 03 06		
	PS	19 04 22		
	SS_N	19 10.0		
	eL	19 21		
	F	20 34		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM January 12, 1945 to January 22, 1945 No. 2

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Saskatoon		
13 Jan. 12 (Cont'd)	e	19 00 12		
	e	19 09.2		
	L	19 16		
	F	20 08		
		Seven Falls		
	e	18 51.9		
	e	19 02.5		
	e	19 08.7		
	L	19 20		
	F	20 39		
		Shawinigan Falls		
	e	18 51.8		
	e	19 02.5		
	L	19 31		
	F	19 47		
		Ottawa		
14 Jan. 12	e	22 06 00		Tacubaya gives:- ϕ = 16° N. λ = 92°.5 W.
	L	22 15		
	F	22 24		
		Seven Falls		
	e	22 06.6		
	L	22 20		
	F	22 24		
		Ottawa		
16 Jan. 16	e	14 01.3		
	L	14 22		
	F	14 58		
		Seven Falls		
	e	14 01.3		
	L	14 19		
	F	15 20		
		Ottawa		
20 Jan. 18	e	3 22.7		
	L	3 27		
	F	3 45		
		Ottawa		
21 Jan. 18	e	3 55		
	L	4 00		
	F	4 18		
		Ottawa		
23 Jan. 22	e	7 53 25		
	L	7 58		
	F	8 28		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM January 22, 1945 to January 31, 1945 No. 3

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Seven Falls		
23 Jan. 22 (Cont'd)	e	7 53 49		
	L	7 59		
	F	8 53		
		Shawinigan Falls		
	e	7 53 33		
	L	8 06		
	F	8 10		
		Ottawa		
26 Jan. 24	H	20 47.8	150	
	P_2	20 48 12		
	S_2	20 48 29		
	F	20 49.1		
		Ottawa		
27 Jan. 25	e_Z	0 41 06		
	e_N	0 52.4		
	L	0 57		
	F	1 29		
		Victoria		
	e	0 41		
	L	0 47		
	F	1 08		
		Saskatoon		
	e	0 46 25		
	L	0 50		
	F	1 19		

W. W. Doyle.

CORRELATION TABLE

The numbered pages of the bulletin list only those earthquakes for which two or more phases are recorded. The tabulation which follows not only provides a yearly numbered list of all earthquakes recorded in Canada but also correlates the seismic registrations of the seven Canadian stations. The seismograph at the Kirkland Lake rockburst station (Established Dec. 19, 1939) records only the bursts and those earthquakes originating very close to Kirkland Lake. Entries for this station in the Correlation Table will be confined to those earthquakes and rockbursts which registered at Kirkland Lake and also at one or more outside stations. Such entries will be indexed as notes. Entries for each station show in hours and minutes the time of beginning of the tremors in Greenwich Mean Time. The appearance of entries in two or more columns in the same line indicates that these are known to be concerned with the same earthquake even though the times of beginning may differ slightly. The figures after the plus sign show the duration of the record in hours and minutes. The earthquake number and the day of the month on which it occurred are listed in the first and second columns, respectively, while the extreme right hand column is reserved for index letters to a series of notes following the tabulation. Certain letters are reserved for the purpose of classifying the entries: these are as follows:-

d (domesticus)	epicentre less than 100 km.
v (vicinus)	epicentre between 100 and 1000 km.
r (remotus)	epicentre between 1000 and 5000 km.
u (ultimus)	epicentre beyond 5000 km.

(above lower-case letters apply to earthquakes of the lowest order of intensity on a scale of three.)

D, V, R, U ::	distance as above, intensity intermediate.
D, V, R, U :	distance as above, intensity - top of scale.
L	Long (or surface waves) alone recorded.
Q	Questionable (may not be seismic).
T	Time uncertain.
P	Preliminary tremors alone recorded.
*	Recorded only by short period seismograph.

CORRELATION OF EARTHQUAKES
January, 1945

N O T E S

A :	Ottawa	Δ =	3,020 km.	H = $1^h 20^m.8$ U.T.
	Victoria	Δ =	4,310 km.	H = 1 20.8 U.T.
	Saskatoon	Δ =	2,800 km.	H = 1 20.9 U.T.
	Halifax	Δ =	2,910 km.	H = (1 20.3) U.T.
	Seven Falls	Δ =	2,910 km.	H = 1 20.7 U.T.
	Shawinigan Falls	Δ =	2,900 km.	H = 1 20.8 U.T.
B :	Ottawa	Δ =	10,550 km.	H = $18^h 38^m.5$ U.T.
C :	Ottawa	Δ =	150 km.	H = $20^h 47^m.8$ U.T.

Dominion Observatory,
Ottawa, Canada,
March 9, 1945.

EARTHQUAKE CORRELATION TABLE

Month January, 1945

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
1	1	1 27+1 07R	1 28+1 04R	1 26+1 06R	1 26+0 48R	1 26+1 09R	1 26+0 40R	1 26+0 40R	A
2	1	17 36+0 0.8P*	.....	.....	.....	.....	17 35+0 0.6P	17 35+0 01P	..
3	2	20 00+0 12L	20 07+0 14L	.....	.....	.....	.....	.....	..
4	2	22 57+0 0.6P*	.....	.....	.....	.....	.....	.....	..
5	5	.....	.....	.....	.....	21 02+0 08L	.....	.....	..
6	6	.....	.....	.....	.....	10 10+0 12L	.....	.....	..
7	6	.....	.....	.....	.....	22 32+0 07L	.....	.....	..
8	7	.....	.....	.....	.....	4 50+0 06L	.....	.....	..
9	7	22 44+0 09L	22 30+0 10L	.....	.....	.....	.....	.....	..
10	9	21 48+0 02P*	.....	.....	.....	.....	.....	.....	..
11	10	17 46+0 0.4P*	.....	.....	.....	.....	.....	.....	..
12	10	21 14+0 01v*	.....	.....	.....	.....	.....	.....	..
13	12	18 52+1 42u	18 59+0 46L	19 00+1 08u	.....	19 02+1 37u	18 52+0 49u	18 52+0 55u	B
14	12	22 06+0 18r	.....	.....	.....	22 20+0 04L	22 07+0 03P	22 06+0 15r	..
15	13	9 35+0 26L	.....	9 47+0 05L	.....	9 29+0 35L	.....	.....	..
16	16	14 01+0 57u	.....	.....	.....	14 01+1 19u	.....	.....	..
17	17	4 11+0 01P*	.....	.....	.....	.....	.....	4 11+0 02P	..
18	17	.....	.....	.....	.....	10 23+0 03L	.....	.....	..
19	17	.....	.....	.....	.....	11 08+0 02L	.....	.....	..
20	18	3 22+0 23r	.....	3 34+0 08L	.....	3 22+0 26L	.....	3 18+0 02P	..
21	18	3 55+0 23r	3 40+0 42L	4 08+0 06L	.....	3 57+0 17L	.....	3 53+0 03P	..
22	18	.....	.....	.....	.....	18 26+0 07L	.....	.....	..
23	21	.....	.....	.....	.....	.....	14 26+0 03L	.....	..
24	22	7 53+0 35r	8 14+0 22L	8 09+0 13L	.....	7 59+0 53L	7 54+0 15r	7 54+0 16r	..
25	22	8 15+0 04P*	.....	.....	.....	.....	8 15+0 04P	8 16+0 04P	..
26	24	20 48+0 01v*	.....	.....	.....	.....	.....	.....	C
27	25	0 41+0 48r	0 41+0 48r	0 46+0 33r	.....	0 57+0 33L	0 59+0 08L	0 41+0 02P	..
28	29	.....	.....	.....	.....	22 03+0 13L	.....	.....	..

SEISMOLOGICAL BULLETINS RECEIVED
January, 1945

We acknowledge, with thanks, the receipt of the following seismological publications and bulletins:-

STATIONS	BULLETINS	RECEIVED	
Apia	July to September, 1944	January	3
Ksara	July, 1944	"	8
Mexican Stations	July to December, 1940	""	10
United States Coast and Geodetic Survey	U.S. earthquakes for 1942	"	11
Cape Girardeau	July to December, 1941	"	12
Saint Louis and Auxiliary Stations	Preliminaries for August 10; September 5, 23; October 2, 5/44; Supplements to August and Sept./44	"	12
Santa Clara	December, 1944	"	15
Florissant	August, 1944	"	18
Saint Louis and Auxiliary Stations	Preliminaries for October 6 and November 15, 1944	"	18
Pasadena	Noteworthy Shocks Oct.-Dec., 1944; Local Shocks January - May, 1944	"	23
Bogota	October and November, 1944	"	26
New Zealand Stations	November, 1944	"	29

DOMINION OBSERVATORY,
OTTAWA - CANADA.

SEISMOLOGICAL SERVICE OF CANADA

SEISMOLOGICAL BULLETIN
February and March
1945

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DOMINION OBSERVATORY
OTTAWA - CANADA

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SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer
Ernest A. Hodgson, Seismologist
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

ϕ = 45°23'38" N. λ = 75°42'57" W. h = 83m.

Time correction within 0.10s.

Foundation: boulder clay over limestone

Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

ϕ = 44°38' N. λ = 63°36' W. h = 46m.

Time correction from recorded radio time signals

Foundation: Carbonaceous slate

Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

ϕ = 47°07'.4 N. λ = 70°49'.6 W. h = 232m. ca.

Time correction from recorded radio time signals

Foundation: Solid granite of Canadian Shield

Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

ϕ = 48°31'14" N. λ = 123°24'56" W. h = 197m.

Time correction from recorded radio time signals

Foundation: rock

Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.

SHAWINIGAN FALLS

Shawinigan Water and Power Company

ϕ = 46°33'.1 N. λ = 72°45.8'W. h = 60m. ca.

Time correction from recorded radio time signals

Foundation: solid granite of Canadian Shield

Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15g.

SASKATOON

University of Saskatchewan

ϕ = 52°08' N. λ = 106°38' W. h = 515m.

Time correction from radio time signals

Foundation: clay and sand

Instrument: Milne-Shaw NE component, designated SN, photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

KIRKLAND LAKE

Lake Shore Mines

ϕ = 48°09' N. λ = 80°03' W. h = 320m.

Time correction from recorded radio time signals

Foundation: rock

Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

DETERMINED CONSTANTS

INSTRUMENT	To	V	ε	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR 10^{-6} g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2500			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	10.0	150	20:1	18 mm.	
KL (Kirkland Lake)	1/30	2×10^4	at 30	cycles	

NOTE:- Universal Time used throughout.

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM February 1, 1945 to February 10, 1945 No. 4

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Victoria		
29 Feb. 1	e	10 59.5		
	L	11 22		
	F	12 06		
		Victoria		
30 Feb. 1	e	12 37 15		
	L	12 59		
	F	14 00		
		Saskatoon		
	e	12 41 05		
	L	13 02		
	F	13 48		
		Ottawa		
31 Feb. 1	H	20 28.0	150	
	P_2	20 28 27		
	S_2	20 28 44		
	F	20 29.3		
		Ottawa		
34 Feb. 2	eZ	23 36 12		
	L	23 44		
	F	0 05		
		Victoria		
	e	23 46.5		
	L	0 03		
	F	0 15		
		Ottawa		
40 Feb. 10	H	4 58.0	9540	USCGS. gives:-
	P	5 10 37		ϕ = 41°5 N.
	iS	5 21 12		λ = 142°E.
	PS	5 22 00		
	SS	5 27.0		
	eL	5 41		
	F	7 34		
		Victoria		
	H	4 58.5	6635	
	P	5 08 29		
	S	5 16 46		
	SSS	5 23.6		
	L	5 27.6		
	F	7 52		
		Saskatoon		
	e	5 09 22		
	iS	5 18 09		
	e	5 20.7		
	e	5 22 40		
	L	5 26		
	F	6 58		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM February 10, 1945 to February 15, 1945 No. 5

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Halifax		
40 Feb. 10 (Cont'd)	e	(5 20)		
	L	(5 38)		
	F	(6 56)		
		Seven Falls		
	H	4 58.1	9520	
	P	5 10 40		
	iS	5 21 14		
	SS	5 27 08		
	SSS	5 29.5		
	L	5 37		
	F	7 58		
		Shawinigan Falls		
	H	4 58.1	9520	
	P	5 10 40		
	S	5 21 14		
	L	5 43		
	F	5 53		
		Ottawa		
42 Feb. 13	e_Z	11 33 27		
	e	11 37		
	L	11 41		
	F	12 11		
		Seven Falls		
	e	11 33 01		
	L	11 37		
	F	12 13		
		Saskatoon		
44 Feb. 14	H	3 01.8	1050	
	P	3 04 06		
	S	3 05 56		
	i	3 06 10		
	L	3 07		
	F	3 13		
		Shawinigan Falls		
	e	3 07.4		
	L	3 16		
	F	3 24		
		Ottawa		
45 Feb. 15	H	6 03.3	70	
	P_1	6 03 31		
	S_1	6 03 39		
	F	6 04.2		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM February 15, 1945 to February 18, 1945 No. 6

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
48 Feb. 18	H	6 46.6	4120	
	P_Z	6 53 47		
	S_E	6 59 42		
	SSS_E	7 02.7		
	L	7 05		
	F	7 26		
		Saskatoon		
	e	7 02.3		
	L	7 13		
	F	7 25		
		Ottawa		
49 Feb. 18	H	10 08.3	9400	
	P_Z	10 20 47		
	S	10 31 16		
	SS	10 37.0		
	eL	10 47		
	F	12 13		
		Victoria		
	H	10 07.8	7010	
	P	10 18.2		
	S	10 26 51		
	SSS	10 34.0		
	L	10 40		
	F	12 15		
		Saskatoon		
	e	10 28 16		
	e	10 32.6		
	e	10 35 54		
	L	10 40		
	F	12 00		
		Seven Falls		
	e	10 31.2		
	e	10 42.7		
	L	10 51		
	F	12 05		
		Ottawa		
50 Feb. 18	e	14 09		
	L	14 17		
	F	14 53		
		Victoria		
	e	13 34 15		
	L	13 55		
	F	14 44		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM February 18, 1945 to February 28, 1945 No. 7

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
51	H	20 16.6	150	
Feb.	P_2	20 17 03		
18	S_2	20 17 20.5		
	F	20 18.2		
		Ottawa		
57	eZ	22 31 44		
Feb.	e	22 32 32		
26	e	22 39 04		
	e	22 46 44		
	L	22 57		
	F	0 13		
		Victoria		
	e	22 25 59		
	e	22 35.1		
	L	22 44		
	F	0 55		
		Saskatoon		
	e	22 36 59		
	L	22 48		
	F	0 08		
		Seven Falls		
	e	22 39 02		
	e	22 46.3		
	L	23 02		
	F	0 34		
		Ottawa		
58	eZ	7 23 07		
Feb.	e_N	7 28 40		
27	L	7 35		
	F	7 54		

W. W. Doxsee.

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM March 1, 1945 to March 18, 1945 No. 8

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
60 March 2	H	20 28.0	155	
	P_2	20 28 24		
	S_2	20 28 42		
	F	20 29.5		
		Ottawa		
64 March 11	H	21 38.3	9540	USCGS. gives:-
	P	21 50 53		ϕ = 38° N.
	PP	21 54.5		λ = 136° E.
	S	22 01 28		
	i	22 01 47		
	eL	22 21		
	F	23 58		
		Victoria		
	e	21 49.1		
	e	21 56.8		
	L	22 18		
	F	23 00		
		Saskatoon		
	H	21 38.6	7640	
	P	21 49 36		
	S	21 58 44		
	L	22 10		
	F	23 27		
		Seven Falls		
	H	21 38.3	9500	
	P	21 50 55		
	S	22 01 28		
	L	22 18		
	F	0 23		
		Shawinigan Falls		
	e	21 50 53		
	e	22 01.4		
	F	22 05		
		Ottawa		
65 March 12	H	23 51.0	150	
	P_2	23 51 26		
	S_2	23 51 43		
	F	23 52.6		
		Ottawa		
66 March 17 and 18	H	23 58.1	4150	USCGS. gives:-
	P	0 05 22		ϕ = 69.9 N.
	PPP	0 06 44		λ = 78.0 W.
	S	0 11 19		
	SSS_E	0 14.0		
	eL	0 16.5		
	F	1 33		

EARTHQUAKE CORRELATION TABLE

Month February, 1945

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
29	1	11 36+0 36L	10 59+1 07u	11 24+0 36L	11 58+0 04L	11 35+0 49L	.....	.....	..
30	1	13 09+1 05L	12 37+1 22u	12 41+1 06u	13 26+0 22L	.....	.....	.....	..
31	1	20 28+0 01v*	.....	.....	.....	.....	.....	.....	A
32	1	23 25+0 0.7P*	.....	.....	.....	.....	.....	.....	..
33	2	.....	2 12+0 08L	.....	.....	.....	.....	.....	..
34	2	23 36+0 29u	23 46+0 29L	.....	.....	23 43+0 21L	.....	.....	..
35	5	8 10+0 02P*	.....	.....	.....	.....	.....	8 10+0 01P	..
36	6	19 20+0 19L	.....	.....	.....	19 21+0 21L	.....	,,.....	..
37	7	0 40+0 08L	0 24+0 12L	.....	.....	0 40+0 06L	.....	.....	..
38	8	.....	.....	.....	.....	1 05+0 08L	.....	.....	..
39	8	14 53+0 37L	.....	.....	.....	14 58+0 49L	.....	.....	..
40	10	5 11+2 23U	5 08+2 44U	5 09+1 49U	5 20+1 36U	5 11+2 48U	5 11+0 46U	5 11+0 42U	B
41	12	.....	.....	.....	.....	.....	.....	16 37+0 02P	..
42	13	11 33+0 38u	11 57+0 18L	11 52+0 17L	.....	11 33+0 41u	11 33+0 03P	11 33+0 04P	..
43	13	13 52+0 09L	13 47+0 06L	.....	.....	13 53+0 11L	.....	13 53+0 04L	..
44	14	3 14+0 08L	3 04+0 08L	3 04+0 09r	.....	3 16+0 04L	3 16+0 10L	3 07+0 17r	C
45	15	6 04+0 0.7d*	.....	.....	.....	.....	.....	.....	D
46	17	19 57+0 09L	.....	.....	.....	.....	.....	.....	..
47	17	22 48+0 01P*	.....	.....	.....	.....	.....	.....	..
48	18	6 54+0 32r	7 19+0 20L	7 02+0 23r	.....	7 04+0 21L	.....	.....	E
49	18	10 21+1 52u	10 18+1 57u	10 28+1 32u	.....	10 31+1 34u	.....	.....	F
50	18	14 09+0 44u	13 34+1 10u	14 01+0 25L	.....	14 13+0 47L	.....	.....	..
51	18	20 17+0 01v*	.....	.....	.....	.....	.....	.....	G
52	19	0 02+0 05L	.....	.....	.....	23 58+0 17L	.....	.....	..
53	20	16 04+0 06L	.....	.....	.....	16 05+0 07L	.....	.....	..
54	20	17 44+0 06L	17 27+0 12L	.....	.....	17 46+0 06L	.....	.....	..
55	26	.....	.....	.....	.....	16 09+0 10L	.....	.....	..
56	26	17 43+0 08L	.....	.....	.....	.....	.....	.....	..
57	26	22 32+1 41u	22 26+2 29u	22 37+1 31u	.....	22 39+1 55u	.....	22 32+0 04P	..
58	27	7 23+0 31u	7 38+0 15L	7 38+0 15L	.....	7 36+0 17L	.....	7 23+0 02P	..

CORRELATION OF EARTHQUAKES
February, 1945

N O T E S

A	:	Ottawa	Δ = 150 km.	H = $20^h28^m.0$ U.T.
B	:	Ottawa	Δ = 9540 km.	H = $4^h58^m.0$ U.T.
		Victoria	Δ = 6635 km.	H = 4 58.5 U.T.
		Seven Falls	Δ = 9520 km.	H = 4 58.1 U.T.
		Shawinigan Falls	Δ = 9520 km.	H = 4 58.1 U.T.
C	:	Saskatoon	Δ = 1050 km.	H = $3^h01^m.8$ U.T.
D	:	Ottawa	Δ = 70 km.	H = $6^h03^m.3$ U.T.
E	:	Ottawa	Δ = 4120 km.	H = $6^h46^m.6$ U.T.
F	:	Ottawa	Δ = 9400 km.	H = $10^h08^m.3$ U.T.
		Victoria	Δ = 7010 km.	H = 10 07.8 U.T.
G	:	Ottawa	Δ = 150 km.	H = $20^h16^m.6$ U.T.

Dominion Observatory,
Ottawa - Canada,
May 7, 1945.

