

*Complete
I.H.*

Seismological Bulletin 1956

Uppsala: 59° 51.5' N, 17° 37.6' E

Kiruna: 67° 50.4' N, 20° 25.0' E

Skalstugan: 63° 34.8' N, 12° 16.8' E

By

Markus Båth

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Uppsala (abbreviated Up in the bulletin)

Location and ground: 59°51.5'N, 17°37.6'E; 14 m above mean sea level; granite.

Instruments: Wiechert 1000 kg pendulum E,N; Grenet-Coulomb Z' (short-period); Benioff variable reluctance E,N,Z (long-period) and E',N',Z' (short-period).

Instrumental constants for 1956:

a) Wiechert

T_0 = seismograph free period,

V = static magnification,

ε = damping ratio,

r = max. deviation due to friction.

Instrument	Date 1956	T_0 sec	V	ε	r mm
Wiechert E	Jan 3	10.3	188	4.4	1.0
	July 2	10.4	189	4.2	1.2
» N	Jan 3	9.5	188	3.8	1.0
	July 2	9.2	197	3.8	1.0

Concerning the method of determination, see Wiechert (1903).

b) Grenet-Coulomb

T_0 = seismometer free period,

T_g = galvanometer free period,

k_g = transference factor,

L = reduced pendulum length,

l_0 = recording distance (from galvanometer lense to record),

V_{\max} = max. dynamic magnification.

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Uppsala, Ki = Kiruna

Instrument	Date	T_0 sec	T_g sec	k_g sec ⁻¹	L cm	l_0 cm	V_{max}
Grenet-Coulomb Z'	Jan 19, 1952	1.4	0.5	16900	11.8	100	10530

Both seismometer and galvanometer damping is critical (aperiodic).

Reference is made to Grenet (1946), Galitzin (1914), and Byerly (1942).

c) Benioff

In addition to T_0 , T_g , l_0 , and V_{max} , already defined, we introduce the following notation:

$2\sigma_g l_0$ = transference factor, where σ_g = a quantity depending on the electrodynamic properties of the transducer and the galvanometer (Benioff, 1932; Chakrabarty, 1949; Båth, 1959).

Instrument	Date 1956	T_0 sec	T_g sec	$2\sigma_g l_0$ sec ⁻¹	V_{max}
Benioff E	Feb 7	1.0	87	2.509×10^4	2000
» N	Feb 7	1.0	85	3.705×10^4	2940
» Z	Feb 7	1.0	89	1.892×10^4	1520
» E'	Feb 7	1.0	0.2	1.561×10^7	239200
	July 10	1.0	0.7	2.090×10^6	88310
» N'	Feb 7	1.0	0.2	1.300×10^7	199200
	July 10	1.0	0.7	2.363×10^6	99840
» Z'	Feb 7	1.0	0.2	1.147×10^7	176100
	July 17	1.0	0.7	1.316×10^6	55580

Damping is critical both for seismometers and galvanometers. As is evident from the table, the galvanometers of 0.2 sec period, first used, were replaced in July, 1956, by galvanometers of 0.7 sec period, which improved the records. The test-weight method for determination of magnification curves for short-period instruments is not very reliable, and a comparison of parallel records of Benioff Z' and Grenet-Coulomb Z' suggests that the last value given above for V_{max} should be reduced to about 40000 (Båth, 1959). Similar reductions apply to E' and N'.

Sk = Skalstugan

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In the bulletin only the readings from Benioff E, N, Z and Grenet Z' are reported as a rule. Readings from Benioff Z' have been included as a complement to Grenet Z', while the other records have not been read in general.

Kiruna (abbreviated Ki)

Location and ground: 67° 50.4' N, 20° 25.0' E; 390 m above mean sea level; porphyry.

Instruments: Grenet-Coulomb Z', Galitzin E, N, Z.

Instrumental constants for 1956:

a) Grenet-Coulomb

Notation, see Uppsala b).

Instrument	Date	T_0 sec	T_g sec	k_g sec ⁻¹	L cm	l_0 cm	V_{max}
Grenet-Coulomb Z'	June 5, 1955	1.4	0.8	15494	12.2	101.5	12820

Damping is critical for seismometer and galvanometer.

b) Galitzin

In addition to the notation above we introduce

μ^2 = seismometer damping (Galitzin, 1914).

Instrument	Date 1955	T_0 sec	T_g sec	μ^2	k_g sec ⁻¹	L cm	l_0 cm	V_{max}
Galitzin E	June 4	12.1	11.8	+0.06	69.2	16.0	135.6	740
» N	June 4	13.0	11.8	+0.20	74.1	15.2	136.0	920
» Z	June 4	8.2	11.9	+0.07	205.1	41.0	135.6	690

Galvanometer damping is critical.

Readings from all Kiruna records are reported in the bulletin.

Skalstugan (abbreviated Sk)

Location and ground: 63° 34.8' N, 12° 16.8' E; 580 m above mean sea level; gneiss.

Instrument: Grenet-Coulomb Z'.

Instrumental constants for 1956:

Instrument	Date	T_0 sec	T_g sec	k_g sec ⁻¹	L cm	l_0 cm	V_{max}
Grenet-Coulomb Z'	Nov 21, 1955	1.4	0.8	~16000	~12	~100	~12000

Seismometer and galvanometer damping critical.

This station began its operation in January, 1956. The establishment of the Skalstugan station was made possible by means of funds from the Knut and Alice Wallenberg Foundation and from the Swedish Natural Science Research Council.

General remarks

This publication is the continuation of the earlier "Observations séismographiques" for Uppsala (1904—1955, with exception for June, 1905—June, 1906, which was not published) and for Kiruna (1951—1955). Starting with this bulletin the readings from all seismograph stations in Sweden will be published together in one and the same volume. Apart from a change of the language used, there is a different presentation of the readings. An enormously increased number of records and readings has compelled us to limit the information to just that which is necessary for computation of earthquake location, time, and magnitude. In addition, especially pronounced phases are given and remarkable features of the records are mentioned. For information beyond this, everybody interested is welcome to write to us. All records are stored at Uppsala, and all correspondence should be addressed: Seismological Laboratory, Uppsala, Sweden.

For notation of phases, see "Observations séismographiques" for Uppsala or Kiruna 1955. Concerning channel waves, see a review by Båth (1958). The time used is Greenwich Mean Time (GMT).

C=compression,

D=dilatation,

μ =amplitude in microns, $1\mu=10^{-3}$ mm,

s=period in seconds,

Δ =epicentral distance,

h=depth of hypocenter,

Magn.=magnitude, determined in the old Gutenberg-Richter scale (M) by applying our station corrections (Båth, 1956). Amplitudes are given only for Uppsala and Kiruna.

In the analysis of the records, use has been made of all available bulletins, especially those from Bureau Central International de Séismologie (BCIS), Strasbourg, and from United States Coast and Geodetic Survey (USCGS), Washington, D.C. The tables and methods of Jeffreys and Bullen (1940), Gutenberg and Richter (1937), Båth (1943 and 1947), Gutenberg (1951) have been used.

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Tables

1956		1956									
Jan	1	✓ Up	iPn	04 55 59	Jan	✓ 2	Ki	iSKP	09 48 38		
			iPg	04 56 03	(cont.)			SKP	z'	0.1 1.0	
			iSn	04 56 18				Fiji Islands.			
			iSg	04 56 20				Deep (h ~ 600 km).			
			△ = 170 km = 1.5°.				»	✓ 2	Up	iP	13 30 27
			Felt at Söderhamn (61.3° N, 17.1° E),				»	✓ 2	Up	i(P)	18 04 18
			Sweden.				»	✓ 3	Up	iP	02 49 47
			Origin time = 04 55 31.				»	✓ 3	Ki	i(P)	02 51 11
	»	1	✓ Up	iP	07 28 46		»	✓ 3	Up	iP	05 57 06
	»	1	✓ Up	iP	09 12 03		»	✓ 3	Up	iP	10 52 19C
			i	09 12 13				P	z'	0.1 0.7	
			✓ Ki	iP	09 11 55		✓	Ki	iP	10 51 33	
			Sinkiang, China.					P	z'	0.2 1.5	
	»	1	✓ Up	iP	14 18 49 ✓			Southern Kurile Islands.			
			✓ Ki	iP	14 18 16 ✓		»	✓ 3	Up	iP	13 14 48
	»	1	✓ Up	ePP	23 27 13 ✓		»	✓ 3	Up	i(P)	14 49 20
			i	23 27 46 ✓		»	✓ 3	Up	iP	15 51 50 ✓	
			✓ Ki	iP	23 22 18C ✓			Kurile Islands.			
			ePKP	23 26 21 ✓			»	✓ 3	Up	e(P)	20 37 47
			iSKS	23 32 39 ✓			»	✓ 3	Up	iP	23 35 41
			iPKKP	23 38 11 ✓				P	z'	0.2 1.3	
			SKS E 2.1 6					Unimak Island, Alaska.			
			M N 2.1 24				»	✓ 4	Up	iP	12 25 06
			△ = 11550 km = 104°.					Near west coast of Greece.			
			Timor Island region.				»	✓ 4	Up	e(P)	20 28 12
	»	2	✓ Up	iP	01 42 08D			i		20 28 31	
			i	01 42 15			✓	Ki	iP	20 28 18	
			P	z'	0.2 1.0			iPP		20 29 10	
			✓ Ki	iP	01 42 10D			Caspian Sea.			
			Nicobar Islands region.				»	✓ 4	Up	eP	20 33 25
	»	2	✓ Ki	eP	04 44 10		»	✓ 5	Up	iPKP	01 13 21
			Off north coast of Luzon, Philippine Islands.					Argentina-Chile border region.			
	»	2	✓ Up	iP	08 51 39						
	»	2	✓ Up	i(P)	09 41 57						
			Possibly near earthquake.								
	»	2	✓ Up	iPKP	09 46 16						
			iSKP	09 49 01							
			SKP	z'	0.1 1.0						

1956
Jan 9 (cont.)

SKP	z'	0.5	1.5
PKS	E	1.5	5
PKS	N	1.2	5
M	E	2.5	21

Δ ~ 14800 km ~ 133°.
Fiji Islands region. Deep (h ~ 650 km). The first PKP is clear, but very weak at both stations. The amplitudes of PKP refer to the second PKP for Uppsala and the third for Kiruna.

» 9 Ki eP		13	55	17
	M	E	2.9	19
	M	N	1.6	20
	M	Z	5.6	22
» 9 Up eP		14	08	57
» 9 Ki iP		14	18	18
» 9 Ki iP		14	34	27
» 9 Ki eP		15	39	46
» 9 Up iP		15	50	08
» 9 Ki eP		16	03	58
» 9 Ki iP		16	36	50
» 9 Up iP		17	14	33
» 9 Ki iP		17	14	21
	P	z'	0.2	1.5

Mexico.

» 9 Ki e(P)		22	29	29
» 9 Up iP		23	57	12
» 9 Ki eP		23	58	21
» 10 Up eP		06	15	08
	i	06	15	37
» 10 Up e(P)		08	19	37
	Seismic?			
» 10 Up e(PKP)		09	12	02
	iPKP	09	12	09
	iPKP	09	12	19
	i	09	12	39
	ePKS	09	16	09
	eSKKS	09	28	37
	eSS	09	34	20
	PKP	z	5.2	5
	PKP	z'	1.6	2.5
	M	E	51	25
	M	N	46	24
	M	Z	69	24

1956
Jan 10 (cont.)

» 10 Ki ePKP		09	11	53
	e	09	12	36
	e	09	14	55
	i!	09	15	01
	iPKS	09	15	43
	PKS	N	8.7	15
	M	E	44	23
	M	N	25	21
	M	Z	39	20

Δ ~ 15950 km ~ 143 1/2°.
Tonga Islands region.
Magn. = 7.3 (Up, Ki).
The initial PKP-phases are of very small amplitude and indefinite beginning, especially at Uppsala. The amplitude of PKP (Uppsala) refers to the third phase.

» 10 Up iPKP		09	46	15
	i	09	46	22
	PKP	z'	0.2	1.3

Tonga Islands region.

» 10 Up iP		10	25	51
» 10 Up iPKP		10	38	00
	PKP	z'	0.1	1.1

Tonga Islands region.

» 10 Up eP		12	41	03
	i	12	41	21
» 10 Ki eP		12	42	24
» 10 Up eP		12	43	41
» 10 Ki iP		12	43	18

Off coast of Oregon, U.S.A.

» 10 Up iP		15	42	32
	Mexico.			
» 10 Up iP		17	47	49
» 10 Ki iP		17	47	06
» 10 Up e(P)		18	31	11
» 10 Up iP		19	40	49
» 10 Up iP		21	00	31
» 10 Up iPKP		21	37	39

South of Tonga Islands.

» 10 Up iP		21	52	26
» 10 Ki iP		21	50	20
» 10 Ki iP		22	12	27

1956
Jan 10

Up iPKP		22	13	41
	P	z'	0.2	1.0

Tonga Islands region.

» 11 Up iP		03	39	47
» 11 Up i(PKP)		06	00	13
» 11 Ki (PKP) z'		0.2	1.2	
» 11 Ki iPKP		05	59	41D
	PKP	z'	0.1	1.3

North Island, New Zealand.

» 11 Up iP		06	21	56
	i(pP)	06	22	04
	i	06	28	07
	(P of new shock?)			
	i	06	29	06
	eS	06	31	44
	P	z	4.4	5
	P	z'	0.4	1.1
	(pP)	z'	1.7	1.5
	M	E	9.4	18
	M	N	10	20
	M	Z	15	18

» 11 Ki iP | 06 | 21 | 57D |

	i(pP)	06	22	06
	eS	06	31	49
	P	z'	0.2	1.4
	(pP)	z'	0.8	1.5
	S	E	2.0	9
	S	N	2.6	9
	M	E	14	17
	M	N	9.6	22
	M	Z	13	17

Δ ~ 8600 km ~ 77 1/2°.
Nicobar Islands.
Magn. = 6.3 (Up, Ki).

» 11 Up iP		06	42	41
	i	06	42	49
» 11 Ki iP		06	42	43C
	P	z'	0.1	1.0

» 11 Up iP | 06 | 50 | 31 |

Off south coast of Honshu, Japan.

» 11 Up iP		07	22	43
	P	z'	0.1	1.0
» 11 Ki eP		07	22	42
	i	07	22	55

Nicobar Islands.

1956
Jan 11

Up iPKP		11	05	07
	PKP	z'	0.1	1.0

Kermadec Islands region.

» 11 Up e(P)		11	26	01
» 11 Ki e(P)		11	25	59
» 11 Up iP		13	21	11
» 11 Ki iP		19	41	20
» 11 Up eP		20	40	57
» 11 Up iP		22	24	38
	Pakistan.			
» 11 Up e(P)		22	55	06
	i	22	57	31

Indefinite beginning.

» 11 Up e(P)		23	14	34
	Seismic?			
» 12 Up iP		00	01	20
	Aegean Sea.			
» 12 Up iP		01	19	20
	P	z'	0.1	1.0
» 12 Up iP		02	34	14
» 12 Up iP		02	35	54
» 12 Up iPKP		02	39	39D
	PKP	z'	0.1	0.7

Tonga Islands region.

» 12 Up iP		03	24	01
» 12 Up iP		05	15	02
	i	05	15	13
	i	05	19	03
» 12 Ki eP		05	47	29
» 12 Up iP		05	49	08C
	iLgl	05	52	42
	iLg2	05	53	03
	i(PcP)	05	54	54
	P	N	0.7	2
	P	Z	2.2	3
	P	Z'	1.2	1.6
	M	E	22	6
	M	N	9.2	7
	M	Z	18	7

» 12 Ki iP | 05 | 50 | 50C |

1956			
Jan 12		μ	s
(cont.)	i	05	50 59
	iS	05	54 41
	iSS	05	55 12
	i(Lg1)	05	56 41
	iLg1	05	57 03
	i(Lg2)	05	57 19
	P	z'	0.4 1.2
	S	E	2.9 5
	S	N	1.8 5
	M	E	3.4 14
	M	N	9.8 7
	M	Z	9.9 10
$\Delta = 2350 \text{ km} = 21^\circ$.			
Hungary. Magn. = 6.0 (Ki).			
The channel waves are exceptionally clear.			
12	Up	iP	05 59 40
	P	z'	0.2 1.2
12	Up	iPKP	06 20 54
	iPKP		06 21 05
	PKP	z'	0.1 0.9
Tonga Islands region.			
12	Up	iPKP	06 29 51
	iPKP		06 30 03
	PKP	z'	0.2 1.0
	Ki	ePKP	06 29 50
Tonga Islands region.			
The second PKP phase (Up) has the largest amplitude, given here.			
12	Ki	eP	06 48 20
12	Ki	eP	07 24 55
12	Up	eP	11 52 13
	Ki	iP	11 51 44
12	Up	iP	12 29 01
	i		12 29 05
	Ki	e(P)	12 28 33
12	Up	iP	12 50 08
12	Ki	eP	14 38 18
12	Up	e(P)	21 02 07
12	Up	iP	22 44 22
12	Up	iP	23 06 53
	i		23 07 07
	P	z'	0.1 1.1
13	Up	iPKP	01 04 33

1956			
Jan 13		μ	s
(cont.)	PKP	z'	0.1 1.0
Kermadec Islands region.			
13	Up	iPKP	02 24 50
Tonga Islands region.			
13	Up	iP	02 41 09
13	Up	iP	02 54 10C
	P	z'	0.1 1.0
13	Up	iPKP	03 22 14
Tonga Islands region.			
13	Up	iPKP	03 24 23
Tonga Islands region.			
13	Up	iP	03 37 22C
	P	z'	0.2 1.2
	Ki	iP	03 36 26
	Sk	eP	03 37 07
Off east coast of Kamchatka.			
13	Up	iP	03 37 52D
	eS		03 46 05
	P	z'	0.4 1.5
	S	N	1.0 10
	M	E	4.8 20
	M	N	3.6 20
	M	Z	7.0 20
$\Delta = 6650 \text{ km} = 60^\circ$.			
	Ki	iP	03 36 55C
	eS		03 44 23
	P	z'	0.3 1.0
	S	E	1.5 10
	S	N	0.9 10
	M	E	7.4 19
	M	N	4.9 20
	M	Z	6.1 20
$\Delta = 5850 \text{ km} = 52\frac{1}{2}^\circ$.			
	Sk	iP	03 37 32
Off east coast of Kamchatka.			
Magn. = 6.1 (Up, Ki).			
13	Up	iP	04 48 24
13	Up	iPKP	06 35 49
	PKP	z'	0.1 1.2
	Ki	ePKP	06 35 41
	PKP	z'	0.1 1.3
	Sk	iPKP	06 35 50
South Pacific.			
13	Up	iPKP	12 32 13

1956			
Jan 13		μ	s
(cont.)	PKP	z'	0.3 1.0
	Ki	ePKP	12 31 52
Tonga Islands region.			
13	Up	iP	20 05 36
Greece.			
14	Ki	iP	07 38 31
14	Ki	iP	08 21 29
14	Up	iP	14 19 47
	eS		14 29 01
	P	z'	0.2 1.1
	M	E	5.9 18
	M	N	3.8 18
	M	Z	6.6 19
	Ki	eP	14 18 53
	iP		14 18 56
	i		14 19 12
	ePeS		14 23 36
	eS		14 27 10
	P	z'	0.1 1.0
	S	E	1.0 16
	M	E	3.4 18
	M	N	3.2 17
	M	Z	5.8 18
$\Delta = 6800 \text{ km} = 61^\circ$.			
Aleutian Islands.			
Magn. = 5.9 (Up, Ki).			
14	Up	iP	14 35 47C
	P	z'	0.3 1.0
	Ki	iP	14 35 03C
	P	z'	0.2 1.2
Off east coast of Hokkaido, Japan.			
14	Up	iP	17 51 33
14	Ki	iP	18 44 19
Mid-Atlantic Ocean.			
15	Up	eP	00 15 34
15	Ki	eP	01 36 14
South of Guam.			
15	Ki	e(P)	01 42 15
15	Up	iP	09 22 50
	Ki	eP	09 23 51
15	Up	iPKP	10 36 21
	i		10 36 32
	PKP	z'	0.2 1.3
Tonga Islands region.			

1956			
Jan 15		μ	s
15	Up	iP	15 13 19
15	Up	iPKP	19 01 17
Tonga Islands.			
15	Up	iP	21 15 27C
	P	z'	0.1 0.9
	Ki	iP	21 14 41
Kurile Islands.			
16	Up	iPKP	02 18 49
New Ireland region.			
Intermediate depth (h ~ 150 km).			
16	Up	iP	23 51 03
	iPP		23 54 51
	iSKS		00 01 33
	eS		00 02 11
	iPS		00 03 33
	P	E	3.6 14
	P	Z	12 14
	PP	E	8.4 20
	PP	Z	14 20
	PP	z'	0.3 1.5
	SKS	E	7.7 10
	S	N	22 22
	M	E	26 19
	M	N	21 20
	M	Z	44 19
$\Delta \sim 10550 \text{ km} \sim 95^\circ$.			
	Ki	iP	23 51 00C
	i(P)		23 51 05
	iPP		23 54 49
	i(PP)		23 54 59
	iSKS		00 01 38
	iS		00 02 02
	P	E	4.2 14
	P	Z	12 14
	(P)	z'	0.7 1.9
	PP	E	5.0 9
	PP	Z	5.2 9
	(PP)	z'	1.2 2.3
	SKS	E	8.5 9
	SKS	N	2.2 9
	S	E	19 10
	S	N	23 20
	M	E	79 25
	M	N	32 24
	M	Z	99 24
$\Delta = 10450 \text{ km} = 94^\circ$.			
	Sk	iP	23 50 51
	iPP		23 54 28
$\Delta \sim 10200 \text{ km} \sim 92^\circ$.			
Near coast of Ecuador.			
Magn. = 7.0 (Up, Ki).			
17	Ki	eL	08 54

1956				μ	s
Jan 17	M	E		2.1	21
(cont.)	M	N		1.3	19
	M	Z		3.4	21
Pacific Ocean.					
» 17	Up	e		11	51 02
» 17	Ki	iP		11	50 53
» 17	Ki	e(P)		12	54 06
» 17	Ki	e(P)		14	39 04
» 17	Ki	e(P)		17	51 29
» 17	Ki	ePKP		19	18 59
Solomon Islands region.					
» 17	Ki	e(P)		19	29 16
» 18	Ki	e(P)		03	49 00
» 18	Ki	e(P)		05	10 43
» 18	Ki	e(P)		07	27 26
» 18	Ki	e(P)		07	47 39
» 18	Up	e		08	36 08
	M	E		μ 5.1	s 25
	M	N		1.8	20
	M	Z		6.1	23
Northern Chile.					
» 18	Ki	e(P)		11	12 42
» 18	Up	eP		14	32 48
» 18	Ki	iP		19	48 34
» 19	Ki	iP		06	23 03
» 19	Up	iP		08	50 08
» 19	Ki	iP		08	49 36
South of Honshu, Japan. Deep (h ~ 500 km).					
» 19	Ki	iP		14	17 39
» 19	Sk	iP		14	17 41
» 19	Up	eP		19	59 42
	M	E		μ 1.3	s 14
	M	N		2.6	18
	M	Z		3.1	18
» 19	Ki	eP		19	59 42
	M	E		μ 1.0	s 16
	M	N		1.8	18
	M	Z		0.8	14
Nepal-Tibet border.					

1956						
Jan 20	Ki	e(P)		00	24	20
» 20	Up	iP		03	49	35
» 20	Ki	iP		03	48	59
South of Honshu, Japan. Deep.						
» 20	Up	iP		04	44	24
Kurile Islands.						
» 20	Ki	iP		05	13	18
Aleutian Islands.						
» 20	Ki	e(P)		05	35	41
» 20	Ki	e(P)		06	29	23
» 20	Ki	e(P)		07	27	30
» 20	Ki	iP		22	27	53
		P	z'	μ 0.1	s 1.0	
» 21	Up	i(Sn)		01	53	37
		i		01	53	42
		i(S*)		01	54	08
» 21	Ki	eP		01	51	45
		iSg		01	52	14
		Sg	z'	μ 0.1	s 0.8	
		$\Delta = 240 \text{ km} = 2.2^\circ$.				
» 21	Sk	eP		01	52	06
		iSg		01	52	46
		$\Delta = 340 \text{ km} = 3.1^\circ$.				
Swedish Lapland, 66.0°N, 17.6°E. Origin time = 01 51 02. Felt at Arjeplog, Sweden.						
» 21	Ki	iP		06	49	42
» 21	Up	iP		09	55	36
» 21	Ki	eP		09	56	53
» 21	Sk	iP		09	56	19
Greece.						
» 21	Up	eP		11	02	10
» 21	Up	iPKP		12	42	26
		PKP	z'	μ 0.1	s 1.0	
» 21	Ki	ePKP		12	42	08
		iPP		12	44	37
		i		12	44	40
		PP	z'	μ 0.1	s 1.0	
Tonga Islands region.						
» 21	Ki	iP		14	08	11
» 21	Sk	eP		14	08	14
» 21	Up	iP		17	46	05

1956				μ	s
Jan 21	P			0.3	1.3
(cont.)	Ki	iP	z'	17	46 00
	Sk	iP		17	46 21
		i		17	46 28
Assam-Burma border. Magn. = 6.1 (Up, Ki).					
» 22	Ki	iP		01	00 19
» 22	Sk	iP		01	00 47
Kodiak Island region, Alaska.					
» 22	Ki	iP		01	07 23
		P	z'	μ 0.1	s 1.0
» 22	Sk	iP		01	07 51
Kodiak Island region, Alaska.					
» 22	Up	iP		14	35 44
		P	z'	μ 0.2	s 1.3
» 22	Ki	i(P)		14	35 41
» 23	Up	iP		00	57 00
		P	z'	μ 0.2	s 1.4
» 23	Ki	iP		00	56 04
		P	z'	μ 0.2	s 1.0
» 23	Sk	iP		00	56 33
Kodiak Island region, Alaska.					
» 23	Up	iP		03	57 38C
		P	z'	μ 0.2	s 1.0
		M	E	4.2	20
		M	N	5.4	20
		M	Z	11	21
» 23	Ki	iP		03	56 42C
		i		03	56 58
		iS		04	04 11
		P	z'	μ 0.2	s 0.9
		S	E	1.4	8
		S	N	0.7	8
		M	E	4.2	20
		M	N	2.6	17
		M	Z	5.2	17
» 23	Sk	iP		03	57 18
		i		03	57 26
Near east coast of Kamchatka. Magn. = 6.0 (Up, Ki).					
» 23	Up	iP		07	48 20C
		P	z'	μ 0.1	s 1.2
» 23	Ki	iP		07	48 05
		iPP		07	51 48

1956				μ	s
Jan 23	P			0.2	1.0
(cont.)	Sk	iP	z'	07	48 26C
Mindanao. Deep (h ~ 650 km).					
» 23	Ki	iP		11	43 46D
» 23	Up	iP		12	25 32
» 23	Up	iP		13	01 08C
		P	z'	μ 0.2	s 0.8
» 24	Up	iPKP		08	25 48
		PKP	z'	μ 0.1	s 1.0
» 24	Sk	iPKP		08	25 40
Kermadec Islands region.					
» 24	Up	iP		08	41 28
» 24	Up	iP		12	26 08
» 24	Ki	iP		12	25 22
Kurile Islands.					
» 24	Ki	iP		13	29 45
» 24	Ki	iP		13	33 32
» 24	Ki	e(P)		14	43 37
» 24	Ki	eP		15	56 26
» 24	Ki	e(P)		19	04 55
» 24	Up	eP		20	03 46
» 24	Ki	e(P)		20	32 51
		i(Sg)		20	33 18
Local?					
» 24	Ki	iP		20	38 59
» 25	Ki	iP		03	12 18
» 25	Up	iP		04	28 22
» 25	Up	eP		06	01 18
» 25	Ki	iP		06	16 58
» 25	Ki	i(P)		06	57 24
» 25	Ki	iP		07	22 31
» 25	Ki	eP		07	42 07
» 25	Up	iP		07	50 53
» 25	Up	iP		08	53 21

1956			
Jan 31	Up	iPKP	09 35 08 D
	✓ Ki	PKP	0.1 1.0
	✓ Ki	iPKP	09 34 56 D
		PKP	0.1 1.0
New Ireland. Deep (h ~ 400 km).			
» 31	Ki	eP	19 55 08
» 31	Ki	iP	20 19 11
Feb 1	Up	i(PKP)	01 52 05 ✓
		iPKP	01 52 19 ✓
		iPKS	01 55 49 ✓
		PKP	0.1 1.0
		M	2.8 21
		M	3.8 21
		M	4.4 21
✓ Ki		e(PKP)	01 52 00 ✓
		iPKP	01 52 05 ✓
		PKP	0.2 1.0
		M	3.0 23
		M	1.7 22
		M	4.2 23
Loyalty Islands. Magn.=6.3 (Up, Ki). The first (PKP) is very small at both stations.			
» 1	Ki	eP	05 23 05
» 1	Ki	eP	06 21 35
» 1	Ki	eP	08 16 33
» 1	Ki	iP	09 40 01
» 1	Up	iP	13 54 12 D ✓
		ipP	13 55 40 ✓
		iPP	13 57 52 ✓
		iSKS	14 04 06 ✓
		iS	14 04 27 ✓
		iSP	14 05 44 ✓
		iPKKP	14 11 36 ✓
		P	0.6 2
		P	0.8 2
		P	5.0 2
		P	3.7 1.8
		PP	1.4 1.6
		SKS	1.1 4
		S	1.2 4
		S	1.3 3
		M	6.2 17
		M	5.7 20
		M	8.8 17
$\Delta=9950 \text{ km}=89\frac{1}{2}^\circ$.			

1956			
Feb 1	Ki	iP	13 53 44 D ✓
		i	13 54 53 ✓
		ipP	13 55 08 ✓
		iS	14 03 29 ✓
		i	14 06 03 ✓
		i	14 06 10 ✓
		iPKKP	14 11 49 ✓
		P	2.1 8
		P	1.4 8
		P	6.3 8
		P	2.6 1.0
		S	3.2 8
		S	6.0 8
		S	0.2 1.5
		PKKP	0.1 1.5
		M	5.0 17
		M	2.9 16
		M	6.5 17
$\Delta=9300 \text{ km}=83\frac{1}{2}^\circ$.			
Marianas Islands. h=370 km (Up, Ki). Magn.=6.8 (Up, Ki).			
» 1	Up	iP	15 15 14 D ✓
		i	15 15 26 ✓
		iS	15 18 50 ✓
		iScS	15 26 09 ✓
		P	0.9 2
		P	1.3 2
		P	1.7 1.2
		S	0.8 2
		S	1.8 2
		S	1.3 1.5
✓ Ki		iP	15 16 29 D ✓
		i(pP)	15 17 24 ✓
		P	0.9 3
		P	1.2 1.2
Tyrrhenian Sea. Intermediate depth. Magn.=6.4 (Up, Ki).			
» 1	Ki	iP	16 41 57
» 1	Ki	iP	18 20 30
» 1	Up	iP	18 40 38
✓ Ki		eP	18 41 48
Aegean Sea.			
» 1	Up	iP	21 00 34
» 2	Ki	e(P)	01 25 47
» 2	Up	iP	03 32 04 ✓
✓ Ki		iP	03 32 27 ✓
Atlantic Ocean.			
» 2	Up	iP	19 34 37
✓ Ki		iP	19 35 04

1956			
Feb 3	Up	iP	03 29 44
» 3	Up	iP	05 09 49
✓ Ki		e(P)	05 14 18
» 3	Ki	e(P)	06 03 16
» 3	Up	eP	13 22 36 ✓
✓ Ki		iP	13 23 21 C ✓
		P	0.3 1.4
Eastern Irak.			
» 3	Up	iP	13 26 14 ✓
✓ Ki		iP	13 25 49 ✓
		P	0.1 1.0
» 3	Ki	eP	13 47 22
Northern part of the Adriatic Sea.			
» 3	Up	iP	21 48 41 ✓
		iPcP	21 49 16 ✓
		P	0.1 1.2
✓ Ki		iP	21 49 28 ✓
		P	0.2 1.5
Lake Tanganyika region.			
» 3	Up	iP	23 37 14
» 4	Up	e(P)	05 52 43
» 4	Ki	eP	12 52 46
» 4	Ki	iP	20 29 31
Off south coast of Honshu, Japan.			
» 4	Up	iP	22 23 44
Lake Tanganyika region.			
» 5	Up	iP	20 49 29 D
		P	0.1 1.0
✓ Ki		iP	20 49 11
		P	0.1 1.0
Molucca Passage.			
» 6	Up	iP	02 36 33
» 7	Up	i(P)	09 40 13
Seismic?			
» 7	Ki	e(P)	14 18 18
Seismic?			
» 7	Up	e(P)	14 47 41
» 7	Ki	iP	20 10 40
» 7	Up	iP	20 25 18

1956			
Feb 8	Ki	e(P)	04 23 10
» 8	Ki	eP	04 27 49
» 9	Up	e(P)	03 39 17
» 9	Up	iP	08 55 47
» 9	Up	iP	14 44 56 ✓
		iS	14 55 08 ✓
		P	0.4 3
		P	0.8 3
		P	1.1 2.0
		S	12 20
		S	11 19
		M	74 21
		M	68 17
		M	88 16
$\Delta \sim 9000 \text{ km} \sim 81^\circ$.			
✓ Ki		iP	14 44 24 ✓
		eS	14 53 58 ✓
		P	2.7 13
		P	1.2 2.5
		S	5.2 14
		S	3.2 14
		M	57 19
		M	30 16
		M	68 16
$\Delta=8350 \text{ km}=75^\circ$.			
Lower California. Magn.=6.7 (Up, Ki).			
» 9	Up	iP	15 36 45
		P	0.2 1.5
✓ Ki		iP	15 36 12
		P	0.1 1.2
Lower California.			
» 9	Up	e(P)	16 42 09
✓ Ki		iP	16 41 48
Lower California.			
» 9	Ki	eP	17 11 36
Lower California.			
» 9	Ki	iP	17 39 41
» 9	Up	iP	18 25 08
» 9	Ki	iP	19 00 34
		M	0.7 15
		M	0.5 16
		M	1.2 15
Lower California.			
» 9	Up	iP	22 07 05

1956				μ	s
Feb 13	M	N		0.5	12
(cont.)					
» 14	Up	iP		01 04	22C
		i		01 04	35
✓	Ki	iP	z'	μ 0.5	s 1.4
		eS		01 03	44C
				01 12	48
	P	z'		μ 0.2	s 1.0
	M	E		1.6	18
	M	N		0.6	18
	M	Z		1.2	18
Japan.					
Magn.=6.2 (Up, Ki).					
» 14	Ki	eP		07 22	01
	M	E		μ 0.5	s 12
	M	Z		0.4	11
» 14	Up	iP		07 50	28
✓	Ki	iP		07 50	08
	M	E		μ 1.0	s 13
	M	Z		1.3	13
Luzon.					
» 14	Up	iP		08 33	15
		i		08 33	36
	M	E		μ 1.1	s 17
	M	N		1.4	16
	M	Z		1.4	16
✓	Ki	iP		08 32	56
	M	E		μ 2.6	s 12
	M	N		0.9	15
	M	Z		1.9	12
Luzon.					
» 14	Up	iP		09 58	51
	P	z'		μ 0.3	s 1.3
	M	E		0.6	10
	M	Z		0.8	10
✓	Ki	iP		09 59	59
	P	z'		μ 0.3	s 1.5
	M	E		1.2	15
	M	N		0.7	13
	M	Z		0.9	14
Algeria.					
Magn.=5.9 (Up, Ki).					
» 14	Up	iP		12 45	59
		iS		12 56	10
✓	Ki	iP		12 45	41
		e		12 55	37
Luzon.					

