1- JAN 1962 Mawson

All 1961 only

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COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

203 Collins Street,
MELBOURNE. VIC.

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SEISMOLOGICAL BULLETIN

MAWSON - ANTARCTICA

Latitude: 67° 35.7 S Longitude: 62° 54.0 E Height 6 Metres

Foundation: Felspar Porphyry.

Instruments: Benioff Short Period Vertical: Seismo. T_s 1.0 sec.

Galvo. T_g 0.2 sec.

Benioff Long Period Horizontals (Two Components)

Seismo. T_s 1.0 sec.

Galvo. T_g 70 sec.

NOTE: The Microseismic level is very much reduced when the ocean freezes from approximately May to December, thus enabling the instrument magnifications to be greatly increased during this period.

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
FEBRUARY			h. m. s.	s.				km	
5	eL	N	18 05.0						
6	iP	NEZ	21 57(49)						Confused by large microseisms
	eSKS	E	22 08 13						USCGS: 6.8S 155.3E h = 25Km.
	eL	E	14.2						
9	iP	N Z	02 19 52						Large Microseisms
									USCGS: 28.2S 177.4W h = 37Km.
11	iP	N Z	21 12 42						USCGS: 28.2S 177.5W h = 41Km.
12	iP	Z	01 32 09						
12	iP	Z	12 21 44						Very large microseisms 13th-19th
									USCGS: 15.0S 175.2W h = 281Km
12	iP	Z	13 08 53				+		USCGS: 13.1S 171.8E h = 598Km
	iX	Z	09 03						
12	iPKP	Z	22 12 50						USCGS: 43.7N 147.6E h = 45Km
22	iP	Z	22 05 07 A				+		USCGS: 28.4S 177.2W h = 78Km
MARCH									
5	iP	Z	01 38 48				+		USCGS: 10.7S 161.6E h = 99Km

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	A_E	A_Z	Δ	Remarks
MARCH	(cont'd)		h. m. s.	s.				km	
7	eiP	NEZ	10 22 19					8520	USCGS: 28.2S 175.7W h = 43km
	iS	NE	31 58						
	eSS	NE	37(40)						
	eSSS	N	40 08						
	eL	NE	43.6						
15	eP	Z	10 27 40						USCGS: 03.3S 150.7E h = 21km
	e(PcP)	Z	27 45						
15	iP	Z	13 13 35						USCGS: 04.4S 152.5E h = 99km
16	iP	Z	13 56 49				-		Very large microseisms
	iX	Z	57 03						USCGS: 8.2S 122.0E h = 74km
20	iP	Z	16 05 29				+	9200	USCGS: 18.4S 175.2W h = 175km
	iS	E	15 35						
	iX	N	15 37						
	eX	E	16 31						
	esS	E	16 59						
20	eP	Z	23 54 43					8880	USCGS: 24.2S 175.9W h = 25[illegible]m
	eS	NE	24 04 42						
24	eP	Z	23 49 37						USCGS: 2.6S 141.9E h = 118km
	iX	Z	49 45						
25	i(P)	Z	21 05 49						Confused by microseisms
28	e(P)	Z	09 07 19						Possibly Local.
28	iP	NEZ	09 47 56				+		USCGS: 0.2N 123.6E h = 83km
	iX	Z	48 31						
	iS	NEZ	57 46						
	ePS	E	58 43						
	ePPS	E	59 09						
	eX	Z	10 00 04						
	eSS	E	02 58						
	e(sSS)	E	04 18						
	i(PKKP)	Z	06 46						
	eP'P'	Z	14 50						
	eX	Z	18 00						
28	iPKP	EZ	12 48 53				+		USCGS: 51.7N 176.2W h = 60km
	iPKP	Z	49 04						
28	iPKP	Z	14 18 42						USCGS: 52.0N 176.3W h = 89km
28	iP	Z	21 14 17						USCGS: 22.0S 68.0W h = 125km
	ipP	Z	14 47						
	isP	Z	15 03						
	iS	E	24 30						
APRIL									
8	iP	Z	18 10 51				+		
9	iPKP	Z	07 43 08						USCGS: 36.5N 121.3W h = 11km
9	eiP	Z	09 32 10						USCGS: 26.0S 178.4E h = 655km

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
APRIL (cont'd)			h. m. s.	s.				km	
10	eP	Z	09 52 36						USCGS: 0.2S 132.9E h = 36km
10	iP	Z	20 45 03				+		
12	iP	Z	03 17 57						USCGS: 30.8S 178.6W h = 190km
12	iP	Z	17 29 52						USCGS: 0.3N 123.8E h = 122km
	ipP	Z	30 23						
12	iPKP	Z	22 39 21						USCGS: 13.1N 88.9W h = 122km
	iX	Z	39 39						
13	iP	Z	23 54 43						USCGS: 27.9S 67.3W h = 220km
16	iP	Z	23 25 59				+		USCGS: 2.4S 135.6E h = 64km
17	iP	Z	02 43 58				+		USCGS: 31.8S 69.8W h = 147km
	iPcP	Z	44 10						
17	eX	Z	05 03 04						
17	iP	Z	20 47 33						USCGS: 20.8S 68.5W h = 200km
	iX	Z	48 08						
18	e(P)	Z	09 57(12)						
18	eP	Z	19 00(32)						USCGS: 38.5S 73.3W h = 30km
19	iP	Z	07 51 11						USCGS: 18.2S 168.2E h = 98km
20	eP	Z	08 38 42						
	iX	Z	39 10						
20	eP	Z	19 30 35						USCGS: 32.9S 178.8W h = 58km
20	eP	Z	21 51 57						USCGS: 15.2S 173.7W h = 25km
	epP	Z	52 06						
	iX	Z	52 12						
21	iP	Z	09 42 44						
21	iP	Z	13 59 33						
21	iPKP	Z	21 46 26				+		USCGS: 51.7N 173.9W h = 36km
	i(pPKP)	Z	46 37						
	iX	Z	47 00						
22	iP	Z	19 11 57				−		USCGS: 3.5S 150.1E h = 91km
	epP	Z	12 22						
23	ePKP	Z	09 20 49						USCGS: 44.6N 150.2E h = 44km
	ipPKP	Z	21 08						
	iX	Z	21 16						
	eSKP	Z	24 11						
	iX	Z	24 39						
25	iP	Z	02 43 35						USCGS: 0.7S 124.1E h = 200km
25	iP	Z	11 27 50				−		USCGS: 32.7S 178.5W h = 35km
	iPcP	Z	28 14						
26	e(PKP)	Z	07 58(21)						USCGS: 44.6N 149.9E h = 20km
26	eiP	Z	17 05 22				+		USCGS: 0.2N 124.1E h = 135km
	epP	Z	05 36						
27	iP	Z	18 05 24				−		USCGS: 12.9S 126.8E h = 124km
29	iP	Z	06 51 04				+		USCGS: 49.8S 126.8E h = 119km
	ipP	Z	51 32						
29	iPKP	Z	09 39 25				−		USCGS: 40.6N 127.5W h = 24km
	iX	Z	39 43						
	e(PP)	Z	43 13						
29	iPKP	Z	09 48 52				−		USCGS: 71.3N 7.4W h = 14km
	iX	Z	49 22						
30	iP	Z	00 16 55						USCGS: 49.6S 117.E h = 25km