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM March 18, 1945 to March 18, 1945 No. 9

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Victoria		
66 March 17 and 18 (Cont'd)	H	23 58.0	6310	
	P	0 07.6		
	S	0 15 36		
	L	0 22		
	F	1 15		
		Saskatoon		
	H	23 58.5	5345	
	P	0 07 10		
	S	0 14 14		
	L	0 24		
	F	1 27		
		Seven Falls		
	H	23 58.2	4400	
	P	0 05 43		
	S	0 11 55		
	SSS	0 15.0		
	L	0 18		
	F	2 16		
		Shawinigan Falls		
	H	23 58.1	4360	
	P	0 05 34		
	PPP	0 07 08		
	S	0 11 44		
	SSS	0 14.7		
	L	0 18		
	F	0 30		
		Ottawa		
69 March 18	H	18 54.9	5380	
	Pz	19 03.6		
	S	19 10 42		
	L	19 18		
	F	20 16		
		Victoria		
	e	19 00 07		
	e	19 03.6		
	F	20 10		
		Seven Falls		
	e	19 11.1		
	L	19 22		
	F	20 24		
		Shawinigan Falls		
	e	19 03 48		
	L	19 22		
	F	19 29		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM March 18, 1945 to March 23, 1945 No. 10

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
70 March 18	e	23 29.8		
	L	23 34		
	F	23 48		
		Seven Falls		
	e	23 23.5		
	e	23 28.9		
	L	23 32		
	F	0 13		
		Ottawa		
71 March 20	H	7 58.8	8580	
	P_Z	8 10 40		
	S	8 20 33		
	SSS_E	8 29		
	eL	8 33		
	F	9 14		
		Seven Falls		
	e	8 20.0		
	L	8 31		
	F	9 32		
		Ottawa		
72 March 22	H	19 27.8	150	
	P_2	19 28 11		
	S_2	19 28 28		
	e	19 28 37		
	F	19 29		
		Ottawa		
74 March 23	e_Z	23 33 55		
	e	23 34 22		
	e_Z	23 37 22		
	e_E	23 43 04		
	e	23 56 35		
	L	0 16		
	F	1 57		
		Victoria		
	e	23 52.7		
	L	0 07		
	F	1 51		
		Seven Falls		
	e	23 34 07		
	e	23 35 52		
	e	23 56.3		
	e	0 02.4		
	L	0 15		
	F	2 18		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM March 23, 1945 to March 31, 1945 No. 11

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Seven Falls		
78 March 31	e	7 15.6		
	L	7 48		
	F	8 25		

W. H. Doyle.

EARTHQUAKE CORRELATION TABLE

Month March, 1945

No.	Date	Ottawa	Victoria	Saskatoon	Seven Falls		Shawinigan	**
					M. S.	W. A.		
59	2	.....	11 30+0 21L	.....	11 18+0 20L	.....	.....	..
60	2	20 28+0 01v*	.....	.....	.....	.....	.....	A
61	6	.....	.....	.....	13 17+0 12L	.....	.....	..
62	10	.....	.....	.....	.....	.....	1 05+0 02P	..
63	11	18 04+0 04P	.....	.....	18 21+0 43L	.....	18 04+0 03P	..
64	11	21 51+2 07u	.....	21 50+1 37u	21 51+2 32u	21 51+0 14u	21 51+0 14u	B
65	12	23 51+0 01v*	.....	.....	.....	.....	.....	C
66	18	0 05+1 28r	0 08+1 07u	0 07+1 20u	0 06+2 10r	0 06+0 28r	0 06+0 24r	D
67	18	0 40+0 0.4P*	.....	.....	.....	.....	.....	..
68	18	8 49+0 32L	9 09+0 18L	.....	8 48+0 40L	.....	.....	..
69	18	19 04+1 12u	19 00+1 10u	19 08+0 58L	19 11+1 13u	19 23+0 05L	19 04+0 25u	E
70	18	23 30+0 18u	23 49+0 11L	.....	23 24+0 49u	.....	.....	..
71	20	8 11+1 03u	.....	8 48+0 12L	8 20+1 12u	.....	8 11+0 03P	F
72	22	19 28+0 01v*	.....	.....	.....	.....	.....	G
73	23	.....	.....	.....	6 16+0 13L	.....	.....	..
74	23	23 34+2 23u	23 53+2 15u	0 14+1 33L	23 36+2 41u	23 34+0 02P	23 34+0 03P	..
75	24	0 19+0 03P*	.....	.....	.....	0 17+0 02P	0 17+0 04P	..
76	24	14 41+0 22L	14 48+0 10L	.....	14 43+0 25L	.....	.....	..
77	28	.....	.....	.....	14 05+0 25L	.....	.....	..
78	31	.....	.....	.....	7 16+1 09u	.....	.....	..
79	31	19 09+0 07L	.....	.....	19 11+0 10L	.....	.....	..
80	31	19 45+0 20L	.....	19 39+0 12L	19 47+0 31L	.....	19 46+0 04L	..
81	31	.....	.....	.....	22 43+0 47L	.....	.....	..

CORRELATION OF EARTHQUAKES
March, 1945

N O T E S

A :	Ottawa	Δ = 155 km.	H = $20^h 28^m.0$ U.T.
B :	Ottawa	Δ = 9540 km.	H = $21^h 38^m.3$ U.T.
	Saskatoon	Δ = 7640 km.	H = 21 38.6 U.T.
	Seven Falls	Δ = 9500 km.	H = 21 38.3 U.T.
C :	Ottawa	Δ = 150 km.	H = $23^h 51^m.0$ U.T.
D :	Ottawa	Δ = 4150 km.	H = $23^h 58^m.1$ U.T.
	Victoria	Δ = 6310 km.	H = 23 58.0 U.T.
	Saskatoon	Δ = 5345 km.	H = 23 58.5 U.T.
	Seven Falls	Δ = 4400 km.	H = 23 58.2 U.T.
	Shawinigan Falls	Δ = 4360 km.	H = 23 58.1 U.T.
E :	Ottawa	Δ = 5380 km.	H = $18^h 54^m.9$ U.T.
F :	Ottawa	Δ = 8580 km.	H = $7^h 58^m.8$ U.T.
G :	Ottawa	Δ = 150 km.	H = $19^h 27^m.8$ U.T.

Dominion Observatory,
Ottawa, Canada,
May 10, 1945.

SEISMOLOGICAL BULLETINS RECEIVED
February, March, and April, 1945

We acknowledge, with thanks, the receipt of the following seismological publications and bulletins:-

STATIONS	BULLETINS	RECEIVED	
Riverview	October to December, 1943	February	12
Santa Clara	January, 1945	"	12
Sydney	March and April, 1944	"	12
Brisbane	October and November, 1944	"	12
Pehpei	January to December, 1944	"	13
Pasadena	Local Shocks for June, 1944	March	6
New Zealand Stations	December, 1944	"	7
United States Coast and Geodetic Survey	April to June, 1943	"	12
Santa Clara	February, 1945	"	12
Pasadena and Auxiliary Stations	July to September, 1943	"	17
Saint Louis and Auxiliary Stations	Supplements to October and December, 1944: Preliminaries for October 23, November 16, 24, December 10, 12/44	"	20
Bogota	December/44 and January/45	April	5
New Zealand Stations	January, 1945	"	7
Pasadena and Auxiliary Stations	October to December, 1943	"	10
Sydney	May and June, 1944	"	12
Bureau Central	January to September, 1944	"	16
Ksara	October to December, 1944	"	26
Apia	October to December, 1944	"	26
India Stations	April to September, 1941	"	28
Pasadena and Auxiliary Stations	Noteworthy Shocks January to March/45	"	30

DOMINION OBSERVATORY
OTTAWA - CANADA

SEISMOLOGICAL SERVICE OF CANADA

SEISMOLOGICAL BULLETIN
April
1945

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DOMINION OBSERVATORY
OTTAWA - CANADA

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SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer
Ernest A. Hodgson, Seismologist
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

ϕ = 45°23'38" N. λ = 75°42'57" W. h = 83m.

Time correction within 0.10s.

Foundation: boulder clay over limestone

Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

ϕ = 44°38' N. λ = 63°36' W. h = 46m.

Time correction from recorded radio time signals

Foundation: Carbonaceous slate

Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

ϕ = 47°07'.4 N. λ = 70°49'.6 W. h = 232m. ca.

Time correction from recorded radio time signals

Foundation: Solid granite of Canadian Shield

Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

ϕ = 48°31'14" N. λ = 123°24'56" W. h = 197m.

Time correction from recorded radio time signals

Foundation: rock

Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.

SHAWINIGAN FALLS

Shawinigan Water and Power Company

ϕ = 46°33'.1 N. λ = 72°45.8'W. h = 60m. ca.

Time correction from recorded radio time signals

Foundation: solid granite of Canadian Shield

Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15g.

SASKATOON

University of Saskatchewan

ϕ = 52°08' N. λ = 106°38' W. h = 515m.

Time correction from radio time signals

Foundation: clay and sand

Instrument: Milne-Shaw NE component, designated SN, photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

KIRKLAND LAKE

Lake Shore Mines

ϕ = 48°09' N. λ = 80°03' W. h = 320m.

Time correction from recorded radio time signals

Foundation: rock

Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

DETERMINED CONSTANTS

INSTRUMENT	To	V	ε	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR 10^{-6} g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2500			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	10.0	150	20:1	18 mm.	
KL (Kirkland Lake)	1/30	2×10^4	at 30	cycles	

NOTE:- Universal Time used throughout.

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM April 1, 1945 to April 15, 1945 No. 12

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
83 April 1 and 2	e	23 59		
	eL	0 02.6		
	F	0 41		
		Saskatoon		
	e	23 52 23		
	L	23 55		
	F	0 48		
		Seven Falls		
	e	23 57.3		
	L	0 06		
	F	0 48		
		Ottawa		
88 April 10	e	1 45 18		
	L	2 01		
	F	2 30		
		Seven Falls		
	e	1 45 18		
	L	2 03		
	F	2 51		
		Ottawa		
92 April 11	e_E	11 35.6		
	e_E	11 40.5		
	L	11 42		
	F	11 53		
		Ottawa		
93 April 11	e_E	15 47.6		
	eL	16 18		
	F	17 07		
		Victoria		
	e	15 41 45		
	L	16 03		
	F	16 37		
		Ottawa		
96 April 15	H	2 35.6	7160	USCGS. gives:-
	P	2 46 10		ϕ = 56° N.
	PP	2 48 39		λ = 164° E.
	PPP	2 50.2		
	S	2 54 56		
	SS	2 59 14		
	SSS	3 02.3		
	L	3 06		
	F	3 13		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM April 15, 1945 to April 15, 1945 No. 13

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Victoria		
96 April 15 (Cont'd)	H	2 35.9	4380	
	P	2 43 23		
	PPP	2 45 30		
	S	2 49 34		
	SS	2 53 23		
	L	2 56		
	F	5 57		
		Saskatoon		
	H	2 35.8	5165	
	P	2 44 16		
	S	2 51 10		
	SS	2 54 51		
	L	3 00		
	F	5 57		
		Seven Falls		
	H	2 35.8	7120	
	P	2 46 17		
	iS	2 55 01		
	SSS	3 02 09		
	L	3 06		
	F	6 24		
		Shawinigan Falls		
	H	2 35.6	7220	
	P	2 46 11		
	PP	2 48.6		
	S	2 55 00		
	SS	2 59		
	L	3 12		
	F	4 32		
		Ottawa		
98 April 15	H	19m50.8	3690	USCGS. gives:-
	PZ	19 57 32		ϕ = 22°5 N.
	S	20 03 00		λ = 108° W.
	SS	20 05.0		
	L	20 08		
	F	21 09		
		Victoria		
	e	19 58.0		
	e	20 01.2		
	L	20 05		
	F	21 01		
		Saskatoon		
	e	20 01.6		
	L	20 07		
	F	20 27		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM April 15, 1945 to April 21, 1945 No. 14

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Seven Falls		
98 April 15 (Cont'd)	e	19 57.3		
	eS?	20 04.0		
	L	20 09		
	F	21 16		
		Seven Falls		
101 April 18	e	12 50.0		
	L	13 19		
	F	14 16		
		Ottawa		
103 April 19	e_E	13 25		
	e_N	13 32.8		
	L	14 07		
	F	15 34		
		Victoria		
	H	12 59ca.	12,800ca.	
	P'	13 17.8		
	PS	13 28.1		
	SS	13 34.2		
	L	13 51		
	F	15 57		
		Saskatoon		
	e	13 31.4		
	L	13 55		
	F	15 42		
		Seven Falls		
	e	13 24.9		
	e	13 35.0		
	e	13 42.4		
	L	14 06		
	F	16 01		
		Victoria		
105 April 20	e	22 58.2		
	L	23 18		
	F	0 00		
		Seven Falls		
	e	23 04.4		
	L	23 36		
	F	0 38		
		Ottawa		
107 April 21	H	17 13.7	4200	Tacubaya gives:-
	P	17 21 00		ϕ = 18°.5 N.
	PP	17 22 17		λ = 100°.5 W.
	e	17 26 21		
	S	17 27 00		USCGS. gives:-
	SS	17 29.0		ϕ = 19°.3 N.
	L	17 32		λ = 100°.6 W.
	F	18 11		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM April 21, 1945 to April 29, 1945 No. 15

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Victoria		
107 April 21 (Cont'd)	e	17 21 22		
	L	17 29		
	F	17 57		
		Saskatoon		
	e	17 21 02		
	e	17 22 18		
	L	17 29		
	F	17 47		
		Seven Falls		
	e	17 21.6		
	e	17 22 56		
	S	17 27 17		
	L	17 33		
	F	18 20		
		Shawinigan Falls		
	P	17 21 19		
	PP	17 22 47		
	e	17 29		
	L	17 35		
	F	17 44		
		Ottawa		
113 April 23	H	6 20ca.	14,500ca.	
	PP	6 41 08		
	e_E	6 42 44		
	S	6 49 27		
	PPS	6 53.0		
	SS	6 58		
	e	7 06		
	L	7 28		
	F	7 51		
		Saskatoon		
	e	6 55		
	L	7 20		
	F	7 33		
		Seven Falls		
	e	6 49.5		
	L	7 07		
	F	8 20		
		Ottawa		
116 April 29	e_Z	20 25 27		
	e	20 32.5		
	L	20 35		
	F	20 53		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM April 29, 1945 to April 30, 1945 No. 16

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Victoria		
116 April 29 (Cont'd)	H	20 16.3	190	
	P_2	20 16 48		
	S_2	20 17 10		
	F	20 49		
		Saskatoon		
	e	20 21.1		
	L	20 22		
	F	20 33		
		Seven Falls		
	e	20 32.6		
	L	20 37		
	F	21 28		
		Shawinigan Falls		
	e	20 25.7		
	L	20 33		
	F	20 41		

W. W. Doxsee.

EARTHQUAKE CORRELATION TABLE

Month April, 1945

No.	Date	Ottawa	Victoria	Saskatoon	Seven Falls		Shawinigan	**
					M. S.	W. A.		
82	1	.....	.....	.....	.....	1 03+0 01P	1 03+0 02P	..
83	1	23 59+0 42r	.....	23 52+0 56r	23 57+0 51r	0 05+0 10L	0 03+0 10L	..
84	6	.....	.....	.....	0 11+0 22L	.....	.....	..
85	6	18 47+0 18L	.....	.....	18 50+0 18L	.....	.....	..
86	7	.....	.....	.....	22 03+0 09L	.....	.....	..
87	8	2 00+0 35L	.....	1 50+0 16L	2 01+0 44L	.....	.....	..
88	10	1 45+0 45u	1 40+0 26L	.....	.....	.....	1 35+0 03P	..
89	10	17 12+0 22L	17 07+0 16L	.....	17 08+0 29L	.....	.....	..
90	11	.....	2 07+0 10L	.....	2 27+0 06L	.....	.....	..
91	11	6 45+0 06L	.....	.....	6 47+0 06L	.....	.....	..
92	11	11 36+0 17r	11 24+0 16L	.....	11 44+0 14L	.....	.....	..
93	11	15 48+1 19u	15 42+0 55u	.....	16 14+1 35L	.....	.....	..
94	12	0 29+0 0.4P*	.....	.....	.....	.....	.....	..
95	13	16 15+0 01v*	.....	.....	.....	.....	.....	..
96	15	2 46+3 27U	2 43+3 14R	2 44+3 13U	2 46+3 38U	2 46+1 49U	2 46+1 46U	A
97	15	3 52+0 03P*	.....	.....	.....	.....	3 52+0 03P	..
98	15	19 58+1 11r	19 58+1 03r	20 02+0 25r	19 57+1 20r	20 10+0 16L	20 09+0 12L	B
99	17	.....	.....	.....	.....	.....	7 06+0 0.2v	..
100	17	8 35+0 03L	.....	.....	.....	.....	.....	..
101	18	13 49+0 08L	.....	.....	12 50+1 26u	.....	.....	..
102	18	14 22+0 46L	14 27+0 38L	14 42+0 19L	.....	.....	.....	..
103	19	13 25+2 09u	13 18+2 39u	13 31+2 11u	13 25+2 36u	.....	.....	C
104	19	.....	18 38+0 15L	18 39+0 08L	18 37+0 29L	.....	.....	..
105	20	23 28+0 48L	22 58+1 02u	23 25+0 25L	23 04+1 34u	.....	.....	..
106	21	5 10+0 07L	.....	.....	.....	.....	.....	..
107	21	17 21+0 50r	17 21+0 36r	17 21+0 26r	17 22+0 58r	17 22+0 24r	17 21+0 22r	D
108	22	4 43+0 35L	4 13+0 53L	.....	4 46+1 19L	.....	.....	..
109	22	10 04+0 15L	9 56+0 19L	9 59+0 11L	10 05+0 03L	.....	10 04+0 07L	..
110	22	.....	15 46+0 08L	.....	.....	.....	.....	..
111	22	22 31+0 07L	22 23+0 11L	.....	.....	.....	.....	..
112	23	.....	6 04+0 12L	.....	.....	.....	.....	..
113	23	6 41+1 10u	6 46+1 34u	6 55+0 38u	6 49+1 31u	.....	.....	E
114	23	8 13+0 10L	.....	8 03+0 09L	.....	.....	.....	..
115	28	.....	.....	.....	16 02+0 10L	.....	.....	..
116	29	20 25+0 28r	20 17+0 32V	20 21+0 12r	20 33+0 55r	20 33+0 10r	20 26+0 15r	F
117	30	.....	17 31+0 23L	.....	17 51+0 19L	.....	.....	..

CORRELATION OF EARTHQUAKES
April, 1945

N O T E S

A :	Ottawa	Δ = 7,160 km.	H = $2^h 35^m.6$ U.T.
	Victoria	Δ = 4,380 km.	H = 2 35.9 U.T.
	Saskatoon	Δ = 5,165 km.	H = 2 35.8 U.T.
	Seven Falls	Δ = 7,120 km.	H = 2 35.8 U.T.
	Shawinigan Falls	Δ = 7,220 km.	H = 2 35.6 U.T.
B :	Ottawa	Δ = 3,690 km.	H = $19^h 50^m.8$ U.T.
C :	Ottawa	Δ = 12,800 km.	H = $12^h 59^m$ U.T.
D :	Ottawa	Δ = 4,200 km.	H = $17^h 13^m.7$ U.T.
E :	Ottawa	Δ = 14,500 km. ca.	H = $6^h 20^m$ U.T.
F :	Victoria	Δ = 190 km.	H = $20^h 16^m.3$ U.T.

Dominion Observatory,
Ottawa, Canada,
June 7, 1945.

SEISMOLOGICAL SERVICE OF CANADA

SEISMOLOGICAL BULLETIN

May

1945

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DOMINION OBSERVATORY

OTTAWA - CANADA

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SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer
Ernest A. Hodgson, Seismologist
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

ϕ = 45°23'38" N. λ = 75°42'57" W. h = 83m.

Time correction within 0.10s.

Foundation: boulder clay over limestone

Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

ϕ = 44°38' N. λ = 63°36' W. h = 46m.

Time correction from recorded radio time signals

Foundation: Carbonaceous slate

Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

ϕ = 47°07!4 N. λ = 70°49!6 W. h = 232m. ca.

Time correction from recorded radio time signals

Foundation: Solid granite of Canadian Shield

Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

ϕ = 48°31'14" N. λ = 123°24'56" W. h = 197m.

Time correction from recorded radio time signals

Foundation: rock

Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.

SHAWINIGAN FALLS

Shawinigan Water and Power Company

ϕ = 46°33'.1 N. λ = 72°45.8' W. h = 60m. ca.

Time correction from recorded radio time signals

Foundation: solid granite of Canadian Shield

Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15g.

SASKATOON

University of Saskatchewan

ϕ = 52°08' N. λ = 106°38' W. h = 515m.

Time correction from radio time signals

Foundation: clay and sand

Instrument: Milne-Shaw NE component, designated SN, photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

KIRKLAND LAKE

Lake Shore Mines

ϕ = 48°09' N. λ = 80°03' W. h = 320m.

Time correction from recorded radio time signals

Foundation: rock

Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

DETERMINED CONSTANTS

INSTRUMENT	To	V	ε	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR 10^{-6} g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2500			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	10.0	150	20:1	18 mm.	
KL (Kirkland Lake)	1/30	2×10^4	at 30	cycles	

NOTE:- Universal Time used throughout.