1956				μ	s
Feb 14	Up	iP		12 47	19
		eS		12 57	22
	P	z'		μ 0.3	s 1.5
	M	E		4.0	19
	M	N		4.2	16
	M	Z		6.3	20
$\Delta=8900$ km= 80° .					
✓	Ki	iP		12 46	59
		eS		12 56	38
		e		12 56	53
	P	z'		μ 0.3	s 1.5
	S	E		1.0	13
	M	E		7.4	12
	M	N		2.1	16
	M	Z		7.3	12
$\Delta=8450$ km= 76° .					
Luzon.					
Magn.=6.2 (Up, Ki).					
» 14	Up	iP		18 45	55
		eS		18 56	08
	P	z'		μ 0.6	s 1.4
	S	N		1.2	10
	M	E		5.9	18
	M	N		7.5	17
	M	Z		7.6	17
$\Delta=9150$ km= $82\frac{1}{2}^\circ$.					
Lower California.					
Magn.=6.3 (Up).					
» 14	Up	iP		19 07	23
	Ki				
	M	E		μ 1.4	s 13
	M	N		1.0	16
Luzon.					
» 14	Up	iP		21 19	40
✓	Ki	iP		21 18	58
Hokkaido, Japan.					
» 14	Up	iP		21 32	06
» 14	Up	iP		22 01	04
Aleutian Islands.					
» 15	Up	iP		01 32	57
		eS		01 43	09
	P	z'		μ 0.9	s 1.6
	S	N		1.2	9
	M	E		5.0	19
	M	N		5.3	17
	M	Z		5.0	16
$\Delta=9100$ km= 82° .					
✓	Ki	iP		01 32	27
		eS		01 42	14

1956				μ	s
Feb 15	P	z'		0.4	1.5
(cont.)	S	E		1.0	8
	S	N		0.7	8
	M	E		6.4	16
	M	N		4.2	15
$\Delta=8550$ km= 77° .					
Lower California.					
Magn.=6.3 (Up, Ki).					
» 15	Up	eP		03 36	33
» 15	Up	i		03 51	37
		iSg		03 51	47
Felt in the area of Gislaved, Sweden.					
Macroseismic epicentre 57.5° N, 13.5° E.					
Origin time= $03\ 49\ 58$.					
» 15	Up	iP		04 07	07
Yugoslavia.					
» 15	Up	iP		04 15	08
» 15	Ki	iP		05 09	46
» 15	Up	eP		07 19	12
✓	Ki	iP		07 18	46
(Lower California).					
» 15	Up	iP		12 08	36
	P	z'		μ 0.1	s 1.5
Kurile Islands.					
» 15	Up	eP		13 04	10
✓	Ki	iP		13 03	43
		ipP		13 04	19
Peru. $h=145$ km (Ki).					
» 15	Up	ePg		15 26	48
		eSn		15 27	35
		e		15 28	00
		iSg		15 28	04
	Sg	z'		μ 0.1	s 0.7
$\Delta=680$ km= 6.1° .					
✓	Ki	ePg		15 26	07
		iSg		15 27	03
	Sg	z'		μ 0.2	s 0.7
$\Delta=450$ km= 4.1° .					
Central coast of Norway, 65.4° N, 12.0° E.					
Origin time= $15\ 24\ 47$.					
Felt at Brønnøysund and neighbouring places, Norway.					
» 15	Up	iP		15 57	01
		iS		16 03	07
	P	z'		μ 0.2	s 1.0
	M	E		6.5	24

1956				μ	s
Feb 15	M	N		6.9	25
(cont.)	M	Z		4.1	23
$\Delta=4450$ km= 40° .					
✓	Ki	iP		15 57	38C
		iPP		15 59	19
		eS		16 04	13
		eSS		16 07	23
	P	z'		μ 0.2	s 1.0
	PP	z'		0.1	1.2
	S	N		0.4	11
	M	E		5.6	17
	M	N		2.6	15
	M	Z		4.8	18
$\Delta=4950$ km= $44\frac{1}{2}^\circ$.					
Southern Iran.					
Magn.=5.7 (Up, Ki).					
» 15	Ki	eSS		21 12	20
	M	E		μ 0.8	s 18
	M	N		0.8	19
Pacific Ocean.					
» 16	Up	iP		00 30	31
		ipP		00 31	02
				μ 0.1	s 1.3
✓	Ki	iP	z'	00 30	02
✓	Sk	iP		00 30	28
		ipP		00 30	59
Marianas Islands region.					
$h=120$ km (Up, Sk).					
» 16	Ki	e(P)		07 13	34
		i		07 14	07
» 16	Up	iP		11 46	19
» 16	Ki	iP		12 38	49
» 16	Up	iP		15 54	18
		i		15 54	32
✓	Ki	iP		15 55	42C
Rumania.					
» 16	Up	e(P)		18 48	34
» 17	Up	iP		09 14	53
» 17	Up	eSS		10 28	35
	M	E		μ 2.4	s 18
	M	N		2.9	20
	M	Z		3.7	18
✓	Ki	eSKSP		10 23	48
		iSS		10 30	15
	M	E		μ 1.9	s 20
	M	N		2.1	17
	M	Z		3.6	18
South Atlantic.					
Magn.=6.1 (Up, Ki).					

1956
Feb 21 (cont.)

✓ iSKP		20	53	56
i		20	54	17
		μ	s	
✓ Ki SKP	z'	0.2	1.0	
iSKP		20	53	33
		μ	s	
✓ Sk SKP	z'	0.5	1.5	
iPKP		20	51	03
iSKP		20	53	50
Fiji Islands region. Deep (h ~ 650 km).				
» 21 ✓ Up	iP	23	02	50
	iT	23	10	39
		μ	s	
	M	1.5	22	
✓ Ki	M	2.4	18	
	eP	23	01	06
	iSg	23	02	45
	eT	23	05	53
	i	23	06	41
	i	23	09	58
		μ	s	
	P	0.4	9	
	T	0.1	0.8	
	M	1.7	15	
	M	0.9	13	
	M	1.9	13	
✓ Sk	iP	23	01	48
	iS	23	03	32
	iT	23	08	55
$\Delta = 1050 \text{ km} = 9\frac{1}{2}^\circ$.				
Arctic Ocean.				
» 22 ✓ Up	iP	00	11	00
	eT	00	18	30
	i	00	19	25
		μ	s	
	M	2.6	20	
	M	5.1	19	
✓ Ki	M	5.0	18	
	iP	00	09	20
	iSg	00	10	48
	iT	00	14	14
	i	00	14	52
	i	00	15	29
		μ	s	
	P	0.7	9	
	P	0.8	9	
	P	0.8	9	
	T	0.2	1.3	
	M	4.4	16	
	M	2.1	15	
✓ Sk	M	5.1	14	
	iP	00	10	02C
	iS	00	11	47
	eT	00	16	50
$\Delta = 1050 \text{ km} = 9\frac{1}{2}^\circ$.				
Arctic Ocean.				

The T phases are extremely clear in this and the preceding shock, especial-

1956
Feb 22 (cont.)

ly at Kiruna. T phases were recorded at all three of our stations, and it is the first time a T phase has been observed on the Uppsala records.

» 22 ✓ Ki	eP	00	38	43
	e	00	42	31
✓ Sk	eP	00	39	19
Probably the same location as for the two previous earthquakes (Arctic Ocean).				
» 22 ✓ Up	eP	05	32	08
✓ Ki	iP	05	31	16
✓ Sk	eP	05	31	45
Near Unimak Island.				
» 22 ✓ Ki	i(P)	07	38	07
» 22 ✓ Ki	eP	08	07	13
		μ	s	
	M	0.7	14	
	M	0.5	14	
	M	0.8	10	
» 22 ✓ Up	eP	09	16	06
» 22 ✓ Up	iP	10	02	04
✓ Ki	iP	10	02	26
✓ Sk	iP	10	02	27
» 22 ✓ Up	iP	10	11	10
	eS	10	20	48
		μ	s	
	P	0.1	1.0	
	S	1.5	10	
	M	2.6	20	
	M	3.6	20	
	M	2.8	20	
✓ Ki	$\Delta = 8400 \text{ km} = 75\frac{1}{2}^\circ$.			
	iP	10	11	33
	i	10	18	16
	eS	10	21	30
		μ	s	
	P	0.5	7	
	P	0.9	7	
	S	1.4	12	
	S	0.6	11	
	M	4.6	19	
	M	1.5	18	
	M	4.1	18	
✓ Sk	$\Delta = 8850 \text{ km} = 79\frac{1}{2}^\circ$.			
	iP	10	11	34
	i	10	11	40
Chagos Islands region, Indian Ocean. Magn. = 6.0 (Up, Ki).				
» 22 ✓ Up	eP	23	50	32
✓ Sk	eP	23	51	03
Chagos Islands region.				

1956
Feb 22

✓ Ki	iP	23	52	34
» 23 ✓ Up	iP	01	04	32 D
» 23 ✓ Up	iP	01	29	51
	eS	01	36	52
		μ	s	
	P	0.6	1.5	
	S	2.3	7	
	S	1.5	7	
	M	2.8	26	
	M	1.2	14	
	M	2.8	26	
✓ Ki	$\Delta = 5400 \text{ km} = 48\frac{1}{2}^\circ$.			
	iP	01	30	10
	eS	01	37	32
		μ	s	
	S	2.3	12	
	S	1.3	12	
	M	1.6	18	
	M	1.6	19	
✓ Sk	$\Delta = 5700 \text{ km} = 51\frac{1}{2}^\circ$.			
	iP	01	29	38C
	i	01	30	04
North Atlantic Ocean.				
» 23 ✓ Up	eP	02	23	16
Algeria.				
» 23 ✓ Up	iP	03	12	17
✓ Ki	iP	03	11	24
✓ Sk	iP	03	11	55
» 23 ✓ Up	e(P)	05	56	39
» 23 ✓ Up	iP	06	09	20
	iS	06	13	17
		μ	s	
	P	0.3	1.5	
✓ Ki	$\Delta = 2350 \text{ km} = 21^\circ$.			
	iP	06	10	29
✓ Sk	iP	06	10	07
Turkey.				
» 23 ✓ Ki	iP	06	42	45
	iSg	06	43	31
✓ Sk	iP	06	42	37
	iSg	06	43	23
Local.				
» 23 ✓ Up	iP	17	39	14
✓ Ki	iP	17	39	51
✓ Sk	iP	17	39	52
Southern Iran.				
» 23 ✓ Ki	iP	20	45	26
» 23 ✓ Up	eP	22	21	25
Mexico.				
» 24 ✓ Ki	iP	04	50	49

1956
Feb 24 (cont.)

Local.	iSg	04	51	21
» 24 ✓ Up	iP	05	41	01
» 24 ✓ Up	iP	07	11	56
» 24 ✓ Up	iPKP	09	38	47
		μ	s	
	PKP	0.1	1.0	
	M	2.5	23	
	M	3.5	25	
✓ Ki	iPKP	09	38	28
	i	09	38	43
		μ	s	
	PKP	1.3	2.2	
✓ Sk	iPKP	09	38	42
	i	09	38	54
Kermadec Islands region.				
» 24 ✓ Up	eP	19	29	20
» 24 ✓ Up	iP	19	56	45
✓ Ki	iP	19	56	45
» 25 ✓ Up	eP	20	48	35
» 26 ✓ Up	iP	05	26	47
✓ Ki	iP	05	26	07
Northern Honshu, Japan.				
» 26 ✓ Up	i(P)	06	31	16
» 26 ✓ Ki	i(P)	13	46	14
» 26 ✓ Ki	e(P)	13	48	58
	iSg	13	49	55
Local.				
» 27 ✓ Up	iP	03	33	40
Kamchatka.				
» 27 ✓ Up	iP	08	48	52
	ipP	08	49	12
		μ	s	
	P	0.3	1.0	
✓ Ki	iP	08	48	00
		μ	s	
	P	0.1	1.2	
Aleutian Islands. h = 75 km (Up).				
» 27 ✓ Sk	e(P)	14	33	37
» 27 ✓ Up	iP	14	51	21
✓ Ki	iP	14	52	38
» 27 ✓ Up	iP	22	33	59
✓ Ki	iP	22	35	11
		μ	s	
	P	0.1	1.5	

1956 Feb 27 (cont.)	Sk	eP	22	34	37
Southwest of Sicily.					
» 28	Ki	i(P)	00	51	08
» 28	Up	i(P)	08	57	43
		i	08	58	28
» 28	Up	iP	15	57	59
» 28	Up	iPKP2	16	51	47
» 28	Ki	ePKP	16	51	25
Kermadec Islands region.					
» 28	Ki	eP	17	05	09
» 28	Ki	eP	18	15	56
» 28	Up	iP	22	29	00
		i	22	29	07
	Ki	iP	22	29	03
	Sk	iP	22	29	27
» 29	Ki	iP	06	17	39
» 29	Up	iP	07	02	28
» 29	Up	iP	07	10	04
» 29	Ki	eP	07	09	34
South of Honshu, Japan.					
» 29	Ki	eP	07	30	32
» 29	Up	eP	09	54	10
» 29	Up	iP	16	04	03
» 29	Ki	eP	16	29	32
» 29	Ki	eP	18	10	26
» 29	Up	iP	21	01	46C
		P	μ	s	
		P	0.3	2	
		P	1.0	2	
		P	0.8	1.2	
		M	E	10.0	20
		M	N	9.6	18
		M	Z	7.0	20
» 29	Ki	iP	21	01	40C
		i	21	01	59
		iPcP	21	02	17
		P	μ	s	
		P	0.8	1.5	
		M	E	18	20
		M	N	8.3	18
		M	Z	24	21
Δ=7000 km=63°. Burma-India border. Magn.=6.5 (Up, Ki).					

1956 Feb 29	Up	iP	21	36	26
		P	μ	s	
		P	0.2	1.0	
		M	E	2.8	21
		M	N	2.7	20
		M	Z	3.5	20
» 29	Ki	iP	21	36	20
		i	21	36	45
		P	μ	s	
		P	0.2	1.0	
		M	E	4.7	18
		M	N	2.3	18
		M	Z	3.0	20
» 29	Sk	iP	21	36	41
Burma-India border. Magn.=6.0 (Up, Ki).					
» 29	Up	iP	22	41	23D
» 29	Up	iP	23	56	57C
		P	μ	s	
		P	0.3	1.2	
» 29	Ki	iP	23	56	05
		P	μ	s	
		P	0.2	1.5	
Near southeast coast of Kamchatka.					
Mar 1	Up	iP	02	45	07D
» 1	Ki	eP	02	45	01
» 1	Ki	iP	06	36	30
Kurile Islands.					
» 1	Up	e(P)	11	21	15
» 1	Up	iP	12	20	01
» 1	Ki	eP	12	20	27
» 1	Up	iP	12	55	33
		P	μ	s	
		P	0.1	1.0	
		M	E	4.1	23
» 1	Ki	iP	12	56	09
Southern Iran.					
» 1	Up	iP	14	12	35C
		i	14	12	46
		P	μ	s	
		P	0.4	1.5	
» 1	Ki	iP	14	11	43
Near southeast coast of Kamchatka.					
» 1	Up	iP	14	37	23C
		i	14	37	37
		P	μ	s	
		P	0.1	1.2	
» 1	Ki	iP	14	36	30C
Near southeast coast of Kamchatka.					
» 1	Up	iP	16	01	29
» 1	Ki	iP	16	02	09

1956 Mar 1	Up	eP	16	11	46
» 1	Ki	eP	16	12	23
» 1	Up	e	18	36	01
		e	18	37	49
» 1	Up	e(P)	19	06	53
» 1	Ki	eP	20	59	02
» 2	Up	iP	05	51	26
» 2	Up	iP	12	06	04D
		P	μ	s	
		P	0.6	1.5	
» 2	Ki	iP	12	05	06
		P	μ	s	
		P	0.3	1.0	
Alaska.					
» 2	Up	iP	15	00	10
		ipP	15	00	37
		P	μ	s	
		P	0.1	0.5	
» 2	Ki	iP	14	59	23
		P	μ	s	
		P	0.2	1.4	
Kurile Islands. h=110 km (Up).					
» 2	Ki	iP	19	01	38
» 2	Up	iPKP	23	03	58
» 2	Ki	ePKP	23	03	31
New Zealand.					
» 3	Up	i(P)	00	11	29
Seismic?					
» 3	Up	iPKP	00	24	40
		M	μ	s	
		M	2.6	20	
		M	N	7.9	21
		M	Z	11	24
» 3	Ki	iPKP	00	24	32
		PKP	μ	s	
		PKP	0.1	1.4	
		M	E	3.8	20
		M	N	3.1	21
		M	Z	6.1	20
Samoa Islands region.					
» 3	Up	iP	04	24	44
		i	04	24	54
		iS	04	26	20
		i	04	26	36
» 3	Ki	e	04	29	36
		e	04	30	24
Local.					
» 3	Up	iP	10	24	11

1956 Mar 3 (cont.)	ipP	10	24	24	
	P	μ	s		
	P	0.4	1.2		
» 3	Ki	iP	10	24	06
		ipP	10	24	19
		P	μ	s	
		P	0.3	1.4	
		M	E	3.8	19
» 3	Sk	iP	10	24	27
		ipP	10	24	41
Burma-India border. h=55 km (Up, Ki, Sk).					
» 3	Up	i(P)	13	05	54
		i	13	06	01
Seismic?					
» 3	Up	eP	18	27	58
» 3	Ki	i(P)	20	16	47
Seismic?					
» 4	Up	iP	03	24	32
		iPcP	03	27	25
		P	μ	s	
		P	0.3	1.7	
» 4	Ki	iP	03	23	20
North Polar region.					
» 4	Ki	iP	03	35	49
		P	μ	s	
		P	0.1	1.5	
» 4	Up	iP	15	45	03C
» 4	Up	iP	16	27	29
		P	μ	s	
		P	0.2	1.7	
» 4	Ki	iP	16	26	35
» 4	Sk	iP	16	27	14
Near southeast coast of Kamchatka.					
» 5	Up	eP	02	27	17
» 5	Up	iP	02	36	52D
		Ki	02	37	14
» 5	Up	iP	03	50	28
» 5	Up	iP	03	53	05C
		i	03	53	16
		P	μ	s	
		P	0.4	1.3	
		M	E	1.3	17
		M	N	2.2	20
		M	Z	2.8	20
» 5	Ki	iP	03	52	13C
		i	03	52	23
		P	μ	s	
		P	0.2	1.0	

Up = Uppsala, Ki = Kiruna

1956 Mar 5 (cont.)	M	E	1.4	17	
	M	N	0.9	14	
	M	Z	2.3	16	
✓ Sk	iP		03	52	49
Near southeast coast of Kamchatka. Magn.=6.2 (Up, Ki).					
» ✓ 5	Up	iP	07	20	24
		i	07	20	31
		iScS	07	30	20
		iLgl	07	35	24
			μ	s	
			0.2	1.0	
	P	z'	16	15	
	M	E	19	23	
	M	N	17	14	
✓ Ki	iP	z	07	20	22
			07	20	33
			07	20	45
			07	32	58
			07	34	48
			07	35	33
			μ	s	
			0.2	1.2	
	P	z'	8.9	13	
	M	E	17	18	
	M	N	8.8	12	
✓ Sk	iP	z	07	20	53
			07	21	09
Sinkiang Province, China. Magn.=6.1 (Up, Ki).					
» ✓ 5	Up	i(P)	10	06	53
» ✓ 5	Ki	iP	11	31	28
» ✓ 5	Up	iP	23	01	09
» ✓ 5	Up	iP	23	40	38
		e	23	57	11
		i	23	57	18
			μ	s	
			0.2	1.0	
	P	z'	13	17	
	M	E	9.0	17	
	M	N	14	18	
✓ Ki	iP	z	23	39	51
			23	40	38
			23	42	10
			23	49	48
			μ	s	
			0.2	1.2	
	P	z'	0.1	1.5	
	PP	E	22	17	
	M	N	7.4	17	
	M	Z	7.3	20	
✓ Sk	iP		23	40	29
Near north coast of Hokkaido, Japan. Magn.=6.3 (Up, Ki).					

1956 Mar 5	Up	iP	23	50	40
		P	μ	s	
			0.1	1.3	
✓ Ki	iP	z'	23	50	37
		i	23	50	41
			μ	s	
			0.2	1.0	
✓ Sk	iP	z'	23	51	01
Sinkiang Province, China.					
» ✓ 6	Up	iP	02	05	20
✓ Ki	eP		02	04	44
Off south coast of Honshu, Japan.					
» ✓ 6	Ki	eP	07	57	10
» ✓ 6	Up	iP	09	03	05C
			μ	s	
			0.1	1.0	
	P	z'	1.3	17	
	M	E	1.9	21	
	M	N	4.2	20	
✓ Ki	iP	z	09	03	42C
			09	03	50
			μ	s	
			0.2	1.0	
	P	z'	6.1	24	
	M	E	2.8	20	
	M	N	2.7	13	
✓ Sk	iP	z	09	03	40C
Southern Iran. Magn.=5.8 (Up, Ki).					
» ✓ 6	Up	iP	09	17	19
✓ Ki	iP		09	17	55
		iPP	09	19	37
			μ	s	
			0.1	1.0	
✓ Sk	iP	z'	09	17	54
Southern Iran. $\Delta = 5000 \text{ km} = 45^\circ$.					
» ✓ 6	Up	iP	09	22	10C
✓ Ki	iP		09	22	48
✓ Sk	iP		09	22	45C
			10	22	46
			10	23	23
			10	26	11
» ✓ 6	Up	i(P)	12	49	18
» ✓ 6	Up	iP	13	50	42
✓ Ki	iP		13	49	50
Off southeast coast of Kamchatka.					
» ✓ 6	Ki	iP	14	33	57
» ✓ 6	Ki	eP	17	27	35

Sk = Skalistugan

1956 Mar 6	Ki	eP	19	04	04
» ✓ 6	Up	eP	20	14	57
✓ Ki	e(P)		20	15	36
» ✓ 6	Ki	iP	20	43	12
» ✓ 6	Up	iP	21	00	48
			μ	s	
			0.2	1.0	
✓ Ki	iP	z'	21	01	25
			μ	s	
			0.3	1.0	
✓ Sk	iP	z'	21	01	24
Southern Iran.					
» ✓ 7	Up	iP	00	08	31
» ✓ 7	Ki	iP	01	43	20
» ✓ 7	Up	iP	03	51	03
✓ Ki	iP		03	51	40
» ✓ 7	Up	iP	06	59	29
✓ Ki	iP		07	00	02C
✓ Sk	iP		07	00	01
» ✓ 7	Up	eP	07	18	25
✓ Ki	iP		07	19	04
Irak-Iran border region.					
» ✓ 7	Up	iP	09	50	03
» ✓ 7	Up	iP	12	52	41
✓ Ki	eP		12	51	46
Off south coast of Kamchatka.					
» ✓ 7	Up	iP	14	12	06
✓ Ki	iP		14	12	43
✓ Sk	iP		14	12	41
Southern Iran.					
» ✓ 7	Up	e(Sg)	21	21	20
		$\Delta = 780 \text{ km} = 7.0^\circ$.			
✓ Ki	ePg		21	18	34
		iSg	21	19	18
		$\Delta = 330 \text{ km} = 3.0^\circ$.			
✓ Sk	ePg		21	18	37
		iSg	21	19	13
		$\Delta = 330 \text{ km} = 3.0^\circ$.			
Central part of the Norwegian coast, 66.7°N, 13.5°E. Origin time=21 17 36.					
» ✓ 7	Ki	iP	22	04	33
Near coast of Costa Rica.					
» ✓ 8	Up	iP	11	16	26
			μ	s	
			0.1	1.0	
✓ Ki	iP	z'	11	15	33D

1956 Mar 8 (cont.)	Sk	iP	11	16	03
Aleutian Islands.					
» ✓ 8	Up	i(P)	16	31	39
» ✓ 8	Up	iP	19	32	33
» ✓ 8	Ki	eP	23	55	51
» ✓ 9	Up	iP	08	00	27
East of Trinidad.					
» ✓ 9	Ki	e(P)	12	13	59
		iSg	12	14	54
Local.					
» ✓ 9	Up	iP	15	40	40
		i	15	40	45
		iPP	15	42	06
			μ	s	
			0.1	1.0	
✓ Ki	iP	z'	15	41	19C
✓ Sk	iP		15	41	21
Southern Iran.					
» ✓ 9	Up	iP	15	49	47
» ✓ 9	Up	iP	16	52	27
			μ	s	
			1.2	18	
	M	E	1.8	20	
✓ Ki	M	N	16	53	04
			17	04	07
			μ	s	
			1.6	18	
	M	E	1.4	20	
	M	N	1.1	16	
✓ Sk	iP		16	53	04
Southern Iran. Magn.=5.3 (Up, Ki).					
» ✓ 9	Up	iP	23	46	00
✓ Ki	iP		23	45	10
✓ Sk	iP		23	45	46
» ✓ 10	Ki	eP	09	54	57
» ✓ 10	Up	iP	12	04	54
» ✓ 10	Up	iP	16	39	58
✓ Ki	iP		16	39	41
Near south coast of Mindanao.					
» ✓ 10	Up	iP	18	39	00
✓ Ki	iP		18	39	47
✓ Sk	eP		18	39	14
Atlantic Ocean.					
» ✓ 10	Up	iPKP	19	52	43
Tonga Islands.					

p = Uppsala, Ki = Kiruna

1956			
Mar 10	Up	iP	20 27 22
	Ki	eP	20 27 22
» 10	Up	iP	21 50 41
		iPP	21 54 48
		PP	μ 0.4 σ 2.0
		$\Delta \sim 11000 \text{ km} \sim 99^\circ$	
✓ Ki	iP	i	21 50 28
		i	21 50 33
	P	z'	μ 0.1 σ 1.0
	M	E	1.7 19
	M	Z	2.7 18
✓ Sk	iP	i	21 50 48
		i	21 51 05
Molucca Passage. Magn. = 6.5 (Up, Ki).			
» 10	Up	iP	21 53 15
	Ki	iP	21 53 51
	Sk	iP	21 53 29
» 11	Up	iP	08 13 41
	Ki	iP	08 14 19
Southern Iran.			
» 11	Up	e(P)	19 48 34
» 12	Ki	eP	05 04 09
» 12	Up	iP	11 35 48
	Ki	iP	11 35 28
Philippine Islands.			
» 12	Up	eP	16 37 29
» 12	Up	iP	16 58 51
» 12	Up	i(P)	20 39 54
» 13	Up	iP	01 14 39
» 13	Up	iP	01 52 02
Dominican Republic.			
» 13	Up	iP	09 37 52
	i	iP	09 38 04
✓ Sk	iP	i	09 37 57
Near east coast of Honshu, Japan.			
» 13	Up	iP	10 50 00
» 13	Up	iP	13 26 12
		iPP	13 29 40
		iS	13 36 53
	P	z'	μ 0.4 σ 1.6
	PP	z'	0.4 1.5
	S	E	2.6 8
	S	N	1.7 8

1956			
Mar 13	M	E	5.9 22
(cont.)	M	N	5.5 24
	M	Z	6.9 24
	$\Delta = 9900 \text{ km} = 89^\circ$		
✓ Ki	iP	i	13 26 08
	iPP	i	13 29 33
	iSKS	i	13 36 35
	iS	i	13 36 50
	eSS	i	13 42 38
	P	z'	μ 0.9 σ 1.7
	PP	z'	0.5 2.0
	SKS	E	2.4 10
	S	N	2.0 9
	M	E	4.3 19
	M	N	2.3 20
	M	Z	13 20
	$\Delta = 9800 \text{ km} = 88 \frac{1}{2}^\circ$		
✓ Sk	iP	i	13 25 58
	iPP	i	13 29 12
Off south coast of Panama. Probably slightly deeper than normal. Magn. = 6.8 (Up, Ki).			
» 13	Ki	iP	14 12 38
» 13	Up	iP	16 47 03
» 13	Up	iP	19 32 49
	Ki	iP	19 31 55
Komandorski Islands region.			
» 13	Up	iP	20 25 58
	Sk	eP	20 26 45
Greece.			
» 13	Up	iPKP	23 50 32
New Ireland.			
» 14	Up	iP	11 12 16D
	P	z'	μ 0.1 σ 0.8
✓ Ki	iP	i	11 12 18
	P	z'	μ 0.1 σ 0.6
✓ Sk	iP	i	11 12 33
Andaman Islands.			
» 14	Ki	e	12 15 00
	Sk	e	12 14 53
	i(Sg)	e	12 14 55
Local.			
» 14	Up	ePKP2	14 39 22
	i	ePKP2	14 40 36
Off coast of North Island, New Zealand.			
» 14	Up	iPKP2	15 58 53
	PKP2	z'	μ 0.2 σ 1.4

Sk = Skalstugan

1956			
Mar 14	Ki	iPKP	15 58 25
(cont.)		PKP	μ 1.0 σ 5
		PKP	z' 0.5 2.0
✓ Sk	iPKP	i	15 58 38
Off coast of North Island, New Zealand.			
» 14	Up	iPKP2	16 03 34
	PKP2	z'	μ 0.2 σ 1.5
✓ Ki	iPKP	i	16 03 06
	PKP	z'	μ 1.2 σ 6
	PKP	z'	0.9 2.2
✓ Sk	iPKP	i	16 03 19
	iPKP2	i	16 03 34
Off coast of North Island, New Zealand.			
» 14	Up	iP	16 08 42
» 14	Up	iPKP2	16 34 08C
	iPKS	i	16 37 27
	PKP2	z'	μ 0.1 σ 1.2
✓ Ki	iPKP	i	16 33 39
	PKP	z'	μ 0.3 σ 1.7
✓ Sk	iPKP	i	16 33 51
Off coast of North Island, New Zealand.			
» 14	Up	iP	16 49 53
	i	iP	16 49 59
✓ Ki	eP	i	16 49 49
✓ Sk	iP	i	16 50 10
Pakistan.			
» 14	Up	iP	21 09 01
» 14	Up	iP	21 39 25
» 14	Up	iP	23 17 43
✓ Ki	eP	i	23 18 28
» 14	Up	iP	23 33 41
» 15	Ki	i(P)	16 45 46
» 15	Up	iPKP	18 19 26
✓ Ki	ePKP	i	18 18 56
	PKP	z'	μ 0.1 σ 1.5
✓ Sk	ePKP	i	18 19 09
Off coast of North Island, New Zealand.			
» 15	Up	iP	21 02 45
» 16	Ki	e(P)	01 30 42
✓ Sk	eP	i	01 30 45

1956			
Mar 16	Up	iP	01 46 20
	Ki	iP	01 46 12
» 16	Up	iPKP2	09 01 03
	PKP2	z'	μ 0.1 σ 0.9
✓ Ki	iPKP	i	09 00 33
	PKP	z'	μ 0.2 σ 1.5
✓ Sk	iPKP	i	09 00 47
Off coast of North Island, New Zealand.			
» 16	Ki	iP	18 31 49
Near south coast of Hokkaido, Japan.			
» 16	Up	ePKP	19 22 15
Tonga Islands region.			
» 16	Up	iP	19 38 37D
	iPP	i	19 39 29
	M	E	μ 1.2 σ 16
	M	N	1.9 21
	M	Z	1.4 14
	$\Delta \sim 3100 \text{ km} \sim 28^\circ$		
✓ Ki	iP	i	19 39 36
	iPP	i	19 40 54
	PP	z'	μ 0.1 σ 1.5
	M	E	2.5 21
	M	N	1.0 16
	M	Z	1.8 14
	$\Delta \sim 3900 \text{ km} \sim 35^\circ$		
✓ Sk	iP	i	19 39 17
Lebanon.			
» 16	Up	iP	19 49 26
	i(PcP)	i	19 52 43
	P	z'	μ 0.1 σ 1.2
	M	E	3.1 21
	M	N	3.8 21
	M	Z	2.6 15
	$\Delta \sim 3100 \text{ km} \sim 28^\circ$		
✓ Ki	iP	i	19 50 25
	i	iP	19 50 38
	i(PcP)	i	19 53 03
	P	z'	μ 0.1 σ 1.0
	M	E	2.8 20
	M	N	2.1 17
	M	Z	2.3 16
	$\Delta \sim 3900 \text{ km} \sim 35^\circ$		
✓ Sk	iP	i	19 50 06
	i	iP	19 50 10
	i(PcP)	i	19 52 44
Lebanon. Magn. = 5.4 (Up, Ki).			
» 16	Up	iPg	20 24 34

1956			
Mar 16	iSg	20	26 02
(cont.)	$\Delta=760 \text{ km}=6.8^\circ$		
✓ Ki	ePg	20	23 01
	iSg	20	23 36
	$\Delta=290 \text{ km}=2.6^\circ$		
✓ Sk	e	20	23 53
	iSg	20	23 57
	Central Norway, 66.7°N , 14.6°E .		
	Origin time = 20 22 14.		
✓ 16	Ki eP	21	46 16
✓ 17	Ki eP	00	12 27
✓ 17	Ki eP	02	12 37
✓ 17	Up iPKP	02	29 43
	i	02	29 47
✓	Ki i(PKP)	02	29 20
	Off coast of North Island, New Zealand.		
✓ 17	Up iP	11	53 30
✓	Ki iP	11	52 49
✓	Sk eP	11	53 21
	Northern Honshu, Japan.		
✓ 17	Up iP	15	52 20
✓	Ki iP	15	51 37
✓	Sk iP	15	52 11
	Near east coast of Hokkaido, Japan.		
✓ 17	Ki eP	16	50 46
	Kurile Islands.		
✓ 18	Up iP	02	25 50
✓ 18	Up iP	02	50 59
✓	Ki i(P)	02	50 16
✓ 18	Up iP	04	01 18
✓	Ki iP	04	01 57
✓	Sk eP	04	01 55
	i	04	02 52
✓ 18	Up iP	08	29 55
	P z'	μ 0.2	s 1.5
	M E	1.3	20
	M N	1.8	20
	M z	1.7	20
✓	Ki iP	08	29 58
	eS	08	39 54
	P z'	μ 0.2	s 1.6
	S E	0.8	7
	M E	2.5	21
	M N	1.1	17
	M z	2.2	17
✓	Sk eP	08	29 57
	$\Delta \sim 8800 \text{ km} \sim 79^\circ$		

1956			
Mar 18	i(PcP)	08	30 12
(cont.)	Nicobar Islands.		
	Magn. = 5.8 (Up, Ki).		
✓ 18	Up iP	16	58 15
✓ 18	Up iP	22	41 18
✓ 19	Up iP	02	56 27
✓ 19	Up iP	03	36 41
✓ 19	Up eP	06	04 46
✓	Ki iP	06	04 19
✓ 19	Ki eP	09	51 48
✓ 19	Up ePP	17	55 31
	ePKKP	18	05 28
	M E	μ 3.3	s 21
	M N	4.6	23
	M z	3.5	20
	Ki No time marks.		
	PP z'	μ 0.3	s 2.5
	PKKP z'	0.1	1.7
	M E	2.2	17
	M N	1.7	20
	M z	4.8	20
✓	Sk iP	17	55 40
	iPKKP	18	05 15
	New Britain.		
	Magn. = 6.4 (Up, Ki).		
✓ 19	Up iP	23	50 40
✓ 20	Up iP	02	15 14
✓ 20	Up iP	02	34 33C
	Sk iP	02	34 24
	Hokkaido, Japan.		
✓ 20	Up iP	04	25 36
	P z'	μ 0.4	s 1.0
	M E	2.2	23
	M N	1.9	21
	M z	1.8	21
	Ki No time marks.		
	P z'	μ 0.1	s 1.0
	M E	1.7	17
	M N	1.2	18
	M z	0.9	14
✓	Sk iP	04	25 21
	Off southeast coast of Kamchatka.		
	Magn. = 6.0 (Up, Ki).		
✓ 20	Up iP	10	35 48
✓	Sk eP	10	35 55
	Off northwest coast of Luzon.		