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
MAY			h. m. s.	s.				km	
1	ePKP	Z	03 31 29						USCGS: 71.2N 6.9W h = 22km
2	eP	Z	19 49 56						USCGS: 27.8S 176.4W h = 53km
	iPcP	Z	50 04						
2	iP	EZ	22 56 26						USCGS: 27.8S 176.5W h = 47km
	eS	E	23 06 09						
	M	E	30.0	18					
5	eP	Z	06 50 46						USCGS: 27.7S 176.4W h = 84km
5	eP	Z	13 54 03						USCGS: 27.8S 176.1W h = 84km
	epP	Z	55 17						
5	eP	Z	15 40 33						USCGS: 27.3S 176.1W h = 60km
6	eiP	Z	21 29 10						USCGS: 6.3N 126.4E h = 93km
6	eiPKP	Z	22 44 49						USCGS: 49.5N 176.5S h = 20km
6	iP	Z	22 45 23				+		USCGS: 6.3N 126.3E h = 20km
6	iP	Z	23 25 33				-	8900	USCGS: 17.2S 167.9E h = 96km
	iPcP	Z	25 40						
	iX	Z	26 12						
	eS	E	35 36						
6	iP	Z	23 49 26						USCGS: 51.5S 161.3E h = 21km
7	iP	EZ	00 38 09						USCGS: 6.1S 154.4E h = 41km
	iX	Z	38 51						
	e(S)	E	48 31						
	eScS	E	48(46)						
	eX	E	49 35						
	ePS	E	49(50)						
	eSS	E	54 19						
	M	E	01 10.5	24					
7	eiP	Z	04 43 01						USCGS: 8.6S 111.4E h = 113km
	iX	Z	43 11						
	iPcP	Z	43 20						
7	i(PcP)	Z	10 35 18				-		USCGS: 5.8N 126.8E h = 89km
	iX	Z	35 35						
	eSKS	E	45(37)						
7	ePKP	Z	16 00 31						USCGS: 71.2N 7.1W h = 66km
7	eP	Z	22 53 05						USCGS: 7.0S 154.8E h = 171km
8	iP	Z	02 50 50						USCGS: 31.3S 67.4W h = 84km
	ipP	Z	06 18						
8	iP	Z	19 23 35					9100	USCGS: 24.3S 69.7W h = 84km
8	iP	Z	23 04 06						USCGS: 0.2N 123.5E h = 88km
9	eP	Z	08 27(48)						USCGS: 27.7S 176.4W h = 84km
	ipP	Z	28 15						
9	iP	Z	11 18 53				-		USCGS: 6.2S 154.5E h = 110km
10	eP	Z	10 18 01						USCGS: 15.8S 172.3W h = 32km

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
MAY	(cont'd)		h m s	s.				km	
11	iP	Z	08 49 39				+		USCGS: 37.2S 73.6W h = 47km
	iPcP	Z	50 04						
	e(S)	N	58 50						
12	eP	Z	04 56 06						USCGS: 27.7S 176.2W h = 60km
	ipP	Z	56 25						
12	eP	Z	07 35 48						USCGS: 28.2S 176.2W h = 21km
13	eP	Z	13 53 33						USCGS: 27.8S 176.2W h = 32km
13	eP	Z	14 30 25						USCGS: 27.9S 176.0W h = 25km
	iPcP	Z	30 42						
13	iP	Z	15 04 31				+		USCGS: 17.5S 178.8W h = 556km
	ipP	Z	06 30						
14	eP	Z	00 22 51						USCGS: 39.6S 176.8E h = 40km
	ipP	Z	23 05						
14	ePKP	Z	15 57 50						USCGS: 67.7N 18.4W h = 23km
15	iP	Z	19 24 24						USCGS: 15.3S 166.6E h = 58km
15	iP	Z	21 05 16						USCGS: 20.0S 177.2W h = 89km
	i(PcP)	Z	05 27						
16	eP	Z	17 39 14						USCGS: 27.9S 176.4W h = 53km
	ipP	Z	39 30						
	eS	NE	48(52)						
17	iPKP	NEZ	19 48 53						USCGS: 52.0N 173.9E h = 21km
17	eP	Z	22 48 35						USCGS: 15.4S 172.6W h = 25km
18	iP	Z	23 21 23						USCGS: 38.2S 73.4W h = 25km
	ipP	Z	21 32						
	ePcP	Z	21 46						
19	iP	Z	01 02 45						USCGS: 3.8N 125.7E h = 77km
19	iP	Z	02 32 37				-		USCGS: 22.5S 179.2E h = 600km
20	iPKP	Z	01 04 56						USCGS: 52.1N 170.4W h = 71km
20	iP	Z	18 02 39						USCGS: 6.5S 31.7E h = 58km
	iX	Z	02 45						
20	eP	Z	19 14 00						
21	iP	Z	06 41 21				+		USCGS: 22.7S 177.5W h = 77km
21	iP	Z	21 22 16				+		USCGS: 2.0N 127.0E h = 103km
21	iP	Z	21 49 55				+		USCGS: 34.3S 150.4S h = 27km
22	i(P)	Z	01 30 54				-		USCGS: 25.0S 67.3W h = 273km
22	iP	Z	13 56 49						USCGS: 21.3S 174.4W h = 97km
	iPcP	Z	56 57						
	iX	Z	57 00						
	e(S)	NE	14 07 01						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	A_E	A_Z	Δ	Remarks
MAY	(cont'd)		h m s	s				km	
22	iP	NEZ	17 44 29				−		USCGS: 22.8S 176.1W h = 35km
	iX	Z	46 33						
	eS	NE	54 31						
	iX	NEZ	55 01						
22	iP	Z	23 58 23				+		USCGS: 22.6S 177.0W h = 256km
23	eP	Z	02 59(35)						USCGS: 36.4N 28.3E h = 49km
	e(PKP)	Z	03 03 41						
	iPP	Z	04 02						
	iPKKP	Z	15 11						
23	eP	Z	06 01 36						
	eX	Z	03 04						
23	iPKP	Z	17 03 41				+		USCGS: 12.6N 87.3W h = 138km
	eX	Z	04 03						
25	iP	Z	04 56 17						USCGS: 27.2S 71.3W h = 46km
	iX	Z	56 33						
25	iP	Z	17 44 55						USCGS: 22.7S 176.1W h = 25km
25	iP	Z	18 52 47				+		USCGS: 22.7S 176.8W h = 35km
	iX	Z	53 03						
25	iP	Z	21 19 32				−		USCGS: 14.8S 177.4W h = 417km
26	eP	Z	03 34 13						USCGS: 32.9S 109.6W h = 54km
26	eP	Z	04 48 14						USCGS: 32.7S 109.1W h = 43km
26	eP	Z	06 18 46						USCGS: 18.6S 169.1E h = 132km
26	iP	Z	08 54 35						USCGS: 10.1S 70.9W h = 678km
27	eiPKP	Z	03 16 29						USCGS: 51.2N 176.3W h = 60km
	eX	Z	16 41						
27	eX	Z	07 55 50						
27	iP	Z	12 06 54				−		
27	eiP	Z	17 03 49						USCGS: 0.8N 98.5E h = 39km
27	eP	Z	17 37(01)						USCGS: 1.2N 98.4E h = 36km
28	iP	Z	01 15 20				+		
28	iP	Z	02 42 40				+		USCGS: 4.9S 145.0E h = 59km
28	eiP	Z	04 10 46						USCGS: 5.4S 102.4E h = 74km
28	iP	Z	10 59 40				−		USCGS: 5.1S 144.8E h = 25km
29	iP	Z	07 39 17				+		USCGS: 39.0S 73.4W h = 13km
	i(pP)	Z	39 23						
	iX	Z	39 26						
	eL	NE	08 02.0						
	L-Max	NE	11.5	18					
29	eP	Z	11 02 09						USCGS: 10.6N 39.4E h = 25km