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM May 1, 1945 to May 19, 1945 No. 17

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
120 May 1	e	16 46 44		
	L	16 56		
	F	17 03		
		Ottawa		
125 May 3	H	21 34.8	150	
	P_2	21 35 13		
	S_2	21 35 30.5		
	e	21 35 38		
	F	21 36		
		Ottawa		
128 May 9	e	3 49 45		
	e	3 52 21		
	L	4 08		
	F	4 38		
		Seven Falls		
	e	3 52 20		
	e	3 54.8		
	L	4 10		
	F	5 10		
		Ottawa		
129 May 10	H	17 53.5	6460	
	P	18 03 23		
	S	18 11 30		
	L	18 21		
	F	18 42		
		Victoria		
	e	18 12.9		
	L	18 32		
	F	18 46		
		Seven Falls		
	e	18 11.9		
	L	18 22		
	F	19 06		
		Ottawa		
133 May 14	i	21 55 40		
	i	21 55 46		
	F	21 56		
		Ottawa		
136 May 19	H	7 55.8	3850	USCGS. gives:-
	P	8 02 39		ϕ = 16°.0 N.
	S	8 08 17		λ = 98°.4 W.
	L	8 12		
	F	9 20		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM May 19, 1945 to May 19, 1945 No. 18

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Victoria		
136 May 19 (Cont'd)	H	7 55.9	4210	
	P	8 03 11		
	S	8 09 12		
	L	8 15		
	F	9 20		
		Saskatoon		
	H	7 55.8	4000	
	P	8 02 53		
	S	8 08 40		
	L	8 15		
	F	9 16		
		Halifax		
	e	8 03.5		
	L	8 10		
	F	8 49		
		Seven Falls		
	H	7 55.8	4280	
	P	8 03 08		
	S	8 09 13		
	L	8 18		
	F	9 47		
		Shawinigan Falls		
	H	7 55.8	4100	
	P	8 02 58		
	S	8 08 52		
	L	8 19		
	F	8 43		
		Ottawa		
137 May 19	H	15 07.2	4010	USCGS. gives:-
	P	15 14 15		ϕ = 40°.2 N.
	PP	15 15.6		λ = 126°.8 W.
	PPP	15 15 48		
	S	15 20 03		
	eL	15 25		
	F	17 13		
		Victoria		
	H	15 07.0	985	
	P	15 09 10		
	S	15 10 53		
	L	15 13		
	F	18 05		
		Halifax		
	e_E	15 15 29		
	e_N	15 22.3		
	e	15 25 40		
	L	15 31		
	F	16 14		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM May 19, 1945 to May 31, 1945 No. 19

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Seven Falls		
137 May 19 (Cont'd)	H	15 07.0	4455	
	P	15 14 38		
	PP	15 15 59		
	S	15 20 53		
	e	15 25		
	L	15 28		
	F	18 03		
		Shawinigan Falls		
	H	15 07.2	4180	
	P	15 14 30		
	S	15 20 29		
	L	15 25		
	F	15 55		
		Victoria		
139 May 21	e	8 11 24		Local.
	e	8 11 32		
	F	8 13		
		Victoria		
141 May 28	e	10 25.7		
	L	10 45		
	F	11 19		

W. W. Doxsee.

EARTHQUAKE CORRELATION TABLE

Month May, 1945

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
118	1	6 08+0 02P	6 20+0 03L	.....	.....	6 17+0 23L	.....	6 08+0 06P	..
119	1	8 30+0 17L	8 19+0 11L	8 20+0 10L	.....	8 31+0 24L	.....	.....	..
120	1	16 47+0 16u	.....	.....	.....	16 57+0 21L	16 47+0 02P	.....	..
121	2	.....	.....	.....	.....	0 04+0 08L	.....	.....	..
122	2	.....	.....	.....	.....	.....	18 06+0 03P	.....	..
123	2	.....	19 50+0 08L	.....	.....	20 09+0 04L	.....	.....	..
124	3	.....	.....	.....	.....	16 18+0 20L	.....	.....	..
125	3	21 35+0 01v*	.....	.....	.....	.....	.....	.....	A
126	5	.....	.....	.....	.....	14 56+0 21L	.....	.....	..
127	5	20 45+0 06L	.....	.....	.....	.....	.....	.....	..
128	9	3 50+0 48u	.....	.....	.....	3 55+1 15u	3 52+0 02P	3 50+0 06P	..
129	10	18 03+0 39u	18 13+0 33u	.....	.....	18 12+0 54u	.....	18 03+0 03P	B
130	11	.....	.....	.....	.....	22 42+0 07L	.....	.....	..
131	13	20 43+0 32L	20 38+0 24L	20 43+0 18L	20 50+0 08L	20 47+0 51L	.....	20 46+0 08L	..
132	13	21 30+0 06L	.....	.....	.....	.....	.....	.....	..
133	14	21 56+0 0.3d	.....	.....	.....	.....	.....	.....	..
134	18	.....	.....	.....	.....	.....	.....	23 48+0 04P	..
135	19	3 49+0 17L	.....	.....	.....	3 35+0 36L	.....	.....	..
136	19	8 03+1 17r	8 03+1 17r	8 03+1 13r	8 03+0 46r	8 03+1 44r	8 03+0 43r	8 03+0 40r	C
137	19	15 14+1 59R	15 09+2 56R	.....	15 15+0 59R	15 15+2 48R	15 15+0 42R	15 14+0 41R	D
138	20	16 48+0 09L	16 45+0 09L	.....	.....	16 50+0 06L	.....	.....	..
139	21	.....	8 11+0 02d	.....	.....	.....	.....	.....	..
140	22	18 13+0 0.5P*	.....	.....	.....	.....	.....	.....	..
141	28	10 40+0 52L	10 26+0 53u	.....	.....	10 38+0 47L	.....	.....	..
142	28	.....	.....	.....	.....	17 59+0 09L	.....	.....	..

CORRELATION OF EARTHQUAKES
May, 1945

N O T E S

A :	Ottawa	Δ = 150 km.	H = $21^h34^m.8$ U.T.
B :	Ottawa	Δ = 6460 km.	H = $17^h53^m.5$ U.T.
C :	Ottawa	Δ = 3850 km.	H = $7^h55^m.8$ U.T.
	Victoria	Δ = 4210 km.	H = 7 55.9 U.T.
	Saskatoon	Δ = 4000 km.	H = 7 55.8 U.T.
	Seven Falls	Δ = 4280 km.	H = 7 55.8 U.T.
	Shawinigan Falls	Δ = 4100 km.	H = 7 55.8 U.T.
D :	Ottawa	Δ = 4010 km.	H = $15^h07^m.2$ U.T.
	Victoria	Δ = 985 km.	H = 15 07.0 U.T.
	Seven Falls	Δ = 4455 km.	H = 15 07.0 U.T.
	Shawinigan Falls	Δ = 4180 km.	H = 15 07.2 U.T.

Dominion Observatory,
Ottawa, Canada,
August 8, 1945.

SEISMOLOGICAL BULLETINS RECEIVED
May and June, 1945

We acknowledge, with thanks, the receipt of the following seismological publications and bulletins:-

STATIONS	BULLETINS	RECEIVED
Strasbourg	January to October, 1944	May 3
New Zealand Stations	February, 1945	" 7
Berkeley	July to December, 1944	" 9
Santa Clara	March, 1945	" 10
Pasadena	Local Shocks August to October, 1944	" 14
Perth	October to December, 1944	" 15
Brisbane	December, 1944	" 17
Brisbane	January and February, 1945	" 23
Reykjavik	Years 1940 to 1942	June 2
Coimbra	January, 1945	" 2
Coimbra	February, 1945	" 11
Santa Clara	May, 1945	" 18
Pasadena	April to June, 1944	" 25
Apia	January to March, 1945	" 27
Saint Louis and Auxiliary Stations	Preliminaries for December 7/44; January 1, 12; February 10, 26; March 17, 18; and Supplements for January-February, 1945.	" 28
Wellington	Provision Bulletin No. P-157 for March, 1945	" 30

DOMINION OBSERVATORY,
OTTAWA - CANADA.

SEISMOLOGICAL SERVICE OF CANADA

SEISMOLOGICAL BULLETIN

June

1945

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DOMINION OBSERVATORY
OTTAWA - CANADA

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SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer
Ernest A. Hodgson, Seismologist
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

ϕ = 45°23'38" N. λ = 75°42'57" W. h = 83m.

Time correction within 0.10s.

Foundation: boulder clay over limestone

Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

ϕ = 44°38' N. λ = 63°36' W. h = 46m.

Time correction from recorded radio time signals

Foundation: Carbonaceous slate

Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

ϕ = 47°07'.4 N. λ = 70°49'.6 W. h = 232m. ca.

Time correction from recorded radio time signals

Foundation: Solid granite of Canadian Shield

Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

ϕ = 48°31'14" N. λ = 123°24'56" W. h = 197m.

Time correction from recorded radio time signals

Foundation: rock

Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.

SHAWINIGAN FALLS

Shawinigan Water and Power Company

ϕ = 46°33'.1 N. λ = 72°45.8'W. h = 60m. ca.

Time correction from recorded radio time signals

Foundation: solid granite of Canadian Shield

Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15g.

SASKATOON

University of Saskatchewan

ϕ = 52°08' N. λ = 106°38' W. h = 515m.

Time correction from radio time signals

Foundation: clay and sand

Instrument: Milne-Shaw NE component, designated SN, photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

KIRKLAND LAKE

Lake Shore Mines

ϕ = 48°09' N. λ = 80°03' W. h = 320m.

Time correction from recorded radio time signals

Foundation: rock

Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

DETERMINED CONSTANTS

INSTRUMENT	To	V	ε	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR 10^{-6} g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2500			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	10.0	150	20:1	18 mm.	
KL (Kirkland Lake)	1/30	2×10^4	at 30	cycles	

NOTE:- Universal Time used throughout.

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM June 1, 1945 to June 1, 1945 No. 20

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
143 June 1	H	15 13.8	6290	
	P_Z	15 23 29		
	S	15 31 26		
	e_N	15 33 12		
	L	15 40		
	F	16 14+		
		Victoria		
	H	15 13.9	3200	
	P	15 19 54		
	S	15 24 51		
	L	15 28		
	F	16 55		
		Saskatoon		
	e	(15 26)		
	L	(15 31)		
	F	(16 35)		
		Seven Falls		
	e	15 31 41		
	L	15 44		
	F	17 11		
		Shawinigan Falls		
	H	15 13.9	6345	
	P	15 23 36		
	S	15 31 36		
	F	15 34		
		Ottawa		
144 June 1	H	15 44.0	6280	
	P_Z	15 53 38		
	S_E	16 01 34		
	L	16 14		
	F	16 53		
		Shawinigan Falls		
	H	15 44.0	6345	
	P	15 53.7		
	S	16 01.7		
	F	17 04		
		Ottawa		
146 June 1	H	22 24.4	5630	
	P_Z	22 33 22		
	S	22 40 42		
	L	22 46		
	F	23 05		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM June 1, 1945 to June 4, 1945 No. 21

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
148 June 3	H	13 05.7	4020	USCGS. gives:-
	P	13 12 48		φ = 8°.3 N.
	PPP	13 14 24		λ = 82°.6 W.
	S	13 18 37		
	SSS	13 21.3		
	L	13 22.2		
	F	14 37		
		Victoria		
	H	13 05.7	6020	
	P	13 15 03		
	S	13 22 45		
	L	13 32		
	F	14 38		
		Saskatoon		
	H	(13 05.5)	5280	
	P	(13 14)		
	S	(13 21)		
	SS	(13 25)		
	L	(13 32)		
	F	(14 20)		
		Halifax		
	H	13 05.5	5800	
	P	13 14.7		
	S	13 22.2		
	L	13 28		
	F	13 49		
		Seven Falls		
	H	13 05.7	4310	
	P	13 13 09		
	PPP	13 14 58		
	S	13 19 16		
	SSS	13 22.4		
	L	13 24		
	F	15 25		
		Shawinigan Falls		
	H	13 05.7	4200	
	P	13 13 02		
	S	13 19 02		
	SSS	13 22 42		
	L	13 27		
	F	13 46		
		Victoria		
150 June 4	e	12 33.4		
	L	13 06		
	F	13 28		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM June 20, 1945 to June 22, 1945 No. 23

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Seven Falls		
166 June 20 (Cont'd)	e	1 45.9		
	L	1 56		
	F	2 20		
		Seven Falls		
167 June 20	e	9 16.5		
	L	9 50		
	F	11 18		
		Ottawa		
169 June 20	H	17 35.3	8600	USCGS. gives:- φ = 45° N. λ = 153° E.
	P	17 47 11		
	PPN	17 50.2		
	S	17 57 05		
	SSN	18 02.4		
	SSSE	18 05.7		
	L	18 13		
	F	19 33		
		Victoria		
	H	17 35.6	5845	
	P	17 44 46		
	S	17 52 18		
	L	17 59		
	F	19 27		
		Saskatoon		
	e	17 53.6		
	L	18 09		
	F	18 58		
		Seven Falls		
	e	17 57 06		
	L	18 16		
	F	19 15		
		Shawinigan Falls		
	H	17 35.3	8650	
	P	17 47 13		
	S	17 57 09		
	L	18 28		
	F	18 35		
		Ottawa		
171 June 22	H	9 18.8	8940	USCGS. gives:- φ = 43° N. λ = 146° E.
	P	9 30 58		
	S	9 41 06		
	PS	9 42.0		
	L	9 59		
	F	10 48		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM June 22, 1945 to June 24, 1945 No. 24

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Victoria		
171 June 22 (Cont'd)	H	9 19.2	6235	
	P	9 28 46		
	S	9 36 40		
	SSS	9 43		
	F	10 26		
		Saskatoon		
	H	9 19.2	6855	
	P	9 29.4		
	S	9 37 54		
	L	9 49		
	F	10 28		
		Seven Falls		
	H	9 18.8	8960	
	P	9 30 58		
	S	9 41 07		
	SSS	9 50.5		
	L	9 59		
	F	11 22		
		Shawinigan Falls		
	H	9 18.8	8960	
	P	9 30 57		
	S	9 41 06		
	F	9 55		
		Ottawa		
172 June 22	e_N	18 14.4		
	e	18 25 06		
	L	18 47		
	F	19 56		
		Victoria		
	e	18 14.7		
	e	18 18 39		
	e	18 25 18		
	L	18 55		
	F	19 40		
		Saskatoon		
	e	18 24 55		
	L	18 55		
	F	19 12		
		Seven Falls		
	e	18 14.5		
	e	18 24 49		
	L	18 53		
	F	20 37		
		Ottawa		
174 June 24	e_N	20 10 00		
	e	20 19 56		
	F	20 23		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM June 24, 1945 to June 27, 1945 No. 25

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
177 June 26	H	21 30.2	150	
	P_2	21 30 35		
	S_2	21 30 52.5		
	F	21 31.3		
		Ottawa		
178 June 27	H	13 08.5	3620	USCGS. gives:-
	P	13 15 06		φ = 26° N.
	S	13 20 30		λ = 110° W.
	SS_N	13 22.5		Tacubaya gives:-
	eL	13 24		φ = 27°39' N.
	F	16 hrs. ca.		λ = 112°38' W.
		Victoria		
	H	13 08.2	2755	
	P	13 13 33		
	S	13 17 59		
	L	13 20		
	F	16 30 ca.		
		Saskatoon		
	H	13 08.4	2800	
	P	13 13 51		
	S	13 18 20		
	L	13 21		
	F	15 15		
		Halifax		
	e	13 22.2		
	L	13 28		
	F	14 35		
		Seven Falls		
	H	13 08.6	3950	
	P	13 15 38		
	S	13 21 22		
	L	13 26		
	F	16 24		
		Shawinigan Falls		
	e	13 15 31		
	L	13 24		
	F	14 10		
		Ottawa		
179 June 27	H	18 08.1	3690	USCGS. gives:-
	P_Z	18 14 50		φ = 27° N.
	S	18 20 18		λ = 112° W.
	SSS_N	18 23.0		
	L	18 25		
	F	19 22		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM June 27, 1945 to June 30, 1945 No. 26

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Victoria		
179 June 27 (Cont'd)	H	18 08.0	2745	
	P	18 13.3		
	S	18 17 43		
	L	18 20		
	F	19 36		
		Saskatoon		
	e	18 18.4		
	L	18 22		
	F	19 00		
		Seven Falls		
	H	18 08.1	4200	
	P	18 15 23		
	S	18 21.4		
	L	18 28		
	F	19 36		
		Shawinigan Falls		
	e	18 15 10		
	L	18 27		
	F	18 38		
		Ottawa		
183 June 28	H	20 32.1	185	
	P_2	20 32 35		
	S_2	20 32 56		
	F_2	20 33.2		
		Ottawa		
185 June 30	H	5 31.5	4800	USCGS. gives:-
	P	5 39 28		φ = 17° N.
	PP	5 41 12		λ = 116° W.
	S	5 46 02		
	SSS	5 49 20		
	L	5 52		
	F	8 35		
		Victoria		
	H	5 31.6	3455	
	P	5 37 58		
	PP	5 38.9		
	S	5 43 11		
	L	5 47		
	F	8 26		
		Saskatoon		
	H	5 31.6	3880	
	P	5 38 26		
	PPP	5 39 58		
	S	5 44 06		
	L	5 51		
	F	7 51		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM June 30, 1945 to June 30, 1945 No. 27

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Halifax		
185 June 30 (Cont'd)	H	5 31.3	5700	
	P	5 40 23		
	S	5 47.8		
	L	5 55		
	F	6 57		
		Seven Falls		
	H	5 31.5	5220	
	P	5 39 57		
	S	5 46 54		
	SS	5 50.5		
	L	5 55		
	F	9 17		
		Shawinigan Falls		
	H	5 31.5	5060	
	P	5 39 47		
	S	5 46 35		
	SS	5 49.6		
	L	5 53		
	F	6 36		

W. W. Doxsee.

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM June 4, 1945 to June 20, 1945 No. 22

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
155 June 12	H	7 58.3	150	
	P_2	7 58 43		
	S_2	7 59 00.5		
	S_1	7 59 03		
	F	8 02		
		Shawinigan Falls		
	H	7 58.3	215	
	P_2	7 58 51		
	S_2	7 59 15.5		
	F	8 03		
		Ottawa		
159 June 14	H	23 51.5	140	
	P_2	23 51 54.5		
	S_2	23 52 10.5		
	F	23 52.5		
		Victoria		
161 June 15	H	22 24.4	65	Local.
	P_2	22 24 36		
	S_2	22 24 44		
	F	22 28		
		Ottawa		
165 June 18	H	15 20.1	460	Felt at Seven Falls and vicinity.
	P	15 21 08		
	S	15 21 58		
	F	15 27		
		Seven Falls		
	H	15 20.1	20	
	P_1	15 20 10		
	S_1	15 20 12.6		
	F	15 24		
		Shawinigan Falls		
	H	15 20.1	150	
	P_2	15 20 30		
	S_2	15 20 47.5		
	F	15 30		
		Ottawa		
166 June 20	H	1 24.0	8560	
	P_N	1 35 50		
	PP	1 38.8		
	S	1 45 42		
	SSS	1 54		
	L	2 01		
	F	2 44		
		Saskatoon		
	e	1 42.1		
	L	1 57		
	F	2 34		

EARTHQUAKE CORRELATION TABLE

Month June 1945

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls M. S.	Seven Falls W. A.	Shawinigan	**
143	1	15 23+0 51u	15 20+1 35r	15 26+1 09u	15 44+0 08L	15 32+1 39u	15 32+0 19u	15 24+0 10u	A
144	1	15 54+1 00u	.....	.....	.....	.....	.....	15 54+0 10u	B
145	1	17 08+0 05L	16 58+0 08L	16 58+0 05L	.....	.....	.....	17 09+0 04L	..
146	1	22 33+0 32u	23 03+0 13L	.....	.....	22 45+0 15L	.....	22 33+0 02P	C
147	2	.....	10 40+0 08L	.....	.....	.....	.....	.....	..
148	3	13 13+1 24R	13 15+1 23u	13 14+1 06u	13 15+0 34u	13 13+2 12R	13 13+0 37R	13 13+0 33R	D
149	3	.....	.....	15 26+0 19L	.....	.....	.....	.....	..
150	4	12 56+0 38L	12 33+0 55u	.....	.....	12 57+0 51L	.....	.....	..
151	4	16 10+0 12L	.....	.....	.....	16 10+0 12L	.....	.....	..
152	6	1 49+0 19L	.....	.....	.....	1 46+0 42L	.....	.....	..
153	6	7 11+0 29L	.....	7 23+0 16L	.....	7 10+0 40L	.....	.....	..
154	7	.....	12 11+0 50L	12 41+0 24L	.....	12 59+0 44L	.....	.....	..
155	12	7 59+0 03V	.....	.....	.....	.....	8 00+0 0.6v	7 59+0 04v	E
156	12	.....	.....	.....	.....	16 53+1 04L	.....	.....	..
157	14	0 57+0 18L	.....	.....	.....	0 44+0 30L	.....	.....	..
158	14	3 48+0 05L	.....	.....	.....	3 50+0 04L	.....	.....	..
159	14	23 52+0 0.6v*	.....	.....	.....	.....	.....	.....	F
160	15	.....	.....	.....	.....	4 47+0 12L	.....	.....	..
161	15	.....	22 25+0 03d	.....	.....	.....	.....	.....	G
162	16	20 06+0 16L	.....	.....	.....	20 05+0 17L	.....	.....	..
163	17	17 01+0 18L	.....	17 01+0 12L	.....	16 59+0 35L	.....	.....	..
164	18	.....	.....	13 02+0 08L	.....	.....	.....	.....	..
165	18	15 21+0 06V	.....	.....	.....	15 20+0 02D	15 20+0 04D	15 20+0 10V	H
166	20	1 36+1 08u	1 41+0 51u	1 42+0 52u	.....	1 46+0 35u	.....	1 36+0 02P	J
167	20	9 49+0 29L	9 35+0 17L	9 41+0 27L	.....	9 16+2 02u	.....	.....	..
168	20	.....	.....	.....	.....	12 46+0 30L	.....	.....	..
169	20	17 47+1 46u	17 45+1 42u	17 54+1 04u	.....	17 57+1 18u	.....	17 47+0 48u	K
170	22	.....	.....	.....	.....	1 43+0 26L	.....	.....	..
171	22	9 31+1 17u	9 29+0 57u	9 29+0 59u	9 41+0 08L	9 31+1 51u	9 31+0 26u	9 31+0 24u	L
172	22	18 14+1 42u	18 15+1 25u	18 25+0 47u	18 54+0 16L	18 25+2 12u	.....	.....	..
173	23	.....	.....	.....	.....	21 00+0 03L	.....	20 45+0 02P	..
174	24	20 10+0 13P	.....	.....	.....	20 20+0 22P	20 20+0 03P	.....	..
175	24	21 02+0 05L	.....	.....	.....	21 02+0 04L	21 02+0 03L	21 01+0 04L	..
176	25	8 13+0 21L	.....	8 27+0 13L	.....	8 12+0 29L	8 08+0 08P	8 13+0 04L	..

EARTHQUAKE CORRELATION TABLE

Month June, 1945

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
177	26	21 31+0 0.7v*	.....	.....	.....	.....	.....	.....	M
178	27	13 15+2 45R	13 14+3 16R	13 14+2 01R	13 22+1 13R	13 17+3 04R	13 16+1 00R	13 16+0 54R	N
179	27	18 15+1 07r	18 13+1 23r	18 18+0 42u	18 29+0 22L	18 21+1 15r	18 15+0 26r	18 15+0 23r	P
180	27	20 14+0 05L	.....	.....	.....	20 16+0 07L	.....	.....	..
181	28	.....	.....	.....	.....	8 18+0 09L	.....	.....	..
182	28	17 36+0 11L	.....	.....	.....	17 38+0 10L	.....	17 37+0 03L	..
183	28	20 33+0 0.6v*	.....	.....	.....	.....	.....	.....	S
184	29	4 43+0 01P	.....	.....	.....	5 06+0 13L	.....	.....	..
185	30	5 39+2 56R	5 38+2 48R	5 38+2 13R	5 40+1 17U	5 40+3 37U	5 40+1 00U	5 40+0 56U	R
186	30	9 54+0 11L	.....	.....	.....	9 57+0 17L	.....	.....	..