1956			
Mar 20	Up iP	11	38 02
(cont.)	Kurile Islands.		
✓ 20	Up iP	16	24 48
	e	16	25 04
✓	Ki iP	16	25 34
	i	16	26 15
✓	Sk eP	16	25 35
	Caucasus.		
✓ 20	Up e(P)	17	24 25
✓	Ki iP	17	24 49
✓ 20	Up iPKP	17	30 37
✓	Ki iPKP	17	30 29
	Fiji Islands.		
	Deep (h ~ 500 km).		
✓ 20	Ki iP	20	14 53
✓	Sk eP	20	14 51
✓ 20	Up ePKP	20	37 12
✓	Sk iPKP	20	37 07
	Kermadec Islands region.		
✓ 20	Up iP	22	16 34
✓	Ki iP	22	16 15
✓ 21	Up e(P)	01	37 57
✓	Ki e(P)	01	34 02
✓ 21	Up iP	01	56 46
✓	Ki iP	01	57 31
✓	Sk eP	01	57 34
	Arabia.		
✓ 21	Up iP	05	00 30
	i	05	01 01
	iS	05	05 11
	i	05	08 33
	iLg1	05	08 50
	iLg2	05	09 41
	P z'	μ 0.4	s 1.2
	S E	0.8	6
	S N	1.7	10
	M E	4.9	15
	M N	4.6	15
	M z	7.7	15
✓	Ki $\Delta=3000 \text{ km}=27^\circ$		
	iP	05	01 06D
	i	05	01 51
	i	05	02 47
	e(S)	05	05 59
	e	05	06 59
	iSSS	05	08 16
	P z'	μ 0.6	s 1.0
	M E	6.5	18
	M N	2.9	18
	M z	9.7	19
	$\Delta=3450 \text{ km}=31^\circ$		

1956			
Mar 21	Sk iP	05	01 06
(cont.)	i	05	01 59
	Caucasus.		
	Magn. = 6.0 (Up, Ki).		
✓ 21	Ki eP	06	43 15
✓ 21	Ki eP	07	24 02
✓ 21	Up		
	M E	μ 1.2	s 18
	M N	1.1	20
	M z	1.7	24
✓	Ki i(PKP)	18	28 01
	M E	μ 1.3	s 23
	M N	0.5	16
	M z	1.2	18
✓ 21	Ki iP	20	53 27
✓ 21	Ki e(P)	21	33 55
✓ 22	Up e(P)	02	08 19
✓ 22	Up iP	06	47 18
	ipP	06	47 42
	epPP	06	51 42
	eS	06	58 25
	ePS	06	59 56
	P z	μ 0.4	s 3
	pP z'	0.2	1.5
	S E	1.0	5
	M E	3.4	25
	M N	2.1	23
	M z	4.7	26
✓	Ki $\Delta=10600 \text{ km}=95\frac{1}{2}^\circ$		
	iP	06	47 20
	ipP	06	47 44
	ePP	06	51 14
	iSKKS	06	57 53
	iS	06	58 24
	iPS	06	59 59
	P z	μ 0.7	s 6
	P z'	0.5	2.2
	pP z'	0.3	1.6
	PP z'	0.8	2.5
	S E	2.6	9
	S N	0.6	9
	M E	3.5	23
	M N	2.5	26
	M z	7.9	26
✓	Sk $\Delta=10600 \text{ km}=95\frac{1}{2}^\circ$		
	iP	06	47 06
	ipP	06	47 30
	iPKKP	07	04 12
	Ecuador.		
	h = 90 km (Up, Ki, Sk).		
	Magn. = 6.5 (Ki).		

Up = Uppsala, Ki = Kiruna

Sk = Skanstugan

1956			
Mar 22	Up	iP	08 47 23
»	✓	22 Up iP	15 26 38
		Ki iP	15 27 07
		i iP	15 33 45
		Sk iP	15 27 19
»	✓	22 Up eL	17 03
			μ s
		M E 1.2 18	
		M N 1.5 17	
		M Z 1.7 20	
»	✓	Ki eL	17 04
			μ s
		M E 1.3 21	
		M N 0.6 17	
»	✓	M Z 1.6 19	
		22 Ki iP	18 50 25
»	✓	23 Ki eP	04 03 33
		23 Up iPKP	05 29 32
»	✓	Ki ePKP	05 29 19
		New Britain.	
»	✓	23 Up iP	05 49 44
		Ki iP	05 49 37
		Sk iP	05 50 01
»	✓	23 Up iP	05 59 54
		i iP	06 00 03
		eS	06 07 39
			μ s
»	✓	P Z' 0.1 1.0	
		M E 3.3 16	
		M N 1.1 13	
		M Z 4.1 16	
		Ki eP	05 59 42
			μ s
		M E 3.0 15	
M N 2.1 20			
»	✓	Sk iP	06 00 06
			μ s
		M Z 3.1 15	
Tibet. Magn.=5.7 (Up, Ki).			
»	✓	23 Ki iP	07 21 02
»	✓	23 Ki eP	12 34 34
»	✓	23 Up i(P) Seismic?	18 06 37
»	✓	23 Up iP	19 09 37
		i iP	19 10 04
		Ki iP	19 09 32
		i iP	19 09 59
		Sk iP	19 09 52
		i	19 10 20

1956			
Mar 23	Ki	iP	21 02 31
»	✓	23 Up iP	22 30 21
		Ki e(P)	22 30 57
»	✓	23 Up iPKP	22 33 03
			μ s
		Ki PKP Z' 0.1 1.0	
		Sk e(PKP)	22 32 39
		Kermadec Islands. iPKP	22 32 57 D
»	✓	24 Ki iP	16 00 54
		24 Ki iP	17 04 21
»	✓	24 Up iP	22 34 12
		24 Up eP	22 41 24
»	✓	24 Ki iP	23 08 04
		25 Ki eP	05 56 59
»	✓	Sk eP	05 56 52
		Near coast of Guatemala and El Salvador.	
»	✓	25 Ki iP	08 03 37
		25 Up iP	23 38 10C
		i iP	23 38 18
»	✓	eS	23 46 46
			μ s
		P N 0.8 2	
		P Z 1.7 2	
		P Z' 1.6 1.4	
		S N 0.4 6	
		M E 2.2 17	
M N 4.0 18			
»	✓	M Z 5.0 18	
		Ki iP	23 37 19C
		eS	23 45 11
Δ=7150 km=64 1/2°.			
»	✓	P N 0.3 5	
		P Z 0.8 4	
		P Z' 1.0 1.5	
		S E 0.5 14	
		M E 4.3 19	
		M N 1.5 19	
		M Z 5.4 19	
		Sk iP	23 37 54
Near southeast coast of Kamchatka. Magn.=6.6 (Up, Ki).			
»	✓	26 Up iP	00 11 48
»	✓	26 Up i(P)	00 23 01
		Ki i(P)	00 23 17

1956			
Mar 26	Up	iP	01 47 25
»	✓	26 Up iP	03 01 28
		Ki iP	03 00 37
»	✓	26 Up iP	03 31 24C
		i iP	03 31 43
»	✓	Ki P Z' 0.2 1.3	
		Ki iP	03 30 32C
		i iP	03 30 43
			μ s
»	✓	Sk iP	03 31 08
		Near southeast coast of Kamchatka.	
»	✓	26 Up iP	03 35 13C
		Ki iP	03 34 22C
»	✓	Ki P Z' 0.2 1.2	
		Ki iP	03 34 22C
			μ s
»	✓	Sk eP Z' 0.1 1.0	
		Sk eP	03 34 57
		Near southeast coast of Kamchatka.	
»	✓	26 Up iP	04 10 04C
		i iPP	04 11 14
		eS	04 12 24
			04 18 41
			μ s
»	✓	P N 0.1 2	
		P Z 0.4 2	
		P Z' 0.9 1.4	
		PP Z' 0.2 1.2	
		S N 0.6 11	
		M E 2.7 17	
		M N 3.9 17	
M Z 4.7 17			
»	✓	Ki iP	04 09 12C
		iPP	04 11 33
		i iP	04 11 43
		eS	04 17 04
			μ s
»	✓	P Z 0.6 8	
		P Z' 0.3 1.0	
		PP Z' 0.1 1.0	
		S E 0.4 14	
		S N 0.3 14	
»	✓	M E 3.1 19	
		M N 2.1 20	
»	✓	M Z 5.4 19	
		Sk iP	04 09 48
Δ=6300 km=56 1/2°.			
Near southeast coast of Kamchatka. Magn.=6.2 (Up, Ki).			
»	✓	26 Up i(P) Northeast of Puerto Rico.	04 10 17
»	✓	26 Up iP	04 32 19C

1956			
Mar 26 (cont.)		P Z' 0.1 1.1	
»	✓	Ki iP	04 31 26
		26 Up iP	05 07 05
»	✓	Ki iP	05 06 13
		26 Up iP	05 20 38
»	✓	Ki iP	05 19 47
		26 Up iPP	05 39 58
»	✓		μ s
		Ki PP Z' 0.1 1.5	
		Sk e iPP	05 40 04
Northern Chile-Argentina border.			
»	✓	26 Ki iP	06 01 25
		26 Ki iP	08 26 25
»	✓	Sk iP	08 26 54
		Alaska.	
»	✓	26 Up iP	17 12 53
			μ s
»	✓	Ki P Z' 0.1 1.3	
		Ki iP	17 12 00
		Near southeast coast of Kamchatka.	
»	✓	26 Up iP	17 53 36
		26 Up iP	22 55 38
		Sk iP	22 56 22
Greece.			
»	✓	27 Up iPKP	02 59 02
		Ki iPKP	02 58 30
		Sk ePKP	02 58 59
New Zealand.			
»	✓	27 Up eP	11 05 41
		27 Ki i(PP) (Colombia).	20 30 14
»	✓	28 Up iP	03 32 35
			μ s
»	✓	P Z' 0.1 1.0	
		Aleutian Islands.	
»	✓	28 Up iP	03 35 50
		28 Ki eP	06 19 45
»	✓	28 Up iP	11 43 51
		Ki eP	11 45 05
		Sk iP	11 44 35
Greece.			

Up = Uppsala, Ki = Kiruna

1956
Apr 6
(cont.)

P	E	μ	s
P	N	3.4	6
P	Z	1.7	6
P	Z'	4.6	6
PP	Z	0.9	1.0
S	E	1.6	5
S	N	2.7	6
S	N	4.7	7
$\Delta = 4650 \text{ km} = 42^\circ$			
Sk	iP	07 19	26C
	iPP	07 21	02
	iSS	07 29	06
Hindu Kush. h=210 km (Ki). Magn.=6.8 (Up, Ki). The amplitudes of sPP are unusually large.			
6	Up	iPKP	16 46 38
	Ki	iPKP	16 46 24
	Sk	iPKP	16 46 36D
New Hebrides Islands.			
6	Up	e(P)	19 10 26
7	Ki	iP	00 11 22
	M	E	μ s
	M	N	0.6 15
	M	N	0.4 16
	M	Z	1.0 16
Revilla Gigedo Islands.			
7	Ki	iP	04 38 37
	M	E	μ s
	M	N	0.6 15
	M	N	0.4 14
	M	Z	0.6 14
Western Pakistan-India border.			
7	Ki	iP	06 16 12
	i		06 16 22
Irak-Iran border.			
7	Up	iP	11 05 19
7	Up	iPKP	18 20 07D
	PKP	Z'	μ s
	M	E	0.2 1.0
	M	N	1.1 21
	M	N	1.7 21
	M	Z	1.8 21
Ki	iPKP		18 19 45
	iSKP		18 22 53
	M	E	μ s
	M	N	1.7 21
	M	N	1.0 24
	M	Z	2.0 21
Sk	iPKP		18 20 02D
	i		18 20 05
Kermadec Islands. Deep (h~350 km).			

1956

Apr 7	Up	iPKP2	18 24 51
	Ki	PKP2	μ s
		iPKP	0.3 1.4
	Sk	PKP	μ s
		iPKP2	1.3 2.5
	Off coast of		18 24 46
	Zealand.		
7	Up	iP	21 33 34
	Ki	iP	21 33 18
8	Up	iP	06 29 01
8	Up	iPKP	10 52 14
Tonga Islands region.			
8	Up	iP	13 46 32
	Sk	iP	13 47 11
9	Up	iP	15 37 51
	Ki	iP	15 36 59
Aleutian Islands.			
9	Up	iP	17 08 53
	Ki	eP	17 08 08
Northeast coast of Hokkaido, Japan. Deep (h~320 km).			
10	Up	iP	13 28 50
	iP		13 28 51
	ipP		13 29 23
	isP		13 29 38
	iSKS		13 39 02
	iS		13 39 28
	esS		13 40 23
	P	Z'	μ s
	pP	Z'	0.4 1.2
	SKS	E	1.3 1.7
	SKS	E	4.5 7
	SKS	N	1.3 6
	S	E	9.9 7
	S	N	4.2 8
	S	Z	2.9 7
	M	E	2.0 19
	M	N	2.2 20
	M	Z	3.1 20
$\Delta = 10050 \text{ km} = 90\frac{1}{2}^\circ$			
Ki	iP		13 28 49
	iP		13 28 51
	ipP		13 29 22
	isP		13 29 37
	iSKS		13 39 02
	iS		13 39 24
	i(SP)		13 40 17
	isS		13 40 25
	P	Z'	μ s
	pP	Z'	0.7 1.0
	SKS	E	1.1 1.3
	SKS	E	4.4 8
	S	E	10.7 8

Sk = Skalistugan

1956
Apr 10
(cont.)

S	N	4.5	9
S	Z	2.8	9
M	E	5.7	20
M	N	3.7	20
M	Z	3.8	16
$\Delta = 10000 \text{ km} = 90^\circ$			
Sk	iP	13 29	04C
	iP	13 29	05
	ipP	13 29	36
South coast of Sumatra. h=130 km (Up, Ki). Magn.~7 (Up, Ki). The P phase is multiple at all three stations, the first P having very small amplitude. The S waves are unusually large in relation to P.			
10	Up	iP	15 15 22
10	Ki	eP	20 45 35
11	Up	iP	01 52 39
	iPP		01 54 09
	i		02 01 11
	P	Z'	μ s
	PP	Z'	0.1 1.1
	M	E	0.2 1.5
	M	N	1.0 15
	M	N	1.7 13
	M	Z	1.5 15
$\Delta = 4400 \text{ km} = 39\frac{1}{2}^\circ$			
Ki	eP		01 52 45
	i		01 52 52
	i		02 01 15
	M	E	μ s
	M	N	1.0 11
	M	N	0.6 10
	M	Z	1.4 12
Sk	iP		01 53 03
	iPP		01 54 38
$\Delta = 4650 \text{ km} = 42^\circ$			
Tadzhik, USSR. Magn.=5.8 (Up).			
11	Ki	iP	07 35 57
11	Ki	i(P)	13 28 39
12	Up		
	M	E	μ s
	M	N	1.9 27
	M	N	0.8 18
	M	Z	1.7 20
Ki	ePS		05 34 36
	M	E	μ s
	M	N	1.1 22
	M	Z	1.9 22
Northern Chile.			
12	Ki	iP	07 57 43

1956
Apr 12

Ki	iP	19 32 59	
12	Up	iP	22 41 02
	iP		22 41 07
	P	Z'	μ s
	M	E	0.2 1.0
	M	N	1.8 20
	M	N	1.6 18
	M	Z	2.2 16
Ki	iP		22 41 40
	iP		22 41 45
	i		22 42 31
	iSS		22 48 55
	P	Z'	μ s
	M	E	0.2 1.0
	M	N	2.3 16
	M	N	1.6 14
	M	Z	3.2 17
Sk	iP		22 41 39
	iP		22 41 45
	iPP		22 42 47
$\Delta = 3800 \text{ km} = 34^\circ$			
Northern Iran. P is multiple at all three stations, the first P having very small amplitude.			
13	Up	iP	07 11 23
	i		07 11 39
Ki	iP		07 12 30
	M	Z	μ s
			1.5 20
Sk	iP		07 12 01
South of Crete.			
13	Up	e(P)	07 15 45
	Sk	e(P)	07 17 27
13	Up	eP	08 05 41
	Ki	iP	08 04 51
Near south coast of Kamchatka.			
13	Ki	i(P)	10 59 24
14	Up	iP	00 28 43
14	Up	i(P)	09 58 39
14	Up	eP	20 39 35
15	Up	iP	12 53 35
	M	E	μ s
	M	N	0.5 14
	M	N	0.3 10
	M	Z	1.0 14
Ki	iP		12 53 40
	M	E	μ s
	M	N	0.6 11
	M	N	0.3 10
	M	Z	0.8 14
Sk	eP		12 54 00
	iPP		12 55 37
Pamir.			

1956
Apr 16/ Up iP 01 52 49 ✓
Ki iP 01 51 55 ✓
Sk eP 01 52 32 ✓
Near east coast of Kamchatka.

» 16 Up iP 10 59 45C ✓
iPP 11 03 18 ✓
P z' μ s
0.1 1.0
Ki iP Δ ~ 10000 km ~ 90°.

Sk iP z' μ s
0.3 0.8
Near south coast of Sumatra.

» 16 Up iP 23 30 40

» 17 Ki i(P) 07 31 02
i 07 31 29
Seismic?

» 17 Up iP 12 27 26 ✓
Sk iP 12 27 23 ✓
Off south coast of Honshu, Japan.
Deep.

» 17 Up iP 15 39 21
Sk iP 15 40 06

» 18 Up iP 02 06 25
P z' μ s
0.1 0.8
Sk iP Southeastern Tibet.

» 18 Up iP 11 11 16 ✓
iS 11 11 18 ✓
11 20 11 ✓
P z' μ s
0.2 1.0
S E 1.5 10
S N 1.0 8
M E 3.8 18
M N 2.4 18
M Z 3.4 18
Ki iP Δ = 7550 km = 68°.

iPP 11 10 26 ✓
e(Pa) 11 12 39 ✓
eS 11 14 09 ✓
11 18 36 ✓
P z' μ s
0.4 9
PP N 0.3 9
PP Z 0.4 9
S E 1.7 10
S N 0.8 9
M E 3.4 20
M N 2.3 18
M Z 4.6 19
Δ = 6650 km = 60°.

1956
Apr 18 (cont.) Sk iP 11 10 57 ✓
Aleutian Islands.
Magn. = 6.0 (Up, Ki).

» 18 Up iP 12 55 53 ✓
iS 12 58 35 ✓
iLg1 13 00 19 ✓
Ki Δ = 1600 km = 14 1/2°.

Sk eP 12 57 22 ✓
eS 13 01 33 ✓
eLg1 13 03 53 ✓
eP 12 56 58 ✓
iS 13 00 35 ✓
iPcP 13 01 26 ✓
iLg1 13 02 38 ✓
Δ = 2200 km = 20°.
Rumania.

» 18 Up iP 14 36 59
P z' μ s
0.1 1.0

» 18 Up iP 18 06 09
Ki iP 18 05 15 ✓
eS 18 13 33 ✓
S E μ s
0.2 9
M E 0.5 19
M N 0.4 19
M Z 0.6 16
Δ ~ 6650 km ~ 60°.
Aleutian Islands.

» 19 Up iP 11 38 21

» 19 Up iP 17 20 25 ✓
Ki eP 17 20 32 ✓
Sk iP 17 20 45 ✓

» 19 Ki eP 18 45 32 ✓
Southern Spain.

» 20 Up iP 01 32 43

» 20 Ki e(P) 02 18 20

» 20 Up iP 04 52 25 ✓
Ki eP 04 51 55 ✓
eS 05 01 28 ✓
M E μ s
0.6 16
M N 0.6 18
M Z 0.9 17
Δ ~ 8350 km ~ 75°.
Bonin Islands region.

» 20 Up eP 06 33 35 ✓
Ki i(P) 06 33 26 ✓

» 20 Up iP 12 22 37

1956
Apr 20 Up eP 15 30 01 ✓
iPP 15 34 32 ✓
μ s
0.1 1.5
Ki PP z' ✓
iP 15 29 46C ✓
i 15 33 00 ✓
i(PKP) 15 33 54 ✓
eSKS 15 40 12 ✓
iS 15 41 17 ✓
eSS 15 48 37 ✓
P z' μ s
0.2 1.0
SKS E 0.4 9
S E 0.5 7
M E 0.8 18
M N 0.9 22
M Z 1.1 17
Δ ~ 11550 km ~ 104°.

Sk iP 15 30 07 ✓
i 15 34 14 ✓
iPKKP 15 45 25 ✓
Banda Sea.
h ~ 150 km (Ki).

» 20 Up iP 16 49 18 ✓
i 16 49 25 ✓

» 20 Ki iP 16 49 41 ✓
i 16 49 49 ✓
P z' μ s
0.5 1.7
Sk iP z' μ s
0.1 1.1
Southwest of Chagos Islands.

» 20 Ki e(P) 23 48 50

» 21 Ki e(P) 01 11 11

» 21 Up iP 01 37 13 ✓
Sk eP 01 37 29 ✓
South of Formosa.

» 21 Ki i(P) 14 06 53 ✓
Sk e(P) 14 06 39 ✓
Off south coast of Nicaragua.

» 21 Up i(PKP) 17 30 30 ✓
Sk eSKP 17 33 18 ✓
Fiji Islands.
Deep (h ~ 600 km).

» 22 Up iP - 00 30 15

» 22 Up iPKP 04 07 31C ✓
i 04 07 35 ✓
Sk iPKP 04 07 25 ✓
i 04 07 38 ✓
Kermadec Islands.

» 22 Up i(PKP) 04 59 03 ✓
M E μ s
2.1 20

1956
Apr 22 (cont.) M N 2.0 20
M Z 2.2 18
Ki e 04 57 13 ✓
ePS 05 09 28 ✓
eSS 05 15 33 ✓
μ s
1.6 18
M E 1.2 18
M N 3.2 19
Sk ePKP 04 59 33 ✓
New Britain.
Magn. = 6.0 (Up, Ki).

» 22 Up iP 17 32 46C ✓
iS 17 41 35 ✓
iScS 17 42 42 ✓
P N μ s
0.6 5
P Z 0.9 5
P z' 0.2 1.3
S E 0.8 6
S N 2.7 11
M E 4.4 17
M N 6.8 17
M Z 5.3 18
Δ = 7450 km = 67°.

» 22 Ki iP 17 31 53C ✓
iS 17 39 57 ✓
e(Sa) 17 46 56 ✓
P N μ s
0.9 5
P Z 0.9 5
P z' 0.3 1.1
S E 1.2 12
S N 2.5 11
S Z 1.9 12
M E 5.9 17
M N 2.6 15
M Z 6.7 16
Δ = 6550 km = 59°.

» 22 Sk iP 17 32 21C ✓
South of Alaska Peninsula.
Magn. = 6.5 (Up, Ki).

» 23 Up iP 03 42 45C ✓
iPcP 03 43 09 ✓
iS 03 51 45 ✓
iPS 03 52 04 ✓
P E μ s
0.7 5
P N 1.5 5
P Z 4.0 5
P z' 1.8 1.2
S E 1.8 5
S N 2.2 8
M E 10.4 16
M N 10.4 16
M Z 13 17
Δ = 7650 km = 69°.

» 23 Ki iP 03 42 01C ✓
iS 03 50 24 ✓

Up = Uppsala, Ki = Kiruna

1956			
May (cont.)			
2	Ki	iP	06 45 09
	Sk	iP	06 46 39
			06 45 37
Bonin Islands region. h=550 km (Up).			
2	Up	iPKP	17 07 44C
Kermadec Islands region.			
2	Up	iPKP	18 27 15
Probably Kermadec Islands region.			
3	Up	iP	15 41 16
3	Up	iP	17 33 32
	Ki	iP	17 33 19
	M	E	μ 0.9 s 11
	M	N	0.4 10
	M	Z	1.2 12
Central Asia.			
4	Ki	eP	05 37 24
4	Ki	eP	10 39 51
4	Ki	iP	11 20 45
4	Up	iP	18 57 50
	Ki	iP	18 57 31C
Luzon.			
4	Up	iP	23 28 41
Near southeast coast of England.			
5	Sk	iP	00 45 29
5	Ki	e(PKP)	03 41 44
Samoa Islands region.			
5	Ki	eP	08 25 58
5	Up	iP	19 40 57
Greece.			
5	Up	iP	20 46 45
5	Up	iP	20 47 09
	Ki	iP	20 48 16
Southwest coast of Turkey.			
5	Ki	iP	22 34 45
Southwest coast of Turkey.			
6	Up	iP	21 08 07C
		i	21 08 10
	P	Z'	μ 0.3 s 1.0
	M	E	1.2 19
	M	N	1.9 18
	M	Z	2.0 19

1956			
May (cont.)			
6	Ki	iP	21 07 13
		i	21 07 16
		iPeP	21 08 07
	P	Z'	μ 0.4 s 1.0
	M	E	1.4 22
	M	N	1.1 23
	M	Z	1.7 18
$\Delta = 6450 \text{ km} = 58^\circ$.			
6	Sk	iP	21 07 42
		i	21 07 45
Alaska.			
6	Up	iP	22 13 30
	Ki	iP	22 12 44
Kurile Islands.			
6	Up	iP	23 23 12D
	Ki	iP	23 23 21
6	Up	iP	23 43 51
	Ki	iP	23 42 57
7	Up	iP	00 54 41
	Ki	eP	00 54 22
7	Up	iP	03 57 38
	Ki	iP	03 59 00
	Sk	iP	03 58 30
Rumania.			
7	Up	iP	08 29 28
	Ki	iP	08 29 21
	Sk	eP	08 29 10
Guatemala.			
7	Up	iPKP	11 17 18
		e	11 35 28
		eSS	11 35 49
	M	E	μ 7.1 s 24
	M	N	6.1 20
	M	Z	9.4 24
7	Ki	iPKP	11 17 25
		eSKKS	11 26 23
	M	E	μ 5.7 s 20
	M	N	2.3 18
	M	Z	9.4 22
7	Sk	iPKP	11 17 25
South Indian Ocean. Magn.=6.7 (Up, Ki).			
7	Up	iP	11 37 16
7	Ki	iP	20 56 22
7	Up	e(P)	22 55 36
		i(Sg)	22 56 32
Local?			

Sk = Skalistugan

1956			
May			
8	Up	iP	03 19 51
	Ki	iP	03 19 30
		i	03 20 25
Near north coast of Luzon.			
8	Up	iP	10 50 04
	Ki	eP	10 47 36
		i	10 48 21
		e	10 50 22
		eT	10 54 49
	M	E	μ 0.9 s 16
	M	N	0.4 12
	M	Z	1.2 18
8	Sk	iP	10 49 10
Arctic Ocean.			
8	Up	iP	16 47 00
8	Up	eP	19 57 47
	Ki	iP	19 57 49C
	M	N	μ 0.8 s 12
8	Sk	eP	19 58 15
Hindu Kush.			
8	Up	iP	20 57 39
Ki	P	Z'	μ 0.2 s 1.5
	iP		20 58 16
	P	Z'	μ 0.2 s 1.7
	M	N	0.5 14
8	Sk	iP	20 58 15D
Iran.			
9	Up	iP	00 23 52
	Ki	iP	00 22 59
9	Up	iP	18 56 02
		i	18 56 14
	P	Z'	μ 0.1 s 0.7
	Ki	iP	18 55 45
	Sk	iP	18 56 08
Off north coast of Luzon.			
9	Up	iP	22 23 45
	Sk	iP	22 23 39
9	Up	iP	22 31 00
9	Ki	i(P)	23 32 44
10	Up	iP	05 58 11
		ePP	06 02 02
	Ki	iP	05 57 45
	P	Z'	μ 0.1 s 1.0
Marianas Islands.			

1956			
May			
10	Up	iP	16 47 27
	Ki	iP	16 46 33D
		iPeP	16 47 22
	P	Z'	μ 0.1 s 1.3
$\Delta = 6550 \text{ km} = 59^\circ$.			
10	Sk	iP	16 47 02
Alaska.			
10	Up	iP	18 16 37
		i	18 16 42
	P	Z'	μ 0.1 s 1.0
	Ki	iP	18 15 03D
		eT	18 26 45
	P	N	μ 0.9 s 3
	P	Z	0.7 3
	P	Z'	0.6 2.2
	M	Z	2.7 21
10	Sk	iP	18 15 53
Off west coast of Spitsbergen. This is the first time a T phase has been observed at Kiruna from this locality.			
10	Up	iP	23 17 35
	Ki	iP	23 17 18
Molucca Passage.			
11	Up	iPKP	15 55 18
	Ki	iPKP	15 55 34
		i(PKS)	15 58 52
	PKP	Z'	μ 0.1 s 1.5
Sandwich Islands.			
11	Up	iP	16 05 14
11	Ki	i(P)	22 39 57
		iSg	22 41 07
Local.			
11	Ki	e(P)	23 10 26
12	Up	iP	02 45 50
12	Up	iP	03 34 15
12	Up	iP	09 56 01
	Ki	iP	09 55 25C
	Sk	iP	09 55 57
South of Honshu, Japan.			
12	Up	iP	14 30 10
12	Up	iP	21 51 30
	Ki	iP	21 50 46
	P	Z'	μ 0.1 s 1.1
12	Sk	iP	21 51 21
Off east coast of Hokkaido, Japan.			

Up = Uppsala, Ki = Kiruna

Sk = Skalistugan

1956 May/13	Up Ki	iP eP i	04 33 20 04 31 55 04 32 02
North Polar region.			
»/13	Ki	i(P)	06 38 19
»/13	Up	iP ePcP ePP iS e	07 58 55 ✓ 08 00 35 ✓ 08 00 45 ✓ 08 05 45 ✓ 08 07 45 ✓
	P	z'	μ 0.4 s 1.5
	S	E	1.3 11
	M	E	12 18
	M	N	16 18
	M	Z	14 18
✓	Ki	$\Delta \sim 5100 \text{ km} \sim 46^\circ$	
	iP	i	07 59 13 ✓
	iPcP	i	08 00 43 ✓
	P	z'	μ 0.2 s 2.0
	M	E	9.2 17
	M	N	5.9 17
	M	Z	10.7 16
✓	Sk	iP	07 59 25C ✓
Pakistan. Magn.=6.1 (Up, Ki).			
»/13	Up	iP	08 07 36
	Ki	eP	08 07 51
»/13	Up	iP	09 02 43
✓	Ki	iP	09 01 19
	i	i	09 01 26
	P	z'	μ 0.1 s 1.1
✓	Sk	iP	09 02 10
	i	i	09 02 15
North Polar region.			
»/13	Up	iP	14 40 08 ✓
✓	Ki	eP	14 38 44 ✓
	i	i	14 38 52 ✓
	i	z'	μ 0.3 s 1.2
	M	N	0.6 17
✓	Sk	iP	14 39 39 ✓
North Polar region.			
»/13	Up	iP	16 45 44
»/13	Up	iP	21 50 43
»/13	Up	iP	22 53 40
»/14	Up	iP	02 40 53

1956 May/14	Sk	eP	07 07 17
»/14	Up	i(P)	16 48 18
»/14	Ki	iP	21 01 44
»/15	Up	i(P)	00 34 47
»/15	Up	iP	04 58 47
»/15	Up	iP	05 41 59
»/15	Ki	iP	06 35 12
	P	z'	μ 0.1 s 0.6
»/15	Up	iP	18 39 12 ✓
	i	i	18 39 17 ✓
	i	iS	18 39 23 ✓
	iS	iS	18 43 17 ✓
	P	N	μ 0.7 s 4
	P	z'	0.3 1.1
	S	N	0.5 4
	M	E	1.9 15
	M	N	2.4 10
	M	Z	2.8 11
✓	Ki	$\Delta = 2500 \text{ km} = 22\frac{1}{2}^\circ$	
	eP	i	18 40 27 ✓
	M	E	μ 3.5 s 15
✓	Sk	iP	18 39 55 ✓
	i	i	18 40 06 ✓
Near west coast of Greece. Magn.=5.8 (Up).			
»/15	Up	iP	23 01 53 ✓
	i	iPP	23 02 04 ✓
	iS	iS	23 02 27 ✓
	iS	iS	23 05 58 ✓
	P	N	μ 0.5 s 3
	P	Z	0.6 3
	P	z'	0.3 1.0
	PP	z'	0.2 1.0
	S	E	1.2 6
	S	N	1.1 6
	S	Z	1.3 5
	M	E	5.0 15
	M	N	4.8 11
	M	Z	6.4 11
✓	Ki	$\Delta = 2500 \text{ km} = 22\frac{1}{2}^\circ$	
	eP	i	23 03 05 ✓
	e(Lg2)	i	23 13 41 ✓
	M	E	μ 7.6 s 17
	M	N	1.9 13
	M	Z	3.8 16
✓	Sk	iP	23 02 33 ✓
Ionian Islands. Magn.=6.0 (Up).			

1956 May/16	Up	iP	07 00 46
»/16	Up	iP	10 24 35
»/16	Up	iP	12 22 25
»/16	Up	eP	14 23 22
»/16	Up	e(P)	20 39 29
»/16	Ki	iSKP	22 30 47
South of Fiji Islands. Deep.			
»/16	Ki	eP	22 35 29
»/17	Up	iP	00 14 47
✓	Ki	iP	00 14 56C
	P	z'	μ 0.1 s 1.0
Hindu Kush. Intermediate depth.			
»/17	Ki	e(P)	03 46 56
	i	i	03 47 09
»/17	Ki	e(P)	16 30 41
	i	i	16 30 57
»/17	Up	iP	21 19 38D
✓	Ki	iP	21 18 44D
	P	z'	μ 0.2 s 1.0
✓	Sk	iP	21 19 18D
Aleutian Islands.			
»/17	Up	iP	23 05 26
✓	Ki	e(P)	23 04 20
»/17	Up	iP	23 11 43
✓	Ki	iP	23 11 03
Off east coast of Honshu, Japan.			
»/18	Up	iP	03 43 06
»/18	Ki	iP	06 08 36
»/18	Ki	eP	09 40 14
»/18	Ki	eP	10 03 55
✓	Sk	iP	10 04 24
Southern Alaska.			
»/18	Up	iP	15 00 52
	P	z'	μ 0.1 s 1.0
»/18	Up	i(P)	18 36 38

1956 May/18	Up	iP	21 38 25
»/18	Ki	iP	21 59 08
	iSg	iSg	22 00 04
Local.			
»/18	Up	iP	22 13 13 ✓
	i	i	22 13 21 ✓
	eS	eS	22 17 12 ✓
	P	N	μ 0.3 s 2
	P	Z	0.6 2
	P	z'	0.9 1.7
	S	E	0.9 7
	M	E	4.9 15
	M	N	2.3 10
	M	Z	2.0 12
✓	Ki	$\Delta = 2400 \text{ km} = 21\frac{1}{2}^\circ$	
	iP	i	22 14 28 ✓
	eLgl	i	22 23 45 ✓
	M	E	μ 2.6 s 12
	M	N	1.6 12
	M	Z	2.7 13
✓	Sk	iP	22 13 56 ✓
	i	i	22 14 13 ✓
Near east coast of Greece. Magn.=6.1 (Up). The earthquakes in Greece often give multiple P phases at our stations, the first P phase generally being the weakest.			
»/19	Up	eL	01 27
	M	E	μ 1.3 s 20
	M	N	1.9 21
	M	Z	1.8 21
✓	Ki	iPKP	00 40 07
Santa Cruz Islands.			
»/19	Up	iPKP	01 49 26 ✓
	i	i	01 49 38 ✓
	iPKKP	iPKKP	01 59 45 ✓
	M	E	μ 2.2 s 23
	M	N	3.4 21
	M	Z	2.2 21
✓	Ki	$\Delta = 13100 \text{ km} = 118^\circ$	
	iPKP	i	01 49 14 ✓
	i	i	01 49 27 ✓
	eSKKS	eSKKS	01 57 01 ✓
	e(PS)	e(PS)	01 59 25 ✓
	M	E	μ 5.0 s 22
	M	N	2.1 20
	M	Z	5.4 21
✓	Sk	iPKP	01 49 25 ✓
	i	i	01 49 38 ✓
Solomon Islands. Magn.=6.4 (Up, Ki).			