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude AZ	Δ	Remarks
MAY (cont'd)			h m s	s				km	
31.	ePKP	Z	14 37 17						USCGS: 29.8N 114.0W h = 74km
31	iP	Z	16 41 54				+		
31	iP	Z	19 28 26				+		USCGS: 5.3S 151.6E h = 56km
	ePcP	Z	28 35						
	isP	Z	28 50						
	eSKS	E	38 49						
	eL	E	57.8						
JUNE									
1	ePKP	Z	10 21 37						USCGS: 19.5N 69.3W h = 50km
1	eP	Z	11 31 19						USCGS: 03.8S 129.4E h = 220km
1	e(P)	Z	12 22 24						
1	e(P)	Z	17 14 30						
1	eP	Z	23 41 27						Confused by Long Period Microseisms
	iPcP	Z	41 31						
	ePP	Z	44 32						USCGS: 10.6N 39.3E h = 51km
	eX	Z	44 58						
	iPPP	Z	45 18						
	e(ScS)	NE	51 45						
	eSS	N	56 35						
	eX	E	56 47						
	eL	E	24 02.0						
	eL	N	06.5						
2	iP	Z	00 13 53				+		USCGS: 10.5N 39.5E h = 29km
2	eiP	Z	00 21 03						USCGS: 10.3N 39.6E h = 34km
	epP	Z	21 16						
	iX	Z	22 16						
2	eP	Z	04 49 14						USCGS: 5.5S 146.4E h = 39km
2	iP	NEZ	05 03 21				-		USCGS: 9.8N 40.0E h = 41km
	iPcP	Z	03 25						
	ipP	Z	03 31						
	iX	Z	03 52						
	ePP	Z	06 25						
	eSKS	N	13(29)						
	eSS	N	18(35)						
	eL	E	32.6	22					
2	iP	Z	05 14 26						Possibly part of previous
2	eP	Z	05 27 56						Possible aftershock
2	eiP	Z	05 34 37						Confused by previous
	iPcP	Z	34 41						USCGS: 10.3N 39.6E h = 26km
	ePP	Z	37 36						
	ePPP	Z	39 33						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
JUNE	(cont'd)		h m s	s				km	
2	eP	Z	05 57 01						Confused by Long Period Microseisms
	iPcP	Z	57 06						
	iX	Z	57 24						USCGS: 10.3N 39.8E h = 31km
	eX	Z	57 53						
	ePP	Z	06 00 04						
	eX	E	07 31						
	eSS	N	12 20						
	L-Max	N	26.8	22					
2	eP	Z	06 29 21						USCGS: 10.5N 39.7E h = 36km
	iX	Z	29 24						
2	eiP	Z	07 14 56						USCGS: 9.3N 40.0E h = 54km
	iX	Z	15 00						
2	iP	Z	07 16 40						
2	eP	Z	12 59 02						USCGS: 40.0S 75.2W h = 25km
3	ePKP	Z	01 33 04						USCGS: 56.1N 164.8E h = 29km
	iX	Z	33 07						
3	eP	Z	03 30(42)						USCGS: 17.7S 167.6E h = 31km
3	eP	Z	03 52(25)						USCGS: 17.9S 167.9E h = 39km
3	eiP	Z	04 34 46						USCGS: 18.0S 70.3W h = 60km
3	eiP	Z	15 35 26						USCGS: 9.8N 39.8E h = 50km
3	eP	Z	17 55 23						USCGS: 0.3N 123.8E h = 88km
3	eP	Z	22 03(13)						USCGS: 17.6S 167.6E h = 25km
4	eP	Z	07 47 00						USCGS: 33.8N 81.8E h = 6km
	ePP	Z	51 10						
4	eP	Z	08 56 38						USCGS: 8.7S 124.2E h = 18km
4	iP	Z	13 29 37						
4	iP	Z	14 09 52						USCGS: 17.4S 177.9E h = 600km
4	iP	Z	14 13 34				-		
4	eiP	Z	23 06 52						USCGS: 14.0S 167.7E h = 216km
	iX	Z	07 21						
5	eP	Z	03 44 19						USCGS: 28.3N 54.8E h = 81km
5	iP	Z	17 42 30				+		USCGS: 05.0S 153.5E h = 110km
	e(P'P')	Z	18 08 43						
6	iP	Z	07 06 30						
6	eP	Z	08 24 34						USCGS: 15.5S 173.6W h = 117km
	iX	Z	24 56						
6	iP	Z	17 34 04				+		
	iX	Z	34 30						
7	iP	EZ	14 27 26				+		USCGS: 5.4S 11.6W h = 17km
	ipP	Z	27 32						
	iX	Z	27 57						
	ePP	Z	30 29						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
JUNE	(cont'd)		h m s	s				km	
7	iP	Z	15 50 40				+		USCGS: 10.7S 166.3E h = 109km
8	iP	Z	01 00 58						
8	iP	NEZ	15 55 20				+		USCGS: 8.1S 121.7E h = 25km
	i(pP)	Z	55 29						
	iPcP	Z	55 36						
	iX	Z	55 57						
8	iP	Z	16 32 49						
8	eiP	Z	16 58 39						USCGS: 8.4S 121.6E h = 25km
9	iP	Z	15 29 30						USCGS: 5.5N 95.8E h = 100km
	e(pP)	Z	29 53						
9	eP	Z	19 05 09						USCGS: 10.7S 165.4E h = 115km
	iX	Z	05 19						
9	pP	Z	22 17 09						Confused by local movements USCGS: 7.6S 122.3E h = 25km
10	iP	Z	08 59 34				+		USCGS: 5.2S 129.1E h = 78km
10	iP	Z	11 55 25				+		USCGS: 32.0S 70.3W h = 83km
	i(PcP)	Z	55 38						
	ipP	Z	55 49						
10	eP	Z	20 44 41						USCGS: 24.1S 112.1W h = 47km
	i(pP)	Z	44 54						
	e(S)	NE	55 32						
	eL	E	21 16.2						
	eL	N	17.5						
11	ePcP	Z	05 23 51				+		USCGS: 27.9N 54.7E h = 44km
	iP	Z	23 55						
	ipP	Z	24 05						
	isP	Z	24 12						
	iX	Z	27 13						
	iX	N Z	27 57						
	eSKS	N	34 29						
	eSS	N	41 38						
11	eP	Z	05 43 37						USCGS: 27.3N 54.5E h = 25km
	iX	Z	43 41						
11	eP	Z	07 00 09						USCGS: 29.3N 55.2E h = 25km
11	eP	Z	12 44 52						USCGS: 28N 54.6E h = 36km
	isP	Z	45 07						
11	iP	Z	14 11 25						USCGS: 27.6N 54.6E h = 63km
11	iP	Z	14 59 08				+		USCGS: 24.3S 178.9E h = 603km
11	iP	Z	16 15 04						
11	iP	Z	22 34 05				-		
12	iP	Z	07 05 26						USCGS: 9.2S 110.1E h = 44km
	iX	Z	05 57						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
JUNE	(cont'd)		h m s	s				km	
12	iP	Z	07 44 12				-		USCGS: 49.6S 163.8E h = 34km
	ipP	Z	44 22						
12	iP	Z	10 11 35				+		USCGS: 21.5N 106E h = 55km
	epP	Z	11 50						
12	iP	Z	18 05 53				+		USCGS: 6.9S 155.0E h = 110km
	iPcP	Z	06 02						
	ipP	Z	06 19						
13	iP	Z	07 26 29				+		USCGS: 22.6S 12.5W h = 37km
	iX	Z	26 48						
13	iP	Z	13 27 20						USCGS: 32.8S 179.9E h = 262km
13	iP	NEZ	21 49 58					9080	USCGS: 21.4S 176.4W h = 146km
	iPcP	EZ	50 07						
	ipP	Z	50 35						
	isP	Z	50 51						
	iS	NE	59 55						
15	e(PKP)	Z	00 10 09						
15	iPKP	Z	23 43 52						USCGS: 45.4N 151.3E h = 38km
	i(SKP)	Z	47 14						
									Confused by Microseisms
16	ePKP	Z	06 51 21						USCGS: 51.4N 173.2W h = 25km
16	iP	Z	07 19 11				+		USCGS: 41.5N 74.5W h = 17km
	iX	Z	19 26						
	iPcP	Z	19 38						
16	iX	Z	10 50 58						USCGS: 8.8N 73.4W h = 120km
	ePP	Z	51 29						
	eSKS	Z	57(00)						
	i(SKKS)	Z	58 11						
16	i(P)	Z	11 01 05						
	iX	Z	01 48						
	iX	Z	05 08						
17	eP	Z	09 45 19						USCGS: 29S 178.5W h = 253km
17	iP	Z	11 09 56				-		USCGS: 11.9S 75.3W h = 29km
17	iP	Z	14 45 29				-		USCGS: 9.9N 126.0E h = 25km
17	ePKP	Z	15 26 23						USCGS: 14.2N 92.2W h = 147km
17	iP	Z	15 36 22	A			+		USCGS: 3.7S 138.2E h = 139km
	eX	Z	36 47						
	iX	Z	37 46						
17	iP	Z	18 10 56						
17	iP	Z	22 00 39				+		USCGS: 20.8? 178.9W h = 627km
18	iP	Z	03 22 50						USCGS: 5.9S 113.0E h = 641km
	ipP	Z	24 56						
	iX	Z	25 35						