CORRELATION OF EARTHQUAKES
June, 1945

N O T E S

A :	Ottawa	Δ = 6290 km.	H = $15^h13^m.8$ U.T.
	Victoria	Δ = 3200 km.	H = 15 13.9 U.T.
	Shawinigan Falls	Δ = 6345 km.	H = 15 13.9 U.T.
B :	Ottawa	Δ = 6280 km.	H = $15^h44^m.0$ U.T.
	Shawinigan Falls	Δ = 6345 km.	H = 15 44.0 U.T.
C :	Ottawa	Δ = 5630 km.	H = $22^h24^m.4$ U.T.
D :	Ottawa	Δ = 4020 km.	H = $13^h05^m.7$ U.T.
	Victoria	Δ = 6020 km.	H = 13 05.7 U.T.
	Saskatoon	Δ = 5280 km.	H = (13 05.5) U.T.
	Halifax	Δ = 5800 km.	H = 13 05.5 U.T.
	Seven Falls	Δ = 4310 km.	H = 13 05.7 U.T.
	Shawinigan Falls	Δ = 4200 km.	H = 13 05.7 U.T.
E :	Ottawa	Δ = 150 km.	H = $7^h58^m.3$ U.T.
	Shawinigan Falls	Δ = 215 km.	H = 7 58.3 U.T.
F :	Ottawa	Δ = 140 km.	H = $23^h51^m.5$ U.T.
G :	Victoria	Δ = 65 km.	H = $22^h24^m.4$ U.T.
H :	Ottawa	Δ = 460 km.	H = $15^h20^m.1$ U.T.
	Seven Falls	Δ = 20 km.	H = 15 20.1 U.T.
	Shawinigan Falls	Δ = 150 km.	H = 15 20.1
J :	Ottawa	Δ = 8560 km.	H = $1^h24^m.0$ U.T.
K :	Ottawa	Δ = 8600 km.	H = $17^h35^m.3$ U.T.
	Victoria	Δ = 5845 km.	H = 17 35.6 U.T.
	Shawinigan Falls	Δ = 8650 km.	H = 17 35.3 U.T.
L :	Ottawa	Δ = 8940 km.	H = $9^h18^m.8$ U.T.
	Victoria	Δ = 6235 km.	H = 9 19.2 U.T.
	Saskatoon	Δ = 6855 km.	H = 9 19.2 U.T.
	Seven Falls	Δ = 8960 km.	H = 9 18.8 U.T.
	Shawinigan Falls	Δ = 8960 km.	H = 9 18.8 U.T.
M :	Ottawa	Δ = 150 km.	H = $21^h30^m.2$ U.T.
N :	Ottawa	Δ = 3620 km.	H = $13^h08^m.5$ U.T.
	Victoria	Δ = 2755 km.	H = 13 08.2 U.T.
	Saskatoon	Δ = 2300 km.	H = 13 08.4 U.T.
	Seven Falls	Δ = 3950 km.	H = 13 08.6 U.T.
P :	Ottawa	Δ = 3690 km.	H = $18^h08^m.1$ U.T.
	Victoria	Δ = 2745 km.	H = 18 08.0 U.T.
	Seven Falls	Δ = 4200 km.	H = 18 08.1 U.T.

CORRELATION OF EARTHQUAKES
June, 1945

N O T E S

Q :	Ottawa	Δ = 185 km.	H = $20^h 32^m.1$ U.T.
R :	Ottawa	Δ = 4800 km.	H = $5^h 31^m.5$ U.T.
	Victoria	Δ = 3455 km.	H = 5 31.6 U.T.
	Saskatoon	Δ = 3880 km.	H = 5 31.6 U.T.
	Halifax	Δ = 5700 km.	H = 5 31.3 U.T.
	Seven Falls	Δ = 5220 km.	H = 5 31.5 U.T.
	Shawinigan Falls	Δ = 5060 km.	H = 5 31.5 U.T.

Dominion Observatory,
Ottawa, Canada,
August 30, 1945.

SEISMOLOGICAL SERVICE OF CANADA

SEISMOLOGICAL BULLETIN

July

1945

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DOMINION OBSERVATORY
OTTAWA - CANADA

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SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer
Ernest A. Hodgson, Seismologist
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

ϕ = 45°23'38" N. λ = 75°42'57" W. h = 83m.

Time correction within 0.10s.

Foundation: boulder clay over limestone

Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

ϕ = 44°38' N. λ = 63°36' W. h = 46m.

Time correction from recorded radio time signals

Foundation: Carbonaceous slate

Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

ϕ = 47°07!4 N. λ = 70°49!6 W. h = 232m. ca.

Time correction from recorded radio time signals

Foundation: Solid granite of Canadian Shield

Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

ϕ = 48°31'14" N. λ = 123°24'56" W. h = 197m.

Time correction from recorded radio time signals

Foundation: rock

Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.

SHAWINIGAN FALLS

Shawinigan Water and Power Company

ϕ = 46°33'.1 N. λ = 72°45.8'W. h = 60m. ca.

Time correction from recorded radio time signals

Foundation: solid granite of Canadian Shield

Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15g.

SASKATOON

University of Saskatchewan

ϕ = 52°08' N. λ = 106°38' W. h = 515m.

Time correction from radio time signals

Foundation: clay and sand

Instrument: Milne-Shaw NE component, designated SN, photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

KIRKLAND LAKE

Lake Shore Mines

ϕ = 48°09' N. λ = 80°03' W. h = 320m.

Time correction from recorded radio time signals

Foundation: rock

Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

DETERMINED CONSTANTS

INSTRUMENT	To	V	ε	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR 10^{-6} g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2500			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	10.0	150	20:1	18 mm.	
KL (Kirkland Lake)	1/30	2×10^4	at 30	cycles	

NOTE:- Universal Time used throughout.

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM July 1, 1945 to July 9, 1945 No. 28

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
187 July 2	e	8 42		
	L	8 46		
	F	9 32		
		Ottawa		
188 July 2	H	13 29.8	380	
	P_2	13 30 48		
	S_2	13 31 31		
	F	13 33.5		
		Shawinigan Falls		
	H	13 30.0	365	
	P	13 30 51		
	S	13 31 31		
	F	13 34		
		Ottawa		
189 July 3	e_Z	4 17 21		
	e	4 25		
	L	4 28		
	F	5 03		
		Saskatoon		
	e	4 20.8		
	L	4 25		
	F	4 38		
		Seven Falls		
194 July 5	ee	12 16		
	L	12 23		
	F	12 40		
		Seven Falls		
196 July 6	H	17 31.9	85	Local.
	P_2	17 32 07		
	S_2	17 32 17		
	F	17 32.7		
		Ottawa		
197 July 6	H	20 40.1	150	
	P_2	20 40 34		
	S_2	20 40 51		
	F	20 41.3		
		Ottawa		
199 July 9	H	16 42.4	4480	USCGS. gives:-
	P	16 50 02		ϕ = 1° N.
	S	16 56 18		λ = 77° W.
	e_F	16 57 14		
	SSS	17 00		
	L	17 05		
	F	17 25		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM July 9, 1945 to July 11, 1945 No. 29

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Seven Falls		
199 July 9 (Cont'd)	H	16 42.3	4800	
	P	16 50 16		
	S	16 56 50		
	L	17 01		
	F	17 27		
		Shawinigan Falls		
	H	16 42.3	4660	
	P	16 50 12		
	S	16 56 38		
	F	17 00		
		Ottawa		
200 July 11	H	0 30.9	4920	
	P	0 39 02		
	PP	0 41.0		
	S	0 45 42		
	SS	0 49		
	L	0 53		
	F	1 25		
		Victoria		
	H	0 30.5	2350	
	P	0 35 11		
	S	0 39 05		
	F	1 14		
		Saskatoon		
	H	(0 31)	3250	No chronometer signals.
	P	(0 37)		
	S	(0 42)		
	L	(0 47)		
	F	(1 30)		
		Halifax		
	e	0 46 21		
	L	0 58		
	F	1 11		
		Seven Falls		
	H	0 30.8	5300	
	P	0 39 23		
	S	0 46 25		
	SSS	0 49 50		
	L	0 54		
	F	1 37		
		Shawinigan Falls		
	H	0 30.7	5110	
	P	0 39 06		
	S	0 45 57		
	L	0 54		
	F	1 04		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM July 11, 1945 to July 15, 1945 No. 30

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
205 July 13	H	19 47.6	155	
	P_2	19 48 01		
	S_2	19 48 19		
	F	19 48.7		
		Ottawa		
206 July 15	H	5 35.5	11,350	USCGS. gives:-
	P	5 49 24		ϕ = 17° N.
	PP	5 53 28		λ = 145° E.
	SKS	5 59 39		
	SKKS	6 00 24		
	SS	6 08.4		
	L	6 24		
	F	7 44		
		Victoria		
	H	5 35.6	8160	
	P	5 47 02		
	S	5 56 36		
	L	6 02		
	F	6 42		
		Saskatoon		
	H	5 35.6	8960	
	P	5 47 45		
	S	5 57 54		
	L	6 13		
	F	7 28		
		Halifax		
	e	6 00		
	L	6 09		
	F	6 48		
		Seven Falls		
	e	5 53.2		
	e	5 59 41		
	e	6 01 11		
	e	6 08 37		
	L	6 21		
	F	8 14		
		Shawinigan Falls		
	e	5 53.7		
	e	5 59 40		
	F	6 11		
		Ottawa		
207 July 15	H	10 45.9	455	
	eZ?	10 46 50		
	P	10 46 59		
	S	10 47 48		
	S_1	10 48 17		
	F	10 50		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM July 15, 1945 to July 25, 1945 No. 31

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Seven Falls		
207 July 15 (Cont'd)	H	10 46.1	190	
	P_2	10 46 39		
	S_2	10 47 01		
	F	10 48		
		Shawinigan Falls		
	H	10 45.8	260	
	P_2	10 46 32		
	S_2	10 47 01.5		
	F	10 49		
		Ottawa		
213 July 20	H	20 05.8	155	
	P2	20 06 14		
	S_2	20 06 32		
	F	20 07		
		Victoria		
214 July 21	e	22 21.9		
	L	22 44		
	F	23 13		
		Ottawa		
217 July 23	e_Z	4 14 03		
	e	4 17.0		
	e_N	4 23 08		
	e_E	4 33.5		
	L	4 44		
	F	6 30		
		Victoria		
	e	4 15.9		
	e	4 23.9		
	L	4 46		
	F	6 44		
		Seven Falls		
	e	4 16.4		
	e	4 32.8		
	L	4 47		
	F	6 44		
		Ottawa		
218 July 24	H	1 56.3	90	
	P_2	1 56 32		
	S_2	1 56 42.5		
	F	1 58.5		
		Ottawa		
220 July 25	H	15 27.8	195	
	P_2	15 28 22		
	S_2	15 28 44.5		
	F	15 29.4		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM July 25, 1945 to July 31, 1945 No. 32

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
221 July 36	H	10 31.1	1960	USCGS. gives:-
	P_Z	10 35 14		ϕ = 34°.3 N.
	S	10 35 37		λ = 81°.4 W.
	F	10 46		
		Ottawa		
222 July 26	H	20 18.9	150	
	P_2	20 19 18		
	S_2	20 19 35.5		
	F	20 20.1		

W. W. Doxsee.

EARTHQUAKE CORRELATION TABLE

Month July, 1945

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls.		Shawinigan	**
						M. S.	W. A.		
187	2	8 42+0 50r	.....	8 48+0 35L	.....	8 48+1 13r	8 53+0 11L	8 50+0 09L	..
188	2	10 31+0 03v*	.....	.....	.....	.....	.....	13 31+0 03v	A
189	3	4 17+0 46r	.....	4 21+0 17r	4 32+0 11L	4 30+0 35L	4 30+0 07L	4 29+0 08L	..
190	3	5 13+0 09L	.....	5 10+0 24L	.....	5 15+0 06L	.....	5 14+0 03L	..
191	3	5 28+0 10L	.....	.....	.....	5 30+0 11L	.....	5 29+0 05L	..
192	3	.....	.....	.....	.....	18 04+0 39L	.....	.....	..
193	3	.....	.....	.....	.....	20 49+0 05L	.....	.....	..
194	5	.....	.....	.....	.....	12 16+0 24u	.....	12 10+0 03P	..
195	6	.....	.....	.....	.....	2 43+0 11L	.....	.....	..
196	6	.....	.....	.....	.....	.....	17 32+0 0.6d	.....	B
197	6	20 41+0 0.7v*	.....	.....	.....	.....	.....	.....	C
198	6	20 58+0 01P*	.....	.....	.....	.....	.....	.....	..
199	9	16 50+0 35r	.....	.....	.....	16 57+0 30r	16 50+0 03P	16 50+0 10r	D
200	11	0 39+0 46r	0 35+0 39r	0 37+0 53r	0 46+0 25r	0 39+0 57u	0 39+0 27u	0 39+0 25u	E
201	12	.....	.....	.....	.....	0 29+0 06L	.....	.....	..
202	12	9 21+0 03P*	.....	.....	.....	.....	.....	.....	..
203	12	.....	.....	.....	.....	.....	15 33+0 01P	15 19+0 01P	..
204	13	2 13+0 02P*	.....	.....	.....	.....	.....	.....	..
205	13	19 48+0 0.7v*	.....	.....	.....	.....	.....	.....	F
206	15	5 49+1 55u	5 47+0 55u	5 48+1 40u	6 00+0 48u	5 53+2 21u	5 53+0 18u	5 54+0 17u	G
207	15	10 47+0 03v*	.....	.....	.....	.....	10 47+0 02v	10 47+0 03v	H
208	16	.....	.....	.....	.....	5 02+1 23L	.....	4 54+0 01P	..
209	16	18 26+0 0.5P*	.....	.....	.....	.....	.....	.....	..
210	16	20 50+0 01P*	.....	.....	.....	.....	.....	.....	..
211	17	6 59+0 38L	.....	.....	.....	7 00+0 37L	.....	.....	..
212	18	18 30+0 0.4P	.....	.....	.....	.....	.....	.....	..
213	20	20 06+0 01v*	.....	.....	.....	.....	.....	.....	J
214	21	22 56+0 34L	22 22+0 51u	22 49+0 27L	.....	23 00+0 50L	.....	.....	..
215	22	.....	6 13+0 15L	.....	.....	.....	.....	.....	..

EARTHQUAKE CORRELATION TABLE

Month July, 1945

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
216	22	11 44+0 38L	11 44+0 30L	11 40+0 35L	.....	11 33+1 35L	.....	.....	..
217	23	4 14+2 16u	4 16+2 28u	4 42+1 35L	4 57+0 39L	4 16+2 28u	.....	.....	..
218	24	1 57+0 02d	.....	.....	.....	.....	.....	.....	K
219	25	.....	.....	.....	.....	5 28+0 02L	.....	.....	..
220	25	15 28+0 01v*	.....	.....	.....	.....	.....	.....	L
221	26	10 35+0 11r	.....	.....	.....	.....	10 39+0 07r	10 39+0 08r	M
222	26	20 19+0 01v*	.....	.....	.....	.....	.....	.....	N
223	29	19 05+0 09L	.....	.....	.....	19 07+0 06L	.....	.....	..
224	31	.....	.....	.....	.....	5 04+0 11L	.....	.....	..
225	31	.....	.....	.....	.....	19 13+0 19L	.....	.....	..

CORRELATION OF EARTHQUAKES

July, 1945

N O T E S

A :	Ottawa	Δ =	380 km.	H = $13^h29^m.8$ U.T.
	Shawinigan Falls	Δ =	365 km.	H = 13 30.0 U.T.
B :	Seven Falls	Δ =	85 km.	H = $17^h31^m.9$ U.T.
C :	Ottawa	Δ =	150 km.	H = $20^h40^m.1$ U.T.
D :	Ottawa	Δ =	4480 km.	H = $16^h42^m.4$ U.T.
	Seven Falls	Δ =	4800 km.	H = 16 42.3 U.T.
	Shawinigan Falls	Δ =	4660 km.	H = 16 42.3 U.T.
E :	Ottawa	Δ =	4920 km.	H = $0^h30^m.9$ U.T.
	Victoria	Δ =	2350 km.	H = 0 30.5 U.T.
	Saskatoon	Δ =	3250 km.	H = 0 31 U.T.
	Seven Falls	Δ =	5300 km.	H = 0 30.8 U.T.
	Shawinigan Falls	Δ =	5110 km.	H = 0 30.7 U.T.
F :	Ottawa	Δ =	155 km.	H = $19^h47^m.6$ U.T.
G :	Ottawa	Δ =	11350 km.	H = $5^h35^m.5$ U.T.
	Victoria	Δ =	8160 km.	H = 5 35.6 U.T.
	Saskatoon	Δ =	8960 km.	H = 5 35.6 U.T.
H :	Ottawa	Δ =	455 km.	H = $10^h45^m.9$ U.T.
	Seven Falls	Δ =	190 km.	H = 10 46.1 U.T.
	Shawinigan Falls	Δ =	260 km.	H = 10 45.8 U.T.
J :	Ottawa	Δ =	155 km.	H = $20^h05^m.8$ U.T.
K :	Ottawa	Δ =	90 km.	H = $1^h56^m.3$ U.T.
L :	Ottawa	Δ =	195 km.	H = $15^h27^m.8$ U.T.
M :	Ottawa	Δ =	1960 km.	H = $10^h31^m.1$ U.T,
N :	Ottawa	Δ =	150 km.	H = $20^h18^m.9$ U.T.

Dominion Observatory,
Ottawa, Canada,
October 26, 1945.

SEISMOLOGICAL BULLETINS RECEIVED

July and August, 1945

We acknowledge, with thanks, the receipt of the following seismological publications and bulletins:-

STATIONS	BULLETINS	RECEIVED	
Wellington	Provisional for April, 1945	July	3
Sydney	July and August, 1945	"	4
Brisbane	March and April, 1945	"	5
Pasadena	Local Shocks for Nov. - Dec., 1944	"	10
Santa Clara	June, 1945	"	10
United States Coast and Geodetic Survey	July to September, 1943	"	11
Bureau Central	January to March, 1945	"	18
Pasadena	Preliminary for April - June, 1945	"	25
Pasadena	July to September, 1944	"	27
Perth	January to March, 1945	August	8
Moscow	January to March, 1945	"	10
Riverview	January to April, 1944	"	13
Santa Clara	July, 1945	"	16
Pasadena	October to December, 1944	"	23
Saint Louis and Auxiliary Stations	Supplement to March; preliminaries for April 15, 21, May 19; and supplement to April, 1945	"	27
Cape Girardeau	January to June, 1942	"	27
Ksara	May, 1940	"	29
Berkeley and Auxiliary Stations	Preliminary for January to June/45	"	29
New Zealand Stations	Distant and Local Earthquakes for May, 1945	"	31

DOMINION OBSERVATORY,
OTTAWA - CANADA.

SEISMOLOGICAL SERVICE OF CANADA

SEISMOLOGICAL BULLETIN
August
1945

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DOMINION OBSERVATORY
OTTAWA - CANADA

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SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer
Ernest A. Hodgson, Seismologist
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

ϕ = 45°23'38" N. λ = 75°42'57" W. h = 83m.
Time correction within 0.10s.
Foundation: boulder clay over limestone
Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

ϕ = 44°38' N. λ = 63°36' W. h = 46m.
Time correction from recorded radio time signals
Foundation: Carbonaceous slate
Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

ϕ = 47°07!4 N. λ = 70°49!6 W. h = 232m. ca.
Time correction from recorded radio time signals
Foundation: Solid granite of Canadian Shield
Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

ϕ = 48°31'14" N. λ = 123°24'56" W. h = 197m.
Time correction from recorded radio time signals
Foundation: rock
Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.

SHAWINIGAN FALLS

Shawinigan Water and Power Company

ϕ = 46°33'.1 N. λ = 72°45.8'W. h = 60m. ca.

Time correction from recorded radio time signals

Foundation: solid granite of Canadian Shield

Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15g.

SASKATOON

University of Saskatchewan

ϕ = 52°08' N. λ = 106°38' W. h = 515m.

Time correction from radio time signals

Foundation: clay and sand

Instrument: Milne-Shaw NE component, designated SN, photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

KIRKLAND LAKE

Lake Shore Mines

ϕ = 48°09' N. λ = 80°03' W. h = 320m.

Time correction from recorded radio time signals

Foundation: rock

Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

DETERMINED CONSTANTS

INSTRUMENT	To	V	ε	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR 10^{-6} g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2500			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	10.0	150	20:1	18 mm.	
KL (Kirkland Lake)	1/30	2×10^4	at 30	cycles	

NOTE:- Universal Time used throughout.