Up = Uppsala, Ki = Kiruna

Sk = Skalistugan

1956
May/19 Ki iP 08 26 08
Region of Alaska.

» ✓ 19 Up iP 14 21 59
μ s
0.9 20

✓ Ki M N 14 22 36
P z' 0.1 1.5
M E 0.9 16
M N 0.3 12
M Z 0.5 11

✓ Sk iP 14 22 34
Southern Iran.

» ✓ 19 Up e(P) 14 34 32

» ✓ 19 Up iP 15 13 41 D

» ✓ 19 Up e 20 21 04
eSKS 20 26 51
eS 20 28 02

SKS N μ s
S E 1.0 8
M E 1.3 10
M E 1.9 18
M N 2.4 19
M Z 2.4 20

✓ Ki Δ ~ 11450 km ~ 103°.
ePKP 20 20 53
e 20 21 50
e 20 22 58
ePPP 20 23 38
eS 20 29 04

S E μ s
M E 1.0 11
M E 2.0 17
M N 1.0 15
M Z 2.4 18

Indian Ocean.
Magn. = 6.3 (Up, Ki).

» ✓ 19 Sk eP 23 53 17

» ✓ 20 Ki eP 06 22 49

» ✓ 20 Ki iPg 06 43 18
iSg 06 43 49

✓ Sk e 06 45 52
Local.

» ✓ 20 Up iP 15 49 52 D
i 15 50 30

μ s
0.1 1.0

✓ Ki P z' 15 49 55
Sk iP 15 50 14 D
i 15 50 42

Sinkiang, China.

» ✓ 21 Up ePKP 00 48 04
Northern Chile.

1956
May/21 Up iP 09 25 42
i 09 26 00
Ki eP 09 24 43
i 09 25 05
Sk iP 09 25 13
i 09 25 33
Alaska.

» ✓ 21 Up iP 13 42 23

» ✓ 21 Up iPKP 23 10 43
i 23 10 49

μ s
0.1 1.3

✓ Sk PKP z' 23 10 35
ePKP
Near north coast of North Island,
New Zealand.

» ✓ 21 Ki iP 23 49 32
Near west coast of Turkey.

» ✓ 22 Up iP 02 18 34
Ki iP 02 18 17

μ s
0.1 1.0

✓ Sk P z' 02 18 31
eP 02 18 38
i
South of Mindanao.

» ✓ 22 Up ePKP 03 20 13
ePP 03 22 55
iPKS 03 24 03

μ s
0.4 5
PKP z 1.0 8
PKS N 1.3 20
M E 3.0 22
M N 3.5 22
M z

✓ Ki Δ ~ 14900 km ~ 134°.
ePKP 03 20 11
ePP 03 22 10
e 03 23 25

μ s
0.3 6
PP N 0.5 6
PP z 3.0 20
M E 1.1 20
M N 3.4 21
M z

✓ Sk Δ ~ 14100 km ~ 127°.
ePKP 03 20 19
iPP 03 23 04

Samoa Islands.
Magn. = 6.3 (Up, Ki).

» ✓ 22 Up iP 05 24 29
Ki iP 05 24 15
Sk iP 05 24 35
Near east coast of Celebes.

» ✓ 22 Up i(P) 05 28 30

1956
May/22 Up e(S) 08 33 06
i(S) 08 30 22
Ki i 08 30 58
Sk e(P) 08 31 59
i(S) 08 33 04
Local.

» ✓ 22 Up iP 13 50 08
iPKP 13 53 56 C
iPP 13 55 01
iSKS 13 59 52
i! 14 01 04
e 14 03 29
iPKKP 14 04 37

μ s
0.6 6
PP E 0.7 6
PP N 1.4 6
PP z 0.3 1.3
SKS E 1.1 6
SKS N 1.2 7
M E 1.3 20
M N 1.4 18
M z 1.7 20

✓ Ki Δ ~ 12800 km ~ 115°.
iP 13 49 42
iPKP 13 53 43
iPP 13 54 19
epPP 13 55 56
iSKS 13 59 32
i! 14 00 27
e 14 02 51
ePKKP 14 04 56

μ s
0.4 7
PP E 0.3 7
PP N 0.7 7
PP z 0.2 1.7
SKS E 2.1 9
SKS N 1.0 8
M E 0.9 18
M N 1.0 19
M z 1.7 18

✓ Sk Δ ~ 12000 km ~ 108°.
eP 13 50 06
e 13 53 33
iPKP 13 53 56
iPP 13 54 57
iPKKP 14 04 32

Δ ~ 12800 km ~ 115°.
New Ireland.
Deep (h ~ 550 km).
Magn. = 6.5 (Up, Ki).

» ✓ 22 Up iP 21 05 33 C
Ki iP 21 05 21
Sk iP 21 05 47 C

Assam-China border region.

» ✓ 23 Up eP 00 10 37
Ki iP 00 11 46
Algeria.

1956
May/23 Up i(P) 03 18 28
i 03 18 45
Local?

» ✓ 23 Up eP 06 43 15
Sk iP 06 43 42
Algeria.

» ✓ 23 Up iP 06 52 14
Ki iP 06 51 53

μ s
0.2 11
M N 0.3 12
M z

✓ Sk eP 06 49 43

» ✓ 23 Up eP 10 27 39
iS 10 37 37

Δ = 8800 km = 79°.

✓ Ki iP 10 28 03
i 10 28 20
eS 10 38 24

μ s
0.3 13
S E

✓ Sk Δ = 9350 km = 84°.
iP 10 28 03
Chagos Islands region.

» ✓ 23 Ki iPKP 17 00 43
Fiji Islands.

» ✓ 23 Up i(PKP) 21 06 47
iPKP 21 06 57
i! 21 08 43
i 21 09 23
isPKP 21 09 32
iSKP 21 09 50
iPKS 21 10 27
i 21 10 56
i 21 11 43
ipPKS 21 12 10
isPKS 21 12 52
iSKS 21 13 32
i 21 15 44
iSKSP 21 18 51
i 21 19 15

μ s
0.2 3
PKP E 0.4 3
PKP N 2.4 3
PKP z 2.7 2.0
PKP z' 15 16
SKP E 39 16
SKP N 120 16
SKP z 14 2.4
SKP z' 16 11
PKS E 26 10
PKS N 24 12
SKS N 51 26
M E 49 26
M N

✓ Ki iP 21 03 26
ipP 21 05 02

1956
May 23
(cont.)

esP	21	05	48
e	21	06	28
iPKP	21	06	43
ipPKP	21	08	36
iPP	21	08	41
iPKS	21	09	59
iSKS	21	13	10
i	21	14	55
i	21	17	17
i	21	17	52
iSP	21	18	10
i	21	19	28
iSKKP	21	19	45
e	21	20	04

P	N	μ	s
P	Z	0.4	13
PKP	N	1.6	13
PKP	N	0.4	7
PKP	Z	3.0	7
PKP	Z'	3.0	7
PP	N	3.5	2.0
PP	Z	9.5	9
PKS	E	8.7	10
PKS	N	9.4	10
SKS	E	8.6	13
SKS	N	11	12
M	E	21	22
M	N	8.9	16
M	Z	20	18

Fiji Islands.
h=420 km (Ki).
Magn.=7.5 (Ki).
SKP has not been found on the records at Kiruna, but it has very large amplitudes at Uppsala and Skanstugan.

» 23 Ki iP	21	33	18
✓ Sk P z'	μ	s	
	0.1	1.5	
» 23 Up i(P)	21	38	49
✓ Sk iP	21	38	40D
» 23 Up i(P)	21	42	51
✓ Sk (P) z'	μ	s	
	0.1	1.5	
» 23 Ki eP	21	42	40
» 23 Up iP	22	07	57
✓ Sk iP	22	13	43
✓ Sk iP	22	13	34
» 24 Ki eP	02	39	33

1956
May 24
(cont.)

M	E	μ	s
M	N	0.8	15
M	N	0.4	15
M	Z	0.8	16

Sk iP 02 39 40 ✓
Gulf of California.

» 24 Ki eP 05 11 11

» 24 Up ePg 09 01 59
eSg 09 02 52
 $\Delta=460\text{ km}=4.1^\circ$.

✓ Ki e 09 05 59
eSg 09 06 11
 $\Delta=1120\text{ km}=10.1^\circ$.

Sk ePg 09 02 19
iSg 09 03 28
 $\Delta=580\text{ km}=5.2^\circ$.

Skagerack, 58.6°N, 10.3°E.
Origin time=09 00 36.

» 24 Up iP 09 24 52
✓ Ki eP 09 26 00
Sk eP 09 25 39

» 24 Ki iP 20 13 43
Banda Sea.

» 24 Ki eP 20 45 42

» 25 Up iP 01 03 05C

P	Z'	μ	s
M	N	0.1	1.0
iP	N	1.0	22
iP	N	01 03 06C	
eS	N	01 13 30	

P	Z'	μ	s
S	E	0.1	1.1
M	E	0.7	12
M	E	1.4	19
M	N	0.4	19
M	Z	1.9	19

Sk iP $\Delta\sim 9450\text{ km}\sim 85^\circ$.
Near coast of Sumatra.

» 25 Up iP 02 31 40
Indian Ocean.

» 25 Up iPKP 12 33 10C
i 12 33 18
✓ Ki ePKP 12 32 47
✓ Sk iPKP 12 33 05C
i 12 33 17
South of Kermadec Islands.

» 26 Ki iP 02 27 34

» 26 Up eP 08 44 23
i(PP) 08 48 28

1956
May 26
(cont.)

M	E	μ	s
M	N	0.9	17
M	N	1.9	21
M	Z	1.7	20

✓ Ki eP 08 44 04 ✓
i 08 44 15 ✓

P	Z'	μ	s
M	E	0.2	1.8
M	N	1.9	20
M	N	1.0	20
M	Z	1.4	18

✓ Sk iP 08 44 25 ✓
Banda Sea.

» 26 Up iP 12 47 31
i 12 47 52
✓ Ki iP 12 48 01

» 26 Ki eP 13 29 40

» 26 Up iP 18 43 51 ✓

M	E	μ	s
M	N	1.7	15
M	N	1.5	14
M	Z	1.3	13

✓ Ki eP 18 45 13 ✓

M	E	μ	s
M	N	1.0	14

✓ Sk eP 18 44 34 ✓
Italy.

» 26 Up iPKP 20 39 29 ✓
iPKP 20 39 36 ✓
iSP 20 39 43 ✓
i 20 42 14 ✓
iSKP 20 42 18 ✓
iPP 20 42 28 ✓
iSP 20 45 33 ✓
i! 20 48 24 ✓
i! 20 51 09 ✓

PKP	Z'	μ	s
SKP	N	0.5	1.5
SKP	Z	1.7	3
SKP	Z'	0.8	1.0
PP	Z'	0.6	1.2
M	E	2.6	20
M	N	4.4	22
M	Z	2.6	24

✓ Ki $\Delta\sim 15100\text{ km}\sim 136^\circ$.

ePKP 20 39 16 ✓
iPKP 20 39 22 ✓
ipPKP 20 41 32 ✓
iSKP 20 41 49 ✓
isPKP 20 42 25 ✓
i! 20 47 39 ✓
i 20 52 17 ✓
eSS 20 58 17 ✓

PKP	Z'	μ	s
SKP	Z	0.4	1.5
SKP	Z	4.0	3

1956
May 26
(cont.)

SKP	Z'	2.4	1.8
M	E	2.8	18
M	N	1.3	19
M	Z	2.0	21

Sk $\Delta\sim 14350\text{ km}\sim 129^\circ$.
ePKP 20 39 27 ✓
iPKP 20 39 37 ✓
i 20 42 07 ✓
iSKP 20 42 10 ✓
i 20 51 23 ✓

Fiji Islands.
Deep (h~550 km).

» 26 Up iP 23 15 40

» 27 Up iP 13 21 52
✓ Ki iP 13 21 54
i 13 22 03

P	Z'	μ	s
SKP	N	0.1	1.3

✓ Sk iP 13 22 08
Near north coast of Sumatra.

» 27 Ki iP 17 10 31 ✓
Banda Sea.
Intermediate depth.

» 27 Ki e(P) 17 20 25
i 17 20 56

» 27 Ki eP 18 09 27
Bikini (H-bomb).

» 27 Up iP 23 16 20D

» 28 Ki iP 01 54 03
North Atlantic Ocean.

» 28 Up iP 09 27 44D
i 09 28 10

P	Z'	μ	s
Ki iP	N	0.1	0.9
Ki iP	N	0.9	27
Ki iP	N	27	26

North of Samar Island, Philippine Islands.

» 28 Up i(P) 09 34 20

» 28 Up iP 13 36 43 ✓
i 13 40 22 ✓
i 13 41 08 ✓
✓ Ki iP 13 36 28 ✓
ipP 13 36 54 ✓
iPP 13 40 11 ✓

P	Z'	μ	s
SKP	N	0.1	1.5

✓ Sk iP 13 36 47 ✓
ipP 13 37 15 ✓
iPP 13 40 50 ✓

Northern Celebes.
h=105 km (Ki, Sk).

[p = Uppsala, Ki = Kiruna

Sk = Skalstugan

Year	Month	Day	Station	Type	Time	μ	s
1956	May	28	Up	iP	21 46 21		
»	✓	29	Ki	iP	00 35 29		
»	✓	29	Up	iP ipP	06 42 22C 06 42 40	μ	s
✓			Ki	P iP ipP	z' 06 42 21 06 42 40	0.1	1.0
✓			Sk	P iP ipP	z' 06 42 35C 06 42 53	0.2	1.0
Near south coast of Sumatra. h=75 km (Up, Ki, Sk).							
»	✓	29	Up	i(P)	06 55 02		
✓			Sk	i(P)	06 55 07 06 54 58		
»	✓	29	Up	iP	09 50 35		
»	✓	30	Up	iP	00 43 46		
»	✓	30	Up	eP iP	03 06 34 03 06 38		
»	✓	30	Ki	iP	09 54 11		
✓			Sk	i e(P)	09 54 35 09 54 30		
»	✓	30	Up	iPKP iSKP	16 00 43 16 03 52	μ	s
✓			Ki	SKP iPKP iSKP	z' 16 00 35 16 03 29	0.1	1.5
✓			Sk	SKP ePKP iSKP	z' 16 00 36 16 03 47	0.1	1.3
Tonga Islands region. Deep (h ~ 350 km).							
»	✓	31	Up	iP i i	02 35 28 02 38 18 02 41 33		
»	✓	31	Up	iP Ki iP	15 01 14 15 00 28		
Kurile Islands.							
»	✓	31	Up	iP	15 13 59		
✓			Ki	e(P)	15 15 50		
»	✓	31	Up	iP	18 30 27		
»	✓	31	Ki	iPKP	21 19 48		
Fiji Islands.							
1956	May	31	Up	i(P) Ki i(P)	21 22 44 21 22 22		
✓			Sk	(P) i(P)	z' 21 22 38	μ	s
✓						0.1	1.5
June	1	Sk	iP		05 58 00		
»	✓	1	Ki	eP	10 50 25		
				M M M	μ μ μ	s s s	
				E N Z	0.6 0.3 0.8	15 12 15	
Iceland.							
»	✓	1	Ki	e(P)	22 53 36		
»	✓	2	Ki	iP	07 22 12		
✓			Sk	iP	07 22 32		
»	✓	2	Up	iP Ki iP	16 33 06 16 33 49D		
»	✓	2	Ki	i(P)	16 55 34		
»	✓	2	Up	iP	17 20 07		
				P	z' 17 20 07	μ	s
						0.1	1.3
»	✓	2	Up	iP	23 04 43D		
✓			Ki	P iP	z' 23 04 50	μ	s
✓			Sk	iP	23 03 50 23 04 23D	0.1	0.9
Aleutian Islands.							
»	✓	2	Up	iP	23 15 13		
»	✓	2	Up	iP	23 30 50		
»	✓	3	Up	iP i iPcP eS	05 26 44C 05 26 48 05 29 07 05 32 29		
				P M M M M	z' E N N Z	μ μ μ μ μ	s s s s s
						0.5 1.0 1.1 1.1 1.3	1.0 16 20 15
✓			Ki	Δ=4100 km=37° iP i iPcP eS	05 25 39 05 25 48 05 28 43 05 30 42		
				P M M M	z' E N Z	μ μ μ μ	s s s s
						0.5 1.4 1.4 2.7	1.0 15 15 15
✓			Sk	Δ=3350 km=30° iP	05 26 09		

Year	Month	Day	Station	Type	Time	μ	s
1956	June	3		i	05 26 15		
(cont.)				Arctic Ocean.			
»	✓	3	Up	iP	13 41 13		
✓			Ki	iP	13 40 40		
✓			Sk	iP	13 41 09		
Bonin Islands.							
»	✓	3	Up	i(P)	18 03 01		
»	✓	3	Up	iPKP	19 12 08		
✓			Ki	PKP ePKP	z' 19 11 52	μ	s
✓			Sk	iPKP	19 12 03	0.3	1.5
Kermadec Islands.							
»	✓	4	Up	iP	02 17 49C		
✓			Ki	P iP	z' 02 16 57	μ	s
						0.1	1.1
				P	z' 02 16 57	μ	s
						0.1	1.0
Near south coast of Kamchatka.							
»	✓	4	Up	iP	02 30 35C		
✓			Ki	P iP	z' 02 29 43	μ	s
						0.2	1.4
				P	z' 02 29 43	μ	s
						0.1	1.3
Near south coast of Kamchatka.							
»	✓	4	Up	i(P) Ki iP	07 18 29 07 17 23		
Aleutian Islands.							
»	✓	4	Up	iP i eS e(ScS) iP'P'	07 20 22 07 20 33 07 29 20 07 30 20 07 48 45		
				P P'P'	z' z'	μ μ	s s
						0.4 0.3	1.0 2.0
				M M M M	E E N Z	3.1 5.6 5.3	18 18 19
✓			Ki	Δ=7550 km=68° iP i eS	07 19 29C 07 19 37 07 27 51		
				P S M M M	z' N E N Z	μ μ μ μ μ	s s s s s
						0.5 0.8 8.4 4.8 10	1.0 10 18 17 18
✓			Sk	Δ~6800 km~61° iP	07 20 01		

Year	Month	Day	Station	Type	Time	μ	s
1956	June	4		i	07 20 10		
(cont.)				Aleutian Islands. Magn.=6.5 (Up, Ki).			
»	✓	4	Up	iPKP i	12 25 42 12 26 04		
✓				PKP M M M	z' E N Z	μ μ μ μ	s s s s
						0.3 1.2 1.6 1.6	1.1 18 18 18
✓			Ki	iPKP i iPKS	12 25 24C 12 25 49 12 29 14		
✓				M M M	E N Z	μ μ μ	s s s
						1.4 1.4 2.4	19 20 20
✓			Sk	iPKP	12 25 38		
Kermadec Islands.							
»	✓	4	Ki	iP	14 47 53		
»	✓	4	Up	iP	17 25 38		
»	✓	4	Up	e(Sg) Ki e Local?	18 56 15 19 01 59		
»	✓	4	Up	iPKP	18 57 07		
Kermadec Islands region.							
»	✓	4	Up	e(P) Ki eP	20 41 56 20 41 54		
»	✓	4	Up	iP iPP	23 55 17 23 56 43		
✓			Ki	ePP	23 56 28		
✓			Sk	eP	23 55 30		
Central Asia.							
»	✓	5	Up	iP	01 51 37		
»	✓	5	Up	iP Ki iP	05 43 27 05 43 22		
Java.							
»	✓	5	Up				
				M M M	E N Z	μ μ μ	s s s
						2.1 1.8 2.6	18 20 17
✓			Ki	ePKP iPKP2 e	06 19 40 06 19 53 06 24 00		
				PKP2 PKP2	Z Z'	μ μ	s s
						0.6 0.1	6 1.6
				M M	E N	1.9 1.7	18 20

1956
June 5 (cont.)

M Pacific Ocean. z 3.2 19
Magn. = 6.2 (Up, Ki).

» 5 Up iP 16 24 33
Ki iP 16 24 00
Aleutian Islands.

» 5 Up eP 18 26 23

» 5 Up iP 19 11 40

✓ Ki P z' 0.3 1.2
Ki iP 19 10 48C

P z' 0.1 1.0
Kamchatka.

» 5 Ki eP 19 29 27

» 5 Up eP 20 28 03
ipP 20 28 15
Ki iP 20 27 10
ipP 20 27 23
Aleutian Islands.
h = 50 km (Up, Ki).

» 6 Ki iP 16 02 08

✓ 6 Ki iP 20 01 22

» 6 Ki iP 21 46 38

» 6 Up iP 22 59 20

» 6 Up i(P) 23 18 35
i(Sg) 23 19 10
✓ Ki e(Sg) 23 17 12
Local?

» 6 Up iP 23 29 11
Sk eP 23 29 30

» 8 Up iP 02 13 07
Ki iP 02 12 54
Sk iP 02 13 04D
Santa Cruz Islands.
Deep (h ~ 300 km).

» 8 Sk iP 02 23 39

» 8 Ki iP 03 32 46

» 8 Up iP 04 15 08C
iPP 04 16 39
e 04 23 47
i 04 25 35

P z' 0.3 1.2
PP E 1.1 4
PP N 0.2 4

1956
June 8 (cont.)

PP z 1.1 4
PP z' 0.9 1.7
M E 3.1 21
M N 8.5 21
M z 3.0 19
 $\Delta = 4550 \text{ km} = 41^\circ$.

✓ Ki iP 04 15 22C
i(PP) 04 16 51
iPP 04 17 02
iSS 04 24 41
eLi 04 28 40
eLgl 04 29 26

P E 0.4 6
P z 0.5 5
P z' 0.2 1.5
PP E 0.7 5
PP N 0.4 5
PP z 0.7 5
(PP) z' 0.2 1.5
M E 1.9 10
M N 1.6 10
M z 1.9 10

Sk $\Delta = 4800 \text{ km} = 43^\circ$
iP 04 15 35C
iPP 04 17 19
 $\Delta = 5000 \text{ km} = 45^\circ$
Afghanistan.
Magn. = 6.4 (Up), 6.0 (Ki).
No clear S. PP is 11 sec earlier on Grenet Z' than on Galitzin at Kiruna.

» 8 Ki ePKP 12 48 21

M E 1.1 24
M N 0.6 24
M z 1.7 26
Solomon Islands.

» 8 Up

✓ Ki M E 2.4 20
M N 1.8 20
M z 3.5 20
iPP 14 13 01
eSP 14 22 38

M E 1.3 21
M N 1.6 25
M z 2.0 21
Argentina-Chile border region. Intermediate depth (h ~ 150 km).

» 8 Up ePKP 21 18 19
iPKP2 21 18 29

✓ Ki PKP2 z' 0.1 1.2
e(PKP) 21 17 52
e 21 18 12
Sk iP 21 18 16
Kermadec Islands.

1956
June 9

Up iP 02 36 14
Ki eP 02 35 02
i 02 35 15
Sk eP 02 35 42
Alaska.

» 9 Up iP 03 17 01
Ki iP 03 16 14
Sea of Okhotsk.

» 9 Up iPP 10 28 08
eSKS 10 33 47
ePS 10 37 42

PP E 0.5 5
PP z 0.9 5
PP z' 1.4 3.0
M E 17 19
M N 10 21
M z 20 19

✓ Ki ePKP 10 27 14
i 10 27 29
e 10 28 10
iPP 10 28 32
e 10 34 19
e(Pa) 10 35 41
ePS 10 38 22
e 10 45 04

PP E 1.0 8
PP N 0.2 8
PP z 1.6 8
M E 11 19
M N 4.8 19
M z 15 19

✓ Sk ePP 10 28 15
Chile. Intermediate depth (h ~ 150 km).
Magn. = 6.9 (Up, Ki).

» 9 Ki e(P) 13 18 11

» 9 Up iP 14 05 28

» 9 Up iP 23 21 31C
iPP 23 23 06
i 23 26 52
iS 23 27 41
iSS 23 30 16

P E 26 10
P N 5.7 10
P z 44 10
P z' 2.4 1.3
PP E 99 10
PP N 21 10
PP z 120 10
PP z' 6.2 1.5
S N 66 15
S z 27 8
M E 680 18

1956
June 9 (cont.)

M N 790 18
M z 480 14
 $\Delta = 4550 \text{ km} = 41^\circ$.

✓ Ki iP 23 21 45C
iPP 23 23 24
iPcS 23 27 31
iS 23 28 03
iSS 23 31 09

P E 22 9
P N 11 9
P z 42 9
P z' 4.0 2.0
PP E 44 9
PP N 30 9
PP z 67 9
PP z' 5.7 2.0
S E 53 13
S N 37 14
M E 210 11
M N 220 15
M z 330 12

Sk $\Delta = 4700 \text{ km} = 42\frac{1}{2}^\circ$
iP 23 21 58C
iPP 23 23 39
 $\Delta = 4900 \text{ km} = 44^\circ$
Afghanistan.
Magn. = 7.7 (Up, Ki).

» 9 Up iP 23 50 15
Ki eP 23 50 28
(Afghanistan).

» 10 Up iP 00 01 19
iPP 00 02 54

P z' 0.1 1.0
PP z' 0.2 1.5

✓ Ki iP 00 01 33
iPP 00 03 15
✓ Sk iP 00 01 47
iPP 00 03 32
Afghanistan.

» 10 Up iP 00 09 59
Ki e(P) 00 10 21

» 10 Up iP 01 09 18
iPP 01 10 50
eSS 01 18 18

P z' 0.2 1.3
PP z' 0.2 1.5
M E 6.6 17
M N 7.8 17
M z 9.3 22

✓ Ki iP 01 09 32
iPP 01 11 11
eLgl 01 23 54
e(Lg2) 01 24 30

1956
June 10
(cont.)

	P	Z'	μ	s
	M	E	0.1	1.5
	M	N	3.8	13
	M	Z	2.0	11
✓ Sk	iP		3.2	13
	iPP		01	09 45
			01	11 23
Afghanistan. Magn.=5.9 (Up, Ki).				
»✓10	Up	iP	03	34 45
»✓10	Up	e(P)	03	40 58
		iPP	03	42 14
		eSS	03	49 53
	M	E	μ	s
	M	N	1.3	20
	M	Z	1.9	21
✓ Ki	eP		1.7	20
	iPP		03	41 09
	eLg1		03	42 41
	eLg2		03	55 27
			03	56 24
	M	E	μ	s
	M	N	0.9	12
	M	Z	0.6	9
✓ Sk	iP		0.5	11
	iPP		03	41 14
			03	42 54
Afghanistan.				
»10	Ki	eP	04	35 27
Celebes.				
»✓10	Up	iPP	06	38 58
	Sk	iP	06	37 53
		iPP	06	39 35
Afghanistan.				
»✓10	Ki	iP	10	42 47
		iPP	10	44 24
✓ Sk	iP		10	43 07
Afghanistan.				
»✓10	Ki	eP	12	50 09
»10	Up			
	M	N	μ	s
✓ Ki	iP		0.6	16
			14	09 21
	M	E	μ	s
	M	N	1.0	14
	M	Z	0.4	12
			1.2	15
Iceland.				
»✓10	Up	iP	23	51 17
	Ki	iP	23	51 32
		iPP	23	53 16
✓ Sk	iP		23	51 46
		ePP	23	53 24
Afghanistan.				

1956

June 11

	P	Z'	μ	s
Up	iP		01	16 59
	iS		01	21 35
	P	Z'	μ	s
	M	E	0.1	1.2
	M	N	0.6	12
	M	Z	1.4	16
			1.5	17
✓ Ki	iP		01	18 06
	iPeP		01	20 52
	P	Z'	μ	s
	M	E	0.1	1.2
	M	N	0.6	15
	M	Z	1.4	15
			2.1	14
$\Delta=2950$ km= $26\frac{1}{2}^\circ$.				
✓ Ki	iP		01	17 38C
	iPeP		01	17 38C
Near south coast of Crete. Magn.=5.4 (Up, Ki).				
»11	Up	iP	03	04 54C
		iPP	03	06 19
		eSS	03	13 47
		i	03	15 15
	P	Z'	μ	s
	PP	Z'	0.1	1.3
	M	E	0.1	1.5
	M	N	2.4	18
	M	Z	1.7	16
			3.3	19
✓ Ki	iP		03	05 07
	ePP		03	06 42
	eLi		03	18 20
	eLg1		03	19 54
	e		03	21 25
	P	Z'	μ	s
	M	E	0.1	1.5
	M	N	1.3	12
	M	Z	1.4	16
			0.9	9
✓ Sk	iP		03	05 21
	iPP		03	07 05
Afghanistan. Magn.=5.6 (Up, Ki).				
»✓11	Up	iP	08	27 58
		i	08	28 07
		i	08	30 26
	P	Z'	μ	s
	M	E	0.1	1.1
	M	N	1.9	16
	M	Z	1.5	17
			3.0	21
✓ Ki	eP		08	28 10
	P	Z'	μ	s
	M	E	0.2	2.0
	M	N	3.4	19
	M	Z	1.3	15
			4.1	19
✓ Sk	iP		08	27 37
	i		08	27 40

Sk = Skalstugan

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1956
June 11
(cont.)

	P	Z'	μ	s
	M	E	0.8	27 49
	M	N		
	M	Z		
North Atlantic Ocean. Magn.=5.5 (Up, Ki).				
»✓11	Up	eL	10	50
	M	E	μ	s
	M	N	1.2	18
	M	Z	0.7	16
			2.0	19
Northern Chile-Argentina border.				
»✓11	Up	i(P)	19	30 54
»✓11	Up	iP	20	28 35
		iS	20	32 22
			$\Delta=2350$ km= 21° .	
✓ Ki	eP		20	29 32
Turkey.				
»✓11	Up	iP	23	02 18
		i	23	02 21
		iPP	23	03 55
		i	23	13 12
	M	E	μ	s
	M	N	0.6	11
	M	Z	0.8	17
			1.1	13
✓ Ki	iP		23	01 53
	eLi		23	12 36
	M	E	μ	s
	M	N	1.2	15
	M	Z	1.2	14
			1.5	13
✓ Sk	iP		23	02 29
Southern Siberia.				
»✓12	Up	iP	03	22 36
		i!	03	22 47
		Z'	μ	s
		N	0.2	1.0
			0.7	16
✓ Ki	iP		03	22 33
	i!		03	22 43
	M	E	μ	s
	M	N	1.1	18
	M	Z	1.4	21
			1.3	17
✓ Sk	iP		03	22 53
	i!		03	23 04
	e		03	23 17
Assam.				
»✓12	Up	ePP	09	13 51
	M	E	μ	s
	M	N	1.4	21
	M	Z	0.9	21
			1.8	21
✓ Ki	e		09	29 14
	M	E	μ	s
	M	N	1.3	20
			0.8	18

1956

June 12
(cont.)