Date 1961	Phase		Time (G.M.T.)	Per	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
JUNE	(cont'd)		h m s	s				km	
18	iP	Z	13 33 55				+		USCGS: 0.2N 123.9E h = 91km
	iX	Z	34 26						
	isP	Z	35 21						
18	iP	Z	14 05 50				+		USCGS: 31.3S 179.3E h = 434km
	iX	Z	06 20						
	ipP	Z	07 48						
	isP	Z	08 14						
	iPP	Z	09 01						
	eS	N	14 24						
	eX	EZ	14 27						
	eSKS	NE	15 07						
	eP'P'	Z	33 42						
18	eiP	Z	17 44 23						USCGS: 38.9S 74.8W h = 44km
	epP	Z	44 34						
18	iP	NEZ	22 22 51				-		USCGS: 56.7S 141.6W h = 92km
	ipP	Z	23 16						
	iPcP	Z	23 54						
	eL	N	41.2						
19	eP	Z	00 58 50						USCGS: 22.5S 178.9W h = 477km
19	iP	Z	06 40 06				+		USCGS: 24.2S 179.6E h = 592km
19	iP	Z	10 31 10						
	iX	Z	32 33						
19	eP	Z	17 19(12)						USCGS: 36.6N 71.0E h = 151km
	eX	Z	23(35)						
20	iP	Z	03 33 45						
21	eP	Z	07 45 52						USCGS: 7.7S 146.7E h = 25km
21	iP	NEZ	20 35 43						USCGS: 7.6S 110E h = 163km
	iPcP	Z	36 06						
	iX	NE	36 10						
	isP	Z	36 34						
	iPP	Z	38 11						
	epPP	Z	38 53						
	eP'P'	Z	21 04 07						
	eX	Z	04 33						
22	iP	Z	05 45 25				-		USCGS: 21.2S 170.3E h = 55km
23	eP	Z	16 49 46						USCGS: 28.5N 55.5E h = 54km
23	ePKP	Z	09 15 48						USCGS: 43.9N 128.9W h = 56km
23	ePKP	Z	09 42 43						USCGS: 43.9N 128.8W h = 53km
24	eP	Z	00 45 21						
24	eP	Z	09 47 35						USCGS: 4.1N 97.5E h = 188km
24	eP	Z	16 13 36						USCGS: 2.1N 126.9E h = 60km
24	iP	Z	17 09 27				-		USCGS: 10.5S 162.5E h = 32km
	i(pP)	Z	09 39						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
JUNE	(cont'd)		h m s	s				km	
24	iP	Z	19 46 37				+		USCGS: 2.9S 130.4E h = 19km
	ipP	Z	46 45						
25	ePP	Z	17 05 18						Large Microseisms USCGS: 21.7N 143.1E h = 13km
26	iP	Z	07 14 41				−		USCGS: 21.3S 170.1E h = 89km
26	iP	Z	14 01 18				−		USCGS: 21.0S 174.4W h = 25km
26	ePKP	Z	15 06 55	A			+		USCGS: 52.4N 174.5E h = 60km
	iPKP	NEZ	06 56						
	iPKP	Z	07 01						
	iPP	Z	10 21						
26	eX	Z	17 01 14						USCGS: 11.2N 74.5W h = 89km
27	iP	Z	21 06 12						
28	iP	Z	13 26 18						USCGS: 4.7S 102.7E h = 142km
	iX	Z	26 26						
29	iP	NEZ	09 35 19	K			−		USCGS: 13.8S 166.0E h = 37km
	iPcP	Z	35 25						
	iX	Z	36 39						
	eSKS	NE	45 28						
	e(S)	N	45 40						
	eL	NE	04.0						
29	iP	Z	10 35 08				−		USCGS: 22.6S 179.1E h = 654km
29	iPKP	Z	14 22 22				−		USCGS: 52.2N 173.4W h = 76km
	i(pPKP)	Z	22 43						
29	iP	Z	15 51 44						USCGS: 13.7S 165.9E h = 74km
29	iP	Z	20 38 56				+		
	iX	Z	41 17						
29	iPKP	Z	22 21 18						USCGS: 85.0N 97.3E h = 11km
30	iP	Z	04 30 16						USCGS: 20.4S 176.0W h = 170km
30	iP	Z	19 02 40				+		USCGS: 6.7S 129.4E h = 179km
JULY									
1	eiP	Z	13 23 44				+		USCGS: 15.3S 75W h = 146km
	iX	Z	23 58						
1	iP	Z	19 02 28				−		USCGS: 17.9S 178.4W h = 600km
2	iPKP	Z	00 03 40				+		USCGS: 53.7N 169.8E h = 19km
2	iP	Z	00 25 37						
2	ePKP	Z	02 26 00						USCGS: 42.8N 143.1E h = 151km