MOLOGICAL SERVICE OF CANADA
MINION OBSERVATORY, OTTAWA

FROM August 1, 1945 to August 3, 1945 No. 33

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
227 Aug. 1	e	22 49		
	I	23 20		
	F	0 09		
		Seven Falls		
	e	22 49.9		
	I	23 15		
	F	0 30		
		Saskatoon		
228 Aug. 2	e	18 17.1		
	I	18 47		
	F	19 08		
		Ottawa		
229 Aug. 2	H	20 44.9	4040	USCGS. gives:-
	P	20 51 58		ϕ = 54°2 N.
	S	20 57 48		λ = 133°1 W.
	L	21 03		
	F	22 13		
		Victoria		
	H	20 44.7	955	
	P	20 46 49		
	S	20 48 30		
	L	20 50		
	F	22 57		
		Saskatoon		
	H	20 44.9	1700	
	P	20 48 31		
	S	20 51 30		
	L	20 53		
	F	22 19		
		Seven Falls		
	H	20 44.9	4280	
	P	20 52 16		
	S	20 58 21		
	L	21 04		
	F	22 45		
		Shawinigan Falls		
	P	20 52 11		
	L	21 03		
	F	21 29		
		Ottawa		
230 Aug. 3	H	4 11.7	4300	USCGS. gives:-
	P	4 19 05		ϕ = 4°4 N.
	PP	4 20 38		λ = 82°1 W.
	S	4 25 11		
	SSS	4 28		
	L	4 31		
	F	5 23		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM August 3, 1945 to August 4, 1945 No. 34

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Victoria		
230 Aug. 3 (Cont'd)	H	4 11.6	6110	
	P	4 21 07		
	S	4 28 54		
	L	4 38		
	F	5 20		
		Saskatoon		
	H	4 11.8	5450	
	P	4 20 36		
	S	4 27 45		
	L	4 34		
	F	5 14		
		Seven Falls		
	H	4 11.8	4580	
	P	4 19 31		
	S	4 25.9		
	L	4 29		
	F	6 13		
		Ottawa		
231 Aug. 3	H	6 34.9	4280	USCGS. gives:-
	P_Z	6 42 17		ϕ = 4°.4 N.
	PP_N	6 43 50		λ = 82°.1 W.
	S	6 48 22		
	L	6 54		
	F	7 32		
		Victoria		
	e	6 52 00		
	e	7 01 21		
	L	7 07		
	F	7 42		
		Seven Falls		
	e	6 49 02		
	L	6 57		
	F	7 54		
		Ottawa		
234 Aug. 4	e_Z	14 59 11		
	e	15 08.0		
	L	15 18		
	F	16 03		
		Victoria		
	e	15 01.3		
	e	15 12 03		
	L	15 33		
	F	16 01		

FROM August 4, 1945 to August 8, 1945 No. 35

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
235 Aug. 6	H	23 02.4	5400	
	P	23 11 05		
	S	23 18 12		
	I	23 25		
	F	23 57		
		Seven Falls		
	e	23 18.9		
	L	23 25		
	F	23 55		
		Ottawa		
237 Aug. 7	e	22 31.8		
	e_E	22 39.2		
	L	22 52		
	F	23 33		
		Victoria		
	e	22 28 15		
	L	22 40		
	F	0 25		
		Saskatoon		
	e	22 29 38		
	I	22 44		
	F	23 06		
		Seven Falls		
	e	22 32.1		
	L	22 57		
	F	0 04		
		Ottawa		
238 Aug. 8	e_N	10 24		
	e_E	10 31		
	I	10 43		
	F	11 49		
		Victoria		
	e	10 13 07		
	e	10 22.7		
	L	10 55		
	F	12 01		
		Saskatoon		
	e	10 21.0		
	L	10 54		
	F	11 57		
		Seven Falls		
	e	10 21.8		
	e	10 30 19		
	L	10 44		
	F	12 10		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM August 8, 1945 to August 11, 1945 No. 36

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
240 Aug. 10	H	11 20.3	3500	USCGS. gives:-
	P	11 26 42		ϕ = 15°.4 N.
	PPP	11 28 00		λ = 88°.8 W.
	S	11 31 58		
	L	11 34		
	F	12 28		
		Victoria		
	e	11 27.6		
	L	11 40		
	F	12 28		
		Saskatoon		
	H	11 20.6	4165	
	P	11 27 50		
	S	11 33 48		
	eL	11 39		
	F	12 18		
		Seven Falls		
	H	11 20.3	3820	
	P	11 27 09		
	S	11 32 45		
	L	11 39		
	F	12 43		
		Shawinigan Falls		
	H	11 20.4	3645	
	P	11 27 00		
	S	11 32 25		
	L	11 36		
	F	12 01		
		Ottawa		
242 Aug. 11	H	0 33.9	4200	USCGS. gives:-
	P	0 41 15		ϕ = 4°.4 N.
	PPP	0 42 54		λ = 82°.1 W.
	S	0 47 15		
	SSS	0 50 30		
	eL	0 54		
	F	2 03		
		Victoria		
	e	0 42.8		
	e	0 51		
	L	1 04		
	F	1 50		
		Saskatoon		
	e	0 49 49		
	L	1 01		
	F	1 19		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM August 11, 1945 to August 17, 1945 No. 37

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Halifax		
242 Aug. 11 (Cont'd)	e	0 47.7		
	L	0 51		
	F	1 13		
		Seven Falls		
	H	0 34.3	4340	
	P	0 41 44		
	S	0 47 53		
	SSS	0 51.2		
	L	0 54		
	F	2 04		
		Shawinigan Falls		
	e	0 41 31		
	L	0 50		
	F	1 04		
		Ottawa		
246 Aug. 13	e_Z	3 32 05		
	I	3 45		
	F	3 55		
		Victoria		
248 Aug. 14	e	12 23.2		
	e	12 32.6		
	L	12 47		
	F	14 07		
		Saskatoon		
	e	12 34 20		
	L	12 48		
	F	14 01		
		Seven Falls		
	e	12 44.4		
	L	12 59		
	F	14 26		
		Victoria		
250 Aug. 15	e	17 59.6		
	L	18 05		
	F	18 20		
		Saskatoon		
	e	18 04.9		
	L	18 07		
	F	18 25		
		Victoria		
252 Aug. 17	e	19 10 22		
	e	19 13 54		
	F	19 23		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM August 17, 1945 to August 22, 1945 No. 38

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Victoria		
253 Aug. 19	e	5 58.8		
	e	6 03.9		
	F	6 05		
		Ottawa		
255 Aug. 21	H	16 29.7	5970	
	P	16 39 03		
	i_Z	16 39 32		
	S	16 46 42		
	i_E	16 47 30		
	L	16 54		
	F	17 05		
		Seven Falls		
	H	16 29.8	6100	
	P	16 39 16		
	S	16 47 02		
	L	16 56		
	F	17 10		
		Shawinigan Falls		
	H	16 29.7	6100	
	P	16 39 12		
	S	16 46 58		
	F	16 50		
		Ottawa		
256 Aug. 21	e_Z	20 21 34		
	e_E	20 28.5		
	e	20 32		
	L	20 52		
	F	22 28		
		Saskatoon		
	e	20 27.4		
	L	20 53		
	F	21 49		
		Seven Falls		
	e	20 23.4		
	e	20 32.9		
	L	20 41		
	F	22 41		
		Ottawa		
257 Aug. 22	e_Z	5 33.0		
	e_E	5 44.3		
	e_N	5 50		
	L	6 07		
	F	7 14		

SEISMOLOGICAL SERVICE OF CANADA

DOMINION OBSERVATORY, OTTAWA

FROM August 22, 1945 to August 27, 1945 No. 39

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Saskatoon		
257 Aug. 22	e	5 41		
	L	6 04		
	F	6 56		
		Seven Falls		
	e	5 34.9		
	e	5 44.9		
	L	6 14		
	F	7 40		
		Ottawa		
259 Aug. 27	e_Z	7 49 03		
	e	7 52.4		
	e	7 59.1		
	L	8 23		
	F	8 55		
		Saskatoon		
	e	7 57		
	L	8 13		
	F	8 27		
		Seven Falls		
	e	7 59.1		
	L	8 25		
	F	9 12		
		Victoria		
262 Aug. 28	e	13 13.6		
	L	13 31		
	F	14 00		
		Ottawa		
263 Aug. 28	e	19 45.8		
	L	20 01		
	F	21 06		
		Victoria		
	e	19 32.7		
	e	19 41.8		
	L	19 50		
	F	21 30		
		Saskatoon		
	e	19 43.3		
	L	19 56		
	F	20 27		
		Seven Falls		
	e	19 45.8		
	L	20 08		
	F	21 13		

FROM August 28, 1945 to August 31, 1945 No. 40

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
265 Aug. 29	H	10 22.6	13,350	USCGS. gives:-
	P'_Z	10 41 26		ϕ = 14° S.
	PP_Z	10 42 43		λ = 166° E.
	e	10 43 01		
	SKS_N	10 48.5		
	PS	10 52 45		
	SS	10 59 22		
	SSS_E	11 03.5		
	e	11 06.7		
	eL	11 18		
	F	14 09		
		Victoria		
	H	10 22.4	10,300	
	P	10 35.6		
	PP	10 39.3		
	S	10 46 44		
	I	11 03		
	F	12 11		
		Saskatoon		
	H	10 22.7	11,100	
	P	10 36 39		
	PP	10 40 31		
	e	10 46 17		
	PS	10 49 22		
	SS	10 54.8		
	SSS	10 58.5		
	I	11 08		
	F	13 25		
		Halifax		
	e	10 43.7		
	e	10 53 57		
	L	11 14		
	F	12 58		
		Seven Falls		
	H	10 22.8	13,500	
	P'	10 42.2		
	PP	10 43 15		
	SKS	10 48.5		
	PS	10 53 09		
	SS	10 59.6		
	e	11 09.2		
	I	11 19		
	F	14 47		
		Shawinigan Falls		
	H	10 22.7	13,500	
	P'	10 41.7		
	PP	10 43.3		
	PS	10 53.1		
	SS	10 59.5		
	L	11 22		
	F	12 46		

W W. Doxsee

EARTHQUAKE CORRELATION TABLE

Month August, 1945

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
226	1	.....	.....	.....	.....	.....	.....	11 56+0 02P	..
227	1	22 49+1 20u	.....	23 16+0 18L	.....	22 50+1 40u	.....	.....	..
228	2	18 52+0 31L	.....	18 17+0 51u	.....	18 19+1 10L	.....	.....	..
229	2	20 52+1 22r	20 47+2 10R	20 49+1 30?	21 06+0 33L	20 52+1 53r	20 52+0 41r	20 52+0 37r	A
230	3	4 19+1 04r	4 21+0 59u	4 21+0 53u	.....	4 20+1 53r	4 19+0 03P	.....	B
231	3	6 42+0 50r	6 52+0 50u	6 39+1 00L	.....	6 49+1 05r	.....	.....	C
232	3	6 51+0 01P*	.....	.....	.....	.....	.....	.....	..
233	3	7 06+0 0.5P*	.....	.....	.....	.....	.....	.....	..
234	4	14 59+1 04u	15 01+1 00u	.....	.....	15 07+1 09L	.....	.....	..
235	6	23 11+0 46u	.....	.....	.....	23 19+0 36u	.....	23 11+0 03P	D
236	6	23 59+0 02P*	.....	.....	.....	.....	.....	.....	..
237	7	22 32+1 01u	22 28+1 57u	22 30+0 36u	.....	22 32+1 32u	.....	.....	..
238	8	10 24+1 25u	10 13+1 48u	10 21+1 36u	.....	10 22+1 48u	.....	.....	..
239	9	.....	.....	.....	.....	22 55+0 10L	.....	.....	..
240	10	11 27+1 01r	11 28+1 00r	11 28+0 50r	.....	11 27+1 16r	11 27+0 24r	11 27+0 34r	E
241	10	14 21+0 27L	.....	.....	.....	14 27+0 20L	.....	.....	..
242	11	0 41+1 22r	0 43+1 07r	0 50+0 29r	0 48+0 25r	0 48+1 16r	0 42+0 21r	0 42+0 23r	F
243	11	5 02+0 0.5P*	.....	.....	.....	.....	.....	.....	..
244	12	.....	9 06+0 17L	.....	.....	.....	.....	.....	..
245	12	.....	.....	.....	.....	15 47+0 08L	.....	.....	..
246	13	3 32+0 23r	.....	3 37+0 09L	.....	3 48+0 08L	.....	.....	..
247	14	8 14+0 04P*	.....	.....	.....	.....	.....	.....	..
248	14	12 47+1 41L	12 23+1 44u	12 34+1 27u	.....	12 44+1 42u	.....	.....	..
249	15	.....	.....	.....	.....	15 05+0 18L	.....	.....	..
250	15	18 12+0 28L	18 00+0 20r	18 05+0 22r	18 18+0 08L	18 16+0 30L	.....	18 15+0 06L	..
251	16	1 38+0 36L	.....	1 46+0 10L	.....	1 30+0 16L	.....	.....	..
252	17	19 26+0 09L	19 10+0 13r	.....	.....	.....	.....	.....	..
253	19	.....	5 59+0 06r	.....	.....	.....	.....	.....	..
254	21	.....	.....	.....	.....	.....	.....	10 29+0 01P	..
255	21	16 39+0 26u	.....	.....	.....	16 47+0 23u	16 39+0 12u	16 39+0 11u	G
256	21	20 22+2 06u	20 26+1 04L	20 27+1 22u	21 11+0 21L	20 23+2 18u	21 15+0 11L	.....	..

EARTHQUAKE CORRELATION TABLE

Month August, 1945

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
257	22	5 33+1 41u	5 45+1 15L	5 41+1 15u	6 22+0 21L	5 35+2 05u	.....	.....	..
258	27	2 26+0 22L	2 15+0 13L	2 27+0 13L	.....	2 28+0 53I	.....	.....	..
259	27	7 49+1 06u	7 56+0 33L	7 57+0 30u	.....	7 59+1 13u	.....	.....	..
260	27	9 32+0 09L	9 19+0 13L	9 23+0 08I	.....	.....	.....	.....	..
261	27	16 38+0 02P*	.....	.....	.....	.....	.....	.....	..
262	28	13 49+0 23L	13 14+0 46u	13 39+0 13I	.....	13 49+0 37L	.....	.....	..
263	28	19 46+1 20u	19 33+1 57u	19 43+0 44u	.....	19 46+1 27u	.....	.....	..
264	29	3 35+0 0.3P*	.....	.....	.....	.....	.....	.....	..
265	29	10 41+3 28U	10 36+1 35U	10 37+2 48U	10 44+2 14U	10 43+4 04U	10 42+2 00U	10 42+2 04U	H
266	29	.....	12 39+0 39L	.....	.....	.....	.....	.....	..
267	29	16 21+0 39L	.....	16 34+0 18L	.....	15 48+2 00L	.....	.....	..
268	30	17 21+0 06I	.....	.....	.....	17 23+0 06L	.....	.....	..
269	31	0 16+0 46L	0 09+0 18L	0 15+0 24I	.....	0 25+0 58I	.....	.....	..

CORRELATION OF EARTHQUAKES
August, 1945

N O T E S

A :	Ottawa	Δ = 4,040 km.	H = $20^h44^m.9$ U.T.
	Victoria	Δ = 955 km.	H = 20 44.7 U.T.
	Saskatoon	Δ = 1,700 km.	H = 20 44.9 U.T.
	Seven Falls	Δ = 4,280 km.	H = 20 44.9 U.T.
B :	Ottawa	Δ = 4,300 km.	H = $4^h11^m.7$ U.T.
	Victoria	Δ = 6,110 km.	H = 4 11.6 U.T.
	Saskatoon	Δ = 5,450 km.	H = 4 11.8 U.T.
	Seven Falls	Δ = 4,580 km.	H = 4 11.8 U.T.
C :	Ottawa	Δ = 4,280 km.	H = $6^h34^m.9$ U.T.
D :	Ottawa	Δ = 5,400 km.	H = $23^h02^m.4$ U.T.
E :	Ottawa	Δ = 3,500 km.	H = $11^h20^m.3$ U.T.
	Saskatoon	Δ = 4,165 km.	H = 11 20.6 U.T.
	Seven Falls	Δ = 3,820 km.	H = 11 20.3 U.T.
	Shawinigan Falls	Δ = 3,645 km.	H = 11 20.4 U.T.
F :	Ottawa	Δ = 4,200 km.	H = $0^h33^m.9$ U.T.
	Seven Falls	Δ = 4,340 km.	H = 0 34.3 U.T.
G :	Ottawa	Δ = 5,970 km.	H = $16^h29^m.7$ U.T.
	Seven Falls	Δ = 6,100 km.	H = 16 29.8 U.T.
	Shawinigan Falls	Δ = 6,100 km.	H = 16 29.7 U.T.
H :	Ottawa	Δ = 13,500 km.	H = $10^h22^m.6$ U.T.
	Victoria	Δ = 10,300 km.	H = 10 22.4 U.T.
	Saskatoon	Δ = 11,100 km.	H = 10 22.7 U.T.
	Seven Falls	Δ = 13,500 km.	H = 10 22.8 U.T.
	Shawinigan Falls	Δ = 13,500 km.	H = 10 22.7 U.T.

Dominion Observatory,
Ottawa, Ontario,
March 8, 1946.

SEISMOLOGICAL SERVICE OF CANADA

SEISMOLOGICAL BULLETIN

September and October

1945

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DOMINION OBSERVATORY

OTTAWA - CANADA

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SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer
Ernest A. Hodgson, Seismologist
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

ϕ = 45°23'38" N. λ = 75°42'57" W. h = 83m.
Time correction within 0.10s.
Foundation: boulder clay over limestone
Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

ϕ = 44°38' N. λ = 63°36' W. h = 46m.
Time correction from recorded radio time signals
Foundation: Carbonaceous slate
Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

ϕ = 47°07'.4 N. λ = 70°49'.6 W. h = 232m. ca.
Time correction from recorded radio time signals
Foundation: Solid granite of Canadian Shield
Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

ϕ = 48°31'14" N. λ = 123°24'56" W. h = 197m.
Time correction from recorded radio time signals
Foundation: rock
Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.

SHAWINIGAN FALLS

Shawinigan Water and Power Company

ϕ = 46°33'.1 N. λ = 72°45.8'W. h = 60m. ca.

Time correction from recorded radio time signals

Foundation: solid granite of Canadian Shield

Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15g.

SASKATOON

University of Saskatchewan

ϕ = 52°08' N. λ = 106°38' W. h = 515m.

Time correction from radio time signals

Foundation: clay and sand

Instrument: Milne-Shaw NE component, designated SN, photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

KIRKLAND LAKE

Lake Shore Mines

ϕ = 48°09' N. λ = 80°03' W. h = 320m.

Time correction from recorded radio time signals

Foundation: rock

Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

DETERMINED CONSTANTS

INSTRUMENT	To	V	ε	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR 10^{-6} g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2500			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	10.0	150	20:1	18 mm.	
KL (Kirkland Lake)	1/30	2×10^4	at 30	cycles	

NOTE:- Universal Time used throughout.

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM September 1, 1945 to September 1, 1945 No. 41

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
271 Sept. 1	H	22 44	15,700	
	P'	23 03.5		
	PP	23 06 20		
	SKP	23 09.6		
	SKS	23 13.5		
	PSKS	23 16.5		
	PPS	23 19		
	SS	23 26		
	SSS	23 30.6		
	L	23 47		
	F	2 15		
		Victoria		
	H	22 44	15,700	
	P'	23 03 52		
	PPP	23 10.6		
	SKKS	23 13 39		
	L	23 39		
	F	1 47		
		Saskatoon		
	H	22 45	16,700	
	P'	23 04 44		
	SKKS	23 14 55		
	PPS	23 21.2		
	SS	23 26.2		
	L	23 45		
	F	2 11		
		Halifax		
	H	22 44	16,100	
	P	23 03 52		
	P'	23 07.4		
	SKS	23 14.3		
	S	23 17.4		
	L	23 53		
	F	1 06		
		Seven Falls		
	H	22 44	16,100	
	P'	23 03 34		
	SKP	23 07 00		
	SKKS	23 13.7		
	PSKS	23 17.1		
	PPS	23 19.5		
	SS	23 25 19		
	L	23 53		
	F	2 39		
		Shawinigan Falls		
271 Sept. 1	e	23 05.3		
	e	23 06 39		
	e	23 25.5		
	L	23 52		
	F	0 44		

SMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM September 1, 1945 to September 5, 1945 No. 42

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
272 Sept. 2	H	11 54.1	8250	USCGS. gives:-
	P	12 05 39		ϕ = 34° N.
	S	12 15 17		λ = 30° E.
	I	12 38		Depth 70 km. ca.
	F	12 45+		
		Saskatoon		
	H	11 54.3	9140	
	P	12 06 38		
	S	12 16 55		
	L	12 43		
	F	12 50		
		Shawinigan Falls		
	H	11 54.2	7940	
	P	12 05 27		
	S	12 14 49		
	F	12 18		
		Ottawa		
273 Sept. 3	eZ	13 10 18		
	L	13 27		
	F	13 46		
		Ottawa		
277 Sept. 5	H	19 42.7	155	
	P_2	19 43 06		
	S_2	19 43 24		
	F	19 43.8		
		Ottawa		
278 Sept. 5	H	21 49	13,900	
	P'Z	22 07 37		
	PP	22 09 09		
	SKS	22 14 40		
	SKKS	22 16 12		
	SS	22 26.0		
	SSS	22 30		
	I	22 46		
	F	1 06		
		Saskatoon		
	H	21 49	11,000	
	PP	22 06 42		
	SKS	22 13 39		
	PPS	22 16.7		
	SS	22 21 43		
	SSS	22 25		
	L	22 31		
	F	0 31		
		Halifax		
	e	22 11 14		
	L	22 42		
	F	23 57		

FROM September 5, 1945 to September 7, 1945 No. 43

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Seven Falls		
278 Sept. 5 (Cont'd)	H	21 49	13,600	
	P'	22 07.9		
	PP	22 09.3		
	PS	22 19 09		
	SS	22 25.4		
	L	22 41		
	F	1 30		
		Shawinigan Falls		
	e	22 07 54		
	L	22 42		
	F	23 30		
		Ottawa		
279 Sept. 6	H	1 26	13,900	
	P'Z	1 45 16		
	PP_E	1 46.8		
	SKS	1 52 18		
	PPS	1 58.4		
	SS	2 03.5		
	L	2 18		
	F	3 31		
		Seven Falls		
	e	1 47		
	e	2 00		
	L	2 17		
	F	4 53		
		Ottawa		
280 Sept. 6	H	14 49	13,900	
	P'Z	15 08 19		
	PP	15 10.2		
	SKS	15 15.6		
	SS	15 27		
	L	15 40		
	F	17 16		
		Seven Falls		
	H	14 49	13,700	
	PP	15 09.8		
	PS	15 19.8		
	SS	15 27		
	L	15 40		
	F	17 26		
		Ottawa		
283 Sept. 7	H	15 48.6	7140	
	P	15 59 05		
	S	16 07 50		
	L	16 20		
	F	16 33		