	P	Z'	μ	s	
	M	Z	3.0	22	
Eastern Pacific Ocean.					
»✓12	Up	i(P)	13	29 05	
		Seismic?			
»✓12	Sk	e(P)	14	21 26	
		e	14	21 59	
		i(Sg)	14	22 09	
Local?					
»✓13	Ki	iP	05	34 48	
»✓13	Up	iPP	12	25 08	
		iSKKS	12	31 34	
		PP	μ	s	
		M	E	0.1	1.5
		M	N	1.5	23
		M	Z	2.3	25
				2.8	26
✓ Ki	iP		12	20 48	
	iSKKS		12	31 17	
	iS		12	31 57	
	P	Z'	μ	s	
	S	E	0.1	1.5	
	M	E	0.7	7	
	M	N	1.8	17	
	M	Z	1.6	21	
			2.4	18	
✓ Sk	i(P)		12	21 13	
Near coast of Celebes. Intermediate depth (h~200 km). Magn.=5.9 (Up, Ki).					
»✓13	Ki	i(PP)	17	29 21	
(Near coast of New Guinea).					
»✓13	Ki	iP	21	18 28	
»✓13	Up	iP	23	32 41	
»✓14	Up	eP	06	22 51	
	Ki	iP	06	22 02	
✓ Sk	iP		06	23 41	
			06	23 52	
»✓14	Up	iP	12	23 22C	
		P	μ	s	
			0.1	0.7	
✓ Sk	iP		12	23 11C	
Kurile Islands.					
»✓14	Up	iPKP	17	14 08	
		i	17	14 13	
		PKP	μ	s	
			0.1	1.0	
South Pacific Ocean.					
»✓15	Up	iP	00	53 22	
	Ki	eP	00	52 52	

1956			
June 15	Up	iP	04 56 14
» 15	Up	i(P)	08 49 33
» 15	Up	iP	14 04 03
» 15	Ki	iP	14 03 12
Kurile Islands.			
» 15	Up	iPKP	15 55 00
		ipPKP	15 55 45
			μ s
			0.2 1.0
» 15	Ki	PKP z'	15 54 47
		ePKP	
South of Tonga Islands.			
Intermediate depth (h ~ 200 km).			
» 16	Up	iP	00 35 35
» 16	Up	i(P)	00 52 55
» 16	Ki	iP	05 02 11
» 16	Ki	iP	05 45 11
» 16	Sk	iP	05 45 48
» 16	Up	iP	06 31 15
		ipP	06 31 25
		eS	06 41 00
			μ s
			0.2 1.5
			0.4 1.5
			2.5 19
			2.5 23
			3.3 13
» 16	Ki	$\Delta = 8550 \text{ km} = 77^\circ$	06 30 45
		iP	06 30 56
		ipP	06 40 02
		eS	
			μ s
			0.1 1.3
			0.5 1.5
			0.9 9
			2.5 21
			1.6 17
			4.3 19
» 16	Sk	$\Delta = 7950 \text{ km} = 71\frac{1}{2}^\circ$	06 31 15
		iP	06 31 27
		ipP	
Ryukyu Islands.			
h = 45 km (Up, Ki, Sk).			
Magn. = 5.9 (Up, Ki).			
» 16	Sk	eP	17 57 12
» 16	Up	i(PKP2)	18 32 36
» 16	Ki	ePKP	18 31 56
Kermadec Islands.			
» 16	Up	ePKP	18 52 00
» 16	Sk	ePKP	18 51 49

1956			
June 16	Up	iPKP	19 55 37
			μ s
			0.1 1.2
» 16	Ki	PKP z'	19 55 25
		iPKP	
South of Tonga Islands.			
» 16	Up	iP	23 46 49
» 17	Up	eP	01 21 45
» 17	Up	iPKP	03 21 00
		i	03 21 07
		ipPKP	03 21 58
			μ s
			0.3 1.0
» 17	Sk	PKP z'	03 20 54
		iPKP	03 20 56
		i	03 24 14
		iSKP	
Kermadec Islands.			
Intermediate depth (h ~ 200 km).			
» 17	Ki	e(P)	06 46 40
» 17	Ki	iP	13 27 47
» 17	Ki	e(P)	13 34 14
» 17	Sk	iP	13 57 59
» 17	Sk	i(P)	14 04 26
» 18	Up	iP	04 41 31
» 18	Up	eP	04 47 35
» 18	Up	eP	07 36 06
» 18	Up	iPn	22 49 24
		iSn	22 50 51
		i	22 51 18
		iSg	22 51 52
			$\Delta = 900 \text{ km} = 8.1^\circ$
» 18	Ki	iPn	22 48 24
		iSn	22 49 06
		iSg	22 49 24
			μ s
			0.3 0.5
» 18	Sk	Sg z'	22 48 33
		iPg	22 49 24
		iSg	
$\Delta = 400 \text{ km} = 3.6^\circ$			
Off the central coast of Norway.			
67.4°N, 10.9°E.			
Origin time = 22 47 25.			
Felt.			
» 18	Up	iP	23 21 02C
		i	23 21 08
» 19	Up	iP	00 32 13
			μ s
			1.4 21

1956			
June 19	M	N	1.4 22
(cont.)	M	Z	1.8 21
» 19	Ki	iP	00 32 12
			μ s
			1.7 19
			1.1 19
			1.8 20
» 19	Sk	iP	00 32 27
Sumatra.			
» 19	Up	iP	01 15 04
		i	01 15 15
			μ s
			0.1 1.0
» 19	Ki	iP	01 14 12
			μ s
			0.1 1.0
» 19	Sk	eP	01 14 36
» 19	Ki	iP	04 57 31
		eT	05 03 01
		iv	05 03 20
			μ s
			1.9 20
			0.8 19
			2.7 19
» 19	Sk	$\Delta \sim 880 \text{ km} \sim 7.9^\circ$	04 57 44
		iP	04 58 54
		i	05 00 40
		iSg	
$\Delta \sim 1050 \text{ km} \sim 9.5^\circ$			
Epicentre between Jan Mayen and Spitsbergen, near 72½°N, 2°E.			
» 19	Up	iP	05 45 39
» 19	Sk	iP	21 47 49
» 20	Up	iP	02 12 37
» 20	Up	i(P)	05 55 49
		i(Sg)	05 56 59
Local?			
» 20	Up	iP	10 47 45
» 20	Ki	iP	10 48 13C
			μ s
			0.1 1.2
» 20	Sk	iP	10 48 18
		i	10 48 32
		i	10 52 16
Southern Iran.			
» 20	Ki	eP	20 42 19
» 21	Ki	eP	00 20 31
» 21	Up	iPKP	10 46 02
			μ s
			0.2 1.0
» 21	Ki	PKP z'	10 45 44
		iPKP	

1956			
June 21	Sk	iPKP	10 45 54
(cont.)	South of Fiji Islands.		
» 21	Up	iP	12 12 36
» 21	Up		μ s
			0.5 20
			1.1 20
			0.7 20
» 21	Ki	iP	19 53 52
		eS	20 05 16
			μ s
			0.2 10
			0.9 19
			0.6 19
			1.4 19
$\Delta = 10950 \text{ km} = 98\frac{1}{2}^\circ$			
Celebes. Magn. = 5.7 (Up, Ki).			
» 21	Up	iP	20 45 45
» 21	Ki	iSKS	20 56 26
			μ s
			0.3 7
			1.0 19
			0.6 19
			1.8 20
Soembawa.			
» 22	Up	e(P)	01 47 39
		i	01 48 06
» 22	Ki	e(P)	20 47 49
		i(Sg)	20 48 44
» 22	Sk	e	20 51 38
Local?			
» 23	Up	iP	01 09 34
» 23	Up	iP	02 28 17C
		i	02 31 51
		ePa	02 32 12
		iS	02 36 33
		e(S)	02 36 42
		eSS	02 40 43
		eP'P'	02 57 24
			μ s
			4.7 10
			8.2 9
			1.6 1.5
			6.4 10
			5.0 15
			29 21
			24 22
			21 17
$\Delta = 6800 \text{ km} = 61^\circ$			
» 23	Ki	iP	02 27 23C
		i	02 27 32
		iS	02 34 49
		i(S)	02 34 59
		eSeS	02 37 15

1956
June 23 (cont.) ✓

i		02	38	53
P	N	μ 2.3	s 10	
P	Z	6.5	10	
P	Z'	1.1	1.3	
S	E	9.2	9	
S	N	4.0	11	
S	Z	4.0	9	
M	E	34	19	
M	N	32	18	
M	Z	34	18	
$\Delta = 5900 \text{ km} = 53^\circ$.				
Sk	iP	02	28	00C
i		02	28	06
e(PS)		02	36	14
i		02	57	27
i(P'P')		02	57	44
Near east coast of Kamchatka. Magn.=6.8 (Up, Ki). P and S are multiple. Velocity of Pa (Up)=8.00 km/sec.				
» 23	Ki iP	15	06	58
✓	Sk iP	15	07	48
» 23	Ki iP	18	12	29
South of Panama.				
» 24	Up eL	00	30	
	M N	μ 0.9	s 21	
	M Z	1.1	21	
Loyalty Islands region.				
» 24	Ki e(P)	10	51	23
	e(S)	10	52	34
Local?				
» 24	Up iP	17	26	54
	P z'	μ 0.1	s 1.3	
✓	Sk iP	17	26	47C
» 24	Up iPKP	21	17	26
	M E	μ 0.9	s 18	
	M N	1.3	20	
	M Z	1.5	17	
✓	Ki ePKP	21	17	14
	M E	μ 1.6	s 18	
	M N	1.0	18	
	M Z	2.7	20	
Solomon Islands.				
» 24	Up eP	22	56	40
» 25	Up e(P)	03	19	29
» 25	Up iPP	03	23	32
South of Tonga Islands.				

1956
June 25 ✓

Up iP		10	55	48
	M E	μ 0.7	s 19	
	M N	0.5	11	
Ki				
	M E	μ 1.0	s 14	
✓	Sk iP	10	56	31
Ionian Islands.				
» 25	Up iP	12	59	39
✓	ePP	13	01	11
	PP z'	μ 0.3	s 1.8	
	M E	0.6	11	
	M N	1.1	11	
	M Z	0.7	11	
✓	Ki iP	13	00	05
	M E	μ 1.2	s 19	
	M N	1.4	18	
	M Z	1.7	15	
✓	Sk eP	13	00	09
✓	ePP	13	01	56
Eastern Iran.				
» 25	Ki eP	18	10	43
» 25	Up iP	20	18	12
✓	Ki iP	20	19	05
✓	Sk iP	20	18	48C
(Arabia-Red Sea).				
» 25	Up iP	22	44	52
✓	Sk eP	22	45	35
» 26	Up iPKP	00	19	25
✓	Ki iPKP	00	19	12
✓	Sk iPKP	00	19	22
New Hebrides Islands.				
» 26	Ki e(P)	01	04	02
✓	Sk eP	01	04	04
» 26	Ki eP	01	56	44
Algeria-Tunis border region.				
» 26	Up iP	06	32	21
	P z'	μ 0.1	s 1.0	
✓	Ki eP	06	33	37
	M E	μ 0.4	s 14	
	M N	0.2	12	
	M Z	0.3	10	
✓	Sk iP	06	33	05
Greece.				
» 27	Up iP	19	09	25D
	P z'	μ 0.2	s 1.2	

1956
June 27 (cont.) ✓

M E	0.8	13		
M N	0.8	15		
M Z	1.2	14		
✓	Ki iP	19	09	02
	P z'	μ 0.1	s 1.5	
	M E	1.0	13	
	M N	0.5	12	
	M Z	1.3	13	
✓	Sk iP	19	09	30
Formosa.				
» 27	Up iP	23	34	48
	M E	μ 1.0	s 15	
	M N	0.5	15	
✓	Ki eP	23	35	53
✓	Sk eP	23	35	25
Aegean Sea.				
» 28	Ki eL	04	55	
	M E	μ 0.4	s 21	
	M N	0.8	21	
	M Z	1.4	21	
Fiji Islands.				
» 28	Sk iP	05	43	18C
» 28	Sk eP	08	39	49
» 28	Up			
	M E	μ 2.3	s 12	
	M N	1.4	10	
	M Z	2.0	10	
✓	Ki iP	17	47	48C
	eS	17	52	09
	ePcS	17	55	11
	P z'	μ 0.1	s 1.5	
	M E	1.6	11	
	M N	0.7	11	
	M Z	1.2	11	
✓	Sk eP	17	47	05
$\Delta = 2650 \text{ km} = 24^\circ$. Yugoslavia. No clear P at Uppsala (shadow-zone effect!).				
» 28	Up iP	22	39	40
✓	Ki iP	22	38	49
Kurile Islands.				
» 28	Up iP	23	09	52
	i	23	09	59
	iS	23	18	56
	P N	μ 0.4	s 4	
	P Z	0.7	4	
	P Z'	0.5	1.5	

1956
June 28 (cont.) ✓

S E	0.8	8		
S N	4.0	10		
M E	5.6	18		
M N	8.8	22		
M Z	12	18		
$\Delta = 7650 \text{ km} = 69^\circ$.				
✓	Ki iP	23	09	07
	i	23	09	12
	iPa	23	12	59
	iS	23	17	31
	P N	μ 0.5	s 6	
	P Z	0.7	5	
	P Z'	0.2	1.7	
	S N	2.3	10	
	S Z	1.7	10	
	M E	10	16	
	M N	8.6	17	
	M Z	28	22	
$\Delta = 6900 \text{ km} = 62^\circ$.				
✓	Sk iP	23	09	24
	i	23	09	30
Off coast of Vancouver Island. Magn.=6.3 (Up, Ki). P is multiple. Velocity of Pa (Ki)=8.11 km/sec.				
» 28	Sk iP	23	27	33
Off coast of Vancouver Island.				
» 29	Up iP	02	26	19
✓	i	02	26	32
	P z'	μ 0.1	s 1.0	
✓	Ki iP	02	26	51C
	P z'	μ 0.1	s 1.0	
✓	Sk iP	02	26	51
	i	02	27	05
Iran.				
» 29	Up iP	02	33	44C
	P z'	μ 0.2	s 1.0	
	M E	9.5	19	
	M N	4.7	21	
	M Z	11	18	
✓	Ki iP	02	33	19C
	iPP	02	35	53
	eS	02	42	34
	P z'	μ 0.2	s 1.0	
	PP z'	0.1	1.5	
	S E	0.5	12	
	S N	0.2	11	
	M E	2.8	16	
	M N	2.1	16	
	M Z	4.2	16	
$\Delta \sim 7900 \text{ km} \sim 71^\circ$.				
✓	Sk iP	02	33	47
Off north coast of Formosa. Magn.=6.2 (Up, Ki).				

Up = Uppsala, Ki = Kiruna

1956	
June 29	Up iP 02 39 55
✓	Ki iP 02 39 31
» ✓	29 Up iP 04 21 17
✓	Ki P z' 0.2 1.4
✓	Ki iP 04 20 38 D
	P z' 0.1 1.5
	M E 0.5 16
	M N 0.4 14
✓	Sk iP 04 21 11
	Honshu, Japan.
» ✓	29 Up iP 08 40 21
» ✓	29 Up iP 17 56 04
	P z' 0.2 1.0
	M E 0.6 16
	M N 1.1 23
✓	Ki iP 17 55 45
	i 17 56 03
	eSKS 18 05 52
	P z' 0.1 1.0
	M E 0.8 17
	M N 0.6 20
	M Z 1.1 17
✓	Sk iP 17 56 09
	Near southwest coast of Luzon.
» ✓	30 Up iP 01 54 24
	i 01 54 29
	i(PP) 01 54 33
	iS 01 57 29
	i(SS) 01 57 44
	iLg2 01 59 32
	P N 0.3 2
	P Z 0.3 2
	P z' 0.1 1.0
	(P) z' 0.6 1.0
	S z' 0.2 1.2
	M E 3.1 10
	M N 2.8 10
	M Z 2.5 10
✓	Ki iP 01 55 45
	i 01 55 49
	i! 01 55 57
	eS 02 00 12
	e 02 00 37
	i! 02 01 42
	eLi 02 02 43
	iLg1 02 03 14
	P z' 0.2 1.0
	S N 0.8 12
	M E 5.4 7
	M N 1.5 9

1956	
June 30	M z 2.7 11
(cont.)	✓ Sk $\Delta=2800 \text{ km}=25^\circ$
	eP 01 55 18
	i 01 55 22
	i(S) 01 59 24
	iLg1 02 01 58
	$\Delta=2500 \text{ km}=22\frac{1}{2}^\circ$
	Black Sea, near coast of Rumania.
	Magn.=5.4 (Up, Ki).
	P is multiple.
» ✓	30 Up iP 03 15 44
✓	Ki iP 03 15 51
	eLg1 03 29 03
	iRg 03 32 36
	Tadzhik, USSR.
» ✓	30 Up iP 11 44 02C
	P z' 0.1 1.0
	M N 0.6 18
	M Z 1.0 14
✓	Ki iP 11 44 30C
	i(PP) 11 45 46
	M E 0.6 13
	M N 0.9 13
	M Z 1.0 16
✓	Sk eP 11 44 34
	i(PP) 11 45 52
	Iran.
July 2	Up iP 01 09 47
» ✓	2 Up iP 07 32 57
✓	Ki iP 07 32 04
» ✓	2 Ki iP 14 16 03
	M E 0.5 16
	M N 0.4 16
	M Z 0.8 16
✓	Sk iP 14 17 33
	i 14 18 16
» ✓	2 Up eP 14 37 00
» ✓	2 Ki iP 14 40 34
	Flores Sea.
» ✓	2 Up eP 16 11 07
» ✓	2 Up ePKP 17 43 43
✓	Sk iPKP 17 43 38
	Kermadec Islands region.
» ✓	3 Ki eP 00 43 57
	Colombia-Venezuela border.
» ✓	3 Up eL 00 48
	M N 0.6 18

Sk = Skalstugan

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1956	
July 3	M z 0.8 22
(cont.) ✓	Ki eL 00 50
	M E 0.9 19
	M N 0.7 20
	M Z 1.5 20
	South Atlantic Ocean.
» ✓	3 Up iP 10 27 26C
✓	Ki iP 10 27 25
✓	Sk iP 10 27 45
	Nepal.
» ✓	3 Up eSKS 16 10 09
	M E 0.5 18
	M N 0.6 22
	M Z 0.6 17
✓	Ki eP 15 59 17
	iSKS 16 09 45
	P Z 0.3 7
	SKS E 0.5 14
	SKS N 0.2 14
	M E 1.4 19
	M N 0.9 21
	M Z 2.4 20
	$\Delta=9450 \text{ km}=85^\circ$
✓	Sk iP 15 59 08
	Near coast of Guatemala.
	Magn.=5.8 (Ki).
» ✓	3 Up iP 23 33 39C
	ipP 23 34 27
	e 23 35 45
	isPP 23 36 23
	iS 23 39 36
	eSS 23 42 40
	P E 0.4 1.0
	P N 0.1 2
	P Z 1.0 1.0
	P z' 1.1 1.3
	S E 0.3 4
✓	Ki $\Delta=4650 \text{ km}=42^\circ$
	iP 23 33 48C
	i 23 33 57
	ipP 23 34 36
	isP 23 34 59
	iPP 23 35 35
	i(Pa) 23 36 33
	iS 23 39 52
	eSS 23 43 02
	i 23 43 48
	i 23 48 44
	P z' 0.6 1.0
	PP z' 0.2 1.4
	S E 0.7 5
	S N 0.3 8
	$\Delta=4900 \text{ km}=44^\circ$
1956	July 3 Sk iP 23 34 05C
(cont.) ✓	ipP 23 34 52
	iPP 23 35 57
	$\Delta=5200 \text{ km}=47^\circ$
	Hindu Kush.
	h=235 km (Up, Ki, Sk).
	Magn.=6.2 (Up, Ki).
» ✓	4 Up iPKP 00 58 17
	iSKP 01 01 22
	i 01 01 31
	P z' 0.2 1.5
✓	Ki SKP 00 58 05
	iPKP 00 58 13
	iSKP 01 00 54
	iPKS 01 01 35
	PKP z' 0.1 0.5
	SKP Z 0.8 4
	SKP z' 0.3 1.5
✓	Sk iPKP 00 58 14
	iSKP 01 01 13
	Fiji Islands.
	Deep (h~450 km).
» ✓	4 Up iPKP 03 23 03
	M E 1.1 20
	M N 0.9 20
	M Z 1.4 20
✓	Ki iPKP 03 22 51
	M E 1.8 22
	M N 1.0 20
	M Z 2.4 21
✓	Sk iPKP 03 23 02
	iPP 03 24 17
	Solomon Islands.
» ✓	4 Up iPKP 04 01 38
	M E 1.1 20
	M N 0.8 17
	M Z 0.7 19
✓	Ki iPKP 04 01 26
	M E 1.9 21
	M N 1.4 21
	M Z 3.4 21
✓	Sk iPKP 04 01 37D
	iPP 04 02 49
	Solomon Islands.
» ✓	4 Ki iP 07 02 38
» ✓	4 Up ePKP 07 37 58
✓	Ki iPKP 07 37 46
	M E 0.3 18
	M N 0.3 19

1956
July 9
(cont.)

Sk	iP	09	51	01
Aegean Sea. Magn.=5.2 (Up).				
» 9	Up	iP	10	07 41 D
		iPP	10	10 21
		iS	10	17 07
		i!	10	17 26
		e	10	18 04
		μ	s	
P	E	0.8	3	
P	N	0.4	3	
P	Z	2.8	3	
P	Z'	1.6	1.5	
PP	Z	0.7	3	
PP	Z'	1.0	2.3	
S	N	1.2	7	
M	E	5.3	20	
M	N	5.6	20	
M	Z	8.5	21	
Δ ~ 8000 km ~ 72°.				
✓ Ki	iP	10	07	40 D
	iS	10	17	05
	e	10	17	19
	i!	10	17	26
		μ	s	
P	E	1.5	5	
P	N	0.4	5	
P	Z	2.9	5	
S	N	1.4	8	
M	E	15	25	
M	N	8.3	24	
M	Z	12	23	
Δ ~ 8000 km ~ 72°.				
✓ Sk	iP	10	07	23
	iPP	10	09	58
	ePKKP	10	35	19
Δ = 7650 km = 69°.				
Near coast of Haiti. Magn.=6.9 (Up, Ki).				
» 9	Up	eP	10	24 56
✓	Sk	eP	10	25 33
(Aegean Sea).				
» 9	Up	iP	11	36 06
✓	Sk	iP	11	36 49
Aegean Sea.				
» 9	Up	iP	13	25 28
» 9	Up	eP	14	32 22
» 9	Up	e(Sg)	15	23 18
✓	Sk	e(Sg)	15	25 01
Local?				
» 9	Sk	i(P)	16	12 35

1956
July 9

Up	iPn	17	53	15
	iSg	17	53	58
Δ = 290 km = 2.6°.				
✓	Ki	e	17	56 21
	iSg	17	56	54
Δ = 890 km = 8.0°.				
✓	Sk	eSn	17	55 23
	iSg	17	55	59
Δ = 710 km = 6.4°.				
Southwest of Finland, 59.8°N, 22.8°E. Origin time=17 52 31.				
» 9	Up	iP	20	15 39
✓	Ki	iP	20	16 47
✓	Sk	iP	20	16 20
Aegean Sea.				
» 9	Up	iP	20	19 08
	eS	20	23	19
	i	20	23	30
		μ	s	
P	Z'	0.1	1.4	
S	E	0.7	8	
S	N	0.5	7	
M	E	3.1	12	
M	N	1.7	14	
M	Z	1.8	12	
Δ = 2600 km = 23 1/2°.				
✓	Ki	iP	20	20 16
		μ	s	
P	Z'	0.1	1.0	
M	E	5.9	14	
M	N	0.9	13	
M	Z	1.3	13	
✓	Sk	iP	20	19 48
Aegean Sea. Magn.=5.4 (Up, Ki).				
» 9	Ki	eP	20	48 02
Off coast of southern Sumatra.				
» 9	Up	iP	20	53 21
		μ	s	
M	E	1.1	12	
M	N	0.7	13	
✓	Ki	iP	20	54 25
		μ	s	
M	E	2.1	14	
M	N	0.4	11	
M	Z	0.5	11	
✓	Sk	iP	20	53 58
Aegean Sea.				
» 9	Up	iP	21	33 57
	eS	21	38	13
		μ	s	
P	Z'	0.1	1.4	
S	E	0.5	7	
S	N	0.4	7	
M	E	0.6	11	
M	N	1.0	11	

1956
July 9
(cont.)

✓	Ki	iP	21	35 04
		μ	s	
M	E	1.4	15	
M	N	0.5	14	
M	Z	0.7	12	
✓	Sk	iP	21	34 36
Aegean Sea. Magn.=5.2 (Up).				
» 9	Up	iP	23	02 15
✓	Ki	iP	23	01 21
✓	Sk	iP	23	01 48
Aegean Sea.				
» 10	Up	iP	00	33 49
Aegean Sea.				
» 10	Up	iP	02	04 53
	iS	02	09	15
		μ	s	
S	N	0.5	6	
M	E	0.5	14	
M	N	1.0	11	
M	Z	1.3	11	
✓	Ki	iP	02	06 02
		μ	s	
P	Z'	0.1	1.0	
M	E	0.6	13	
M	N	0.5	12	
M	Z	0.6	12	
✓	Sk	iP	02	05 35
Aegean Sea.				
» 10	Up	iP	03	06 39C
	iS	03	10	53
		μ	s	
P	E	0.3	5	
P	N	0.8	6	
P	Z	0.9	5	
P	Z'	0.4	1.7	
S	E	1.1	7	
S	N	1.6	7	
M	E	2.8	11	
M	N	8.4	11	
M	Z	8.8	10	
Δ = 2600 km = 23 1/2°.				
✓	Ki	iP	03	07 48C
	eS	03	12	59
		μ	s	
P	Z'	0.1	1.1	
S	N	0.7	12	
M	E	5.9	14	
M	N	2.5	10	
M	Z	3.8	10	
Δ = 3500 km = 31 1/2°.				
✓	Sk	iP	03	07 19
Aegean Sea. Magn.=5.7 (Up, Ki).				
» 10	Up	iP	09	36 05
✓	Ki	iP	09	35 40

1956
July 10
(cont.)

M	E	0.3	14	
M	N	0.2	14	
M	Z	0.3	15	
» 10	Up	iP	13	39 51
✓	Ki	iP	13	40 29
» 10	Ki	e(PKP)	15	37 53
» 10	Up	iPn	17	14 20
		iSg	17	15 03
✓	Ki	iSg	17	17 59
✓	Sk	eSn	17	16 27
		iSg	17	17 05
Aftershock of earthquake SW of Finland on July 9, 1956, at 17 52 31. Epicentre at 59.8°N, 22.8°E. Origin time=17 13 36.				
» 10	Up	i(P)	20	19 14
» 10	Up	iP	22	16 03
	i	22	17	37
✓	Ki	iP	22	16 11
✓	Sk	iP	22	16 28
Hindu Kush (h ~ 100 km).				
» 11	Up	i(P)	05	30 55
» 11	Up	eP	19	00 39
✓	Ki	eP	19	00 59
		μ	s	
M	E	0.7	19	
M	N	0.4	19	
Sk	eP	19	01	07
Indian Ocean.				
» 12	Ki	eP	00	28 35
Indian Ocean.				
» 12	Up	iP	02	58 13
Aleutian Islands.				
» 12	Ki	iP	06	24 08
		μ	s	
M	E	0.6	15	
M	N	0.2	14	
Aegean Sea.				
» 12	Up	iP	15	11 52
	i	15	13	39
	iPP	15	14	15
	e(Pa)	15	15	50
	iS	15	20	22
	iSeS	15	21	40
		μ	s	
P	E	0.2	2	
P	Z	0.8	2	
P	Z'	0.6	1.0	
S	E	0.3	4	
S	N	0.2	4	

1956 July 12 (cont.)				
M	E	1.7	25	
M	N	1.1	15	
M	Z	2.2	25	
△=7050 km=63½°				
✓ Ki	iP	15	11	47
	iS	15	20	13
		μ	s	
P	E	0.4	5	
P	Z	0.4	5	
P	Z'	0.6	1.2	
S	E	0.8	10	
S	N	0.5	10	
M	E	1.7	15	
M	N	1.0	13	
M	Z	2.4	15	
△=7000 km=63°				
✓ Sk	iP	15	12	08
	iPcP	15	12	33
Burma. Magn.=6.3 (Up, Ki).				
» 12	Up			
		μ	s	
M	E	1.4	21	
M	N	2.0	20	
M	Z	3.1	20	
✓ Ki	e	17	21	58
	e	17	30	50
		μ	s	
M	E	2.3	22	
M	N	0.8	19	
M	Z	3.8	23	
South Pacific Ocean.				
» 13	Up	e(PP)	13	55 06
Northern Chile.				
» 13	Up	iP	14	16 43
✓ Ki	iP		14	16 24
✓ Sk	iP		14	16 49
» 13	Ki	iP	16	58 30
» 14	Up	iP	00	22 18
		iPP	00	23 57
			μ	s
✓ Ki	PP	Z'	0.1	1.2
	iP		00	22 27
	i		00	22 59
	iPP		00	24 05
✓ Sk	eP		00	22 43
	iPP		00	24 35
Hindu Kush.				
» 14	Ki	eP	00	47 45
» 14	Ki	iP	03	40 42
✓ Sk	iP		03	41 12
Ryukyu Islands.				
» 14	Sk	eP	03	51 12
Mexico.				

1956 July 14				
✓ Up	eP		12	35 57
✓ Ki	eP		12	36 40
✓ Sk	eP		12	36 38
» 14	Up	eP	12	41 14
✓ Ki	iP		12	42 22
✓ Sk	eP		12	42 41
	i		12	43 32
	i		12	47 52
» 14	Sk	iP	12	52 33
» 14	Ki	iP	13	46 40
» 14	Up	iP	15	47 53
» 14	Up	iP	19	05 49
	iS		19	09 31
	e		19	11 32
		μ	s	
M	E	1.0	16	
M	N	1.0	18	
M	Z	1.4	16	
✓ Ki	eP		19	06 57
	e		19	12 07
		μ	s	
M	E	1.3	12	
M	N	0.5	13	
M	Z	0.7	13	
✓ Sk	iP		19	06 34
	i		19	11 27
Turkey.				
» 14	Up	iP	22	17 51
		μ	s	
P	Z'	0.1	1.0	
✓ Ki	iP		22	17 31
✓ Sk	iP		22	17 56
Off north coast of Luzon, Philippine Islands.				
» 15	Up	iP	13	03 40
	iS		13	13 01
		μ	s	
P	Z'	0.1	0.9	
S	E	0.5	3	
S	N	0.7	3	
✓ Ki	e		13	11 25
	iS		13	12 00
		μ	s	
S	E	0.3	8	
S	N	0.7	8	
✓ Sk	iP		13	03 38
	eS		13	12 58
Bonin Islands region. Deep (h~500 km).				
» 15	Up	iP	18	50 28
		μ	s	
P	Z'	0.1	1.5	
✓ Sk	iP		18	50 21
Off coast of northern Honshu, Japan.				

1956 July 16				
Up	iP		00	27 19
» 16	Up	iP	05	25 32
✓ Ki	iP		05	26 07
	eScS		05	36 14
		μ	s	
M	E	0.2	15	
M	N	0.4	15	
M	Z	0.3	15	
Iran.				
» 16	Up	iP	09	34 55
✓ Ki	iP		09	34 00
Near east coast of Kamchatka.				
» 16	Up	iP	13	43 14
	i		13	44 05
» 16	Up	iP	15	17 45
	i		15	17 48
	i		15	17 54
	i		15	19 39
	iPP		15	20 07
	iPa		15	21 53
	iS		15	26 24
	iScS		15	27 45
	iSa		15	33 45
		μ	s	
P	E	0.6	3	
P	Z	1.7	3	
P	Z'	0.6	1.1	
PP	Z'	0.3	1.2	
S	E	12	22	
S	N	9.0	20	
M	E	62	15	
M	N	200	22	
M	Z	110	15	
△=7150 km=64½°				
✓ Ki	iP		15	17 39C
	i		15	17 45
	i		15	18 54
	iPa		15	21 41
	iS		15	26 18
	ePS		15	26 36
	iScS		15	27 37
	iSa		15	33 36
		μ	s	
P	E	2.0	7	
P	N	0.3	7	
P	Z	3.3	7	
P	Z'	2.5	2.5	
S	E	23	20	
S	N	12	20	
M	E	120	14	
M	N	160	18	
M	Z	150	14	
△=7100 km=64°				
Burma. Magn.=6.9 (Up, Ki). P is multiple at both stations. Pa is extremely clear on Grenet Z' at Kiruna.				

1956 July 16				
Up	iP		18	04 54
» 16	Up	iP	20	51 00
✓ Ki	iP		20	50 53C
Burma.				
» 16	Up	iP	21	45 04
	i!		21	45 19
	eS		21	54 07
		μ	s	
P	Z'	0.2	1.0	
M	N	0.5	20	
M	Z	0.7	20	
△=7650 km=69°				
✓ Ki	iP		21	44 11
	i!		21	44 27
	eS		21	52 18
	eP'P'		22	13 28
		μ	s	
i!	Z'	0.1	1.4	
M	E	0.7	19	
M	N	0.5	19	
M	Z	1.1	19	
Aleutian Islands.				
» 16	Up	iP	23	58 28
» 17	Up	iP	03	24 23C
	eS		03	28 23
		μ	s	
M	N	0.4	12	
△~2450 km~22°				
✓ Ki	iP		03	25 36
		μ	s	
M	E	0.4	14	
M	N	0.4	14	
Near west coast of Greece.				
» 17	Ki	iP	04	49 01
	i		04	49 15
Marianas Islands.				
» 17	Up	iP	07	47 30D
	ipP		07	49 10
	i		07	50 25
	i		07	51 43
	ipPP		07	53 30
	iSKS		07	57 23
	i!		07	58 06
	iSP		08	00 22
	eSS		08	06 17
		μ	s	
P	Z'	0.1	1.0	
SKS	E	4.4	10	
SKS	N	1.1	6	
M	E	5.3	20	
M	N	4.7	20	
M	Z	5.2	20	
△~11650 km~105°				
✓ Ki	iP		07	47 15
	i		07	47 18

1956 July 17 (cont.)				1956 July 18 (cont.)			
ipP		07 48 59	✓	ipPP		06 38 33	✓
i		07 50 35	✓	iSKS		06 43 54	✓
iPP		07 51 37	✓	e		06 44 49	✓
iSKS		07 57 09	✓	eSP		06 46 50	✓
i!		07 57 49	✓	ipPS		06 47 37	✓
iS		07 58 13	✓	i!		06 48 44	✓
iPKKP		08 03 18	✓	iPKKP		06 49 12	✓
iSS		08 05 36	✓				
		μ s				μ s	
P	z'	0.3 1.2		P	z	1.3 5	
SKS	E	7.2 11		P	z'	0.6 1.1	
SKS	N	1.2 10		PP	E	1.1 3	
S	E	3.0 8		PP	z	3.0 4	
S	N	1.9 11		PP	z'	2.3 1.8	
PKKP	z'	0.2 1.5		PKKP	z'	0.2 1.5	
M	E	9.3 18		M	E	34 24	
M	N	7.5 22		M	N	45 22	
		$\Delta=11350$ km= 102° .		M	z	46 24	
		Banda Sea. h=460 km (Ki).				$\Delta\sim 11650$ km $\sim 105^\circ$.	
		Magn.=6.9 (Up, Ki).		Ki	iP	06 33 12C	✓
» 17 Up	i(P)	12 11 42	✓	i		06 33 19	✓
» 17 Ki	iP	15 26 51	✓	ipP		06 33 50	✓
	Azores region.			iPP		06 37 29	✓
» 17 Ki	eP	17 18 05	✓	ipPP		06 38 04	✓
	Marianas Islands.			iSKS		06 43 38	✓
» 17 Up	e(P)	20 46 16	✓	iS		06 44 37	✓
	i	20 46 36	✓			μ s	
» 17 Ki	i(P)	22 08 55	✓	P	E	0.8 6	
	(P)	μ s		P	z	1.7 5	
		0.1 1.0		P	z'	1.3 1.0	
	Seismic?			PP	E	3.2 8	
» 18 Up	iPKP	00 46 12	✓	PP	z	5.2 8	
	e	00 47 11	✓	PP	z'	0.7 1.5	
		μ s		S	E	17 11	
		1.0 25		S	N	4.7 10	
	M	E		M	E	43 20	
	M	N		M	N	34 21	
	M	z		M	z	46 20	
		1.1 21				$\Delta=11300$ km= $101\frac{1}{2}^\circ$.	
✓ Ki	iPKP	00 46 00	✓			Banda Sea. h=140 km (Ki).	
	ePS	00 56 11	✓			Magn.=7.3 (Up, Ki).	
		μ s		» 18 Up	iP	09 51 26	✓
		0.9 20		i		09 51 39	✓
	M	E		» 18 Ki	eP	09 52 43	✓
	M	N				μ s	
	M	z				0.6 14	
		1.7 23				0.3 14	
	New Britain.					Near west coast of Turkey.	
» 18 Up	iP	04 48 25	✓	» 18 Up	e(P)	11 32 41	✓
» 18 Ki	ePKP	05 37 35	✓	» 18 Up	iP	21 20 31	✓
	Loyalty Islands.			» 19 Up	i(P)	00 32 52	✓
» 18 Up	iP	06 33 27C	✓	» 19 Up	iP	20 01 43	✓
	i	06 36 41	✓	Sk	iP	20 02 23	✓
	iPKP	06 37 24	✓			Ionian Islands.	
	i	06 37 44	✓	» 19 Up	iP	20 53 21	✓
	iPP	06 37 56	✓				

1956 July 19 (cont.)				1956 July 19 (cont.)			
i		20 53 39	✓	M	E	1.6 18	
iS		21 03 34	✓	M	N	1.4 18	
		μ s		M	z	2.5 18	
P	z'	0.4 1.0		✓ Ki	eP	23 50 49	
S	E	0.3 4			e(SKS)	00 01 15	
S	N	0.2 4				μ s	
M	E	1.9 18			(SKS)	E	0.5 10
M	N	1.4 17			(SKS)	N	0.3 11
M	z	2.5 18			M	E	1.9 18
		$\Delta=9200$ km= 83° .			M	N	1.3 17
✓ Ki	iP	20 53 04C	✓		M	z	2.4 17
i		20 53 22	✓	✓ Sk	iP	23 50 38	
iS		21 03 00	✓			Near coast of Costa Rica.	
		μ s				Magn.=6.2 (Up, Ki).	
P	E	0.3 6		» 20 Up	eP	02 08 18	
P	z	0.7 5		» 20 Up	iP	11 58 23	
P	z'	0.1 1.0				μ s	
S	E	1.0 8			M	E	0.9 14
S	N	0.3 8			M	N	0.5 14
M	E	3.8 20			M	z	1.2 14
M	N	1.1 16		✓ Ki	iP	11 57 57	
M	z	6.1 20				μ s	
		$\Delta=8850$ km= $79\frac{1}{2}^\circ$.			M	E	0.7 17
✓ Sk	iP	20 53 27C	✓		M	N	0.4 16
i		20 53 38	✓		M	z	0.7 15
		Near west coast of Luzon, Philippine Islands.		» 20 Up	i(P)	15 11 08	
		Magn.=6.0 (Up, Ki).		» 20 Up	iP	17 46 27	
» 19 Ki	iP	21 12 44	✓	✓ Ki	iP	17 46 12	
	i	21 13 01	✓		eS	17 57 22	
		Possibly aftershock of preceding earthquake.				μ s	
» 19 Up	iP	23 39 16D	✓		M	E	0.8 20
	e(S)	23 50 07	✓		M	N	0.3 17
		μ s			M	z	0.9 20
		0.2 1.2				$\Delta=10500$ km= $94\frac{1}{2}^\circ$.	
	(S)	N				Halmahera region.	
	M	E		» 20 Ki	eP	17 59 30	
	M	N				Bikini (H-bomb).	
	M	z		» 21 Up	iP	00 19 31	✓
✓ Ki	iP	23 39 11	✓		eS	00 28 31	✓
i		23 39 19	✓			μ s	
eSKS		23 49 30	✓			0.6 14	
eS		23 49 46	✓			1.2 18	
		μ s				1.1 20	
		0.4 1.5				1.2 18	
	SKS	E				$\Delta=7550$ km= 68° .	
	M	E		✓ Ki	iP	00 20 11	✓
	M	N			eS	00 29 45	✓
	M	z				μ s	
		2.2 17				0.4 13	
✓ Sk	iP	23 39 00	✓			1.1 16	
i		23 39 07	✓			0.8 20	
		Near coast of Costa Rica.				1.2 18	
		Magn.=6.2 (Up, Ki).		» 19 Up	eP	23 50 54	
» 19 Up	eP	23 50 54	✓		eSKS	00 01 15	
	eSKS	00 01 15	✓			$\Delta=8300$ km= $74\frac{1}{2}^\circ$.	