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
JULY	(cont'd)		h m s	s.				km	
2	iP	Z	11 55 56						USCGS: 19.2S 174.8W h = 114km
2	eP	Z	16 59 42						USCGS: 13.9S 166.1E h = 33km
4	ePP	Z	06 28 55						USCGS: 17.9N 146.5E h = 145km
4	eP	Z	19 25 11						USCGS: 55.8S 147.4E h = 39km
	eL	E	36.8						
	L-Max	E	40.5						
4	eP	Z	20 05 48						USCGS: 55.4S 147.8E h = 122km
5	iP	Z	02 35 52						USCGS: 52.8S 150.4E h = 25km
	ePP	Z	37(18)						
	eS	N	41 41						
	eX	E	41 47						
	eL	NE	45.1						
	L-Max	E	50.8	18					
	L-Max	N	51.4	16					
5	eiP	Z	23 43 32						USCGS: 10.6S 161.2E h = 60km
6	eP	Z	16 20 20						USCGS: 7°.0S 13.1W h = 19km
6	eiP	Z	18 45 00						USCGS: 7.0S 120.4E h = 598km
6	iP	NEZ	22 21 23	a			+		
	iX	Z	24 49						
	ePPP	Z	26 16						
	eS	NE	31 10						
	eScS	E	31 38						
	eSP	Z	31 57						
	e(PS)	E	32 10						
	eX	E	35 59						
	eX	E	38.8						
	eL	N	42(10)						
	L-Max	N	43.8	36					
	L-Max	E	49.9	23					
	eP'P'	Z	48(29)						
7	eP	Z	07 54 29						USCGS: 9.4S 155.3E h = 174km
	iPcP	Z	54 35						
7	eiP	Z	12 45 33						USCGS: 20.2S 169.6E h = 25km
	iX	Z	45 45						
7	eP	Z	13 23 08						USCGS: 5.7S 149.7E h = 57km
	iPcP	NEZ	23 13						
	ipP	Z	23 25						
	e(SKS)	NEZ	33 27						
	eX	EZ	34 17						
	eSS	E	38(49)						
	L-Max	NE	47.9						
7	eP	Z	14 53 41						USCGS: 20.4S 169.2E h =100 km
	ipP	Z	54 01						
7	iP	Z	15 41 45				+		
	iX	Z	41 51						
	iX	Z	42 03						
	i(pP)	Z	43 28						Possibly separate quake
7	iP	Z	16 16 30				+		

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
JULY	(cont'd)		h m s	s				km	
7	iP	NEZ	22 31 25				+		USCGS: 20.1S 169.2E h = 89km
	iPcP	NEZ	31 34						
	eS	NE	41 13						
7	iP	Z	23 00 55						
	iX	Z	01 08						
8	eP	Z	02 47 12						USCGS: 20.0S 168.8E h = 52km
	iPcP	Z	47 23						
	iX	Z	47 52						
	eS	NE	57 01						
8	eP	Z	03 37(17)						USCGS: 20.6S 169.1E h = 25km
8	iP	NEZ	15 46 33				+		USCGS: 20.1S 169.8E h = 44km
	i(pP)	Z	46 45						
	isP	Z	46 50						
	iX	Z	48 05						
	eS	NE	56 22						
	eL	E	16 12.4						
	L-Max	E	17.7						
8	iP	EZ	15 52 08				-		Approx. 20.0S 169.0E
	i(pP)	Z	52 18						
	iX	Z	52 40						
8	eP	Z	21 25 52						Large Microseisms
	iX	Z	25 59						USCGS: 20.2S 169.0E h = 56km
8	iP	Z	22 00 38						Large Microseisms
									USCGS: 20.2S 169.0E h = 68km
9	iPKP	Z	17 05 32						USCGS: 51.7N 176.2E h = 33km
	iX	Z	05 39						
	iX	Z	05 50						
10	iP	Z	04 02 32				+		USCGS: 19.2S 68.4W h = 117km
	ipP	Z	02 59						
	esP	Z	03 11						
10	eiP	Z	13 36 08						
10	iP	Z	14 00 13						USCGS: 27.3S 177.1W h = 58km
11	iP	Z	05 57 08				-		
11	iP	Z	09 43 46						USCGS: 08.3N 93.3E h = 163km
	eS	N	53 41					9000	
	eSKS	NE	53 49						
	ePS	NE	54 49						
	eL	E	10 04.5						
	L-Max	N	12.7	18					
11	eP	Z	17 15 12						
11	iP	Z	18 46 34				-		USCGS: 6.7S 125.8E h = 579km
12	iP	Z	04 59 52				+		USCGS: 3.3N 127.9E h = 92km
	iX	Z	00 09						
	ipP	Z	00 16						
12	eiP	Z	14 48 40						USCGS: 22.8S 171.3E h = 65km
	eX	Z	54						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
JULY	(cont'd)		h m s	s				km	
12	eiP	Z	20 55 48						
	iX	Z	55 57						
13	iP	Z	10 44 30				+		USCGS: 5.5S 150.8E h = 25km
13	iP	Z	13 57 18				+		USCGS: 21.3S 175.7W h = 29km
	ipP	Z	57 29						
	iX	Z	57 39						
13	eP	Z	15 08 41						USCGS: 20.5S 169.0E h = 67km
	eX	Z	08 54						
13	iP	Z	22 21 02						USCGS: 25.2S 179.7E h = 526km
15	iP	Z	00 30 51				-		USCGS: 13.1N 120.4E h = 52km
15	eP	Z	08 04 27						USCGS: 57.8S 148.5E h = 60km
15	eP	Z	12 06 08						USCGS: 3.8S 131.4E h = 100km
	iX	Z	06 20						
15	iP	Z	14 05 51						USCGS: 6.8S 116.9E h = 565km
	iPcP	Z	06 08						
	epP	Z	07 48						
	eP'P'	Z	33 42						
15	iP	Z	21 16 33				+		
16	iP	Z	05 34 46				-		USCGS: 19.0S 175.4W h = 200km
16	iP	Z	06 59 23				-		USCGS: 18.6 175.7W h = 172km
	iX	Z	59 32						
	esP	Z	07 00 22						
16	iP	Z	07 18 50				+		
16	iP	Z	12 59 21				+		
16	iP	Z	14 13 21				-		USCGS: 22.7S 171.2E h = 56km
	iX	Z	13 25						
	i(sP)	Z	13 44						
16	iP	Z	20 11 06				+		USCGS: 34.3S 178.5W h = 191km
	iX	Z	11 19						
16	iP	Z	23 14 59				-		USCGS: 18.0S 178.3W h = 591km
17	ePKP	Z	01 20 09						USCGS: 16.7N 97.7W h = 74km
	iX	Z	20 15						
17	iP	Z	09 28 57						USCGS: 37.6S 73.3W h = 100km
17	iP	Z	15 17 12						USCGS: 2.6S 141.9E h = 60km
18	eP	Z	07 28 44						Large Microseisms USCGS: 27.8S 176.8W h = 60km
18	iP	Z	13 15 16						Large Microseisms USCGS: 5.9S 128.5E h = 25km
18	iP	Z	14 18 06						Large Microseisms USCGS: 29.4N 131.6E h = 21km
	iPKP	Z	22(07)						
	iPP	NEZ	22 39						
	iX	Z	23 01						
	iPKKP	Z	33 12						
	iPcPPKP	Z	37 16						