FROM September 7, 1945 to September 12, 1945 No. 44

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Seven Falls		
283 Sept. 7 (Cont'd)	H	15 49.3	6360	
	P	15 59 02		
	S	16 07 03		
	L	16 19		
	F	16 35		
		Ottawa		
284 Sept. 8	e_Z	3 52 55		
	e_N	4 03.5		
	e_N	4 16.0		
	L	4 44		
	F	5 44		
		Seven Falls		
	e	4 05.8		
	L	4 48		
	F	5 56		
		Ottawa		
285 Sept. 9	H	4 02	13,200	
	PP	4 21 46		
	PPP	4 23.3		
	SKS	4 26 15		
	S	4 28 48		
	PS	4 30 18		
	PPS	4 31 18		
	SSS	4 40 18		
	L	4 54		
	F	6 55		
		Victoria		
	e	4 26 43		
	L	4 46		
	F	5 27		
		Saskatoon		
	e	4 27.5		
	L	4 52		
	F	5 30		
		Seven Falls		
	H	4 03	13,900	
	PP	4 23 42		
	SKS	4 28 56		
	SKKS	4 30 39		
	PS	4 33 39		
	SS	4 35.8		
	L	4 43		
	F	7 21		
		Ottawa		
289 Sept. 12	H	9 36.7	120	
	P_2	9 37 01		
	S_2	9 37 15		
	F	9 38.2		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM September 12, 1945 to September 14, 1945 No. 45

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s		
		Ottawa		
290 Sept. 12	H	19 16.7	155	
	P_2	19 17 12		
	S_2	19 17 30		
	F	19 18.3		
		Ottawa		
291 Sept. 13	H	11 17.3	8520	USCGS. gives:-
	P	11 29 06		ϕ = 34° S.
	e	11 29 09		λ = 70° W.
	S	11 38 56		Depth 90 km. ca.
	PS_{II}	11 39 57		
	SS	11 44 17		
	L	11 51		
	F	12 31		
		Victoria		
	e	11 30.9		
	S	11 40 52		
	L	12 03		
	F	12 21		
		Saskatoon		
	e	11 30.7		
	S	11 40 29		
	L	11 59		
	F	12 37		
		Seven Falls		
	H	11 17.3	8680	
	P	11 29 16		
	S	11 39 13		
	L	11 54		
	F	13 12		
		Shawinigan Falls		
	H	11 17.3	8600	
	P	11 29 12		
	S	11 39 06		
	F	11 50		
		Ottawa		
293 Sept. 14	H	2 02.5	5500	USCGS. gives:-
	P	2 11 17		ϕ = 7° N.
	S	2 18 30		λ = 38°8 W.
	L	2 24		
	F	3 16		
		Saskatoon		
	e	2 22 45		
	L	2 34		
	F	3 15		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM September 14, 1945 to September 23, 1945 No. 46

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Seven Falls		
293 Sept. 14 (Cont'd)	H	2 02.6	5280	
	P	2 11 08		
	S	2 18 08		
	L	2 22		
	F	3 27		
		Shawinigan Falls		
	H	2 02.5	5350	
	P	2 11 10		
	S	2 18.2		
	L	2 24		
	F	2 33		
		Saskatoon		
296 Sept. 19	e	12 47.1		
	L	13 02		
	F	13 25		
		Ottawa		
298 Sept. 21	H	21 32.8	150	
	P_2	21 33 11		
	S_2	21 33 28.5		
	F	21 34.2		
		Ottawa		
299 Sept. 22	e_E	9 31 02		
	e	9 32 08		
	e	9 37 34		
	e_E	9 40.6		
	L	9 59		
	F	11 30		
		Victoria		
	e	9 33 45		
	L	9 53		
	F	11 58		
		Saskatoon		
	e	9 34.0		
	e	9 42.4		
	L	9 52		
	F	10 46		
		Seven Falls		
	e	9 33.8		
	L	10 06		
	F	11 33		
		Ottawa		
302 Sept. 23	e	10 03.4		
	L	10 09		
	F	10 17		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM September 23, 1945 to September 28, 1945 No. 47

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Victoria		
302 Sept. 23 (Cont'd)	e	10 01 03		
	L	10 02		
	F	10 05		
		Saskatoon		
	e	9 59 27		
	L	10 01 51		
	F	10 08		
		Ottawa		
303 Sept. 23	e_Z	15 47.7		
	I	16 18		
	F	16 49		
		Ottawa		
305 Sept 24	e_Z	12 53 53		
	L	13 32		
	F	13 54		
		Victoria		
	e	12 58.6		
	L	13 16		
	F	13 34		
		Ottawa		
306 Sept. 26	e_Z	3 46 50		
	L	4 06		
	F	4 33		
		Ottawa		
308 Sept. 26	e_Z	14 32 50		USCGS. gives:- φ = 18°.9 N. λ = 62°.4 W.
	L	14 37		
	F	15 41		
		Shawinigan Falls		
	e	14 32 53		
	L	14 44		
	F	14 49		
		Seven Falls		
309 Sept 27	e	23 34.3		
	L	0 03		
	F	0 59		
		Ottawa		
310 Sept. 28	H	16 19.9	155	
	P_2	16 20 23		
	S_2	16 20 41		
	F	16 21.1		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM September 28, 1945 to September 30, 1945 No. 48

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
311 Sept. 28	H	22 24.2	3980	USCGS. gives:-
	P	22 31 14		ϕ = 41°40' N.
	S	22 37 00		λ = 126°55' W.
	L	22 42		
	F	0 35		
		Victoria		
	H	22 23.9	865	
	P	22 25 50		
	S	22 27 21		
	L	22 27.6		
	F	1 06		
		Saskatoon		
	H	22 24.0	1880	
	P	22 27 57		
	S	22 31 12		
	L	22 33		
	F	0 22		
		Seven Falls		
	H	22 24.3	4250	
	P	22 31 41		
	PP	22 33 10		
	S	22 37 45		
	L	22 44		
	F	1 29		
		Shawinigan Falls		
	H	22 24.3	4160	
	P	22 31.5		
	S	22 37 29		
	L	22 43		
	F	23 09		

W. W. Doxsee

EARTHQUAKE CORRELATION TABLE

Month September, 1945

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
270	1	.....	.....	.....	.....	0 38+0 38L	.....	.....	..
271	1	23 03+3 12U	23 04+2 43U	23 05+3 06U	23 04+2 02U	23 04+3 35U	23 06+1 47U	23 05+1 39U	A
272	2	12 06+0 39u	.....	12 07+0 43u	.....	.....	12 05+0 02P	12 05+0 12P	B
273	3	13 10+0 36u	.....	.....	.....	.....	.....	.....	..
274	3	19 43+0 01P*	.....	.....	.....	.....	.....	.....	..
275	4	18 20+0 42I	.....	.....	.....	18 26+0 53L	.....	.....	..
276	5	.....	.....	.....	.....	15 53+0 10I	.....	.....	..
277	5	19 43+0 0.7v*	.....	.....	.....	.....	.....	.....	C
278	5	22 08+2 58U	22 27+1 12L	22 07+2 24U	22 11+1 46U	22 09+3 20U	22 08+1 38U	22 08+1 22U	D
279	6	1 45+1 46u	2 10+0 18L	1 53+2 07u	.....	1 47+3 06u	.....	.....	E
280	6	15 08+2 08u	15 32+0 21L	15 33+0 34L	.....	15 10+2 16u	.....	.....	F
281	7	.....	.....	.....	.....	7 09+0 39I	.....	.....	..
282	7	.....	.....	.....	.....	14 02+0 32I	.....	.....	..
283	7	15 59+0 34u	.....	.....	.....	15 59+0 36u	15 59+0 01P	15 59+0 02P	G
284	8	3 53+1 51u	.....	4 39+0 54I	.....	4 06+1 50u	.....	.....	..
285	9	4 22+2 33u	4 27+1 00u	4 27+1 03u	.....	4 24+2 57u	4 43+1 12L	.....	H
286	10	.....	22 59+0 03v	.....	.....	.....	.....	.....	..
287	11	.....	.....	.....	.....	19 07+0 21I	.....	.....	..
288	12	.....	.....	.....	.....	1 36+0 18I	.....	1 04+0 02P	..
289	12	9 37+0 01v*	.....	.....	.....	.....	.....	.....	J
290	12	19 17+0 01v*	.....	.....	.....	.....	.....	.....	K
291	13	11 29+1 03u	11 31+0 50u	11 31+1 06u	.....	11 30+1 39u	11 29+0 18u	11 29+0 21u	L
292	13	.....	.....	.....	.....	22 51+0 19I	.....	.....	..
293	14	2 11+1 05u	2 25+0 45L	2 23+0 52u	.....	2 11+1 16u	2 11+0 24u	2 11+0 22u	M
294	17	.....	.....	1 06+0 08I	.....	1 09+0 14L	.....	.....	..
295	18	.....	.....	.....	.....	3 42+0 17I	.....	.....	..
296	19	.....	.....	12 47+0 38u	.....	13 09+0 28L	.....	.....	..
297	20	.....	.....	.....	.....	.....	19 29+0 01d	19 29+0 02v	..
298	21	21 33+0 01v*	.....	.....	.....	.....	.....	.....	N
299	22	9 31+1 59u	9 34+2 24u	9 34+1 12u	.....	9 34+1 59u	.....	.....	..
300	22	.....	15 35+0 03I	.....	.....	.....	.....	.....	..
301	23	8 40+0 06L	8 38+0 05L	.....	.....	.....	7 33+0 02P	7 31+0 05P	..
302	23	10 03+0 14r	10 01+0 04r	9 59+0 09v	.....	.....	10 11+0 08L	10 09+0 12L	..
303	23	15 48+1 01u	16 16+0 21L	.....	.....	16 18+0 46L	.....	.....	..

EARTHQUAKE CORRELATION TABLE

Month September, 1945

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
304	23	17 40+0 11L	.....	.....	.....	17 43+0 24L	.....	17 40+0 07L	..
305	24	12 54+1 00u	12 59+0 35u	.....	.....	13 45+0 14I	.....	.....	..
306	26	3 47+0 46u	3 49+0 22L	3 53+0 17I	.....	4 05+0 29I	.....	.....	..
307	26	9 05+0 01P*	.....	.....	.....	.....	.....	.....	..
308	26	14 33+1 09r	14 55+0 44L	.....	.....	14 38+0 59I	14 34+0 08r	14 33+0 16r	..
309	27	23 56+0 41L	.....	.....	.....	23 34+1 25u	.....	.....	..
310	28	16 20+0 01v*	.....	.....	.....	.....	.....	.....	P
311	28	22 31+2 04R	22 26+2 40V	22 28+1 54R	.....	22 32+2 57R	22 32+0 43R	22 32+0 37R	S
312	28	23 51+0 04P*	.....	.....	.....	.....	.....	.....	..
313	29	4 37+0 02P*	.....	.....	.....	4 59+1 07L	.....	.....	..

CORRELATION OF EARTHQUAKES

September, 1945

N O T E S

A :	Ottawa	Δ = 15,700 km.	H = 22^h44^m U.T.
	Victoria	Δ = 15,700 km.	H = 22 44 U.T.
	Saskatoon	Δ = 16,700 km.	H = 22 45 U.T.
	Halifax	Δ = 16,100 km.	H = 22 44 U.T.
	Seven Falls	Δ = 16,100 km.	H = 22 44 U.T.
B :	Ottawa	Δ = 8,250 km.	H = $11^h54^m.1$ U.T.
	Saskatoon	Δ = 9,140 km.	H = 11 54.3 U.T.
	Shawinigan Falls	Δ = 7,940 km.	H = 11 54.2 U.T.
C :	Ottawa	Δ = 155 km.	H = $19^h42^m.7$ U.T.
D :	Ottawa	Δ = 13,900 km.	H = 21^h49^m U.T.
	Saskatoon	Δ = 11,000 km.	H = 21 49 U.T.
	Seven Falls	Δ = 13,600 km.	H = 21 49 U.T.
E :	Ottawa	Δ = 13,900 km.	H = 1^h26^m U.T.
F :	Ottawa	Δ = 13,900 km.	H = 14^h49^m U.T.
	Seven Falls	Δ = 13,700 km.	H = 14 49 U.T.
G :	Ottawa	Δ = 7,140 km.	H = $15^h48^m.6$ U.T.
	Seven Falls	Δ = 6,360 km.	H = 15 49.3 U.T.
H :	Ottawa	Δ = 13,200 km.	H = 4^h02^m U.T.
J :	Ottawa	Δ = 120 km.	H = $9^h36^m.7$ U.T.
K :	Ottawa	Δ = 155 km.	H = $19^h16^m.7$ U.T.
L :	Ottawa	Δ = 8,520 km.	H = $11^h17^m.3$ U.T.
	Seven Falls	Δ = 8,680 km.	H = 11 17.3 U.T.
	Shawinigan Falls	Δ = 8,600 km.	H = 11 17.3 U.T.
M :	Ottawa	Δ = 5,500 km.	H = $2^h02^m.5$ U.T.
	Seven Falls	Δ = 5,280 km.	H = 2 02.6 U.T.
	Shawinigan Falls	Δ = 5,350 km.	H = 2 02.5 U.T.
N :	Ottawa	Δ = 150 km.	H = $21^h32^m.8$ U.T.
P :	Ottawa	Δ = 155 km.	H = $16^h19^m.9$ U.T.
S :	Ottawa	Δ = 3,980 km.	H = $22^h24^m.2$ U.T.
	Victoria	Δ = 865 km.	H = 22 23.9 U.T.
	Saskatoon	Δ = 1,880 km.	H = 22 24.0 U.T.
	Seven Falls	Δ = 4,250 km.	H = 22 24.3 U.T.
	Shawinigan Falls	Δ = 4,160 km.	H = 22 24.3 U.T.

Dominion Observatory,
Ottawa, Canada,
March 26, 1946.

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer
Ernest A. Hodgson, Seismologist
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

ϕ = 45°23'38" N. λ = 75°42'57" W. h = 83m.
Time correction within 0.10s.
Foundation: boulder clay over limestone
Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

ϕ = 44°38' N. λ = 63°36' W. h = 46m.
Time correction from recorded radio time signals
Foundation: Carbonaceous slate
Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

ϕ = 47°07!4 N. λ = 70°49!6 W. h = 232m. ca.
Time correction from recorded radio time signals
Foundation: Solid granite of Canadian Shield
Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

ϕ = 48°31'14" N. λ = 123°24'56" W. h = 197m.
Time correction from recorded radio time signals
Foundation: rock
Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.

SHAWINIGAN FALLS

Shawinigan Water and Power Company

ϕ = 46°33'.1 N. λ = 72°45.8'W. h = 60m. ca.

Time correction from recorded radio time signals

Foundation: solid granite of Canadian Shield

Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15g.

SASKATOON

University of Saskatchewan

ϕ = 52°08' N. λ = 106°38' W. h = 515m.

Time correction from radio time signals

Foundation: clay and sand

Instrument: Milne-Shaw NE component, designated SN, photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

KIRKLAND LAKE

Lake Shore Mines

ϕ = 48°09' N. λ = 80°03' W. h = 320m.

Time correction from recorded radio time signals

Foundation: rock

Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

DETERMINED CONSTANTS

INSTRUMENT	To	V	ε	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR 10^{-6} g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2500			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	10.0	150	20:1	18 mm.	
KL (Kirkland Lake)	1/30	2×10^4	at 30	cycles	

NOTE:- Universal Time used throughout.

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM October 1, 1945 to October 7, 1945 No. 49

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
314 Oct. 1	e	5 41.0		
	L	6 11		
	F	6 39		
		Seven Falls		
	e	5 40 41		
	L	6 05		
	F	6 38		
		Seven Falls		
317 Oct. 3	H	22 53.2	30	
	P_1	22 53 16.5		
	S_1	22 53 20		
	F	22 53.5		
		Ottawa		
319 Oct. 6	e_Z	9 31 40		
	L	10 18		
	F	10 46		
		Ottawa		
321 Oct. 7	H	12 23.5	3740	USCGS. gives:-
	P	13 30 17		ϕ = 12°.3 N.
	PPP	13 31 40		λ = 89°.0 W.
	i_Z	13 32 51		Tacubaya gives:-
	S	13 35 48		Δ = 1620 km.
	SS	13 38		Depth = 80 km.
	L	13 40		
	F	15 07		
		Victoria		
	H	13 23.4	5110	
	P	13 31 46		
	S	13 38 37		
	L	13 47		
	F	14 45		
		Saskatoon		
	e	13 31 21		
	e	13 37 46		
	L	13 50		
	F	14 29		
		Halifax		
	H	13 23.6	4165	
	P	13 30 53		
	S	13 36.9		
	L	13 44		
	F	14 12		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM October 7, 1945 to October 9, 1945 No. 50

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Seven Falls		
321 Oct. 7	H	13 23.1	4560	
	P	13 30 46		
	PPP	13 32 20		
	S	13 37.1		
	SS	13 39.8		
	L	13 43		
	F	15 42		
		Shawinigan Falls		
	H	13 23.6	3930	
	P	13 30 34		
	PPP	13 31.9		
	S	13 36 17		
	L	13 34		
	F	14 07		
		Ottawa		
322 Oct. 9	H	13 18.7	530	
	P_2	13 20 06		
	S_n	13 20 51		
	S_2	13 21 06		
	F	13 28		
		Seven Falls		
	H	13 18.7		
	P_2	13 19 02	110	
	S_2	13 19 15		
	F	13 27		
		Shawinigan Falls		
	H	13 18.7	255	
	P_2	13 19 26		
	S_2	13 19 55		
	S_1	13 20 01		
	F	13 31		
		Ottawa		
323 Oct. 9	H	14 36.7	8940	USCGS. gives:-
	P	14 48 52		ϕ = 43° N.
	PP	14 52.0		λ = 150° E.
	S	14 59 00		
	PS_H	14 59 42		
	SS_H	15 04.5		
	L	15 14		
	F	16 18		
		Victoria		
	H	14 36.4	6550	
	P_E	14 46.4		
	S	14 54 34		
	SSS	15 00		
	F	16 22		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM October 9, 1945 to October 15, 1945 No. 51

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Saskatoon		
323 Oct. 9 (Cont'd)	i	14 55 46		
	L	15 05		
	F	15 39		
		Seven Falls		
	H	14 36.7	8980	
	P	14 48 53		
	S	14 59 03		
	L	15 19		
	F	16 29		
		Shawinigan Falls		
	H	14 36.6	9020	
	P	14 48 53		
	S	14 59 05		
	F	15 07		
		Ottawa		
327 Oct. 11	H	16 53.0	3490	USCGS. gives:-
	P	16 59 25		ϕ = 17° N.
	S	17 04 40		λ = 97° W.
	L	17 11		
	F	17 21		
		Seven Falls		
	H	16 53.0	3900	
	P	16 59 56		
	S	17 05 36		
	L	17 15		
	F	17 22		
		Shawinigan Falls		
	H	16 53.0	3740	
	P	16 59 45		
	S	17 05 16		
	F	17 14		
		Ottawa		
329 Oct. 15	eZ	8 12 57		USCGS. gives:-
	L	8 20		ϕ = 59° N.
	F	9 00		λ = 140° W.