1956 July 21 (cont.)

Sk iP 00 19 37
Mid-Atlantic Ocean.
Magn.=5.6 (Up, Ki).

» 21 Up iPn 09 45 16
iSg 09 46 00
 $\Delta=300 \text{ km}=2.7^\circ$.

✓ Ki e 09 47 44
iSg 09 48 49
 $\Delta=870 \text{ km}=7.8^\circ$.

✓ Sk eSn 09 47 21
iSg 09 47 58
 $\Delta=700 \text{ km}=6.3^\circ$.

Finland. Epicentre at 60.0°N , 23.0°E .
Origin time=09 44 30. Aftershock
of earthquake on July 9 at 17 52 31.

» 21 Up iPn 09 56 20
iSg 09 57 07

✓ Ki eSg 09 59 53
Sk eSn 09 58 31
iSg 09 59 06

Finland. Same epicentre as for the
preceding shock.
Origin time=09 55 37.

» 21 Up iPn 12 41 43C
iP* 12 41 50
iSg 12 42 42
 $\Delta=390 \text{ km}=3.5^\circ$.

✓ Ki eSn 12 45 23
iSg 12 46 37
 $\Delta=1180 \text{ km}=10.6^\circ$.

✓ Sk eSn 12 44 13
iSg 12 44 58
 $\Delta=840 \text{ km}=7.6^\circ$.

Southern Baltic, 57°N , 21°E . Origin
time=12 40 45. Location and time
determined by combination with the
record at Copenhagen. Well developed
surface waves (period about 2 sec)
on Grenet Z' at Uppsala.

» 21 Up iP 15 00 37D
i 15 01 07
ipP 15 02 43
iS 15 08 18
iScS 15 09 24

P z' μ s
S E 0.1 0.9
0.3 3

$\Delta=7100 \text{ km}=64^\circ$.

✓ Ki iP 14 59 50D
ipP 15 01 47
iS 15 06 50
eScS 15 08 30

P z' μ s
S E 0.1 0.9
0.7 8
S N 0.2 8

$\Delta=6200 \text{ km}=56^\circ$.

1956 July 21 (cont.)

Sk iP 15 00 25D
epP 15 02 26
iS 15 08 10
 $\Delta \sim 7000 \text{ km} \sim 63^\circ$.

Sea of Okhotsk.
h=640 km (Up, Ki, Sk).
Magn.=5.4 (Up, Ki).

» 21 Up iP 15 28 17
Sk iP 15 28 57

» 21 Up iP 15 41 34C
i 15 41 43
iPP 15 43 33
iS 15 48 53
i 15 52 42

P E μ s
P N 1.0 2
P N 0.3 2
P Z 2.5 2
P z' 1.6 1.0
PP E 0.4 3
PP N 0.2 3
PP Z 0.6 3
S E 2.3 8
S N 1.9 8
S Z 2.2 10
M E 18 14
M N 7.4 15
M Z 23 15

$\Delta=5700 \text{ km}=51\frac{1}{2}^\circ$.

✓ Ki iP 15 41 52C
i 15 41 59
iPeP 15 42 58

P E μ s
P N 1.1 10
P N 0.6 10
P Z 2.7 10
P z' 0.9 1.0

$\Delta=6000 \text{ km}=54^\circ$.

✓ Sk iP 15 42 01C
i 15 42 09

Western India.
Magn.=6.7 (Up, Ki).

» 21 Ki iP 21 08 53
Marianas Islands region.

» 22 Up iP 03 34 10
eS 03 38 29

P N μ s
P Z 0.2 5
P z' 0.1 1.0
S E 0.3 7
S N 0.4 8
S Z 0.5 7
M E 0.7 11
M N 1.9 10
M Z 2.2 11

$\Delta=2700 \text{ km}=24\frac{1}{2}^\circ$.

1956 July 22 (cont.)

Ki iP 03 35 20
eS 03 40 27

P z' μ s
S N 0.2 0.9
0.2 8
M E 1.4 13
M N 0.6 13
M z 0.9 12

$\Delta=3450 \text{ km}=31^\circ$.

✓ Sk iP 03 34 51D
Aegean Sea.
Magn.=5.6 (Up, Ki).

» 22 Ki ePP 09 43 46
eSKS 09 49 55

P z' μ s
S N 0.4 12

✓ Sk iP 09 43 15
Northern Chile.

» 23 Up i(P) 02 09 16

» 23 Up iSKP 03 53 14
Ki iSKP 03 52 50
Fiji Islands.
Deep (h ~ 600 km).

» 23 Sk e(P) 06 20 54

» 23 Ki e(P) 07 53 32

» 23 Up iP 07 55 17
Ki iP 07 54 20
iPeP 07 55 28

M E μ s
M N 0.8 13
0.4 12
M z 1.1 19

✓ Sk eP 07 55 00
Near east coast of Kamchatka.

» 23 Up i 08 41 38
i(Sg) 08 41 57
Ki e(Sg) 08 40 37
Local?

» 23 Ki i(P) 12 53 20
i 12 54 23

» 23 Ki iP 19 04 10
Sk iP 19 04 21

» 23 Up i(PP) 19 47 14
i! 19 47 33
ePKS 19 48 44

M E μ s
M N 2.0 19
1.4 16
M z 1.8 17

✓ Ki iP 19 45 12
iPP 19 47 09
ePKS 19 48 29
e 19 49 35

1956 July 23 (cont.)

PKP z' μ s
PP E 0.1 1.5
0.3 8
PP N 0.3 8
PP z 0.6 8
PP z' 0.1 2.0
PKS E 0.4 8
M E 3.8 23
M N 3.0 23
M z 7.4 24

✓ Sk iPKP 19 45 11
iPP 19 47 11

Easter Island region.
Magn.=6.3 (Up, Ki).

» 24 Up iP 02 24 27
Ki iP 02 24 18

P z' μ s
S N 0.5 19

✓ Sk iP 02 24 43
Tibet.

» 24 Up iPKP 07 23 18
Tonga Islands.

» 24 Ki iP 07 28 14
Sk iP 07 27 47

» 24 Ki eP 07 40 02
Sk eP 07 39 38

» 24 Up iP 13 11 26C
i 13 12 12
iPP 13 14 30
iS 13 20 38

P z' μ s
S N 0.7 1.0
0.3 3

✓ Ki iP 13 10 53C
iPP 13 13 38
iS 13 19 37

S N μ s
S N 0.4 7

✓ Sk iP 13 11 23
iPP 13 14 23

South of Honshu, Japan.
Deep (h ~ 500 km).

» 24 Up iP 14 12 29C
Ki eP 14 11 52
Sk iP 14 12 24
Off south coast of Honshu, Japan.

» 24 Ki iP 15 58 16
i 15 58 30
Sk iP 15 59 02

» 24 Up i(P) 18 30 56
i(Sg) 18 31 57
Ki e(Sg) 18 28 51
Sk e(Sg) 18 31 43
Local.

23 36 127.2

1956 July 24			1956 July 26 (cont.)		
Up	eP	19 10 12	Ki	eSKP	18 25 14
	eSKS	19 20 44	Kermadec Islands region.		
	eS	19 21 27	Deep (h ~ 650 km).		
	SKS	μ 0.4 6	26	Up	iP
	M	E 1.9 24			i
	M	N 1.4 25	27	Up	iP
	M	Z 2.1 24	27	Ki	eP
	$\Delta = 10700 \text{ km} = 96\frac{1}{2}^\circ$		27	Up	iP
Ki	iP	19 09 57			P
	eSKS	19 20 25			z'
	eS	19 20 56			μ 0.2 1.0
	P	z' 0.1 1.1	27	Ki	iP
	SKS	E 0.5 7		Sk	iP
	S	N 0.4 13			Kamchatka.
	M	E 2.0 23	27	Up	iP
	M	N 1.3 20			Ki
	M	Z 3.0 22			eP
	$\Delta = 10300 \text{ km} = 92\frac{1}{2}^\circ$		27	Up	iP
Sk	iP	19 10 19			Marianas Islands.
Molucca Passage.			28	Ki	eS
Magn. = 5.8 (Up, Ki).					M
24	Sk	iP			E 1.4 19
		21 47 40			Z 1.5 20
25	Up	i(P)			00 05 55 D
		03 19 35			Sk
26	Ki	iP			Mexico.
	Sk	iP			28
		06 23 48 C			Up
		06 24 40			iP
	Off east coast of Honshu, Japan.				Sk
26	Ki	e(P)			eP
		06 30 23			28
26	Up	iP			Ki
		08 08 38			iP
26	Up	iP			Sk
		10 04 58			eP
	Ki	iP			Marianas Islands.
		10 04 25 D			28
	Nevada, U.S.A.				Up
26	Ki	iP			eP
		10 11 03			Ki
26	Ki	iP			M
		11 10 54			E 1.1 16
26	Up	iP			M
		11 55 28			N 0.3 14
26	Ki	e(P)			Aegean Sea.
		16 29 33			28
26	Up	iPKP			Up
		18 07 41 D			iP
		μ 0.2 0.8			e
	PKP	z' 18 07 30			e
	iPKP	18 10 08			Sk
	iSKP	18 07 34			iP
	Sk	iPKP			i
	Kermadec Islands region.				28
	Deep (h ~ 650 km).				Up
26	Up	iPKP			i(P)
		18 22 41			28
		μ 0.1 1.2			Sk
	PKP	z' 18 22 41			eP
					29
					Up
					ePKP
					Sk
					iPKP
					Kermadec Islands.
					29
					Up
					iP

1956 July 29			1956 July 30 (cont.)		
Up	iP	07 26 29	M	N	43 15
Ki	eS	07 37 21	M	Z	14 11
	M	μ 0.6 15	Sk	iP	09 20 56
	M	N 0.3 15		i	09 21 03
	M	Z 0.6 16	Aegean Sea.		
Sk	iP	07 26 47 C	Magn. = 6.1 (Up, Ki).		
Indian Ocean.			P is multiple.		
29	Up	iP			30
	Sk	eP			Up
		13 41 30			iP
		13 41 10			P
	Guatemala.				z'
29	Up	iP			μ 0.2 1.5
		22 37 48			09 27 46
30	Up	iP			Sk
		00 56 29			iP
30	Up	iP			P
		05 46 23			z'
		05 46 28			μ 0.1 1.5
		05 50 50			09 27 18
		μ 2.8 11			Aegean Sea.
		E 9.2 12			It is a remarkable fact that this shock
		M 4.8 11			occurred 6m 20s after the previous,
		Z 4.1 12			larger shock and that the shock at
	$\Delta = 2800 \text{ km} = 25^\circ$				05.52 came 6m 08s after the one at
		05 47 29			05.46, a mere coincidence?
		05 47 38			30
		05 47 00			Ki
	Aegean Sea. P is multiple.				iP
30	Up	iP			10 44 32
	Ki	iP			24.7
		05 52 31			30
		05 53 37			Up
		05 53 46			eP
		05 53 14			i
	Aegean Sea.				i
30	Up	eP			eS
	Ki	eP			10 45 15
		06 39 48			10 45 23
		06 40 55			10 45 31
	(Aegean Sea).				10 49 40
30	Up	iP			μ 0.1 1.3
		09 20 20			0.1 1.3
		09 20 36			S
		09 20 49			E 1.0 10
		09 21 35			S
		09 24 36			N 2.1 12
		09 24 41			S
		μ 0.8 1.4			Z 1.4 10
		E 4.4 10			M
		N 5.2 12			E 4.9 12
		Z 3.1 10			M
		E 34 12			N 3.6 13
		M 13 11			M
		N 16 12			Z 4.7 11
	$\Delta = 2700 \text{ km} = 24^\circ$				$\Delta = 2800 \text{ km} = 25^\circ$
Ki	iP	09 21 24			32.2
		09 21 29			62.9
		μ 0.2 1.0			63.3
		E 0.2 1.0			30
					Up
					iP
					12 13 20
					30
					Up
					iP
					13 10 19

1956
Aug 14 (cont.)

✓ Ki	M	z	7.0	20
	iPKP		03 08	59C
	ePKS		03 12	44
	e(PKKP)		03 20	22
			μ	s
	PKS	z	0.3	9
	M	E	2.5	16
	M	N	2.6	22
	M	z	5.3	22

South Indian Ocean.
Magn.=6.5 (Up, Ki).

» ✓ 14 Ki iP 05 46 55
Sk iP 05 47 14

» ✓ 14 Up iPKP 12 07 44C
Ki ePKP 12 07 23
Kermadec Islands region.

» ✓ 14 Ki i(P) 12 48 04

» ✓ 14 Ki iP 12 56 04
Near southwest coast of Sumatra.

» ✓ 14 Up iP 20 50 31
i 20 51 17
i 20 51 57

» ✓ 14 Up iPKP 23 52 50
Ki iPKP 23 52 43
iSKP 23 55 19
Sk iSKP 23 55 35
Fiji Islands.
Deep (h~550 km).

» ✓ 15 Up i(P) 05 13 15
i(Sg) 05 13 50
Local?

» 15 Up iP 05 32 54D
i 05 33 27
iPP 05 36 21
iSKS 05 42 48
iS 05 43 04

			μ	s
	P	z	0.8	3
	P	z'	0.7	1.0
	PP	z'	0.2	1.5
	SKS	E	2.3	6
	SKS	N	0.6	5
	S	E	3.1	6
	S	N	2.4	7
	M	E	1.6	24
	M	N	1.5	21
	M	z	1.7	20

△~9700 km~87°.

✓ Ki iP 05 32 53D.
i 05 33 27
iPP 05 36 19.
iSKS 05 42 45
iS 05 43 02.

1956
Aug 15 (cont.)

iSP			05	44	01
ePS			05	44	42
			μ	s	
P	E		0.5	7	
P	Z		1.4	6	
P	Z'		1.2	1.0	
PP	E		0.4	7	
PP	Z'		0.3	1.7	
SKS	E		2.7	8	
S	E		5.3	10	
S	N		5.1	8	
S	Z		0.9	8	
M	E		0.8	17	
M	N		0.6	16	
M	Z		1.1	16	

△~9700 km~87°.

✓ Sk iP 05 33 07D
iPP 05 36 45
Sumatra. Deep (h~300 km).
Magn.=6.4 (Up, Ki).

» ✓ 15 Up i(P) 05 43 05
(P) z' 0.4 1.8
Ki i(P) 05 43 10
 μ s
0.1 1.0
Sk i(P) 05 43 31

» ✓ 15 Up eP 11 04 46
iPP 11 08 45
i 11 09 20
iSKS 11 15 07
iS 11 15 54

			μ	s	
	PP	E	0.7	6	
	PP	Z	1.2	6	
	PP	Z'	0.1	1.2	
	SKS	E	1.2	4	
	S	E	0.8	5	
	M	E	2.6	20	
	M	N	5.3	23	
	M	Z	3.1	18	

✓ Ki iP 11 04 26
i(pP) 11 04 52
iPP 11 08 23
e 11 12 07
iSKS 11 14 51
iS 11 15 24
iPKKP 11 21 26

			μ	s	
	P	Z	0.6	6	
	P	Z'	0.1	1.3	
	PP	E	0.7	6	
	PP	Z	1.0	6	
	PP	Z'	0.2	1.7	
	SKS	E	2.6	5	
	S	E	1.9	7	
	S	N	0.9	7	
	M	E	4.1	22	
	M	N	5.8	22	

1956
Aug 15 (cont.)

✓ Sk	M	z	4.8	20
	△=10450 km=94°.			
	iP		11 04	49
	i(pP)		11 05	11
	iPP		11 08	48
	△=10700 km=96 1/2°.			
	Northern Celebes.			
	h=85 km (Ki, Sk).			
	Magn.=6.3 (Up, Ki).			

» ✓ 15 Up iP 12 06 49C
i 12 06 54
iS 12 10 00
iLg1 12 11 32
i(Lg1) 12 11 49
iLg2 12 12 15
i 12 12 23

			μ	s	
	P	N	1.8	4	
	P	Z	2.8	4	
	P	Z'	1.5	1.5	
	S	E	1.2	8	
	S	N	0.7	3	
	M	E	7.7	13	
	M	N	15	10	
	M	Z	20	10	

△=1850 km=16 1/2°.

✓ Ki iP 12 08 18C
eS 12 12 36
iLg2 12 16 26
eRg 12 17 22
e 12 18 17

			μ	s	
	P	N	0.9	5	
	P	Z	1.0	5	
	P	Z'	0.6	1.0	
	S	E	1.3	14	
	S	N	1.6	13	
	S	Z	1.4	12	
	M	E	8.0	13	
	M	N	17	11	
	M	Z	25	11	

△=2700 km=24 1/2°.

✓ Sk iLg1 12 13 19
Near coast of Yugoslavia.
Magn.=6.0 (Up, Ki).
Lg2 is extremely clear at Uppsala and Kiruna.

» 15 Ki iP 12 34 03

» ✓ 15 Ki iP 13 22 00.

» ✓ 15 Up iP 13 23 12C
eS 13 32 06
ePS 13 32 22
e 13 33 25

			μ	s	
	P	N	0.4	3	
	P	Z	1.0	4	
	P	Z'	0.7	1.5	

1956
Aug 15 (cont.)

S	N	1.1	13	
M	E	12	20	
M	N	12	17	
M	Z	12	18	
△=7550 km=68°.				
✓ Ki iP		13 22	24	
i		13 22	29	
e		13 26	24	
eS		13 30	36	
iScS		13 32	15	
		μ	s	
	P	E	0.3	7
	P	N	0.3	6
	P	Z	1.1	8
	P	Z'	0.4	1.5
	S	N	1.3	17
	M	E	15	16
	M	N	12	19
	M	Z	24	20
△=6650 km=60°.				
✓ Sk iP		13 22	59	
i		13 23	02	
iPcP		13 23	34	
Kurile Islands.				
Magn.=6.3 (Up, Ki).				

» ✓ 15 Ki e(P) 13 57 22

» ✓ 15 Up iP 14 43 24
Ki eP 14 44 37
Sk eP 14 44 02
Off south coast of Greece.

» ✓ 15 Ki iP 15 12 17C

» ✓ 15 Ki iP 16 58 26

» ✓ 15 Ki i(Sg) 17 38 04
Local?

» ✓ 15 Up i(P) 20 42 27

» ✓ 15 Up iP 21 39 55

			μ	s	
	P	Z'	0.1	1.1	
✓ Ki iP			21 39	08C	
			μ	s	
	P	Z'	0.1	1.0	
	M	E	0.8	18	
	M	N	0.6	20	
	M	Z	1.2	20	

✓ Sk iP 21 39 43
Kurile Islands.

» ✓ 15 Up e(P) 22 19 47
i(Sg) 22 20 27
Local?

» ✓ 15 Up iP 22 48 47D

» ✓ 16 Up iP 00 43 49

1956 Aug 16 (cont.)

i		00	43	56
e		00	47	52
eS		00	48	02
	μ		s	
P	Z'	0.1	0.9	
M	E	9.3	16	
M	N	3.6	20	
M	Z	4.8	14	
	$\Delta=2650$ km	$=24^\circ$		
Ki	eP	00	45	02
e		00	49	54
eS		00	50	13
	μ		s	
M	E	9.1	20	
M	N	2.1	17	
M	Z	2.7	13	
	$\Delta=3550$ km	$=32^\circ$		
Sk	iP	00	44	27
i		00	44	35
About 200 km off south coast of Greece. Magn.=5.4 (Up, Ki).				
» 16	Up	iP	02	15 41
	e		02	25 04
	e(Lg2)		02	25 47
	μ		s	
M	E	0.8	13	
M	N	1.1	13	
M	Z	1.8	13	
Ki	iP	02	16	40
e(SS)		02	24	11
	μ		s	
M	E	0.9	18	
M	N	1.2	24	
M	Z	1.1	17	
Sk	eP	02	15	53
Near southwest coast of Portugal.				
» 16	Ki	eP	08	40 30
	Sk	iP	08	39 46
Italy.				
» 16	Sk	iP	15	36 27
» 16	Ki	iP	23	48 29
	Sk	iP	23	48 00
» 17	Up	iP	01	29 07
	e		01	34 19
	μ		s	
M	E	1.5	19	
M	N	1.8	20	
M	Z	2.3	19	
Ki	iP	01	29	12
ePP		01	30	15
iPcP		01	32	18
eS		01	34	08
	μ		s	
PP	E	0.3	8	
S	N	0.3	8	

1956 Aug 17 (cont.)

M	E	1.1	16	
M	N	0.4	14	
M	Z	1.3	16	
	$\Delta=3300$ km	$=29\frac{1}{2}^\circ$		
Sk	eP	01	28	35
i		01	28	43
i		01	31	44
North Atlantic Ocean.				
» 17	Up	iP	02	05 34C
	μ		s	
M	E	1.2	19	
M	N	1.1	20	
M	Z	1.7	20	
Ki	eP	02	05	34
e		02	06	09
	μ		s	
M	E	1.0	17	
M	N	0.6	18	
M	Z	1.3	17	
Sk	iP	02	05	04
North Atlantic Ocean.				
» 17	Up	iP	05	14 21
	i		05	14 42
» 17	Ki	eL	15	08
	μ		s	
M	E	0.9	20	
M	N	0.6	21	
M	Z	1.1	19	
New Britain region.				
» 17	Ki			
	μ		s	
M	E	0.6	15	
M	N	0.4	13	
M	Z	0.5	13	
Sk	iP	18	53	59
» 17	Ki	iP	22	07 14
» 18	Ki	eP	04	43 20
	μ		s	
Sk	iP	04	44	18
	Z'	0.1	1.5	
» 18	Up	iP	06	09 02
	eP		06	09 41
	μ		s	
M	E	0.2	11	
M	N	0.2	11	
» 19	Up	iPKP	05	36 52
	μ		s	
PKP	Z'	0.1	1.0	
M	E	0.6	24	
M	N	0.9	20	
M	Z	1.4	20	
Ki	ePKP	05	36	35

1956 Aug 19 (cont.)

M	E	0.6	20	
M	N	0.9	22	
M	Z	1.2	20	
Fiji Islands region. Intermediate depth (h~150 km).				
» 19	Up	iPKP	09	08 07
	Ki	iPKP	09	08 02
	Sk	iPKP	09	08 12
Tonga Islands. Intermediate depth (h~100 km).				
» 19	Up	iP	11	40 41
	Sk	iP	11	40 31
» 19	Up	e(P)	14	51 07
» 19	Up	e(P)	22	49 29
» 20	Up	iP	01	06 39
	i		01	07 08
	Ki	iP	01	05 50
Northwest Pacific. Deep.				
» 20	Up	iP	05	46 36
	eSKS		05	56 53
	eS		05	57 12
	μ		s	
P	Z'	0.4	2.0	
SKS	N	0.3	4	
S	E	0.6	9	
M	E	1.8	23	
M	N	1.1	20	
M	Z	2.9	23	
	$\Delta=9700$ km	$=87\frac{1}{2}^\circ$		
Ki	iP	05	46	35
eSKS		05	56	57
eS		05	57	07
	μ		s	
P	Z'	0.3	1.8	
S	N	0.5	8	
M	E	1.7	20	
M	N	0.9	21	
M	Z	2.3	22	
	$\Delta=9650$ km	$=87^\circ$		
Sk	iP	05	46	22
Near south coast of Panama. Magn.=6.3 (Up, Ki).				
» 20	Ki	i(Sg)	10	09 46
Local?				
» 20	Up	iP	18	57 03
» 21	Up	eL	00	51
	μ		s	
M	N	0.5	20	
Sk	eL	00	52	
	μ		s	
M	E	0.9	20	

1956 Aug 21 (cont.)

M	N	0.7	22	
M	Z	1.5	20	
» 21	Up	iP	02	37 06 D
» 21	Ki	e(PP)	02	53 45
Tonga Islands region.				
» 21	Up	eP	11	36 47
	μ		s	
M	E	0.8	21	
M	N	1.1	21	
M	Z	1.4	20	
Ki	iP	11	35	56
	μ		s	
M	E	1.0	19	
M	N	0.5	19	
M	Z	2.6	25	
Kurile Islands.				
» 21	Up	e(P)	14	40 47
» 21	Up	i(P)	15	26 35
» 21	Ki	iP	16	28 15C
» 21	Up	iP	18	31 29
» 22	Up	iPKP	11	45 20
	Ki	iPKP	11	45 05
	Sk	iPKP	11	45 17
New Hebrides.				
» 22	Ki	e(P)	13	10 41
» 22	Up	iSn	14	45 29
	iSg		14	46 01
	$\Delta=620$ km	$=5.6^\circ$		
Ki	eSn	14	45	19
i		14	45	44
iSg		14	45	47
	$\Delta=580$ km	$=5.2^\circ$		
Sk	iP(g)	14	43	23 D
i		14	43	29
iSg		14	43	41
	$\Delta=160$ km	$=1.4^\circ$		
Off coast of central Norway, 64.7°N, 10.0°E. Origin time=14 42 55.				
» 22	Up	eP	15	07 21
	Ki	eP	15	08 10
Off east coast of Rhodes.				
» 22	Up	iP	16	12 34
	i		16	12 42
Ki	iP	16	12	21
i		16	12	29
Sk	iP	16	12	49
» 22	Ki	iP	17	26 15
Molucca Passage.				

psala, Ki = Kiruna

Sk = Skanstugan

1956
Aug 26 (cont.)

Sk	iSg	08	13	00
	$\Delta=630\text{ km}=5.7^\circ$			
Sk	iP	08	10	41
	i	08	10	44
	i	08	10	59
	iSg	08	11	14
	$\Delta=280\text{ km}=2.5^\circ$			
Near the Baltic coast of Sweden, 62.2°N, 17.0°E.				
Origin time=08 09 51.				
Felt in the area of Hälsingland-Medelpad.				
»	26 Sk	iP	11	03 51
»	26 Up	iP	13	05 10
»	26 Up	iP	13	41 05
»	26 Up	iP	16	59 08
»	26 Ki	iP	16	58 14
		μ	s	
	P	z'	0.1	1.0
✓	Sk	iP	16	58 48
Aleutian Islands.				
»	26 Ki	i(P)	17	14 44
»	26 Up	eL	22	07
		μ	s	
	M	E	1.2	16
	M	N	0.7	16
	M	Z	1.8	17
✓	Ki	eL	22	07
		μ	s	
	M	E	0.6	15
	M	N	0.6	18
	M	Z	1.1	17
»	27 Up	iP	01	40 19
»	27 Ki	iP	15	36 42
»	27 Up	iP	15	42 45C
		μ	s	
	P	z'	0.1	1.0
✓	Ki	eP	15	43 16
	iPP		15	43 58
	iPeS		15	50 08
✓	Sk	iP	15	43 28
	i		15	43 43
Northern Caucasus.				
»	27 Ki	eP	18	09 40
✓	Sk	eP	18	10 10
Alaska.				
»	28 Up	iP	01	34 21
	iS		01	38 03
	i		01	38 44

1956
Aug 28 (cont.)

		μ	s	
	P	z'	0.2	1.2
	M	N	0.8	17
	M	Z	1.4	16
	$\Delta=2200\text{ km}=20^\circ$			
✓	Ki	iP	01	35 28
	i		01	35 47
	i		01	41 05
		μ	s	
	M	E	1.3	16
	M	N	0.5	15
	M	Z	1.0	15
✓	Sk	iP	01	35 08
	iPP		01	35 37
	i		01	40 28
Near north coast of Turkey.				
»	28 Up	i(P)	08	47 14
»	28 Up	iPKP	10	07 38C
✓	Ki	iPKP	10	07 29
✓	Sk	ePKP	10	07 30
Tonga Islands region.				
Deep (h ~ 600 km).				
»	28 Up	eP	13	47 00
»	28 Up	iP	13	55 00
		μ	s	
	P	z'	0.1	1.2
»	29 Up	iP	03	14 59
		μ	s	
	P	z'	0.1	1.0
	M	E	1.6	24
	M	N	1.3	24
	M	Z	1.8	21
✓	Ki	iP	03	14 04
		μ	s	
	M	E	1.0	21
	M	N	0.6	19
	M	Z	0.7	18
✓	Sk	iP	03	14 41C
Near east coast of Kamchatka.				
»	29 Up	iP	18	07 44D
✓	Ki	eP	18	07 31
✓	Sk	iP	18	07 58
»	29 Sk	i(P)	18	12 59
»	30 Up	iP	04	35 15C
	e(S)		04	44 18
		μ	s	
	P	N	0.4	4
	P	Z	0.7	4
	P	Z'	0.3	1.3
	M	E	2.4	18
	M	N	2.6	22
	M	Z	4.1	21
✓	Ki	iP	04	34 22C

1956
Aug 30 (cont.)

		μ	s	
	eS		04	42 27
	e		04	42 40
		μ	s	
	P	N	0.4	8
	P	Z	0.8	8
	P	Z'	0.3	1.2
	S	E	0.7	13
	M	E	2.5	18
	M	N	2.6	15
	M	Z	4.8	16
	$\Delta=6550\text{ km}=59^\circ$			
✓	Sk	iP	04	34 50C
Aleutian Islands.				
Magn.=6.2 (Up, Ki).				
»	30 Up	iP	05	36 37
	eS		05	46 15
		μ	s	
	S	N	1.2	14
	M	E	1.2	18
	M	N	1.3	18
	M	Z	2.0	19
	$\Delta=8400\text{ km}=75\frac{1}{2}^\circ$			
✓	Ki	iP	05	35 57
	iS		05	45 02
	ePPS		05	45 31
		μ	s	
	S	N	0.6	10
	M	E	1.6	18
	M	N	1.2	18
	M	Z	3.1	18
	$\Delta=7650\text{ km}=69^\circ$			
✓	Sk	iP	05	36 11
Off coast of northern California.				
Magn.=5.8 (Up, Ki).				
»	30 Up	i	06	26 05
		μ	s	
	M	E	1.2	15
	M	Z	1.1	11
✓	Ki	iP	06	12 08
		μ	s	
	M	E	0.4	10
	M	N	0.6	16
	M	Z	0.6	11
✓	Sk	iP	06	12 40
»	30 Ki	eP	10	19 10
»	30 Ki	e(P)	13	15 52
	i		13	17 00
	i(Sg)		13	17 17
Local?				
»	30 Up	iP	18	17 45
✓	Ki	iP	18	17 50
✓	Sk	iP	18	17 12
	i		18	17 20
North Atlantic Ocean.				
»	30 Up	i(P)	20	47 45

1956
Aug 30 (cont.)

		μ	s	
	i		20	48 27
	i(Sg)		20	48 54
Local?				
»	31 Up	iPKP	00	30 26
Solomon Islands.				
Intermediate depth (h ~ 100 km).				
»	31 Up	i(P)	02	41 25
	i(Sg)		02	41 58
Local?				
»	31 Sk	iP	03	00 27
Lesser Antilles.				
»	31 Ki	e(Sg)	08	17 41
Local?				
»	31 Sk	i(P)	10	34 22
»	31 Up	i(Sn)	10	50 21
	iSg		10	50 47
	$\Delta=610\text{ km}=5.5^\circ$			
✓	Ki	eP	10	48 38
	iSg		10	49 12
		μ	s	
	Sg	z'	0.2	0.5
	$\Delta=290\text{ km}=2.6^\circ$			
✓	Sk	eP	10	48 44
	iSg		10	49 23
	i		10	49 27
	$\Delta=330\text{ km}=3.0^\circ$			
Swedish Lapland, 65.5°N, 18.3°E.				
Origin time=10 47 45. Felt.				
»	31 Ki	eP	15	44 22
»	31 Up	iP	18	32 17
»	31 Ki	iP	22	16 20
✓	Sk	iP	22	16 44
Marianas Islands region.				
»	31 Ki	eP	23	19 34
✓	Sk	iP	23	20 02
Marianas Islands region.				
Sep 1 Up				
		μ	s	
	M	N	0.7	20
✓	Ki	iP	00	34 33C
	eSKS		00	45 08
		μ	s	
	SKS	E	0.4	11
	M	E	0.7	17
	M	N	0.5	16
	M	Z	1.2	18
✓	Sk	iP	00	34 57
Marianas Islands region.				
»	1 Up	i(P)	04	21 22

1956
Sep ✓ 1 Ki iP 08 19 21
» ✓ 1 Up iP 16 04 48C
Ki M N 0.9 20
Sk iP 16 05 16C
» ✓ 1 Up iP 18 07 29
Ki iP 18 06 35D
Sk iP 18 07 05
Alaska.
» ✓ 1 Ki i(P) 20 51 31
» 2 Ki iP 14 13 08
i 14 14 11
i(P) 14 19 23
Two shocks?
» ✓ 3 Up eP 15 08 45
Ki iP 15 08 26
South of Formosa.
» ✓ 3 Up iP 18 46 09C
Ki P z' 0.1 1.0
Sk iP 18 47 21
Sk iP 18 46 48
Near south coast of Greece.
» ✓ 4 Up i(P) 01 20 19
» ✓ 4 Up iP 02 15 16D
Ki iP 02 14 51
» ✓ 4 Up e(P) 15 25 39
» ✓ 5 Ki iP 03 23 18
» ✓ 5 Up i(P) 13 02 25
» ✓ 5 Up eL 14 20
M E 0.7 11
M N 0.7 15
M Z 1.3 15
Ki eL 14 25
M E 0.7 10
M N 0.5 11
Yugoslavia-Hungary border region.
» ✓ 5 Ki e(P) 21 04 33
» ✓ 6 Up ePKP 00 17 16
Sk iPKP 00 17 05
South Pacific Ocean.