Date 1961	Phase		Time (G.M.T.)	Per	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
JULY	(cont'd)		h m s	s				km	
18	iP	Z	16 34 39						USCGS: 28.0S 66.4W h = 80km
	iX	Z	35 14						
18	iP	Z	21 38 49						USCGS: 13.8N 56.6E h = 43km
	ipP	Z	39 01						
19	iP	Z	03 57 52						USCGS: 58.8S 25.3W h = 39km
	ipP	Z	58 03						
	iX	Z	58 30						
19	iP	Z	09 32 09				+		
19	iP	Z	18 12 53						USCGS: 19.8S 173.9W h = 166km
19	iP	Z	18 37 44				+		USCGS: 23.5S 179.9E h = 531km
19	iPKP	Z	22 56 17						USCGS: 51.7N 173.4W h = 42km
	ipPKP	Z	56 31						
20	iP	Z	02 17 10				+		
20	iP	Z	15 22 02				+		USCGS: 17.5S 178.7W h = 570km
20	iP	Z	20 09 19				-		USCGS: 31.8S 177.2W h = 44km
	ipP	Z	09 30						
21	iP	Z	01 22 15						USCGS: 22.2S 171.6E h = 117km
	ipP	Z	22 43						
21	iP	Z	03 01 01						USCGS: 8.2N 93.4E h = 24km
21	eP	Z	07 56 32						USCGS: 11.3S 166.0E h = 93km
21	eiP	Z	13 19 10						USCGS: 19.4S 169.2E h = 167km
21	iP	Z	19 17 28				+		
22	iP	Z	02 54 31				-		USCGS: 24.7 175.4W h = 100km
	ipP	Z	54 54						
22	eP	Z	10 07 18						USCGS: 7.4S 107.9E h = 142km
22	eP	Z	10 40 17						USCGS: 20.2S 174.0W h = 25km
	iX	Z	40 29						
22	eP	Z	14 03(14)						
22	iP	Z	18 10 07				+		
22	iP	Z	18 19 39 a.				+		USCGS: 54.0S 141.2E h = 84km
	ipP	Z	19 56						
	ePP	Z	21 08						
23	iP	Z	11 41 34				+		USCGS: 23.5S 66.3W h = 168km
	iPcP	Z	41 46						
	iX	Z	42 25						
23	iP	Z	11 26 45						USCGS: 7.7S 151.0E h = 75km
23	iP	Z	12 22 16						USCGS: 21.4S 67.2W h = 241km
23	iP	Z	13 48 05				-		USCGS: 25.4S 68.9W h = 35km
	iX	Z	48 28						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
JULY	(cont'd)		h m s	s				km	
23	iP	NEZ	14 15 42				-		USCGS: 18.5S 168.2E h = 44km
	iPcP	Z	15 50						
	ipP	Z	15 58						
	isP	Z	16 06						
	eS	NE	25(36)						
	e(SKS)	NE	25 46						
	eX	N	31 42						
23	ePKP	Z	14 56 43						USCGS: 6.9N 123.5W h = 89km
	ePP	Z	58 03						
23	eP	Z	15 40 56						USCGS: 18.3S 168.2E h = 44km
23	iP	NEZ	15 42 18						USCGS: 18.5S 168.0E h = 107km
	iPcP	Z	42 28						
	ix	Z	42 38						
	ix	Z	42 49						
	esP	Z	42 55						
	eS	NE	52 22						
23	iP	Z	14 28 36				-		USCGS: 18.4S 168.1E h = 48km
	iPcP	Z	28 44						
	ipP	Z	28 53						
23	iP	NEZ	22 03 10				+		USCGS: 18.3S 168.3E h = 44km
	ePP	Z	06 17						
	ePPP	Z	08 10						
	iS	NEZ	13 10						
	iSKS	N	13 23						
	ix	E	14 45						
	ix	E	15 24						
	ex	E	21 28						
	i(SS)	N	21 53						
	eLq	NE	24.2						
	eLR	NE	29.1						
	e(PcPP')	Z	27 33						
	eP'P'	Z	30(08)						
23	iP	Z	22 13 59						Confused by previous
	ePP	Z	17 09						USCGS: 18.4S 168.3E h = 37km
23	eP	Z	22 53 04						USCGS: 18.1S 167.9E h = 139km
	i(PcP)	Z	53 15						
	ipP	Z	53 34						
23	iP	Z	23 34 11						USCGS: 18.6S 168.0E h = 53km
	ix	Z	34 19						
23	eP	Z	23 58 21						USCGS: 18.4S 167.8E h = 25km
	ix	Z	58 44						
24	eP	Z	00 47 03						USCGS: 18.1S 168.2E h = 58km
24	iP	Z	01 42 08				+		USCGS: 21.1S 179.3W h = 642km
	ix	Z	42 31						
	ipP	Z	44 21						
24	iP	Z	01 58 30				+		USCGS: 18.0S 167.9E h = 43km
24	iP	Z	02 10 57				+		USCGS: 18.2S 168.4E h = 23km
	ix	Z	11 22						
24	eP	Z	03 05 18						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
JULY	(cont'd)		h m s	s				km	
24	iP	Z	09 00 07				+		USCGS: 0 124.1E h = 159km
	ix	Z	00 20						
	i(pP)	Z	00 51						
24	iP	Z	10 03 42						
24	iP	Z	16 21 50						
	ex	Z	22 07						
24	eP	Z	18 21 49						USCGS: 3.9S 130.8E h = 118km
	ePcP	Z	21 58						
25	iP	Z	01 42 32				-		USCGS: 18.3S 168.3E h = 99km
	ix	Z	42 38						
25	iP	Z	03 00 42						USCGS: 8.8S 71.3W h = 642km
25	iP	Z	08 07 09				-		USCGS: 38.2S 78.6E h = 19km
	epP	Z	07 17						
25	iP	Z	09 02 49				-		USCGS: 18.4S 167.7E h = 25km
	epP	Z	03 00						
25	iP	Z	18 51 32				+		USCGS: 0.0 124.7E h = 43km
	iPcP	Z	51 39						
	ipP	Z	51 47						
	isP	Z	51 53						
	ix	Z	52 21						
26	iP	Z	01 46 08				+		USCGS: 35.7S 104.5W h = 24km
	ipP	Z	46 15						
	iPcP	Z	46 21						
26	eP	Z	03 07(29)						USCGS: 7.5S 128.0E h = 96km
26	iP	Z	09 29 25				-		USCGS: 37.1S 177.3E h = 100km
	ix	NEZ	29 26						
	ix	Z	29 37						
	iPcP	Z	30 01						
27	eP	Z	02 18 03						USCGS: 30.4S 178.7W h = 482km
	ix	Z	18 22						
28	iP	Z	00 13 37				+		USCGS: 4.5N 125.6E h = 89km
	ex	Z	13 49						
	epP	Z	14 03						Possibly different quake. USCGS: 2.2S 77.1W h = 136km
28	eP	Z	01 19 24						
	ix	Z	19 25						
	ex	Z	23 03						
	ePP	Z	23 46						
	ix	Z	24 14						
	eSKS	NE	29 49						
28	iP	Z	06 23 39				+		USCGS: 18.6S 167.7E h = 41km
	iPcP	NEZ	23 47						
	ipP	Z	23 52						
	ix	Z	24 05						
	ix	Z	24 30						
	eS	NE	33 36						
	eSKS	E	33 51						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	△	Remarks
JULY	(cont'd)		h m s	s				km	
28	iP	Z	13 32 34				-		USCGS: 0.6S 122.4E h = 35km
	ix	EZ	32 38						
	i(pP)	Z	32 43						
	isP	Z	32 49						
	ix	Z	33 01						
28	iPKP	Z	15 38 43				-		USCGS: 43.4N 146.1E h = 34km
	epPKP	Z	38 56						
28	iP	Z	17 28 48				-		USCGS: 20.5S 169.9E h = 147km
29	iP	Z	02 00 51						
29	eP	Z	12 02 57						
	ix	Z	03 01						
29	iP	NEZ	16 39 22				+		USCGS: 23.9S 176.1W h = 23km
	iPcP	Z	39 27						
	ipP	Z	39 33						
30	iP	Z	12 45 59						
30	iP	Z	14 18 18				+		USCGS: 18.1S 168.7E h = 48km
	ix	Z	18 21						
	ipP	Z	18 29						
	ix	Z	18 42						
30	eiP	Z	15 48 38						USCGS: 20.6S 174.1W h = 25km
	epP	Z	48 48						
30	i(P)	Z	20 24 19						
31	iP	Z	00 26 38				-		USCGS: 5.3S 107.2E h = 244km
	iPcP	Z	27 00						
31	iP	Z	23 45 52				+		
AUGUST									
1	iP	Z	01 05 45						
1	eP	Z	01 30(10)						USCGS: 14.2S 166.7E h = 26km
1	iP	Z	05 18 32						
	iPcP	Z	19 18						
1	iP	NEZ	05 52 21				+		USCGS: 9.8S 160.5E h = 50km
	ix	Z	54 12						
	iPP	Z	55 40						
	ePPP	Z	57 36						
	ix	EZ	57 56						Possibly different shock
	e(SKS)	E	06 02 43						
	e(S)	NE	02 46						
	eSS	E	08 23						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	△	Remarks