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM October 15, 1945 to October 16, 1945 No. 52

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Saskatoon		
329 Oct. 15 (Cont'd)	e	8 06.5		
	e	8 09 14		
	L	8 11		
	F	8 50		
		Seven Falls		
	e	8 17.8		
	L	8 22.6		
	F	9 01		
		Shawinigan Falls		
	e	8 11.9		
	L	8 20.6		
	F	8 35		
		Ottawa		
331 Oct. 16	K	16 03	14,500	USCGS. gives:-
	P'Z	16 22 10		ϕ = 0°.5 N.
	PP	16 24.2		λ = 126° E.
	SKP	16 25 29		
	PS	16 34.7		
	PPS	16 36.6		
	SS	16 41.6		
	L	17 05		
	F	18 21		
		Victoria		
	K	16 03	11,350	
	PP	16 21 18		
	SKS	16 27 36		
	PPS	16 31.0		
	L	16 50		
	F	18 42		
		Seven Falls		
	K	16 03	14,600	
	P'	16 22 15		
	PP	16 24 27		
	SKP	16 25 31		
	SS	16 42.0		
	L	17 05		
	F	18 27		
		Shawinigan Falls		
	K	16 03	14,550	
	P'	16 22.1		
	SKP	16 25 28		
	SKKS	16 31 17		
	F	16 39		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM October 16, 1945 to October 25, 1945 No. 53

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
333 Oct. 20	H	0 32.9	3950	
	P_Z	0 39 54		
	S	0 45 38		
	L	0 51		
	F	1 20		
		Saskatoon		
	e	0 39.0		
	L	0 40		
	F	0 52		
		Victoria		
	H	0 33.1	305	
	P	0 33 47		
	S	0 34 21		
	F	1 14		
		Shawinigan Falls		
	e	0 40 16		
	L	0 52		
	F	1 03		
		Victoria		
337 Oct. 21	H	0 29.9	310	
	P	0 30 41		
	S	0 31 15		
	L	0 31.4		
	F	0 40		
		Victoria		
338 Oct. 21	e	3 44.5		
	L	4 09		
	F	5 00		
		Seven Falls		
	e	3 55.3		
	L	4 14		
	F	5 03		
		Ottawa		
341 Oct. 25	H	14 59.0	7180	USCGS. gives:-
	P	15 09 31		ϕ = 56°.1 N.
	PPE	15 12.1		λ = 162° E.
	PPPZ	15 13 46		
	S	15 18 18		
	SSSN	15 22.8		
	L	15 30		
	F	16 33		

SEISMOLOGICAL SERVICE OF CANADA

DOMINION OBSERVATORY, OTTAWA

FROM October 25, 1945 to October 27, 1945 No. 54

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Victoria		
341 Oct. 25 (Cont'd)	H	14 58.7	4745	
	P	15 06 28		
	PPP_E	15 08.4		
	S	15 12 59		
	SSS	15 16 25		
	L	15 19		
	F	17 23		
		Seven Falls		
	H	14 59.0	7180	
	P	15 09 33		
	PPP	15 13 42		
	S	15 18 20		
	SS	15 22.4		
	SSS	15 25.4		
	L	15 31		
	F	16 19		
		Ottawa		
343 Oct. 26	H	13 56.8	8140	
	P_Z	14 08 15		
	S	14 17.8		
	SSS	14 24.6		
	L	14 30		
	F	15 12		
		Victoria		
	e	14 20 24		
	L	14 35		
	F	15 29		
		Saskatoon		
	e	14 12.0		
	L	14 42		
	F	15 00		
		Ottawa		
345 Oct. 26	H	18 44.8	155	
	P_2	18 45 14		
	S_2	18 45 32		
	F	18 46.2		
		Ottawa		
349 Oct. 27	H	11 24.8	3300	USCGS. gives:- ϕ = 15° N. λ = 91° W. Depth = 110 km. ca. Tacubaya gives:- ϕ = 14°09' N. λ = 93°23' W.
	P	11 30 55		
	S	11 35 58		
	SS	11 37 06		
	L	11 38		
	F	12 30		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM October 27, 1945 to October 29, 1945 No. 55

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Victoria		
349 Oct. 27 (Cont'd)	E	11 24.8	4360	
	P	11 32 17		
	S	11 38 27		
	SSS	11 42.7		
	L	11 49		
	F	12 29		
		Saskatoon		
	E	11 24.9	3845	
	P	11 31 50		
	S	11 37 28		
	SS	11 38 48		
	L	11 40		
	F	12 23		
		Halifax		
	E	11 24.1	3780	Clock correction uncertain.
	P	11 30 53		
	S	11 36 26		
	L	11 40		
	F	11 54		
		Seven Falls		
	E	11 24.7	3680	
	P	11 31 20		
	S	11 36 47		
	L	11 39		
	F	12 53		
		Shawinigan Falls		
	E	11 24.9	3540	
	P	11 31 13		
	PPP	11 32 40		
	S	11 36 31		
	L	11 41		
	F	11 55		
		Ottawa		
355 Oct. 29	E	10 54.3	4010	USCGS. gives:-
	P_Z	11 01 24		ϕ = 52° N.
	S	11 07 12		λ = 131° W.
	SS	11 09.0		
	L	11 12		
	F	12 29		
		Victoria		
	E	10 54.1	710	
	P	10 55 42		
	S	10 56 57		
	L	10 57		
	F	12 59		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM October 29, 1945 to October 31, 1945 No. 56

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Saskatoon		
355 Oct. 29 (Cont'd)	H	10 54.7	1500	
	P	10 57 59		
	S	11 00 39		
	L	11 02		
	F	12 21		
		Seven Falls		
	H	10 54.3	4250	
	P	11 01 41		
	S	11 07 45		
	SS	11 10 13		
	SSS	11 12 19		
	L	11 14		
	F	12 19		
		Shawinigan Falls		
	e	11 01 36		
	e	11 10.1		
	L	11 14		
	F	11 22		

W. D. Lyons.

EARTHQUAKE CORRELATION TABLE

Month October, 1945

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	
						M. S.	W. A.		
314	1	5 41+0 58u	.....	.....	.....	5 41+0 57u	.....	.....	..
315	1	.....	.....	.....	.....	19 05+0 19L	.....	.....	..
316	2	1 27+0 21L	1 16+0 18L	1 20+0 10I	.....	1 24+0 36L	.....	.....	..
317	3	.....	.....	.....	.....	.....	22 53+0 0.2d	.....	A
318	5	23 24+0 02P*	.....	.....	.....	23 38+0 03I	.....	23 25+0 03P	..
319	6	9 32+1 14u	9 59+0 38L	.....	.....	10 11+0 49I	.....	.....	..
320	6	.....	.....	.....	.....	22 59+0 27L	.....	.....	..
321	7	13 30+1 37r	13 32+1 13u	13 31+0 58u	13 31+0 41r	13 31+2 11r	13 31+0 10r	13 31+0 36r	B
322	9	13 20+0 08v	.....	.....	.....	.....	13 19+0 08V	13 19+0 12V	C
323	9	14 49+1 29u	14 46+1 36u	14 56+0 43u	.....	14 59+1 30u	14 49+0 17u	14 49+0 18u	D
324	11	9 16+0 01P*	.....	.....	.....	.....	.....	.....	..
325	11	10 15+0 01P*	.....	.....	.....	.....	.....	.....	..
326	11	.....	12 19+0 05L	.....	.....	.....	.....	12 26+0 07L	..
327	11	16 59+0 22r	17 10+0 11L	.....	.....	17 06+0 16r	17 00+0 12r	17 00+0 14r	E
328	14	4 57+0 21L	.....	4 52+0 18L	.....	4 59+0 29L	.....	.....	..
329	15	8 13+0 47r	8 07+0 17L	8 06+0 44r	8 25+0 10L	8 18+0 43r	8 22+0 12L	8 12+0 23r	..
330	15	18 49+0 13L	18 55+0 05L	.....	.....	.....	.....	.....	..
331	16	16 22+1 59u	16 21+2 21u	.....	.....	16 24+2 02u	16 22+0 16u	16 22+0 17u	F
332	16	17 24+0 0.6P*	.....	.....	.....	.....	.....	.....	..
333	20	0 40+0 40r	0 34+0 40V	0 39+0 13r	0 56+0 11L	0 52+0 27L	0 53+0 05L	0 40+0 23r	G
334	20	.....	1 44+0 14L	.....	.....	.....	.....	.....	..
335	20	1 51+0 0.2P*	.....	1 51+1 06L	.....	2 04+0 04L	.....	.....	..
336	20	.....	14 15+0 09L	.....	.....	.....	.....	.....	..
337	21	.....	0 31+0 09V	0 36+0 05L	.....	0 49+0 04L	0 48+0 06L	0 48+0 03L	H
338	21	4 17+0 33L	3 44+1 16u	4 05+0 31L	.....	3 55+1 08u	.....	.....	..
339	21	.....	12 53+0 11L	13 00+0 04L	.....	.....	.....	.....	..
340	22	.....	.....	.....	.....	.....	14 10+0 0.3d	.....	..
341	25	15 10+1 23u	15 06+2 17r	15 25+0 38L	.....	15 10+1 09u	15 10+0 38u	15 10+0 10P	J
342	25	16 55+0 0.8P*	.....	.....	.....	.....	.....	.....	..
343	26	14 08+1 04u	14 20+1 09u	14 12+0 48u	.....	14 21+0 58L	.....	.....	K

EARTHQUAKE CORRELATION TABLE

Month October, 1945

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
344	26	14 43+0 0.5P*	.....	.....	.....	.....	.....	.....	..
345	26	18 45+0 01v*	.....	.....	.....	.....	.....	.....	L
346	27	.....	.....	.....	.....	0 35+0 25L	.....	.....	..
347	27	4 15+0 0.4P*	.....	.....	.....	.....	.....	.....	..
348	27	6 55+0 01P*	.....	.....	.....	.....	.....	.....	..
349	27	11 31+0 59r	11 32+0 57r	11 32+0 51r	1 131+0 23r	11 31+1 22r	11 31+0 18r	11 31+0 24r	M
350	28	1 06+0 31L	1 27+0 22L	.....	.....	1 09+0 35I	.....	.....	..
351	28	5 56+0 01P*	6 00+0 49L	.....	.....	6 46+0 15L	.....	.....	..
352	28	.....	8 34+0 10L	.....	.....	8 21+0 02I	.....	.....	..
353	29	6 49+0 01P*	6 53+0 06L	6 54+0 04L	.....	7 02+0 05L	7 02+0 02L	7 00+0 05I	..
354	29	10 31+0 03L	10 14+0 09L	10 19+0 06L	.....	.....	.....	.....	..
355	29	11 01+1 28r	10 56+2 03R	10 58+1 23R	11 16+0 35L	11 08+1 11r	11 02+0 57r	11 02+0 20r	N

CORRELATION OF EARTHQUAKES

October, 1945

N O T E S

A :	Seven Falls	Δ = 30 km.	H = $22^h 53^m.2$ U.T.
B ::	Ottawa	Δ = 3740 km.	H = $12^h 23^m.5$ U.T.
	Victoria	Δ = 5110 km.	H = 12 23.4 U.T.
	Halifax	Δ = 4165 km.	H = 12 23.6 U.T.
	Seven Falls	Δ = 4560 km.	H = 12 23.1 U.T.
	Shawinigan Falls	Δ = 3930 km.	H = 12 23.6 U.T.
C :	Ottawa	Δ = 530 km.	H = $13^h 18^m.7$ U.T.
	Seven Falls	Δ = 110 km.	H = 13 18.7 U.T.
	Shawinigan Falls	Δ = 255 km.	H = 13 18.7 U.T.
D :	Ottawa	Δ = 8940 km.	H = $14^h 36^m.7$ U.T.
	Victoria	Δ = 6550 km.	H = 14 36.4 U.T.
	Seven Falls	Δ = 8980 km.	H = 14 36.7 U.T.
	Shawinigan Falls	Δ = 9020 km.	H = 14 36.6 U.T.
E :	Ottawa	Δ = 3490 km.	H = $16^h 53^m.0$ U.T.
	Seven Falls	Δ = 3900 km.	H = 16 53.0 U.T.
	Shawinigan Falls	Δ = 3740 km.	H = 16 53.0 U.T.
F :	Ottawa	Δ = 14,500 km.	H = $16^h 03^m$ U.T.
	Victoria	Δ = 11,350 km.	H = 16 03 U.T.
	Seven Falls	Δ = 14,600 km.	H = 16 03 U.T.
	Shawinigan Falls	Δ = 14,550 km.	H = 16 03 U.T.
G :	Ottawa	Δ = 3950 km.	H = $0^h 32^m.9$ U.T.
	Victoria	Δ = 305 km.	H = 0 33.1 U.T.
H :	Victoria	Δ = 310 km.	H = $0^h 29^m.9$ U.T.
J :	Ottawa	Δ = 7180 km.	H = $14^h 59^m.0$ U.T.
	Victoria	Δ = 4745 km.	H = 14 58.7 U.T.
	Seven Falls	Δ = 7180 km.	H = 14 59.0 U.T.
K :	Ottawa	Δ = 8140 km.	H = $13^h 56^m.8$ U.T.
L :	Ottawa	Δ = 155 km.	H = $18^h 44^m.8$ U.T.
M :	Ottawa	Δ = 3300 km.	H = $11^h 24^m.8$ U.T.
	Victoria	Δ = 4360 km.	H = 11 24.8 U.T.
	Saskatoon	Δ = 3845 km.	H = 11 24.9 U.T.
	Halifax	Δ = 3780 km.	H = (11 24.1) U.T.
	Seven Falls	Δ = 3680 km.	H = 11 24.7 U.T.
	Shawinigan Falls	Δ = 3540 km.	H = 11 24.9 U.T.
N :	Ottawa	Δ = 4010 km.	H = $10^h 54^m.3$ U.T.
	Victoria	Δ = 710 km.	H = 10 54.1 U.T.
	Saskatoon	Δ = 1500 km.	H = 10 54.7 U.T.
	Seven Falls	Δ = 4250 km.	H = 10 54.3 U.T.

Dominion Observatory,
Ottawa - Canada,
April 15, 1946.

SEISMOLOGICAL BULLETINS RECEIVED
September and October, 1945

We acknowledge, with thanks, the receipt of the following seismological publications and bulletins:-

STATIONS	BULLETINS	RECEIVED
New Zealand Stations	May, 1945	September 5
Pasadena and Auxiliary Stations	October to December, 1944	" 6
Ksara	January to March, 1945	" 7
Pasadena	Local Shocks January-March, 1945	" 8
Ksara	April to June, 1945	" 10
Apia	April to June, 1945	" 10
New Zealand Stations	June, 1945	" 11
Santa Clara	August, 1945	" 12
New Zealand Stations	July, 1945	October 1
Perth	March, 1945	" 1
Brisbane	May and June, 1945	" 3
Coimbra	April to September, 1945	" 13
Santa Clara	September, 1945	" 16
Zurich	November, 1942 to May, 1945	" 18
Bureau Central	April to June, 1945	" 20
Pasadena	Local Shocks April to June, 1945	" 22
Sydney	September and October, 1945	" 22
Zurich	June and July, 1945	" 23
Wellington	Provisional for August, 1945	" 30
U.G.G.I.	April, 1945	" 31
Uccle	January, 1940 to May, 1941	" 31

Dominion Observatory,
Ottawa - Canada.

SEISMOLOGICAL SERVICE OF CANADA

SEISMOLOGICAL BULLETIN

November, 1945

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DOMINION OBSERVATORY
OTTAWA - CANADA

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SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer
Ernest A. Hodgson, Seismologist
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

ϕ = 45°23'38" N. λ = 75°42'57" W. h = 83m.
Time correction within 0.10s.
Foundation: boulder clay over limestone
Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

ϕ = 44°38' N. λ = 63°36' W. h = 46m.
Time correction from recorded radio time signals
Foundation: Carbonaceous slate
Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

ϕ = 47°07!4 N. λ = 70°49!6 W. h = 232m. ca.
Time correction from recorded radio time signals
Foundation: Solid granite of Canadian Shield
Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

VICTORIA

Dominion Astrophysical Observatory

ϕ = 48°31'14" N. λ = 123°24'56" W. h = 197m.
Time correction from recorded radio time signals
Foundation: rock
Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

Wiechert Vertical, designated WV, smoked sheet registration, air damping, paper speed of 15 mm. per min., mass 80 kg.

SHAWINIGAN FALLS

Shawinigan Water and Power Company

ϕ = 46°33'.1 N. λ = 72°45.8'W. h = 60m. ca.

Time correction from recorded radio time signals

Foundation: solid granite of Canadian Shield

Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15g.

SASKATOON

University of Saskatchewan

ϕ = 52°08' N. λ = 106°38' W. h = 515m.

Time correction from radio time signals

Foundation: clay and sand

Instrument: Milne-Shaw NE component, designated SN, photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

KIRKLAND LAKE

Lake Shore Mines

ϕ = 48°09' N. λ = 80°03' W. h = 320m.

Time correction from recorded radio time signals

Foundation: rock

Instrument: Converted Heiland Field Seismometer, vertical component, designated KL, photographic registration, paper speed of 30 mm. per min.

DETERMINED CONSTANTS

INSTRUMENT	To	V	ε	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR 10^{-6} g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
HN (Halifax)	5.0	125	20:1		
HE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2500			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
WV (Victoria)	4.0	120	15:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
SN (Saskatoon)	10.0	150	20:1	18 mm.	
KL (Kirkland Lake)	1/30	2×10^4	at 30	cycles	

NOTE:- Universal Time used throughout.

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM November 1, 1945 to November 6, 1945 No. 57

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
359 Nov. 3	H	22 09.2	4940	USCGS. gives:-
	P	22 17 21		ϕ = 59°.1 N.
	PP	22 19 02		λ = 151°.0 W.
	S	22 24 02		
	SS	22 27 15		
	L	22 31		
	F	23 18		
		Victoria		
	H	22 08.8	2300	
	P	22 13 28		
	iS	22 17 18		
	L	22 18.4		
	F	23 18		
		Saskatoon		
	H	22 08.9	2865	
	P	22 14.5		
	S	22 19 04		
	L	22 22		
	F	22 55		
		Halifax		
	eE	22-25.1		
	L	22 35		
	F	22 54		
		Seven Falls		
	H	22 09.2	5010	
	P	22 17 30		
	PPP	22 19 35		
	S	22 24 15		
	SS	22 27.6		
	L	22 31		
	F	23 26		
		Shawinigan Falls		
	H	22 09.2	4960	
	P	22 17 25		
	S	22 24.2		
	L	22 32		
	F	22 49		
		Ottawa		
360 Nov. 6	H	21 42.9	150	
	P_2	21 43 18		
	S_2	21 43 35.5		
	F	21 44.2		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM November 6, 1945 to November 8, 1945 No. 58

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
361 Nov. 8	H	9 05.6	4420	USCGS. gives:-
	P_Z	9 13 11		ϕ = 81° N.
	PP	9 14 33		λ = 7° W.
	S	9 19 24		
	SSS_N	9 22.5		
	L	9 26		
	F	10 08		
		Victoria		
	eE	9 20.5		
	e	9 23.6		
	L	9 28		
	F	10 17+		
		Saskatoon		
	e	9 19.0		
	L	9 25		
	F	10 16+		
		Seven Falls		
	H	9 05.5	4235	
	P	9 12 52		
	S	9 18.9		
	SSS	9 22 46		
	L	9 26		
	F	10 09		
		Shawinigan Falls		
	H	9 05.4	4400	
	P	9 12 58		
	PP	9 14 18		
	S	9 19 10		
	L	9 27		
	F	9 46		
		Ottawa		
362 Nov. 8	H	10 02.7	4550	USCGS. gives:-
	P_Z	10 10 24		ϕ = 81° N.
	PP	10 11.8		λ = 7° W.
	S_N	10 16 44		
	SS_N	10 19 42		
	L	10 23		
	F	11 00		
		Victoria		
	e_E	10 17.7		
	e_E	10 21.5		
	e_N	10 22.9		
	L	10 26		
	F	11 17		
		Saskatoon		
	e	10 16.2		
	L	10 22		
	F	10 58		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM November 8, 1945 to November 16, 1945 No. 59

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Seven Falls		
362 Nov. 8 (Cont'd)	P	10 10 05		
	e	10 18.7		
	e	10 19 33		
	L	10 23		
	F	10 57		
		Shawinigan Falls		
	P	10 10 11		
	e	10 11.5		
	L	10 24		
	F	10 35		
		Ottawa		
363 Nov. 8	H	21 58.6	150	
	P_2	21 59 05.5		
	S_2	21 59 23		
	i	21 59 26		
	F	22 00		
		Victoria		
367 Nov. 11	e_E	9 56.0		
	L	10 07		
	F	10 40		
		Saskatoon		
368 Nov. 13	e	2 09 43		Local.
	e	2 10 26		
	F	2 12		
		Ottawa		
374 Nov. 16	H	18 02.4	4250	USCGS. gives:-
	PZ	18 09 45		ϕ = 57°.7 N.
	S_N	18 15 48		λ = 135°.8 W.
	L	18 20		
	F	19 10		
		Victoria		
	e	18 05 22		
	L	18 08		
	F	19 15		
		Saskatoon		
	H	18 02.7	1965	
	P	18 06 46		
	e	18 09 23		
	S	18 10 09		
	L	18 11.5		
	F	18 57		
		Shawinigan Falls		
	e	18 10.5		
	L	18 21		
	F	18 35		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM November 16, 1945 to November 27, 1945 No. 60

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Victoria		
377 Nov. 19	H	23 58.3	285	
	P_E	23 59 03		
	S	23 59 35		
	L	0 00		
	F	0 01		
		Saskatoon		
	H	18 02.7	1965	
	P	18 06 46		
	e	18 09 23		
	S	18 10 09		
	L	18 11.5		
	F	18 57		
		Shawinigan Falls		
	e	18 10.5		
	L	18 21		
	F	18 35		
		Victoria		
377 Nov. 19	H	23 58.3	285	
	P_E	23 59 03		
	S	23 59 35		
	L	0 00		
	F	0 01		
		Ottawa		
378 Nov. 22	e_Z	15 25.0		
	L	15 30		
	F	16 00		
		Ottawa		
381 Nov. 23	H	22 02.1	150	
	P_2	22 02 29		
	S_2	22 02 46.5		
	F	22 03.3		
		Ottawa		
383 Nov. 26	e_Z	5 30 44		USCGS. gives:-
	e_Z	5 31 51		ϕ = 23° S.
	e_E	5 36 38		λ = 180° W.
	e_N	5 38 52		
	e_N	5 47 05		
	L	5 50		
	F	6 07		
		Ottawa		
386 Nov. 27	e_Z	12 13 25		
	e	12 17.0		
	e	12 26		
	e	12 46 06		
	L	12 58		
	F	14 10		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM November 27, 1945 to November 27, 1945 No. 61

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Seven Falls		
386 Nov. 27	e	12 17.1		
	L	12 58		
	F	14 36		
		Ottawa		
387 Nov. 27	H	21 57	11,500	USCGS. gives:-
	P	22 10.7		ϕ = 22° N.
	PP	22 15 02		λ = 62° E.
	PPP_E	22 17 44		
	SKS	22 21 18		
	PS	22 24 09		
	SS	22 29 18		
	SSS	22 34 24		
	L	22 46		
	F	3 13		
		Victoria		
	H	21 57	11,700	
	P_N	22 11 39		
	PP	22 15 30		
	SKS	22 22 08		
	e	22 24 09		
	PPS	22 25.5		
	SS	22 31		
	SSS	22 36		
	L	22 49		
	F	2 20		
		Saskatoon		
	H	21 57	11,100	
	P	22 11.2		
	PP	22 15 09		
	e	22 20.8		
	PS	22 24.0		
	SS	22 30.5		
	L	22 46		
	F	2 34		
		Halifax		
	H	21 57	10,500	
	P	22 11 51		
	PP	22 14.4		
	SKS	22 21 16		
	SS	22 28.5		
	L	22 41		
	F	1 18		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM November 27, 1945 to November 30, 1945 No. 62

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Seven Falls		
387 Nov. 27 (Cont'd)	H	21 57	11,100	
	P	22 10 28		
	PP	22 14 40		
	e	22 20 22		
	e	22 21 28		
	PS	22 23.1		
	e	22 26.4		
	SS	22 29.0		
	F	3 07		
		Shawinigan Falls		
	H	21 57	11,100	
	P	22 10.6		
	PP	22 14.5		
	SKS	22 21.0		
	SKKS	22 21.6		
	SS	22 28 17		
	F	0 57		

W. W. Doxsee

EARTHQUAKE CORRELATION TABLE
Month November, 1945

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
356	2	19 17+0 0.2P*	.....	.....	.....	.....	.....	.....	..
357	3	4 14+0 0.4P*	.....	.....	.....	.....	.....	.....	..
358	3	8 15+0 01P*	.....	.....	.....	.....	.....	.....	..
359	3	22 17+1 01r	22 13+1 05R	22 14+0 41r	22 25+0 29u	22 17+1 09u	22 17+0 34u	22 17+0 32r	A
360	6	21 43+0 01v*	.....	.....	.....	.....	.....	.....	B
361	8	9 13+0 55r	9 20+0 57r	9 19+0 57r	9 28+0 09L	9 19+0 50r	9 13+0 26r	9 13+0 33r	C
362	8	10 10+0 50r	10 18+0 59r	10 16+0 42r	10 27+0 08L	10 19+0 39r	10 10+0 27r	10 10+0 25r	D
363	8	21 59+0 01v*	.....	.....	.....	.....	.....	.....	E
364	10	.....	.....	.....	.....	19 54+0 07L	.....	.....	..
365	10	.....	.....	.....	.....	23 10+0 27L	.....	.....	..
366	10	.....	.....	.....	.....	23 52+0 06L	.....	.....	..
367	11	.....	9 56+0 49u	.....	.....	10 23+0 48L	.....	.....	..
368	13	.....	.....	2 10+0 02v	.....	.....	.....	.....	..
369	13	.....	.....	.....	.....	.....	.....	2 56+0 03P	..
370	13	.....	9 16+0 07L	9 21+0 08L	.....	.....	.....	9 32+0 02L	..
371	13	.....	.....	.....	.....	.....	.....	21 30+0 03v	..
372	14	.....	10 17+0 06L	10 20+0 07L	.....	.....	.....	.....	..
373	15	.....	22 25+0 03L	.....	.....	.....	.....	.....	..
374	16	18 10+1 00r	18 05+1 10R	18 07+0 50r	18 26+0 17L	18 22+0 49L	18 21+0 13L	18 10+0 25r	F
375	17	22 39+0 06L	22 25+0 19L	22 28+0 09L	22 42+0 06L	.....	22 39+0 05L	22 39+0 04L	..
376	18	.....	3 05+0 08L	3 10+0 04L	.....	.....	.....	.....	..
377	19	.....	23 59+0 02v	.....	.....	.....	.....	.....	G
378	22	15 25+0 35r	.....	15 41+0 12L	.....	15 31+0 18L	15 31+0 02L	.....	..
379	22	15 48+0 02L	.....	.....	.....	.....	15 48+0 03L	.....	..
380	22	21 10+0 01P*	.....	.....	.....	.....	.....	.....	..
381	23	22 02+0 01v*	.....	.....	.....	.....	.....	.....	H
382	26	1 13+0 01P*	.....	.....	.....	.....	.....	.....	..
383	26	5 31+0 36u	.....	5 57+0 13L	.....	5 37+0 19L	.....	.....	..
384	26	5 41+0 0.6P*	.....	.....	.....	.....	.....	.....	..
385	27	6 07+0 17L	.....	.....	.....	6 06+0 17L	.....	.....	..
386	27	12 13+1 57u	12 46+0 42L	.....	.....	12 17+2 19u	.....	.....	..
387	27	22 11+5 02U	22 12+3 41U	22 11+4 23U	22 12+3 06U	22 10+5 00U	22 10+2 46U	22 11+2 46U	J
388	28	8 54+0 0.3P*	.....	.....	.....	.....	.....	.....	..
389	29	.....	5 42+0 09L	.....	.....	5 34+0 18L	.....	.....	..