1956
Sep ✓ 6 Up e(P) 00 56 13
» ✓ 6 Up i(P) 02 27 59
» ✓ 6 Up iP 04 47 30
» ✓ 6 Ki i(P) 08 30 57
» ✓ 6 Ki eP 10 49 57
Aleutian Islands.
» ✓ 6 Up iP 11 52 00 ✓
i 11 52 09
iS 11 56 21 ✓
P z' 0.1 1.0
S E 1.5 10
S N 1.7 10
S Z 1.7 10
M E 9.2 11
M N 5.3 11
M Z 5.1 12
△ = 2700 km = 24 1/2°.
» ✓ Ki iP 11 52 59 ✓
i 11 53 16 ✓
M E 15 15
M N 6.8 13
M Z 9.7 12
Sk iP 11 52 37 ✓
i 11 53 04 ✓
i 11 53 17 ✓
Dodecanese Islands region.
Magn. = 5.6 (Up, Ki).
» ✓ 6 Up eP 13 04 01
i 13 04 13
iPP 13 04 35
eS 13 08 30
PP z' 0.1 1.3
S N 0.5 10
M E 1.5 12
M N 0.7 13
M Z 1.0 12
△ = 2800 km = 25°.
» ✓ Ki eP 13 05 04
M E 2.3 15
M N 1.0 12
M Z 1.4 12
Sk iP 13 04 38
Dodecanese Islands.
» ✓ 6 Up eP 15 18 53
i 15 19 14
» ✓ 6 Up e(P) 15 50 10
» ✓ 6 Up i(P) 15 52 20
i(Sg) 15 52 46

1956
Sep ✓ 6 Sk e(P) 15 52 13
(cont.) e(Sg) 15 54 37
Local?
» ✓ 6 Ki iP 17 40 17
» ✓ 6 Up iP 22 31 26
» ✓ 7 Ki iPKP 04 12 58 ✓
Sk iPKP 04 13 08 ✓
Fiji Islands region.
Intermediate depth (h ~ 250 km).
» ✓ 7 Ki eP 05 58 32
Sk eP 05 58 40
» ✓ 7 Ki eL 15 28
M E 0.7 17
M N 0.4 13
» ✓ 7 Ki iP 15 33 05
» ✓ 7 Ki eP 20 00 11
» ✓ 8 Ki iP 12 45 30
P z' 0.1 1.5
» ✓ 8 Up iP 15 47 18
Ki iP 15 47 28
Sk iP 15 47 44
» ✓ 8 Ki iP 16 13 30
Off south coast of Kamchatka.
» ✓ 8 Up eP 18 11 53 ✓
iPP 18 12 13 ✓
i! 18 15 35
M E 1.1 17
M N 1.2 15
M Z 1.8 17
Ki iP 18 10 30 ✓
iPP 18 10 36 ✓
eT 18 18 58
PP z' 0.1 1.0
M E 3.4 19
M N 2.3 18
M Z 3.2 19
Sk iP 18 11 23 ✓
iPP 18 11 30 ✓
Arctic Ocean, west of Spitsbergen.
» ✓ 9 Up iPKP 01 53 06
Sk ePKP 01 53 00
Kermadec Islands region.
» ✓ 9 Up iPKP 15 38 09
PKP z' 0.1 1.0

1956
Sep ✓ 9 Ki iPKP 15 37 59
(cont.) i 15 40 40
Fiji Islands region.
Deep (h ~ 550 km).
» ✓ 9 Up eP 17 48 35
M E 1.2 18
M N 1.1 20
M Z 1.0 19
Ki iP 17 48 19
eS 17 59 06
P z' 0.1 1.0
M E 1.9 20
M N 1.1 20
M Z 1.6 19
Sk iP 17 48 41
Halmahera.
Intermediate depth (h ~ 150 km).
» ✓ 9 Sk iP 18 01 42
» ✓ 9 Ki iP 18 17 36
i 18 22 12
Sk iP 18 17 57
» 10 Up —
M E 1.2 19
M N 1.1 20
M Z 1.6 18
Ki —
M E 1.1 18
M N 0.6 18
M Z 1.8 20
Sk iPKP 02 27 33
» ✓ 10 Ki iP 07 15 54
» ✓ 10 Up iP 10 55 41
» ✓ 10 Up iP 12 44 14D
eSKS 12 54 13
iS 12 54 28
P z' 0.2 1.0
SKS E 0.2 3
SKS N 0.1 2
S N 0.1 3
Ki iP 12 44 13D
i 12 44 28
iSKS 12 54 12
iS 12 54 26
P z' 0.3 1.0
SKS E 0.4 5
S E 0.3 7
S N 0.5 7

1956
Sep 16 (cont.)

M	z	76	17
$\Delta = 4650 \text{ km} = 42^\circ$			
Ki	iP	08 45	30 ✓
	iPP	08 47	11 ✓
	iS	08 52	02 ✓
	eSS	08 55	06
	i	08 55	21
	iScS	08 55	28
	iSSS	08 56	12
	i	08 57	20
	iLg1	09 00	30
	iLg2	09 01	54
		μ	s
P	E	1.7	6
P	N	0.8	6
P	Z	1.9	6
P	Z'	0.4	1.0
PP	E	2.3	6
PP	N	1.2	6
PP	Z	2.5	5
PP	Z'	0.5	1.5
S	E	4.3	9
S	N	2.5	10
M	E	71	10
M	N	38	11
M	Z	70	10
$\Delta = 4900 \text{ km} = 44^\circ$			
Sk	iP	08 45	34 ✓
	i	08 45	45 ✓
	iPP	08 47	24 ✓
	i	08 47	39
Afghanistan. Magn. = 6.7 (Up, Ki).			
»✓16	Ki	iPKP	13 45 23
Tonga Islands. Intermediate depth (h ~ 200 km).			
»✓16	Up	iP	14 31 18
		μ	s
	M	E	2.4 20
	M	N	1.9 11
	M	Z	3.1 20
✓	Ki	i(P)	14 31 20
	i		14 31 39
	iPP		14 33 16
		μ	s
	M	E	1.6 11
	M	N	1.6 11
	M	Z	2.5 11
✓	Sk	iP	14 31 45
Afghanistan.			
»✓16	Up	iP	18 12 58 ✓
		e(S)	18 17 33 ✓
		μ	s
	(S)	E	0.8 7
	M	E	1.4 11
	M	N	1.0 11
	M	Z	1.0 12
$\Delta \sim 2750 \text{ km} \sim 25^\circ$			

1956
Sep 16 (cont.)

Ki	iP	18 14	05 ✓
		μ	s
	M	E	2.1 14
	M	N	0.9 14
	M	Z	1.8 14
✓	Sk	iP	18 13 38 ✓
Aegean Sea.			
»✓16	Up	iP	20 36 22
Near south coast of Kamchatka.			
»✓17	Sk	iP	05 36 25
»✓17	Up	iP	20 30 59 ✓
✓	Ki	iP	20 30 59 ✓
		i	20 31 16 ✓
✓	Sk	iP	20 31 12 ✓
Near north coast of Sumatra. Inter- mediate depth (h ~ 150 km).			
»✓18	Ki	e(P)	05 45 46
»✓18	Up	iP	09 55 50
✓	Ki	eP	09 56 29
Azores Islands.			
»✓18	Sk	i(P)	10 34 01
»✓18	Up	iP	16 14 18
✓	Ki	eP	16 13 46
Off south coast of Honshu, Japan.			
»✓19	Up	iP	01 22 00
	Ki	iP	01 21 56
	Sk	iP	01 22 16
Burma.			
»✓19	Up	iP	23 58 07C
	iS		00 06 28 ✓
	iS		00 07 22 ✓
		μ	s
	P	Z'	0.6 1.0
	S	N	0.4 4
	M	Z	1.4 16
✓	Ki	iP	23 58 01C
	ipP		23 58 28 ✓
	i'		00 02 30
	iS		00 06 18 ✓
	esS		00 07 08
		μ	s
	P	Z'	0.4 1.0
	S	E	1.8 7
	S	Z'	0.6 2.5
	M	E	2.8 17
	M	N	3.1 21
	M	Z	4.9 19
$\Delta = 7100 \text{ km} = 64^\circ$			
✓	Sk	iP	23 58 23C
	ipP		23 58 49 ✓
	i		23 59 30
		μ	s
	P	E	0.4 1.0
	S	E	1.8 7
	S	Z'	0.6 2.5
	M	E	2.8 17
	M	N	3.1 21
	M	Z	4.9 19
$\Delta = 7050 \text{ km} = 63\frac{1}{2}^\circ$			
✓	Sk	iP	23 58 23C
	ipP		23 58 49 ✓
	i		23 59 30

1956
Sep 19 (cont.)

eS		00 06	58 ✓
i		00 07	11
$\Delta = 7400 \text{ km} = 66\frac{1}{2}^\circ$			
Burma. h = 120 km (Up, Ki, Sk).			
Magn. = 6.3 (Up, Ki).			
»✓20	Ki	i(P)	07 18 13
»✓20	Up	iP	11 22 05
		μ	s
	P	Z'	0.1 1.3
(South Atlantic Ocean).			
»✓20	Up	iP	14 05 23
✓	Ki	iP	14 04 30
		μ	s
	P	Z'	0.1 1.0
✓	Sk	iP	14 04 57
Alaska.			
»✓20	Ki	eP	16 12 16
»✓20	Up	iPg	16 25 28
		iSg	16 25 32
Rock-burst in the Dannemora mines. situated about 40 km NNE of Upp- sala.			
»✓20	Up	iP	20 16 49C
	i		20 16 56
		μ	s
	P	N	0.2 2
	P	Z	0.4 2
	P	Z'	0.6 1.3
	M	E	1.0 15
	M	N	1.5 17
	M	Z	2.8 16
✓	Ki	iP	20 15 57C
	i		20 16 27 ✓
		μ	s
	P	Z'	0.3 1.0
	M	E	1.5 16
	M	N	0.7 15
	M	Z	1.7 15
✓	Sk	iP	20 16 33C
Near south coast of Kamchatka.			
»✓20	Up	iP	22 02 39C
	iS		22 11 17 ✓
		μ	s
	P	E	0.3 2
	P	N	1.0 2
	P	Z	2.3 2
	P	Z'	2.7 1.5
	S	E	1.3 10
	S	N	1.2 9
	M	E	5.2 15
	M	N	6.9 17
	M	Z	9.9 16
✓	Ki	iP	22 01 46C
$\Delta = 7150 \text{ km} = 64\frac{1}{2}^\circ$			

1956
Sep 20 (cont.)

eS		22 09	43 ✓
		μ	s
	P	Z	1.6 4
	P	Z'	1.2 1.4
	S	E	1.0 13
	M	E	7.4 16
	M	N	3.8 19
	M	Z	7.3 17
$\Delta = 6350 \text{ km} = 57^\circ$			
✓	Sk	iP	22 02 22C
	i		22 03 47 ✓
Near south coast of Kamchatka. Magn. = 6.9 (Up, Ki).			
»✓20	Up	iP	22 11 57
✓	Ki	iP	22 11 05
»✓20	Up	i(P)	23 14 29 ✓
		μ	s
	(P)	Z'	0.1 1.5
	M	E	3.2 19
	M	N	4.0 18
	M	Z	6.6 19
✓	Ki	eP	23 14 52 ✓
		μ	s
	M	E	5.1 23
	M	N	5.2 24
	M	Z	5.6 22
✓	Sk	iP	23 14 23 ✓
	i		23 14 37 ✓
Atlantic Ocean.			
»✓21	Up	iP	03 45 25C
✓	Ki	iP	03 44 32
Near south coast of Kamchatka.			
»✓21	Up	iP	05 54 19
✓	Ki	iP	05 53 26
»✓21	Ki	iP	09 00 08
		μ	s
	M	N	0.9 15
»✓21	Up	ePP	09 32 30
Mexico.			
»✓21	Ki	eP	12 45 41
»✓21	Ki	eP	14 28 18
»✓21	Ki	iP	15 11 39
»✓21	Up	iP	18 19 44
		i	18 20 16
✓	Ki	i(P)	18 18 57
»✓21	Up	i(P)	18 46 18
»✓21	Ki	iPKP	19 29 30 ✓
Argentina. Deep (h ~ 600 km).			

1956	Time	Station	Type	μ	s
Sep 21	23 06 46	Up	iP		
			P	0.1	0.8
		Ki	iP	23 05 59	
		Sk	iP	23 06 35	
Kurile Islands.					
» 22	03 23 57	Up	iP		
	03 24 00		i		
	03 24 39	Sk	iP		
Italy.					
» 22	04 01 25C	Up	iP		
» 22	07 11 35	Up	ePKP		
	07 11 27	Ki	ePKP		
	07 14 01		iSKP		
	07 11 30	Sk	iPKP		
Fiji Islands region. Deep (h ~ 650 km).					
» 22	14 09 54	Up	iP		
	14 10 03	Ki	eP		
			M	0.4	11
			M	0.7	13
			M	0.6	11
	14 10 20	Sk	eP		
Tadzhik, USSR.					
» 22	16 01 49	Up	iP		
	16 03 09		ePP		
	16 10 47		e		
	16 15 23		iLg2		
			P	0.2	1.5
			PP	0.1	1.4
			M	1.9	15
			M	1.6	9
			M	3.3	16
	16 01 58	Ki	iP		
	16 03 34		iPP		
	16 10 41		e		
	16 15 55		eLg1		
			P	0.2	1.4
			PP	0.1	1.2
			M	3.5	11
			M	1.9	7
			M	3.2	10
	16 02 16	Sk	iP		
	16 04 08		i(PP)		
Tadzhik, USSR. Magn. = 5.8 (Up, Ki).					
» 22	18 29 24	Up	iP		
	18 29 36		i(pP)		
			P	0.1	1.0
			M	0.9	17
			M	0.8	17

1956	Time	Station	Type	μ	s
Sep 22	1.1 16	M	z		
(cont.)	18 28 36	Ki	iP		
	18 28 49		i(pP)		
			P	0.1	1.0
			M	1.4	17
			M	0.7	18
			M	1.4	18
	18 29 12D	Sk	iP		
	18 29 25		i(pP)		
Kurile Islands.					
» 22	23 19 19	Up	e(P)		
» 23	02 09 12	Up	iPg		
	02 09 16		iSg		
			Sg	0.2	0.8
Rock-burst in the Dannemora mines, situated about 40 km NNE of Upp- sala.					
» 23	02 54 13	Up	iP		
» 23	03 13 13	Up	iP		
	03 13 26		i(pP)		
	03 12 26	Ki	iP		
			P	0.1	1.0
	03 13 02D	Sk	iP		
Kurile Islands.					
» 23	10 54 17	Up	iP		
» 23	15 51 39	Up	iP		
	15 51 27	Sk	iP		
» 24	00 31 30	Sk	e(P)		
» 24	07 06	Up	eL		
			M	1.0	22
			M	2.2	25
	07 01	Ki	eL		
			M	1.3	20
			M	0.8	20
Samoa Islands.					
» 24	—	Up	—		
			M	1.1	21
			M	1.7	20
	07 21 25	Ki	iPKP		
			M	1.1	20
			M	1.2	24
	07 21 40	Sk	iPKP		
Fiji Islands region.					
» 24	10 28 33	Up	iP		

1956	Time	Station	Type	μ	s
Sep 24	10 30 10	iPP			
(cont.)	10 34 55	iS			
	10 37 31	i			
	10 38 09	eSS			
			P	0.2	2
			P	0.6	3
			P	0.4	1.4
			PP	1.1	4
			PP	0.4	4
			PP	0.9	4
			PP	0.4	1.2
			S	0.4	4
			S	0.6	5
			M	11	20
			M	9.1	11
			M	13	19
			Δ = 4750 km = 43°.		
	10 28 46	Ki	iP		
	10 30 28		iPP		
	10 31 26		i		
	10 38 26		iSS		
	10 43 58		eLg1		
	10 44 52		eLg2		
			P	0.2	1.5
			PP	0.3	1.5
			M	9.7	10
			M	6.8	11
			Δ = 4950 km = 44 1/2°.		
	10 29 01	Sk	iP		
	10 29 33		i		
	10 30 56		iPP		
Afghanistan. Magn. = 6.2 (Up, Ki).					
» 24	14 47 32	Sk	iP		
» 24	18 02 47	Up	iP		
» 25	02 20 39	Up	iPKP		
Kermadec Islands region.					
» 25	16 33 07	Up	eP		
	16 33 38	Sk	iP		
Pakistan-Afghanistan border.					
» 25	18 40 17	Up	iP		
	18 40 02	Sk	iP		
Costa Rica-Panama.					
» 25	20 50 50	Up	iP		
	20 51 32	Sk	iP		
Yugoslavia.					
» 26	00 34 18	Up	eP		
» 26	02 29 28	Up	eP		
» 26	05 16 09	Up	iP		
			P	0.1	1.5

1956	Time	Station	Type	μ	s
Sep 26	05 15 33	Ki	eP		
(cont.)			M	1.7	19
			M	1.0	15
	05 16 05	Sk	iP		
Off south coast of Honshu, Japan.					
» 26	13 11 17D	Up	iP		
	13 11 48	Ki	eP		
	13 11 51	Sk	iP		
» 26	13 57 36C	Up	iP		
	13 58 08		ipP		
			P	0.4	0.8
	13 56 42	Ki	iP		
			P	0.1	0.8
	13 57 16	Sk	iP		
Aleutian Islands. h = 130 km (Up).					
» 27	14 11 13	Ki	e(Sg)		
	14 12 23	Sk	e(Sg)		
Local?					
» 27	14 18 03	Ki	e(Sg)		
	14 18 32	Sk	i(Sg)		
Local?					
» 27	15 38 35	Ki	eP		
	15 37 42	Sk	iP		
» 27	19 25 56	Up	iP		
» 27	19 33 30D	Up	iP		
» 27	23 01 30	Up	e(P)		
» 28	04 57 43	Up	i(P)		
	04 57 27	Ki	iP		
» 28	05 03 56	Ki	eP		
	05 04 29	Sk	iP		
» 28	06 47 31	Ki	iP		
» 28	12 34 55	Ki	iP		
» 28	15 05 48	Up	eP		
			P	0.1	1.3
	15 04 12C	Ki	iP		
	15 04 18		i!		
			P	0.2	1.4
			M	0.8	14
			M	0.5	15
			M	1.2	14
	15 05 03	Sk	iP		
	15 05 08		i!		

1956 Sep	28	i	15 05 30
(cont.)	»	Off west coast of Spitsbergen.	
»	28	Ki e(P)	17 16 15
»	29	Ki eP	04 08 18
		Northern Celebes. Deep (h ~ 300 km).	
»	29	Sk iP	07 16 26
»	29	Up iP	09 15 34 ✓
		i!	09 15 42 ✓
		P z'	0.1 1.0
		i! z'	0.5 1.2
		M E	3.7 19
		M N	3.8 21
		M z	5.5 21
✓		Ki iP	09 15 34 ✓
		i!	09 15 42 ✓
		iS	09 25 30 ✓
		P z'	0.1 1.0
		i! z'	0.4 1.5
		S N	1.4 7
		M E	5.3 19
		M N	5.5 22
		M z	6.7 18
✓		Sk eP	09 15 47 ✓
		i!	09 15 57 ✓
		Nicobar Islands. Magn.=6.3 (Up, Ki).	
»	29	Up iP	15 34 59
✓		Ki iP	15 34 59
»	29	Up iP	21 32 14 ✓
		P z'	0.3 1.0
		M N	2.3 17
✓		Ki iP	21 31 33 ✓
		P z'	0.2 0.9
		M E	3.4 20
		M N	2.2 15
		M z	3.8 16
✓		Sk iP	21 32 07 ✓
		Honshu, Japan. Magn.=6.2 (Up, Ki).	
»	29	Ki iP	22 36 02
		Off north coast of Halmahera.	
»	29	Up iPn	23 03 47
		e°	23 05 47
		iSg	23 06 38
		P z'	0.2 1.2
✓		Ki iPn	23 02 16
		$\Delta=1060 \text{ km}=9.5^\circ$	

1956 Sep	29	iPg	23 02 23
(cont.)	»	i	23 02 35
		iSg	23 03 07
		i	23 03 21
		Pn z'	0.1 0.5
		Pg z'	0.2 1.0
		Sg z'	0.5 1.0
		M N	1.5 10
		M z	2.8 9
		$\Delta=340 \text{ km}=3.1^\circ$	
✓		Sk iPn	23 02 51
		$\Delta=620 \text{ km}=5.6^\circ$	
		Off coast of northern Norway, 69.3°N, 13.1°E. Origin time=23 01 25.	
»	29	Up iP	23 32 22C ✓
		iPP	23 35 06 ✓
		P N	0.4 1.0
		P z	2.0 1.0
		P z'	2.2 1.2
		PP z'	0.3 1.3
		$\Delta=8050 \text{ km}=72\frac{1}{2}^\circ$	
✓		Ki iP	23 31 44C ✓
		i	23 31 53
		iPP	23 34 09 ✓
		P z'	0.9 1.0
		PP z'	0.3 1.2
		M E	3.4 18
		M N	1.9 23
		M z	2.7 20
		$\Delta \sim 7350 \text{ km} \sim 66^\circ$	
✓		Sk iP	23 32 17C ✓
		i	23 32 26 ✓
		Honshu, Japan. Deeper than normal. Magn.=7.0 (Up, Ki).	
»	30	Up iP	04 47 57
»	30	Up iP	10 21 15
		Off south coast of Hokkaido, Japan.	
»	30	Sk i(P)	13 53 23
»	30	Sk i(P)	14 09 35
»	30	Up iP	14 55 01C
✓		Ki iP	14 54 34
✓		Sk iP	14 54 59
		Marianas Islands. Intermediate depth (h ~ 100 km).	
Oct	1	Up i(P)	00 12 56
»	1	Up iP	11 57 55
»	1	Up iP	18 16 35

1956 Oct	1	P	z'	0.1 0.7
(cont.)	»	Ki iP	18 16 31	
		P z'	0.1 1.2	
✓		Sk iP	18 16 17	
		Jamaica.		
»	2	Ki e(P)	02 26 28	
		i(Sg)	02 27 24	
		Local?		
»	2	Ki eP	13 03 13	
»	2	Up iP	15 06 51C	
		i	15 06 59	
		ipP	15 07 09	
		iS	15 15 18	
		P N	0.3 2	
		P z	1.1 3	
		P z'	0.9 1.5	
		S N	0.5 5	
		M E	4.1 25	
		M N	2.8 25	
		M z	3.5 22	
		$\Delta=7100 \text{ km}=64^\circ$		
✓		Ki iP	15 05 58	
		iPcP	15 06 57	
		iS	15 13 36	
		P z'	0.1 1.0	
		M E	3.2 22	
		M N	2.9 24	
		M z	2.6 22	
		$\Delta=6200 \text{ km}=56^\circ$		
✓		Sk iP	15 06 36C	
		iPcP	15 07 01	
		$\Delta=6900 \text{ km}=62^\circ$		
		Near southeast coast of Kamchatka. h ~ 70 km (Up). Magn.=6.3 (Up, Ki).		
»	3	Up iPKP	08 37 05	
		i	08 38 15	
		Northern Chile. Intermediate depth (h ~ 150 km).		
»	3	Ki iPKP	15 12 20	
		Off south coast of South Island, New Zealand.		
»	3	Up iPKP	21 39 07	
✓		Sk iPKP	21 38 39	
		i	21 39 12	
		South of Fiji Islands.		
»	3	Up iP	23 50 07	
✓		Ki iP	23 49 31	
		Sea of Japan. Deep (h ~ 500 km).		
»	4	Up eP	02 42 44	

1956 Oct	4	Up iP	02 55 49C
	»	Ki iP	02 56 59
		Aegean Sea.	
»	4	Up iSg	14 24 59
✓		Ki e	14 27 01
		i(Sg)	14 27 48
✓		Sk eSg	14 26 54
		The Gulf of Finland. Origin time=14 22 55.	
»	4	Up iSg	14 32 46
✓		Ki e(Sg)	14 35 29
✓		Sk eSg	14 34 43
		The Gulf of Finland. Origin time=14 30 43.	
»	4	Up eSn	14 40 56
		eSg	14 41 15
		$\Delta=420 \text{ km}=3.8^\circ$	
✓		Ki eSg	14 43 47
		$\Delta=930 \text{ km}=8.4^\circ$	
✓		Sk eSg	14 43 09
		$\Delta=800 \text{ km}=7.2^\circ$	
		The Gulf of Finland, 59.7°N, 25.0°E. Origin time=14 39 09.	
»	4	Up iP	17 28 16
✓		Ki iP	17 28 41
✓		Sk iP	17 27 57
		Near coast of Oaxaca, Mexico.	
»	4	Up iP	20 14 49
		Off west coast of Luzon.	
»	5	Up iSg	11 07 54
✓		Sk iSg	11 09 50
		The Gulf of Finland. Origin time=11 05 50.	
»	5	Up iP	18 30 35
»	5	Up iPKP	22 02 16D
✓		Ki iPKP	22 02 01
		PKP z'	0.1 0.9
✓		Sk iPKP	22 02 13D
		New Hebrides Islands. Intermediate depth (h ~ 100 km).	
»	5	Ki i(P)	23 56 57
»	6	Ki iP	06 29 17
		P z'	0.1 1.1
		Molucca Passage.	
»	6	Up	
		M N	1.5 17
		M z	1.4 17

1956			
Oct 13 (cont.)	iPP	08 30 27	
	P	μ 0.1	s 1.0
	PP	μ 0.2	s 1.1
✓ Ki	iP	08 28 58 D	
	iPP	08 30 33	
	P	μ 0.2	s 0.8
	PP	μ 0.2	s 1.1
✓ Sk	iP	08 29 15 D	
Afghanistan. Magn.=6.1 (Up, Ki).			
✓ 13	Ki iP	15 22 21	
Kurile Islands.			
✓ 13	Up eL	19 52	
	M	μ 2.5	s 23
	M	μ 3.5	s 22
New Britain.			
✓ 14	Up iP	00 42 22C	
Honshu, Japan.			
✓ 14	Ki iP	10 55 22	
Marianas Islands. Deep (h ~ 400 km).			
✓ 14	Ki i(PP)	11 23 28	
✓ 14	Up iP	21 16 58	
✓	Ki iP	21 16 19C	
	M	μ 1.1	s 18
	M	μ 0.6	s 19
	M	μ 1.1	s 19
Off east coast of Honshu, Japan.			
✓ 15	Ki iPKP	04 08 26	
	PKP	μ 0.1	s 1.3
✓ Sk	iPKP	04 08 39	
	i	04 08 54	
New Zealand.			
15	Ki	—	
	M	μ 0.8	s 13
	M	μ 0.3	s 14
	M	μ 0.4	s 17
✓ Sk	iP	07 40 28C	
Aegean Sea.			
✓ 15	Up iP	07 58 38	
	i(S)	08 09 33	
	P	μ 0.1	s 1.0
	M	μ 1.3	s 20
	M	μ 1.1	s 20
	M	μ 1.4	s 20

1956			
Oct 15 (cont.)	Ki iP	07 58 19	
	i	07 58 32	
	i!	08 08 54	
	P	μ 0.1	s 1.0
	M	μ 1.1	s 20
	M	μ 1.1	s 23
	M	μ 0.9	s 19
✓ Sk	iP	07 58 41 D	
Near east coast of Samar, Philippine Islands. Intermediate depth (h ~ 200 km). Magn.=5.8 (Up, Ki).			
✓ 15	Up iP	11 33 37	
	Ki iP	11 33 37 D	
✓	Sk iP	11 33 53 D	
✓ 15	Up iP	23 14 50	
	i	23 16 37	
✓	Ki iP	23 14 59	
	eLg2	23 29 15	
	eRg	23 32 03	
✓	Sk iP	23 15 16	
Tadzhik, USSR.			
✓ 15	Up iPKP	23 35 55	
✓	Ki iPKP	23 35 36	
	PKP	μ 0.1	s 1.0
✓	Sk iPKP	23 35 51 C	
New Zealand area.			
✓ 16	Up iP	03 13 10	
Philippine Islands.			
✓ 16	Up iP	04 49 57	
✓ 16	Up e(Sg)	09 50 39	
✓ 16	Ki i(Sg)	13 38 21	
✓ 16	Up iP	16 30 21	
✓ 16	Ki e(Sg)	16 57 49	
✓ 16	Up iP	17 39 58 D	
Near east coast of Honshu, Japan.			
✓ 16	Ki i(P)	19 56 20	
✓ 17	Up iP	01 12 10	
✓	Ki iP	01 12 10	
✓ 17	Up iP	01 22 13	
	iSP	01 23 20	
✓	Ki iP	01 22 23	
Afghanistan. Intermediate depth (h ~ 200 km).			

1956			
Oct 17	Up e(P)	02 41 44	
✓ 17	Up iP	03 38 32	
✓ 17	Up e(P)	03 42 32	
✓ 17	Up e(Sg)	08 45 11	
	Local?		
✓ 17	Up e(Sg)	12 34 24	
	Local?		
✓ 17	Ki eL	20 25	
	M	μ 0.8	s 14
✓ 17	Up eP	22 59 47	
✓ 18	Up iP	03 40 28	
✓	Ki iP	03 40 12	
Near north coast of Mindanao.			
✓ 18	Ki e(Sg)	10 57 11	
	Local?		
✓ 18	Up i(PKP)	17 44 25	
✓ 18	Up e(Sg)	18 20 11	
	Local?		
✓ 18	Up i(PKP)	18 24 10	
✓ 19	Up eP	03 35 53	
	i	03 36 44	
✓ 19	Up eP	05 44 06	
✓ 19	Ki i(P)	10 57 52	
	i	11 00 36	
✓ 19	Up iPKP	12 18 50 D	
✓	iSKP	12 21 36	
	i	12 21 57	
	PKP	μ 0.2	s 1.0
	SKP	μ 0.2	s 1.3
✓	Ki iPKP	12 18 31	
	i	12 18 42	
	iSKP	12 21 13	
	PKP	μ 0.2	s 1.4
	SKP	μ 0.6	s 1.3
Fiji Islands. Deep (h ~ 650 km).			
✓ 19	Up iP	14 09 28	
✓ 19	Up eL	15 23	
	M	μ 6.0	s 19
	M	μ 4.9	s 21

1956			
Oct 19 (cont.)	Ki eL	z 7.3	19
	M	μ 15	s 22
	M	μ 3.8	s 20
	M	μ 3.6	s 19
	M	μ 5.8	s 18
South Pacific Ocean.			
✓ 19	Ki e(P)	20 53 04	
✓ 19	Up iP	20 58 27	
	i	20 59 22	
	iS	21 07 00	
	P	μ 0.7	s 1.2
	S	μ 3.9	s 6
	S	μ 2.6	s 6
	M	μ 11	s 17
	M	μ 14	s 20
	M	μ 19	s 21
$\Delta = 7500 \text{ km} = 67^\circ$.			
✓	Ki iP	20 57 34	
	iS	21 05 34	
	iSS	21 09 38	
	P	μ 0.3	s 1.2
	S	μ 8.1	s 11
	S	μ 2.4	s 9
	M	μ 20	s 17
	M	μ 7.6	s 16
	M	μ 25	s 17
$\Delta = 6600 \text{ km} = 59^\circ$.			
Aleutian Islands. Magn.=6.6 (Up, Ki).			
✓ 19	Up iP	21 38 44	
✓	Ki iP	21 37 50	
Aleutian Islands.			
✓ 20	Up iP	03 42 30	
	P	μ 0.1	s 1.0
✓	Ki iP	03 41 37 C	
	P	μ 0.1	s 1.0
Aleutian Islands.			
✓ 20	Up iP	04 36 43	
✓ 20	Up iPKP	06 51 10 D	
	i	06 51 22	
Kermadec Islands region.			
✓ 21	Up i(P)	13 12 02	
✓ 21	Ki iP	22 53 01	
✓ 22	Ki e(Sg)	04 33 01	
	Local?		
✓ 22	Ki eP	07 36 19	
Aleutian Islands.			

1956
Oct 22 Up iP 07 42 24
 » 22 Up i 12 54 22
 M E 3.1 26
 M N 4.2 23
 M Z 3.5 20
 Ki
 M E 6.9 22
 M N 2.8 20
 M Z 6.1 20
 Near southeast coast of New Guinea.
 » 23 Up iP 08 51 25
 P z' 0.1 0.8
 » 23 Up iP 08 53 49
 i 08 54 06
 iP 08 54 14
 iS 09 04 13
 iPS 09 04 36
 i 09 05 36
 P z' 0.3 0.8
 S N 1.2 9
 M E 6.6 20
 M N 5.2 25
 M Z 7.0 20
 Ki iP 08 53 31
 iP 08 53 53
 iPP 08 56 51
 iS 09 03 37
 P z' 0.2 0.9
 PP z' 0.9 2.5
 S N 1.6 12
 M E 9.2 22
 M N 6.2 21
 M Z 11 20
 $\Delta = 9300 \text{ km} = 83\frac{1}{2}^\circ$.
 Mindoro Island, Philippine Islands.
 h=90 km (Up, Ki).
 Magn.=6.2 (Up, Ki).
 » 23 Up iP 10 44 03
 Ki iP 10 43 39
 Off southeast coast of Formosa.
 » 23 Up e(Pg) 11 47 29
 eSg 11 48 18
 Local.
 » 24 Up i(P) 01 16 34
 Ki iP 01 16 06
 Marianas Islands region.
 » 24 Ki iP 01 27 00
 » 24 Up e(P) 05 53 18

1956
Oct 24 Up iP 09 55 38C
 P z' 0.1 0.7
 » 24 Up iP 13 12 06
 P z' 0.1 0.9
 » 24 Up iP 14 54 56
 i 14 55 11
 iPP 14 58 23
 eSKS 15 05 29
 eS 15 05 39
 P z' 0.1 1.2
 PP E 1.3 6
 PP z' 4.1 8
 PP z' 0.3 1.4
 M E 89 23
 M N 32 18
 M Z 130 24
 $\Delta = 9650 \text{ km} = 87^\circ$.
 Ki iP 14 54 49
 i1 14 55 00
 i2 14 55 24
 iPP 14 58 11
 eS 15 05 16
 P E 1.6 7
 P z' 3.6 8
 P z' 0.1 0.9
 i1 z' 0.4 1.7
 i2 z' 1.0 2.2
 PP z' 2.7 7
 S E 5.3 10
 M E 130 19
 M N 52 18
 M Z 140 19
 $\Delta = 9500 \text{ km} = 85\frac{1}{2}^\circ$.
 Near coast of Nicaragua.
 Magn.=7.1 (Up, Ki).
 » 25 Up
 M E 6.8 24
 M N 2.6 18
 M z' 9.5 24
 Ki eP 05 34 09
 M E 9.3 18
 M N 4.8 17
 M z' 11 18
 Near coast of Nicaragua.
 Magn.=6.3 (Up, Ki).
 » 25 Up i(P) 09 26 43
 (P) z' 0.1 0.9
 » 25 Up iP 12 31 48
 P z' 0.1 0.8

1956
Oct 26 Up i(P) 04 45 34
 » 26 Up iP 09 08 45
 Ki iP 09 08 29
 Banda Sea. Intermediate depth (h ~ 200 km).
 » 26 Up iPKP 23 09 31
 iPKS 23 12 53
 ePPS 23 23 27
 PKP z' 0.1 1.0
 M E 7.2 21
 M N 12 22
 M z' 20 22
 $\Delta \sim 14350 \text{ km} \sim 129^\circ$.
 Ki iP 23 09 17
 i 23 09 21
 PKP z' 0.2 1.0
 M E 11 25
 M N 4.7 21
 M z' 13 20
 $\Delta \sim 13550 \text{ km} \sim 122^\circ$.
 New Hebrides Islands.
 Magn.=6.5 (Up, Ki).
 » 27 Up iP 00 54 38D
 P z' 0.1 1.0
 Ki iP 00 54 16
 Kansu Province, China.
 » 27 Up i(P) 05 45 21
 » 27 Ki iP 23 12 44
 e 23 17 49
 e 23 18 05
 » 28 Up iPKP 03 14 17
 Fiji Islands.
 Deep (h ~ 400 km).
 » 28 Up iPKP 03 48 26
 i 03 48 32
 iPP 03 52 16
 i 04 02 51
 iPPS 04 05 24
 PKP z' 1.0 1.0
 PP z' 1.5 4
 M E 11 24
 M N 21 25
 M z' 29 24
 Ki iP 03 48 10
 i 03 49 08
 i 03 53 08
 PKP z' 1.1 2.0
 M E 18 24
 M N 11 22

1956
Oct. 28 M z 17 22
 (cont.) Kermadec Islands.
 Magn.=6.8 (Up, Ki).
 » 28 Up iPKP 05 42 52D
 iPKP2 05 43 13
 Kermadec Islands region.
 » 28 Ki e(P) 06 22 51
 » 28 Up iP 10 57 46
 i 10 58 25
 iPP 11 00 54
 P z' 0.9 1.5
 M E 3.5 18
 M N 9.5 21
 Ki iP 10 57 29
 i 10 57 34
 e 11 08 20
 P z' 0.5 1.4
 M E 8.3 21
 M N 9.0 22
 M z' 14 21
 Luzon, Philippine Islands.
 Magn.=6.4 (Up, Ki).
 » 28 Up eP 13 40 13
 Luzon, Philippine Islands.
 » 28 Up i(P) 18 56 19
 » 29 Up e(P) 07 40 33
 M E 2.8 18
 Ki eP 07 41 26
 M E 3.8 16
 M N 2.4 14
 M z' 3.0 13
 Dodecanese Islands.
 » 29 Ki eP 13 52 08
 Near north coast of Iceland.
 » 29 Ki iP 16 24 39
 M E 1.4 12
 M N 1.9 14
 M z' 2.2 17
 Near north coast of Iceland.
 » 29 Ki i(P) 21 31 55
 » 29 Up iPKP 22 52 48
 i 22 56 49
 Ki ePKP 22 52 31
 i 22 55 43
 Tonga Islands region.
 Intermediate depth (h ~ 200 km).