AUGUST (cont'd)			h m s	s				km	
1	eiP	Z	07 28 34						USCGS: 56.8S 25.1W h = 44km
	ipP	NEZ	28 46						
	ix	Z	29 03						
	ePP	Z	30(10)						
	ix	Z	30 19						
	ePPP	Z	30 32						
	iPcP	Z	30 48						
	eS	NEZ	34 32						
	ex	N	37 48						
1	eiP	Z	09 31 45						USCGS: 56.6 24.0 h = 61km
1	iP	Z	09 42 01						USCGS: 57.1S 26.1W h = 31km
	ipP	Z	42 13						
	ix	Z	42 18						
	iPP	Z	43 38						
	ePcP	Z	44(12)						
	eS	NE	47 58						
1	iP	Z	10 40 31						USCGS: 2.1S 152.2E h = 25km
1	ePKP	Z	14 49 50						USCGS: 19.1N 104.1W h = 58km
1	iP	Z	22 23 38					+	USCGS: 18.0S 167.6E h = 214km
	epP	Z	23 59						
2	iP	Z	01 27(06)						Large Microseisms USCGS: 53.3S 134.9W h = 22km
2	eP	Z	03 38 52						Large Microseisms USCGS: 56.7S 24.8W h = 25km
	epP	Z	39 03						
	ePP	Z	40(25)						
2	eP	Z	04 06 42						USCGS: 57.6S 26.6W h = 67km
	ipP	Z	06 57						
3	iPKP	Z	03 26 44						USCGS: 18.2N 66.2W h = 141km
3	eiP	Z	03 30 08						
3	eP	Z	07 03 47						USCGS: 3.5S 130.8E h = 22km
	i(pP)	Z	03 57						
	ix	Z	04 08						
3	iPKP	Z	14 44 30						USCGS: 52.2N 174.0E h = 41km
4	iPKP	Z	10 56 11						USCGS: 51.4N 177.4W h = 20km
	ipPKP	Z	56 26						
	iPKP	Z	56 27						
	ipPKP	Z	56 31						
4	iP	Z	18 31 40						USCGS: 19.9S 169.7E h = 119km
	ix	Z	31 43						
4	i(PKP)	Z	23 12 13						USCGS: 45.3N 151.1E h = 20km
4	iP	Z	23 43 26					-	USCGS: 25.4 179.7W h = 495km
5	iP	Z	01 20 10						USCGS: 13.7S 166.0E h = 40km
	ex	Z	20 18						
5	i(PKP)	Z	02 47 16						USCGS: 60.5N 148.6W h = 105km
5	iP	Z	06 54 42						USCGS: 28.2S 176.7W h = 66km
	i(pP)	Z	54 53						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	△	Remarks
AUGUST (cont'd)			h m s	s				km	
5	iP	Z	09 40 22				-		USCGS: 18.8S 68.2W h = 113km
	ipP	Z	40 55						
	eSKS	NE	50(47)						
6	eP	Z	08 25 49						
6	eP	Z	10 46 18						USCGS: 2.7S 122.0E h = 69km
6	iP	Z	17 19 25				-		USCGS: 3.2S 139.6E h = 79km
	ipP	Z	19 40						
7	iP	Z	04 34 08				+		USCGS: 2.7S 121.6E h = 76km
	iPcP	Z	34 17						
	epP	Z	34 27						
	eS	N	43 54						
7	iP	Z	10 55 24				+		USCGS: 0.3N 124E h = 76km
	eX	Z	55 49						
7	iP	Z	12 34 03				-		USCGS: 28.1S 176.5W h = 39km
	iX	Z	34 07						
	ipP	Z	34 16						
7	iP	Z	14 39 45						USCGS: 5.8S 130.1E h = 25km
7	iP	Z	16 19 02						USCGS: 61.1S 160.4E h = 49km
	iX	Z	19 27						
	ePP	Z	20 32						
	ePcP	Z	21 16						
7	iP	Z	17 09 27						USCGS: 27.5S 177.1W h = 60km
7	eP	Z	17 41 51						
7	eP	Z	23 41 46						
	eX	Z	41 59						
8	eP	Z	00 30 31						USCGS: 28.1S 176.5W h = 51km
	iPcP	Z	30 43						
	ipP	Z	30 48						
	iX	Z	30 58						
8	i(P)	Z	05 36 07						
8	iPKP	Z	05 56 07				+		USCGS: 51.9N 176.3W h = 57km
	epPKP	Z	56 21						
8	eiP	Z	07 31 01						USCGS: 8.1S 156.6E h = 61km
8	iPKP	Z	12 38 04	A			+		USCGS: 50.9N 170.7W h = 24km
	iX	NEZ	38 07						
	iX	NEZ	38 36						
	iX	Z	39 02						
	i(PP)	Z	41 48						
	eSKKS	E	48 27						
8	i(P)	Z	12 48 15						
8	e(P)	Z	13 09 14						
8	iPKP	Z	13 57 37						USCGS: 51.3 170.5W h = 39km
8	iP	Z	16 03 08						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
AUGUST (cont'd)			h m s	s				km	
8	iP	Z	16 51 47						USCGS: 9.7S 160.4E h = 63km
9	iX	Z	00 05 00						
9	iPKP	Z	00 09 01						USCGS: 50.9N 170.5W h = 25km
	eX	Z	09 31						
9	iP	Z	01 36 51						
9	iP	Z	02 45 27						
	iX	Z	45 33						
9	iP	NEZ	16 14 33					+	USCGS: 19.1S 168.7E h = 69km
	iX	Z	15 29						
	eS	E	24 27						
10	iP	Z	06 48 42					+	USCGS: 20.8S 178.0W h = 377km
10	e(P)	Z	16 05 16						
10	eP	Z	17 34 59						USCGS: 9.6S 159.7E h = 44km
	iX	Z	35 08						
	iX	Z	35 17						
11	iPKP	Z	01 03 12						USCGS: 56.1N 164.3E h = 27km
	epPKP	Z	03 20						
	eX	Z	04 04						
11	eP	Z	08 20 39						USCGS: 17.8S 167.8E h = 48km
11	iP	EZ	10 37 00					-	USCGS: 18.5S 168.2E h = 25km
	ipP	Z	37 07						
	i(PcP)	Z	37 12						
	iX	Z	37 30						
11	iP	EZ	11 16 32					+	USCGS: 0.2N 124.0E h = 143km
	i(PcP)	Z	16 38						
	iX	Z	16 54						
	ipP	Z	17 09						
	eS	NE	26 21						
11	iPKP	NEZ	16 10 33					+	USCGS: 42.9N 145.1E h = 71km
	epPKP	Z	10 45						
	iX	NEZ	12 29						
	i(PP)	Z	12 47						
	eX	Z	13 28						
	ePKS	EZ	13 54						
	e(SKP)	Z	14 00						
	iPPP	Z	14 25						
	eX	Z	16 03						
	eSKS	NE	17 36						
	ePKKP	Z	20(42)						
	e(PS)	NEZ	22 20						
	ePcPPKP	Z	23 51						
	i(SPP)	Z	24 10						
	iX	Z	24 26						
	eX	NEZ	27 29						
	eSS	NE	29(40)						
11	iP	Z	22 49 11					-	USCGS: 2.8S 122.1E h = 20km
	i(pP)	Z	49 17						
	iX	Z	49 29						
	eS	NE	58 54						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	△	Remarks
AUGUST (cont'd)			h m s	s				km	
11	i(P)	Z	22 52 49						
11	iPKP	Z	23 52 50				+		USCGS: 42.8 145.1E h = 72km
	ipPKP	Z	53 03						
	iX	Z	53 13						
12	i(P)	Z	14 11 48						
14	i(P)	Z	11 06 04						
14	iP	Z	19 02 55	K			-		USCGS: 24.2S 175.7W h = 21km
	iX	Z	03 34						
14	eiP	NEZ	23 40 35				+		USCGS: 20.3S 169.4E h = 97km
	ipP	Z	40 49						
	iX	Z	40 53						
	iX	Z	41 56						
15	ePKP	Z	18 22 38						USCGS: 32.8N 142.4E h = 39km
	eX	Z	23 37						
16	iP	Z	01 55 56						
16	eP	Z	03 45 05						USCGS: 31.8S 177.9W h = 70km
	iX	Z	45 11						
	ipP	Z	45 24						
	isP	Z	45 36						
16	eiP	Z	16 21 02						
16	eP	Z	16 27(27)						USCGS: 13.8S 14.7W h = 25km
	ipP	Z	27 35						
17	eP	Z	01 15 52						USCGS: 31.5S 179.1W h = 45km
17	iP	Z	05 15 45				+		USCGS: 55.3S 124.3W h = 62km
17	eP	Z	13 06 03						USCGS: 31.7S 178.7W h = 25km
17	iP	Z	18 01 25				-		USCGS: 18.6S 168.8E h = 25km
17	iP	Z	18 02 39						USCGS: 17.1S 71.8W h = 105km
17	iPKP	NEZ	21 35 22				-		USCGS: 46.3N 149.3E h = 186km
	ipPKP	Z	36 03						
	ePP	Z	37(41)						
	eiSKP	NEZ	38 31						
	iPKS	NE	38 48						
	eX	Z	39(40)						
	ePPP	Z	40 38						
	e(SKSP)	Z	47 31						
	iX	Z	48 08						
	iScSP[1]	Z	50 40						
	eSS	NE	54 58						
18	iP	NEZ	11 12 31				+		USCGS: 24.0S 179.9W h = 519km