CORRELATION OF EARTHQUAKES
November, 1945

N O T E S

A :	Ottawa	Δ = 4,940 km.	H = $22^h09^m.2$ U.T.
	Victoria	Δ = 2,300 km.	H = 22 08.8 U.T.
	Saskatoon	Δ = 2,865 km.	H = 22 08.9 U.T.
	Seven Falls	Δ = 5,010 km.	H = 22 09.2 U.T.
	Shawinigan Falls	Δ = 4,960 km.	H = 22 09.2 U.T.
B :	Ottawa	Δ = 150 km.	H = $21^h42^m.9$ U.T.
C :	Ottawa	Δ = 4,420 km.	H = $9^h05^m.6$ U.T.
	Seven Falls	Δ = 4,235 km.	H = 9 05.5 U.T.
	Shawinigan Falls	Δ = 4,400 km.	H = 9 05.4 U.T.
D :	Ottawa	Δ = 4,550 km.	H = $10^h02^m.7$ U.T.
E :	Ottawa	Δ = 150 km.	H = $21^h58^m.6$ U.T.
F :	Ottawa	Δ = 4,250 km.	H = $18^h02^m.4$ U.T.
	Saskatoon	Δ = 1,965 km.	H = 18 02.7 U.T.
G :	Ottawa	Δ = 285 km.	H = $23^h58^m.3$ U.T.
H :	Ottawa	Δ = 150 km.	H = $22^h02^m.1$ U.T.
J :	Ottawa	Δ = 11,500 km.	H = 21^h57^m U.T.
	Victoria	Δ = 11,700 km.	H = 21 57 U.T.
	Saskatoon	Δ = 11,100 km.	H = 21 57 U.T.
	Halifax	Δ = 10,500 km.	H = 21 57 U.T.
	Seven Falls	Δ = 11,100 km.	H = 21 57 U.T.
	Shawinigan Falls	Δ = 11,100 km.	H = 21 57 U.T.

Dominion Observatory,
OTTAWA - CANADA,
May 8, 1946.

SEISMOLOGICAL SERVICE OF CANADA

SEISMOLOGICAL BULLETIN

December
1945

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DOMINION OBSERVATORY
OTTAWA - CANADA

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SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

R. Meldrum Stewart, Dominion Astronomer
Ernest A. Hodgson, Seismologist
W. W. Doxsee, Station Superintendent

S T A T I O N S

OTTAWA

ϕ = 45°23'38" N. λ = 75°42'57" W. h = 83m.

Time correction within 0.10s.

Foundation: boulder clay over limestone

Instruments: Milne-Shaw NS and EW components, designated 23 and 17, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 1 lb.

Benioff Vertical, short and long period, designated BS and BL, respectively, photographic registration, BS a paper speed of 60 mm. per min., BL a paper speed of 30 mm. per min., mass 235 lbs.

HALIFAX

Dalhousie University

ϕ = 44°38' N. λ = 63°36' W. h = 46m.

Time correction from recorded radio time signals

Foundation: Carbonaceous slate

Instruments: Bosch NS and EW components, designated HN and HE, respectively, each with photographic registration, magnetic damping, paper speed of 15 mm. per min., mass 200g.

SEVEN FALLS

Quebec Power Company

ϕ = 47°07'.4 N. λ = 70°49'.6 W. h = 232m. ca.

Time correction from recorded radio time signals

Foundation: Solid granite of Canadian Shield

Instruments: Wood-Anderson and Milne-Shaw, both EW component, designated SF and SM, respectively, each with photographic registration, magnetic damping, SF a paper speed of 60 mm. per min. and mass 15g., SM a paper speed of 8 mm. per min. and mass 1 lb.

S T A T I O N S (Cont'd)

VICTORIA

Dominion Astrophysical Observatory

ϕ = 48°31'14" N. λ = 123°24'56" W. h = 197m.

Time correction from recorded radio time signals

Foundation: rock

Instruments: Milne-Shaw NS and EW components, designated 21 and 20, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

SHAWINIGAN FALLS

Shawinigan Water and Power Company

ϕ = 46°33'1 N. λ = 72°45'8 W. h = 60m. ca.

Time correction from recorded radio time signals

Foundation: solid granite of Canadian Shield

Instrument: Wood-Anderson NS component, designated SA, photographic registration, magnetic damping, paper speed of 60 mm. per min., mass 15g.

SASKATOON

University of Saskatchewan

ϕ = 52°08' N. λ = 106°38' W. h = 515m.

Time correction from radio time signals

Foundation: clay and sand

Instrument: Milne-Shaw NE and NW components, designated 18 and 22, respectively, each with photographic registration, magnetic damping, paper speed of 8 mm. per min., mass 1 lb.

DETERMINED CONSTANTS

INSTRUMENT	T_o	V	ε	DISPLACEMENT FOR 1" ARC TILT	DISPLACEMENT FOR 10^{-6} g
17 (Ottawa)	12.0	300	20:1	50 mm.	
23 (Ottawa)	12.0	300	20:1	50 mm.	
BS (Ottawa)	1.0				5 mm.
BL (Ottawa)	1.0				16 mm.
NN (Halifax)	5.0	125	20:1		
NE (Halifax)	5.0	125	20:1		
SA (Shawinigan)	1.0	2500			
20 (Victoria)	12.0	300	20:1		
21 (Victoria)	12.0	300	20:1		
SF (Seven Falls)	1.0	2500			
SM (Seven Falls)	12.0	300	20:1	50 mm.	
18 (Saskatoon)	10.0	150	20:1	18 mm.	
22 (Saskatoon)	10.0	150	20:1	18 mm.	

NOTE:- Universal Time used throughout.

SEISMOLOGICAL SERVICE OF CANADA

DOMINION OBSERVATORY, OTTAWA

FROM December 1, 1945 to December 8, 1945 No. 63

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ott wa		
390 December 2	H	15 22.5	90	
	P_1	15 22 45		
	S_1	15 22 55.5		
	F	15 24.5		
		Ottawa		
391 December 3	H	20 36.5	155	
	P_2	20 36 56		
	S_2	20 37 14		
	F	20 37.5		
		Seven Falls		
392 December 7	H	5 54.3	60	
	P_1	5 54 30		
	S_1	5 54 37		
	F	5 55.7		
		Ottawa		
393 December 8	H	1 04	13900	USCGS gives:-
	P_2	1 23 02		ϕ = 1° S.
	PP	1 24.8		λ = 148° E.
	PS	1 34 42		
	PPS	1 36 32		
	SS	1 41 28		
	SSS	1 46 10		
	eL	1 56		
	F	3 37		
		Victoria		
	H	1 04	10500	
	PP_E	1 20.8		
	SKKS	1 27.7		
	PS	1 29 27		
	SS	1 34.7		
	L	1 43		
	F	3 36		
		Saskatoon		
	H	1 04	11100	
	PS	1 31.0		
	SS	1 37.0		
	SSS	1 40.7		
	L	1 47		
	F	3 51		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM December 8, 1945 to December 20, 1945 No. 64

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Seven Falls		
393 December 8 cont'd	H	1 04	14100	
	PP	1 25.1		
	PPS	1 36.7		
	SS	1 42.1		
	L	1 56		
	F	3 35		
		Shawinigan Falls		
	e	1 24 07		
	L	2 12		
	F	2 27		
		Ottawa		
395 December 9	H	20 45.6	3900	USCGS gives:- ϕ = 15°N. λ = 92°W. Depth = 100 km. ca.
	P_Z	20 52 35		
	S_N	20 58 16		
	L	21 03		
	F	21 32		
		Ottawa		
396 December 10	H	21 24.3	150	
	P_2	21 24 40.5		
	S_2	21 24 58		
	F	21 25.4		
		Ottawa		
397 December 14	H	17 27.0	4980	
	P	17 35 17		
	S	17 42.0		
	SSS	17 46.0		
	L	17 51		
	F	18 00		
		Ottawa		
402 December 20	H	3 59	13700	
	P_Z	4 18 11		
	PP	4 19 48		
	PS_N	4 29.7		
	SS_N	4 37		
	L	4 57		
	F	5 43		
		Victoria		
	e	4 23 28		
	L	4 44		
	F	5 18		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM DECEMBER 20, 1945 to December 23, 1945 No. 65

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Saskatoon		
402 December 20 cont'd	e	4 26.8		
	L	4 45		
	F	5 32		
		Seven Falls		
	e	4 29.8		
	L	4 52		
	F	5 38		
		Ottawa		
403 December 20	H	21 06.2	155	
	P_2	21 06 39		
	S_2	21 06 57		
	F	21 07.3		
		Ottawa		
405 December 23	H	8 10.1	3920	USCGS gives:-
	P_Z	8 17 06		ϕ = 10°.2 N
	PPP	8 18 28		λ = 61°.7 W
	S	8 22 49		
	L	8 26		
	F	9 00		
		Saskatoon		
	H	8 10.2	5900	
	P	8 19 29		
	S	8 27 04		
	L	8 36		
	F	9 14		
		Seven Falls		
	H	8 10.1	4040	
	P	8 17 12		
	S	8 23 02		
	L	8 26		
	F	8 31		
		Shawinigan Falls		
	H	8 10.1	3960	
	P	8 17 06		
	S	8 22 51		
	L	8 27		
	F	8 38		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM December 23, 1945 to December 27, 1945 No. 66

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Ottawa		
406 December 25	H	1 25.5	7680	
	P	1 36 32		
	S_E	1 45 42		
	i_N	1 46 36		
	e_N	1 49 50		
	SS_E	1 53		
	SSS_N	1 56		
	L	2 01		
	F	3 00		
		Victoria		
	e	1 33 10		
	L	1 42		
	F	2 19		
		Saskatoon		
	e	1 34.5		
	e	1 40 42		
	L	1 48		
	F	2 36		
		Seven Falls		
	e	1 46.5		
	L	2 00		
	F	2 59		
		Ottawa		
407 December 27	H	4 41	13900	USCGS gives:-
	P, Z	5 00 01		φ = 6°S
	SKP_E	5 03		λ = 148°E
	PPS	5 13.5		
	SS	5 18.5		
	SSS	5 23.5		
	L	5 40		
	F	6 52		
		Victoria		
	e_E	4 54.2		
	e_E	5 04 46		
	L	5 19		
	F	7 06		
		Saskatoon		
	H	4 41	11100	
	SKS	5 05.7		
	PS	5 08.2		
	SS	5 14		
	SSS	5 17.6		
	L	5 24		
	F	7 15		

SEISMOLOGICAL SERVICE OF CANADA,
DOMINION OBSERVATORY, OTTAWA

FROM December 27, 1945 to December 28, 1945 No. 67

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
407 December 27 cont'd		Seven Falls		
	H	4 41	14500	
	SKP	5 03.1		
	PPS	5 13.5		
	SS	5 18.7		
	L	5 34		
	F	7 16		
		Ottawa		
408 December 27	H	20 50.0	150	
	P_2	20 50 22.5		
	S_2	20 50 40		
	F	20 51.2		
		Ottawa		
409 December 28	H	17 48.7	13900	USCGS gives:-
	P'Z	18 07 46		ϕ = 6°S
	PP	18 09 28		λ = 151°E
	e	18 15 04		
	e	18 16 38		
	S_N	18 17 31		
	e	18 20 16		
	PPS	18 21.2		
	SS	18 26 24		
	SSS	18 31 20		
	eL	18 40.5		
	F	22 27		
		Victoria		
	H	17 48.4	10400	
	P_E	18 01.7		
	e_E	18 06 05		
	SKS_N	18 12 04		
	$SKKS_E$	18 12 28		
	PPS	18 14 16		
	SS	18 19.4		
	SSS	18 24		
	L	18 31		
	F	22 04		
		Saskatoon		
	H	17 48.3	11600	
	PP	18 06.6		
	SKKS	18 13 38		
	PPS	18 16 10		
	SS	18 21 55		
	SSS	18 25.7		
	L	18 36		
	F	22 02		

SEISMOLOGICAL SERVICE OF CANADA
DOMINION OBSERVATORY, OTTAWA

FROM December 28, 1945 to December 30, 1945 No. 68

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Halifax		
409 December 28 cont'd	H	17 48.9	14600	
	SKP	18 11 27		
	PPS	18 22.1		
	SS	18 28.2		
	L	18 43		
	F	20 19		
		Seven Falls		
	H,	17 48.8	14000	
	P'	18 07 54		
	PP	18 07 44		
	SKP	18 11 08		
	e	18 18 40		
	PPS	18 21.0		
	SS	18 26 48		
	L	18 48		
	F	22 25		
		Shawinigan Falls		
	H,	17 48.8	13900	
	P'	18 07 51		
	S	18 27.1		
	SSS	18 41		
	L	18 49		
	F	19 43		
		Ottawa		
410 December 29	eZ	10 09 38		
	L	10 55		
	F	11 10		
		Ottawa		
411 December 29	eZ	12 45 51		
	L	13 32		
	F	13 42		
		Ottawa		
413 December 30	eZ	1 07 35		
	e	1 26 15		
	L	1 41		
	F	2 25		
		Saskatoon		
	e	1 13.7		
	L	1 35		
	F	2 20		

SEISMOLOGICAL SERVICE OF CANADA

DOMINION OBSERVATORY, OTTAWA

FROM December 30, 1945 to December 31, 1945 No. 69

NO. AND DATE	PHASE	TIME	DISTANCE	REMARKS
		h m s	km.	
		Seven Falls		
413 December 30 cont'd	e	1 20.6		
	L	1 44		
	F	2 35		
		Ottawa		
414 December 31	e_Z	17 45 00		
	L	18 27		
	F	18 55		

W W. Doxsee

EARTHQUAKE CORRELATION TABLE

December, 1945

No.	Date	Ottawa	Victoria	Saskatoon	Halifax	Seven Falls		Shawinigan	**
						M. S.	W. A.		
390	2	15 23+0 02d*	.....	.....	.....	.....	.....	15 24+0 0.6v	A
391	3	20 37+0 0.5v*	.....	.....	.....	.....	.....	.....	B
392	7	.....	.....	.....	.....	.....	5 54+0 01d	.....	C
393	8	1 23+2 14U	1 21+2 15U	1 31+2 20U	2 02+0 44L	1 25+2 10U	2 06+0 29L	1 24+1 03U	D
394	9	6 19+0 01P*	.....	.....	.....	.....	6 19+0 02P	.....	
395	9	20 53+0 39r	21 04+0 32L	.....	.....	21 01+0 32L	.....	20 53+0 04P	E
396	10	21 25+0 0.7 v*	.....	.....	.....	.....	.....	.....	F
397	14	17 35+0 25r	.....	.....	.....	.....	.....	17 35+0 05P	G
398	14	22 59+0 0.7v*	.....	.....	.....	.....	.....	23 00+0 0.3v	
399	16	17 58+0 01P*	.....	.....	.....	.....	.....	.....	
400	17	18 11+0 0.2P*	.....	.....	.....	.....	.....	.....	
401	19	19 02+0 0.5P*	.....	.....	.....	.....	.....	.....	
402	20	4 18+1 25u	4 23+0 55u	4 27+1 05u	.....	4 30+1 08u	.....	.....	H
403	20	21 07+0 0.7v*	.....	.....	.....	.....	.....	.....	J
404	22	22 01+0 14L	22 11+0 14L	22 07+0 12L	.....	.....	.....	.....	
405	23	8 17+0 43R	8 37+0 30L	8 19+0 55u	8 26+0 15L	.....	8 17+0 14R	8 17+0 21R	K
406	25	1 37+1 23u	1 33+0 46u	1 34+1 02u	2 04+0 18L	1 46+1 13u	.....	1 37+0 06P	L
407	27	5 00+1 52u	4 54+2 12u	5 06+2 09u	5 47+0 27L	5 03+2 13u	.....	.....	M
408	27	20 50+0 0.8v*	.....	.....	.....	.....	.....	.....	N
409	28	18 08+4 19U	18 02+4 02U	18 07+3 55U	18 11+2 08U	18 10+4 15U	18 08+1 56U	18 08+1 35U	P
410	29	10 10+1 00u	10 35+0 15L	10 45+0 10L	.....	10 53+0 20L	.....	10 10+0 01P	
411	29	12 46+0 56u	13 18+0 10L	13 20+0 13L	.....	13 36+0 22L	.....	.....	
412	29	22 06+1 00P*	.....	.....	.....	.....	.....	.....	
413	30	1 08+1 17u	1 33+0 25L	1 14+1 06u	.....	1 21+1 14u	.....	.....	
414	31	17 45+1 10u	.....	.....	.....	18 22+0 45L	.....	.....	

CORRELATION OF EARTHQUAKES

December, 1945

NOTES

A	:	Ottawa	Δ = 90 km.	H = $15^h22^m.5$ U.T.
B	:	Ottawa	Δ = 155 km.	H = $20^h36^m.5$ U.T.
C	:	Seven Falls	Δ = 60 km.	H = $5^h54^m.3$ U.T.
D	:	Ottawa	Δ = 13900 km.	H = 1^h04^m U.T.
		Victoria	Δ = 10500 km.	H = 1 04 U.T.
		Saskatoon	Δ = 11100 km.	H = 1 04 U.T.
		Seven Falls	Δ = 14100 km.	H = 1 04 U.T.
E	:	Ottawa	Δ = 3900 km.	H = $20^h45^m.6$ U.T.
F	:	Ottawa	Δ = 150 km.	H = $21^h24^m.3$ U.T.
G	:	Ottawa	Δ = 4980 km.	H = $17^h27^m.0$ U.T.
H	:	Ottawa	Δ = 13700 km.	H = 3^h59^m U.T.
J	:	Ottawa	Δ = 155 km.	H = $21^h06^m.2$ U.T.
K	:	Ottawa	Δ = 3920 km.	H = $8^h10^m.1$ U.T.
		Saskatoon	Δ = 5900 km.	H = 8 10.2 U.T.
		Seven Falls	Δ = 4040 km.	H = 8 10.1 U.T.
		Shawinigan Falls	Δ = 3960 km.	H = 8 10.1 U.T.
L	:	Ottawa	Δ = 7680 km.	H = $1^h25^m.5$ U.T.
M	:	Ottawa	Δ = 13900 km.	H = 4^h41^m U.T.
		Saskatoon	Δ = 11100 km.	H = 4 41 U.T.
		Seven Falls	Δ = 14500 km.	H = 4 41 U.T.
N	:	Ottawa	Δ = 150 km.	H = $20^h50^m.0$ U.T.
P	:	Ottawa	Δ = 13900 km.	H = $17^h48^m.7$ U.T.
		Victoria	Δ = 10400 km.	H = 17 48.4 U.T.
		Saskatoon	Δ = 11600 km.	H = 17 48.3 U.T.
		Halifax	Δ = 14600 km.	H = 17 48.9 U.T.
		Seven Falls	Δ = 14000 km.	H = 17 48.8 U.T.
		Shawinigan Falls	Δ = 13900 km.	H = 17 48.8 U.T.

Dominion Observatory,

OTTAWA - CANADA,

May 29, 1946