1956				μ	s
Oct 30	Up	—			
	M	E		1.8	14
	M	N		2.1	17
	M	Z		1.7	16
✓	Ki	iP		00	14 33
	i			00	14 42
	iS			00	17 14
	P	z'		0.2	1.0
	M	E		1.8	12
	M	N		2.2	13
	M	Z		4.3	18
				$\Delta=1650$ km = 15° .	
	Near north coast of Iceland.				
»	✓	30	Up	iP	00 54 35
			Ki	iP	00 54 12
	Off north coast of Panay, Philippine Islands.				
»	✓	30	Ki	i	03 13 45
	Seismic?				
»	✓	30	Up	i	03 18 22
				i(Sg)	03 18 59
	Local?				
»	✓	30	Up	i(P)	10 06 57
»	✓	30	Ki	i(P)	22 57 05
»	✓	31	Ki	iP	01 09 08
»	✓	31	Up	iP	14 11 30D
				iPP	14 13 11
				iS	14 17 37
			P	z'	μ s 0.7 1.3
			PP	E	4.3 12
			PP	Z	4.1 10
			S	E	8.6 12
			S	N	11 11
			M	E	23 15
			M	N	31 14
			M	Z	22 12
			$\Delta=4550$ km = 41° .		
✓	Ki	iP		14	12 05
		iPP		14	13 53
		iS		14	18 47
		i(SS)		14	21 59
		i		14	22 26
		P	z'	μ s 0.8 1.0	
		PP	E	2.2 6	
		PP	N	1.9 6	
		PP	Z	1.3 1.5	
		S	E	5.5 6	
		S	N	9.5 13	
		M	E	7.5 15	
		M	N	3.3 14	

1956				μ	s
Oct 31	M	Z	53	13	
(cont.)			$\Delta=5050$ km = $45\frac{1}{2}^\circ$.		
	Southern Iran.				
	Magn. = 6.7 (Up, Ki).				
»	✓	31	Up	iP	14 30 09
				i	14 32 05
				iS	14 36 22
			P	z'	μ s 0.3 1.0
			$\Delta=4600$ km = $41\frac{1}{2}^\circ$.		
✓	Ki	iP		14	30 43C
		P	z'	μ s 0.4 1.0	
	Southern Iran.				
»	✓	31	Ki	eP	17 40 50
»	✓	31	Up	iP	22 31 40
			P	z'	μ s 0.1 0.7
✓	Ki	iP		22	31 38
		P	z'	μ s 0.1 1.0	
	Northeastern India.				
»	✓	31	Up	iP	23 40 36
			Ki	eP	23 41 07
	Southern Iran.				
Nov 1	Up	iP		06	00 21
		P	z'	μ s 0.2 0.9	
✓	Ki	iP		06	00 54
		i		06	01 13
		P	z'	μ s 0.2 1.0	
	Southern Iran.				
»	✓	1	Ki	i(P)	07 19 18
	Seismic?				
»	✓	1	Up	iP	10 49 38
»	✓	1	Ki	e(P)	14 35 37
»	✓	1	Ki	iP	16 22 27
»	✓	1	Ki	i(P)	17 36 04
»	✓	1	Ki	eP	17 40 33
	Kamchatka.				
»	✓	1	Up	e(Sg)	22 43 25
	Local?				
»	✓	2	Up	e(Sg)	00 47 48
	Local?				
»	✓	2	Up	e(Pg)	01 07 25
				e(Sg)	01 07 45
	Local?				

1956				μ	s
Nov 2	Up	i(P)		14	19 18
»	✓	2	Up	iP	16 09 16D
			i	16	09 21
			iS	16	13 12
		P	N	μ s 0.6 3	
		P	Z	0.8 3	
		P	Z'	0.3 0.6	
		S	N	0.7 4	
		M	E	6.6 17	
		M	N	2.5 9	
		M	Z	2.7 9	
		$\Delta=2350$ km = 21° .			
✓	Ki	iP		16	10 31
		iPP		16	11 09
		P	z'	μ s 0.1 1.3	
		M	E	3.8 12	
		M	N	2.3 12	
		M	Z	3.6 12	
	Greece. Magn. = 5.9 (Up, Ki).				
»	✓	3	Up	iP	02 32 20
»	✓	3	Up	iP	05 35 55C
			Ki	iP	05 35 01
		P	z'	μ s 0.1 0.8	
	Southern Yukon, Canada.				
»	✓	3	Up	iP	10 14 41
			i	10	15 33
		P	z'	μ s 0.2 1.1	
✓	Ki	iP		10	13 48
		P	z'	μ s 0.2 1.0	
	Near south coast of Kamchatka.				
»	✓	3	Up	iPKP	18 20 38
			PKP	z'	μ s 0.1 0.8
			ePKP	18	20 12
			iSKP	18	23 12
	South of Fiji Islands. Deep (h ~ 500 km).				
»	✓	4	Up	iP	00 50 13
»	✓	4	Up	iP	01 27 21
			iPP	01	27 35
			eP	01	28 50
			i	01	34 36
	Rumania. Intermediate depth (h ~ 125 km).				
»	✓	4	Up	iP	05 48 44C
			i	05	49 00
		P	z'	μ s 0.1 0.6	

1956				μ	s
Nov 4	Ki	iP		05	48 08
(cont.)			P	z'	μ s 0.1 0.6
	Near east coast of Honshu, Japan.				
»	✓	4	Up	iPKP	07 25 05
			i	07	25 41
		PKP	z'	μ s 0.1 0.8	
		M	E	2.2 24	
		M	N	5.5 23	
		M	Z	7.3 23	
✓	Ki	iPKP		07	24 47
		i		07	25 16
		iPKS		07	28 31
		PKS	z'	μ s 1.6 2.5	
	Tonga Islands. Magn. = 6.4 (Up).				
»	✓	4	Up	iP	21 50 49D
			Ki	iP	21 49 57D
		P	z'	μ s 0.1 1.0	
	Yukon, Canada.				
»	✓	4	Ki	iP	22 30 29
»	✓	5	Up	i(P)	12 59 05
			Ki	iP	12 58 33
»	✓	5	Up	i(P)	18 26 23C
			iSg	18	26 54
	Local.				
»	✓	5	Ki	eP	19 50 16
	The Alps, in the Italy-Austria border region.				
»	✓	6	Ki	iP	14 26 39
		P	z'	μ s 0.1 1.5	
	Banda Sea.				
»	✓	6	Ki	iP	19 02 50
»	✓	6	Up	iP	23 25 22
	Aleutian Islands.				
»	✓	7	Ki	i(P)	05 56 51
»	✓	7	Up	i(Sg)	12 24 29
			(Sg)	z'	μ s 0.2 0.5
	Local?				
»	✓	7	Up	i(Sg)	13 43 32
			(Sg)	z'	μ s 0.1 0.5
	Local?				

1956				
Nov 12	i		21	04 43
(cont.)	i		21	04 58
			μ	s
	P	z'	0.1	0.9
	M	E	0.8	17
	M	N	0.5	16
	M	z	0.9	14
	$\Delta = 700 \text{ km} = 6\frac{1}{2}^\circ$.			
Sk	iP		20	59 56
	iS		21	01 43
	eT		21	06 39
	$\Delta = 1050 \text{ km} = 9\frac{1}{2}^\circ$.			
	Northeast of Jan Mayen.			
	Origin time = 20 57 36.			
» 12	Up	iP	21	47 17
	Ki	iP	21	47 11
	Near north coast of Java.			
	Deep (h ~ 350 km).			
» 13	Up	iP	03	02 04
		iS	03	04 34
		iT	03	09 39
			μ	s
	M	N	0.9	15
	M	z	1.5	17
	T phase remarkable.			
Ki	iP		03	00 20
	i		03	00 25
	iS		03	01 33
	iT		03	05 19
	i		03	05 53
			μ	s
	P	z'	0.1	0.9
	M	E	0.8	16
	M	N	0.8	19
	M	z	2.4	20
	$\Delta = 700 \text{ km} = 6\frac{1}{2}^\circ$.			
Sk	iP		03	00 58
	i		03	01 03
	iS		03	02 42
	eT		03	07 24
	$\Delta = 1050 \text{ km} = 9\frac{1}{2}^\circ$.			
	Northeast of Jan Mayen.			
	Origin time = 02 58 37.			
	There is a certain remarkable regularity in the origin times of the shocks in this series. Explosions?			
» 13	Up	iP	03	33 06
	Ki	iP	03	33 03
		i	03	33 19
			μ	s
	P	z'	0.1	1.0
Sk	iP		03	33 18
	Java.			
» 13	Ki	ePKP	05	04 53
	(Southern Iran).			
» 13	Ki	ePKP	08	00 05
	Loyalty Islands region.			

1956				
Nov 13	Up	iPKP	10	15 01
		iPP	10	17 41
			μ	s
	M	E	2.0	24
	M	N	1.4	25
	M	z	2.0	24
Ki	ePKP		10	14 55
			μ	s
	M	E	3.0	22
	M	N	1.0	22
	M	z	3.8	22
Sk	iPKP		10	14 59
	Indian Ocean.			
» 13	Up	i(P)	12	48 06
» 13	Ki	i(Sg)	13	30 44
	Seismic?			
» 13	Up	iP	14	51 27C
			μ	s
	P	z'	0.3	1.4
	M	E	1.1	21
	M	N	0.9	25
Ki	iP		14	51 07
			μ	s
	P	z'	0.1	0.9
	M	E	0.7	15
	M	N	0.4	13
Sk	iP		14	51 32
	Near east coast of Luzon.			
» 13	Ki	iPg	15	49 55
		iSg	15	50 21
Sk	eSg		15	52 31
	Local.			
» 14	Up	iP	00	59 04D
		iPP	01	00 45
		i	01	05 07
			μ	s
	P	z'	0.4	0.5
	PP	E	2.1	3
	PP	z	2.2	3
	M	E	7.1	18
	M	N	12	18
	M	z	4.7	17
Ki	iP		00	59 12D
		iPP	01	00 51
		eS	01	05 04
		e	01	05 23
		i(Ss)	01	06 12
			μ	s
	P	z'	0.7	1.0
	PP	E	1.6	9
	PP	z	1.6	4
	PP	z'	0.6	1.2
	M	E	4.5	10
	M	N	3.5	10
	M	z	4.7	11
Sk	iP		00	59 29D

1956				
Nov 14	ipP		01	00 12
(cont.)	iPP		01	01 14
	$\Delta = 4900 \text{ km} = 44^\circ$.			
	Hindu Kush. h = 210 km (Sk).			
	Magn. = 6.5 (Up, Ki).			
» 14	Up	i(P)	01	12 49
	Sk	i(P)	01	11 35C
» 14	Up	i(P)	02	34 40
		i	02	35 33
		i(Sg)	02	35 57
	Local.			
» 14	Up	i(Pg)	18	31 50
		i(Sg)	18	33 20
	Local.			
» 15	Up	i(P)	12	05 38
» 15	Up	iP	20	38 51D
	Ki	iP	20	38 49
» 16	Up	iP	04	59 24D
» 16	Ki	iP	09	02 04C
			μ	s
	P	z'	0.1	1.0
	New Guinea. Intermediate depth			
	(h ~ 150 km).			
» 16	Up	iP	11	56 15
			μ	s
	P	z'	0.1	0.9
	M	E	4.4	17
	M	N	1.8	17
	M	z	3.3	19
Ki	iP		11	55 55
			μ	s
	P	z'	0.2	1.4
	M	E	4.2	21
	M	N	2.1	16
Sk	eP		11	56 02
	Southern Luzon.			
» 16	Up	iP	12	06 22D
			μ	s
	P	z'	0.1	1.0
Ki	iP		12	06 22
			μ	s
	P	z'	0.3	1.2
Sk	iP		12	06 10
	Northwestern Venezuela.			
» 16	Up	eP	14	11 50
	Ki	iP	14	12 28
			μ	s
	P	z'	0.1	0.9
Sk	eP		14	12 27
	Iran.			

1956				
Nov 16	Up	i(P)	18	28 23
» 17	Up	i(P)	01	10 12
» 17	Up	iP	19	26 36
	Ki	iP	19	26 08D
	Sk	eP	19	26 37
	Ryukyu Islands region.			
	Intermediate depth (h ~ 150 km).			
» 17	Up	iP	20	37 50D
		i	20	37 55
			μ	s
	P	z'	0.3	1.0
	M	E	2.6	20
	M	N	5.4	16
	M	z	4.2	20
Ki	iP		20	37 01
			μ	s
	P	z'	0.3	1.3
	M	E	4.1	15
	M	N	2.2	13
	M	z	4.8	15
Sk	iP		20	37 21
	Queen Charlotte Islands region.			
	Magn. = 6.1 (Up, Ki).			
» 18	Up	iP	01	59 38D
			μ	s
	P	z'	0.1	0.6
Ki	iP		01	59 03
Sk	iP		01	59 34
	Off south coast of Honshu, Japan.			
	Intermediate depth (h ~ 280 km).			
» 18	Up	iP	05	27 15
			μ	s
	M	E	4.6	12
	M	N	2.5	14
	M	z	4.1	12
Ki	iP		05	27 12
			μ	s
	P	z'	0.1	1.0
	M	E	2.1	12
	M	N	1.3	12
	M	z	2.4	12
Sk	iP		05	27 36
	Sinkiang, China.			
» 18	Up	iPKP	10	06 30D
	Kermadec Islands region.			
» 18	Up	iP	16	05 55C
	Ki	eP	16	07 19
		i	16	07 24
Sk	iP		16	06 48
	Rumania. Intermediate depth (h ~ 160 km).			
» 18	Up	iPKP	18	36 04D
		i	18	36 25
	Kermadec Islands region.			

1956					
Nov 18	✓ Up	i(Sg)	18	39	03
	✓ Sk	i(P)	18	36	44
		iSg	18	37	19
	Local.				
» 18	✓ Up	iP	19	25	48
» 18	✓ Up	iP	20	36	30C
	✓ Sk	iP	20	37	09
» 18	✓ Up	eP	21	34	26
		M	μ	s	
		M	2.4	17	
		M	1.5	15	
		M	3.4	18	
	✓ Ki	iP	21	33	55
		M	μ	s	
		M	1.0	14	
		M	0.9	16	
		M	3.9	20	
	✓ Sk	iP	21	34	26
	Ryukyu Islands.				
» 18	✓ Up	e(Pg)	22	36	29
		i(Sg)	22	36	57
	Local.				
» 19	✓ Up				
		M	μ	s	
		M	1.4	18	
		M	1.6	20	
		M	1.6	18	
	✓ Ki	eP	12	15	12
		M	μ	s	
		M	1.5	16	
		M	1.3	17	
		M	3.0	17	
	Marianas Islands. Intermediate depth (h ~ 150 km).				
» 19	✓ Ki	eP	15	10	16
» 19	✓ Up	iP	15	17	20
» 19	✓ Up	iP	15	53	57
	✓ Ki	iP	15	53	12
	Off east coast of Hokkaido, Japan.				
» 20	✓ Up	iP	12	12	16
	✓ Ki	iP	12	12	02
		P	μ	s	
		P	0.1	1.2	
	✓ Sk	iP	12	12	23
	Near east coast of Celebes. Intermediate depth (h ~ 200 km).				
» 20	✓ Up	iP	14	49	22
	✓ Ki	iP	14	49	17
	✓ Sk	iP	14	49	38
» 20	✓ Up	i(P)	15	01	32

1956					
Nov 20	Ki	eP	17	19	24
» 20	✓ Up	iP	19	01	13
	✓ Sk	iP	19	01	05D
» 20	✓ Up	iP	23	25	38
		iPP	23	25	57
		i	23	28	43
		iPcS	23	33	29
		M	μ	s	
		M	7.0	15	
		M	5.5	13	
		M	8.3	16	
	✓ Ki	iP	23	26	50
		P	μ	s	
		M	0.1	1.0	
		M	3.8	12	
		M	1.5	11	
		M	1.7	11	
	✓ Sk	iP	23	26	24
	Aegean Sea.				
» 21	✓ Ki	i(P)	05	10	03
		i	05	12	40
» 21	✓ Up	iP	06	32	36
	✓ Ki	iP	06	31	48
	Off west coast of Sakhalin.				
» 21	✓ Up	iPKP	07	32	19
		PKP	μ	s	
		iPKP	0.1	0.8	
	✓ Sk	iPKP	07	32	12C
	Kermadec Islands. Deep (h ~ 300 km).				
» 21	✓ Up	iP	07	44	50C
		P	μ	s	
		M	0.2	0.6	
		M	7.1	18	
		M	9.4	18	
	✓ Ki	iP	07	44	10C
		iPP	07	46	32
		iPS	07	53	13
		iSS	07	57	13
		P	μ	s	
		PP	0.3	1.0	
		M	0.2	1.6	
		M	6.1	16	
		M	2.7	17	
		M	8.0	16	
	✓ Sk	iP	07	44	44C
	Near east coast of Honshu, Japan. Deeper than normal. Magn.=6.2 (Up, Ki).				
» 22	✓ Ki	iP	04	34	27
	Iran.				
» 22	✓ Ki	ePKP	08	35	22

1956					
Nov 22	(cont.)	PKP	μ	s	
		New Zealand.	0.1	1.4	
» 22	✓ Up	i(P)	10	12	21
» 23	✓ Up	iP	08	27	15
	✓ Sk	iP	08	27	29
» 23	✓ Up	iP	10	11	51D
	✓ Ki	iP	10	10	58
	✓ Sk	eP	10	11	28
	Aleutian Islands.				
» 23	✓ Ki	i(Sg)	12	48	31
	Local? Seismic?				
» 23	✓ Up	iP	15	18	13
» 23	✓ Ki	i(Sg)	16	17	33
	Local?				
» 23	✓ Ki	eP	18	18	40
» 24	✓ Up	i(Sg)	13	32	59
	Seismic?				
» 24	✓ Up	i(P)	16	10	58
		(P)	μ	s	
		(P)	0.1	1.0	
	✓ Ki	i(P)	16	10	56
		(P)	μ	s	
		(P)	0.1	1.0	
» 24	✓ Up	i(P)	17	01	12
» 24	✓ Up	iPKP	21	01	41
		i	21	01	51
	Kermadec Islands region.				
» 24	✓ Ki	i(P)	23	01	07
» 25	✓ Up	iP	11	35	52
	✓ Ki	eP	11	34	58
		i	11	35	09
		P	μ	s	
		P	0.1	1.2	
	Unimak Island region.				
» 25	✓ Up	iP	15	24	22
	North Atlantic Ocean.				
» 25	✓ Ki	iPKP	18	26	30
	✓ Sk	iPKP	18	26	42
	New Hebrides Islands. Intermediate depth (h ~ 100 km).				
» 25	✓ Up	i(P)	20	45	10
	✓ Ki	iP	20	45	57
» 26	✓ Up	iP	03	12	02

1956					
Nov 26	(cont.)	P	μ	s	
		Ki	0.1	0.8	
» 26	✓ Ki	iP	03	11	31
		P	μ	s	
		P	0.1	1.0	
	Bonin Islands.				
» 26	✓ Up	i(P)	05	35	48
	(Arctic Ocean).				
» 26	✓ Up	i(P)	13	09	36
» 26	✓ Up	iPKP	23	49	10
		PKP	μ	s	
		M	0.1	1.0	
		M	4.2	20	
		M	5.4	20	
		M	7.0	20	
	✓ Ki	iPKP	23	48	51
		PKP	μ	s	
		M	0.2	1.2	
		M	5.3	20	
		M	4.8	22	
		M	13	23	
	✓ Sk	iPKP	23	49	04
	Loyalty Islands. Magn.=6.5 (Up, Ki).				
» 27	✓ Ki	e(PKP)	01	10	57
	Loyalty Islands.				
» 27	✓ Up	iP	02	45	14
	✓ Ki	eP	02	46	11
» 27	✓ Up	iP	08	10	56
	Off north coast of Hokkaido, Japan.				
» 27	✓ Sk	i	12	29	35
	Seismic?				
» 27	✓ Ki	ePKP	13	38	18
	Loyalty Islands.				
» 27	✓ Up	i(P)	19	51	03
» 27	✓ Up	iSn	23	55	47
		iSg	23	56	36
		$\Delta=910 \text{ km}=8.2^\circ$			
	✓ Ki	iPn	23	53	08
		iPg	23	53	23
		iSn	23	53	55
		iSg	23	54	16
		Sg	μ	s	
		Sg	0.1	0.6	
		$\Delta=440 \text{ km}=4.0^\circ$			
	✓ Sk	iS*	23	54	02
		iSg	23	54	06
		$\Delta=410 \text{ km}=3.7^\circ$			
	Off central coast of Norway, 67.3°N, 10.0°E. Origin time=23 52 05.				

1956 Nov 28 ✓ Up iPKP 15 31 22C
 ✓ Ki PKP z' μ 0.2 0.8
 iPKP 15 31 06
 ✓ Sk PKP z' μ 0.2 1.5
 iPKP 15 31 16C
 i 15 31 38
 Kermadec Islands.
 » 28 ✓ Up iP 16 57 42
 » 28 ✓ Up iP 19 37 59C
 iPeP 19 38 39
 i 19 41 08
 iPeS 19 42 37
 iS 19 46 40
 iPS 19 47 05
 iP'P' 20 06 33
 P z' μ 0.2 0.7
 M E 11 20
 M N 27 22
 M Z 34 24
 Δ=7350 km=66°.
 ✓ Ki iP 19 37 08C
 i 19 37 21
 e 19 41 00
 P z' μ 0.3 1.3
 M E 22 22
 M N 14 20
 M Z 32 18
 ✓ Sk iP 19 37 49
 i 19 38 11
 i! 19 39 00
 Northern Kurile Islands.
 Probably deeper than normal.
 Magn.=6.4 (Up, Ki).
 » 29 ✓ Up iPKP 04 32 37
 i 04 35 58
 ✓ Ki iPKP 04 32 40
 iPP 04 35 37
 South Orkney Islands region.
 » 29 ✓ Ki eP 07 27 50
 Bonin Islands.
 » 29 ✓ Up iP 09 27 40D
 iPP 09 30 54
 iS 09 37 48
 iScS 09 38 12
 i 09 38 32
 iSS 09 43 15
 P z μ 1.2 5
 S N 1.2 7
 M E 11 14
 M N 12 13

1956 Nov 29 (cont.) M z 9.6 16
 Δ=9100 km=82°.
 ✓ Ki iP 09 27 02
 iPeP 09 27 15
 i 09 27 46
 eScS 09 37 13
 iSa 09 46 50
 P z' μ 0.1 1.0
 M E 16 16
 M N 13 16
 M Z 19 16
 Δ=8400 km=75 1/2°.
 ✓ Sk iP 09 27 36D
 Bonin Islands.
 Magn.=6.3 (Up, Ki).
 » 29 ✓ Ki i(P) 14 05 06
 » 30 ✓ Ki i(P) 11 09 14
 Seismic?
 » 30 ✓ Up iP 15 01 09
 Ki iP 15 01 08
 Sk eP 15 01 22
 » 30 ✓ Up iPKP 19 48 52
 Ki iPKP 19 49 07D
 San Juan Province, Argentina.
 Dec 1 ✓ Up i(P) 03 39 08
 Local?
 » 1 ✓ Up i(P) 06 57 01
 » 1 ✓ Up i(P) 12 23 47
 » 1 ✓ Ki i(P) 12 32 04
 i 12 32 09
 Local blast?
 » 2 ✓ Ki iP 02 13 06
 » 2 ✓ Up iP 03 10 56
 P z' μ 0.1 1.0
 ✓ Ki iP 03 10 03
 P z' μ 0.2 1.0
 ✓ Sk iP 03 10 33
 Aleutian Islands.
 » 3 ✓ Ki ePP 04 05 02
 Prince Edward Island region, Indian Ocean.
 » 3 ✓ Ki eP 07 22 48
 P z' μ 0.1 1.0
 Aleutian Islands.

1956 Dec 3 ✓ Up iP 07 31 07
 M N μ 2.7 20
 M z 3.5 20
 ✓ Ki iP 07 30 12D
 i 07 30 19
 eScS 07 40 16
 P z' μ 0.2 1.0
 M E 3.8 20
 M N 1.6 17
 M Z 4.2 20
 ✓ Sk iP 07 30 46
 Aleutian Islands.
 » 3 ✓ Up iP 07 51 28
 i! 07 52 57
 ✓ Ki i 07 54 13
 » 3 ✓ Up iP 07 55 55
 iPP 07 58 09
 P z' μ 0.1 0.9
 PP z' 0.2 1.0
 ✓ Ki iP 07 55 01C
 i 07 56 03
 iPP 07 57 15
 P z' μ 0.3 1.0
 PP z' 0.1 1.0
 ✓ Sk iP 07 55 32
 Aleutian Islands.
 » 3 ✓ Ki iP 08 02 48
 P z' μ 0.1 1.0
 Aleutian Islands.
 » 3 ✓ Ki iP 21 06 47
 Aleutian Islands.
 » 4 ✓ Up iP 08 55 10
 M E μ 1.6 20
 M N 3.0 22
 M Z 4.7 22
 ✓ Ki iP 08 54 20D
 P z' μ 0.1 1.0
 ✓ Sk iP 08 54 56
 Kurile Islands.
 » 4 ✓ Ki iP 09 00 19
 Kurile Islands.
 » 4 ✓ Up iPKP 10 27 29
 PKP z μ 2.1 5
 PKP z' 0.2 0.6
 ✓ Ki iPKP 10 27 32D

1956 Dec 4 (cont.) Sk PKP z' μ 1.4 1.8
 ePKP 10 27 26
 South Pacific Ocean.
 » 4 ✓ Up iP 10 53 08
 P z' μ 0.1 1.0
 ✓ Ki iP 10 52 15C
 P z' μ 0.2 1.0
 ✓ Sk iP 10 52 46
 Aleutian Islands.
 » 4 ✓ Ki iP 11 02 59
 » 4 ✓ Up i(Pg) 16 10 02
 iSg 16 10 44
 Local.
 » 4 ✓ Up iP 21 11 36D
 Ki eP 21 11 07
 Ryukyu Islands.
 Intermediate depth (h~100 km).
 » 4 ✓ Up iP 23 14 07
 M E μ 3.3 21
 M N 2.2 24
 M Z 5.5 22
 ✓ Ki iP 23 13 56
 eS 23 24 19
 M E μ 3.2 22
 M N 1.1 19
 M Z 4.7 21
 Guatemala, Intermediate depth (h~100-150 km).
 » 5 ✓ Up iP 15 15 12
 P z' μ 0.1 0.7
 » 5 ✓ Up iP 18 07 54
 Ki eP 18 07 29
 » 5 ✓ Up e(Sg) 20 55 41
 Local?
 » 6 ✓ Up e(P) 03 41 24
 e(Sg) 03 44 00
 Local?
 » 6 ✓ Ki iP 05 27 07
 » 6 ✓ Up iP 20 37 44
 Hindu Kush.
 Intermediate depth (h~200 km).
 » 6 ✓ Up i(P) 22 47 28

1956
Dec 24
(cont.)

Sk Sg z' μ s
 $\Delta = 380 \text{ km} = 3.4^\circ$
 eSn 18 34 12
 iSg 18 34 52
 $\Delta = 730 \text{ km} = 6.6^\circ$
 Northern Finland, 65.6°N, 27.0°E.
 Origin time = 18 31 15.

» 24 Up iP 18 51 41
 P z' μ s
 0.3 1.5
 Ki iP 18 51 23C

P z' μ s
 0.2 1.1
 Sk iP 18 51 46
 Near east coast of Mindanao.

» 25 Up iP 01 06 32C
 Sk iP 01 07 14
 Ionian Islands.

» 25 Sk eP 03 04 29
 North Atlantic Ocean.

» 25 Up iP 04 48 50
 Ki iP 04 48 42
 Tonga Islands.
 Intermediate depth (h ~ 200 km).

» 25 Up iP 09 39 31
 i! 09 39 37
 iPP 09 40 28
 iS 09 44 21

P E μ s
 1.1 4
 P Z 1.3 4
 P z' 0.8 1.6
 PP Z 0.6 3
 S E 1.6 5
 S N 0.9 5
 M E 5.7 13
 M N 14 17
 M Z 6.9 18

» 25 Ki iP 09 39 53
 i! 09 39 59
 iPP 09 40 47
 iS 09 45 02
 i 09 45 19
 iPcS 09 46 38

P E μ s
 0.7 4
 P z' 0.5 1.8
 PP E 1.6 6
 S E 2.3 10
 S N 1.2 9
 M E 13 18
 M N 4.5 15
 M Z 14 18
 $\Delta = 3450 \text{ km} = 31^\circ$

1956
Dec 25
(cont.)

Sk iP 09 39 14
 i! 09 39 20
 North Atlantic Ocean.
 Magn. = 6.0 (Up, Ki).

» 25 Up iP 13 56 16C
 Sk iP 13 56 18C
 Tonga Islands region.

» 26 Up iP 03 43 26C
 Sk iP 03 43 22

» 26 Sk iP 08 05 23
 Santa Cruz Islands.

» 27 Up iP 00 33 15
 iP 00 34 40
 iPP 00 36 42
 i 00 43 14
 iSP 00 46 40
 iSS 00 54 30

PKP z' μ s
 0.8 1.3
 PP N 1.8 4
 PP Z 1.2 2
 PP z' 3.3 2.2
 M E 16 26
 M N 14 25
 M Z 13 22

» 27 Ki iP 00 32 56
 iP 00 33 05
 iP 00 34 29
 iPP 00 35 37
 i! 00 36 22
 iP 00 36 47
 iP 00 38 26
 i 00 42 14
 i 00 42 45
 iSP 00 45 41
 iSS 00 53 07

PKP z μ s
 2.6 5
 PKP z' 0.5 1.2
 pPKP z' 0.8 2.0
 PP Z 2.6 5
 M E 8.2 19
 M N 7.8 21
 M Z 18 23

» 27 Sk iP 00 33 07
 iSKP 00 36 33
 Tonga Islands region.
 Deep (h ~ 300 km).
 Magn. = 7.2 (Up, Ki).
 The first PKP at Ki has very small amplitude.

» 27 Up iP 10 13 34
 iPP 10 14 15

1956
Dec 27
(cont.)

P z' μ s
 0.1 1.0
 PP z' 0.1 1.2
 M E 3.1 17
 M N 2.4 15
 M Z 2.1 15
 $\Delta = 2800 \text{ km} = 25^\circ$

» 27 Ki iP 10 14 41D
 M E μ s
 1.8 16
 M N 0.6 16
 M Z 1.0 15

» 27 Sk iP 10 14 15
 Near south coast of Rhodes Island.

» 27 Up i(Sg) 18 24 50
 Local?

» 27 Up iP 21 44 43
 P z' μ s
 0.1 1.0
 M E 1.5 27
 M N 4.6 25
 M Z 1.7 24

» 27 Ki iP 21 44 24
 P z' μ s
 0.1 1.2
 M E 1.0 16
 M N 2.3 23
 M Z 2.4 18

» 27 Sk eP 21 44 45
 Mindanao, Philippine Islands.

» 28 Up iP 01 02 33

» 28 Up iP 02 31 31
 Ki iP 02 31 40C
 Sk eP 02 31 59
 Northern Afghanistan.

» 28 Ki iP 13 54 10
 Near south coast of Mindanao, Philippine Islands.

» 28 Up ePKP 14 44 44
 i(pPKP2) 14 45 23

M E μ s
 5.6 21
 M N 8.4 21
 M Z 9.4 22

» 28 Ki iP 14 44 12
 iPKP 14 44 50
 iPP 14 44 50
 $\Delta \sim 17350 \text{ km} \sim 156^\circ$

PKP z' μ s
 0.1 1.1
 pPKP Z 3.3 5
 pPKP z' 0.3 1.1
 M E 4.6 21
 M N 3.4 22
 M Z 9.0 22
 $\Delta \sim 16450 \text{ km} \sim 148^\circ$

1956
Dec 28
(cont.)

Sk iP 14 44 25
 i 14 44 57
 iP 14 45 07
 Near coast of North Island, New Zealand.
 h = 160 km (Ki, Sk).

» 28 Sk i 15 19 28
 i(Sg) 15 19 57
 Local?

» 28 Up iP 16 45 55
 Sk iP 16 45 48

» 28 Up
 M E μ s
 3.0 22
 M N 2.4 22
 M Z 4.3 24

» 28 Ki iP 19 34 05
 M E μ s
 1.7 17
 M N 1.9 23
 M Z 4.3 20
 Off south coast of Lower California.

» 29 Up e 01 03 11
 i 01 03 45
 e(Sg) 01 05 45
 Local?

» 29 Up iP 09 48 00
 Ki eP 09 47 09
 Near south coast of Kamchatka.

» 29 Up e(Sg) 13 37 57
 Ki e(Sg) 13 39 18
 Sk e(Sg) 13 39 25
 Local.

» 29 Up iP 19 45 32
 Ki iP 19 45 24
 Sk iP 19 45 27
 Fiji Islands.
 Deep (h ~ 600 km).

» 29 Up eL 21 38
 M E μ s
 1.1 21
 M N 2.4 19
 M Z 4.5 18

» 29 Ki eL 21 32
 M E μ s
 2.5 21
 M N 2.2 21
 M Z 8.1 21
 Tonga Islands.

» 29 Up e(Sg) 22 51 40
 Local?

1956						
Dec 30	Up	iP		09	50	28
		i		09	50	47
	Ki	iP		09	49	53
	Off south coast of Honshu, Japan.					
» 30	Up	iP		18	29	18
		i		18	29	33
				μ	s	
				0.2	1.0	
	Ki	iP	z'	18	30	34
				μ	s	
				0.1	1.0	
	Sk	iP		18	29	58
	Ionian Islands.					
» 30	Up	iP		22	09	38
				μ	s	
				0.2	0.7	
		P	z'	2.8	18	
		M	E	1.4	20	
		M	N	4.0	17	
		M	z	4.0	17	
	Ki	iP		22	09	32C
				μ	s	
				0.2	0.5	
		P	z'	3.1	18	
		M	E	2.3	20	
		M	N	2.3	20	

1956						
Dec 30	M	z		5.8	18	
(cont.)	Sk	iP		22	09	54C
	India-Burma border.					
» 31	Up	iPn		04	45	17
		iSn		04	47	20
		i		04	48	25
				μ	s	
				0.2	1.0	
		Sn	z'	$\Delta = 1310 \text{ km} = 11.8^\circ$		
	Ki	iPn		04	43	36 D
		i		04	44	03
		iSn		04	44	22
		iS*		04	44	34
		iSg		04	44	46
		i		04	45	15
				μ	s	
		Pn	z'	0.4	0.5	
		Sn	z'	1.2	0.5	
				$\Delta = 470 \text{ km} = 4.2^\circ$		
	Sk	iPn		04	44	29 D
		i		04	45	30
		iSn		04	45	54
				$\Delta = 890 \text{ km} = 8.0^\circ$		
	Off north coast of Norway.					
» 31	Up	iP		06	06	35