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
AUGUST (cont'd.)			h. m. s.	s.				km	
19	iX	NEZ	05 29 44						Preliminary Phases lost in record change.
	iX	Z	31 42						
	iSKS	NE	31 44						USCGS: 10.7S 71.0W h = 649km
	eS	NE	32 24						
	e(SP)	NEZ	33 50						
	esS	N	36 32						
	iPKKP	Z	39 00						
	eSS	NE	39 00						
	esSS	NE	43(30)						
	eSSS	E	43 50						
	iP^1P^1	Z	47 06						
	$e(SKPP^1)$	Z	49(28)						
	$eP^1P^1P^1$	Z	06 07(00)						
19	ePKP	Z	05 52 07						USCGS: 36.0N 136.5E h = 17km
	iPP	Z	53 28						
	iPKKP	Z	06 02 42						
	$i(PcPP^1)$	Z	06 31						
19	eP	Z	07 16 12						
19	iP	Z	11 40 02						
19	iPKP	Z	15 11 12				+		USCGS: 18.0N 68.8W h = 146km
	iX	Z	11 51						
19	iP	Z	16 13 43				-		USCGS: 11.4S 70.6W h = 645km
19	iP	Z	20 10 13				+		
19	iP	Z	20 37 54						USCGS: 2.1N 96.9E h = 25km
	iX	Z	38 18						
19	iP	Z	21 34 39				+		USCGS: 6.0N 126.1E h = 222km
20	eP	Z	01 42 24						USCGS: 17.8S 169.0E h = 60km
	iPcP	Z	42 33						
	i(sP)	Z	42 46						
20	iP	NEZ	05 15 46						USCGS: 17.8S 178.8W h = 592km
	ipP	NEZ	17 47						
	iX	Z	18 02						
	isP	Z	18 57						
	iSKS	NEZ	25 17						
	eS	NE	25 23						
	eSP	Z	26 17						
	eX	NE	26 21						
	e(sS)	N	28(58)						
20	iP	Z	10 32 26				+		USCGS: 6.3S 155.4E h = 72km
	iX	Z	32 39						
20	e(P)	Z	16 53 31						
	eX	Z	53 56						
21	iP	Z	01 40 47						USCGS: 23.4S 65.1W h = 98km
21	iP	Z	02 17 55				+		USCGS: 22.7S 179.2W h = 554km
	epP	Z	19 53						
21	iPKP	Z	11 40 28				-		USCGS: 50.9N 170.9W h = 33km
	i(pPKP)	Z	40 41						
21	iP	NEZ	16 19 26				-		USCGS: 17.8S 174.4W h = 74km
	ipP	Z	19 44						
	iX	Z	20 08						
22	iP	Z	00 08 09				+		
22	iP	Z	03 16 00				-		USCGS: 17.7S 168.5E h = 77km

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
AUGUST (cont'd)			h. m. s.	s.				km	
22	eiP	Z	09 11 48				+		USCGS: 13.4S 166.7E h = 63km
	ipP	Z	12 02						
	iX	Z	12 18						
22	iPKP	Z	22 41 25						USCGS: 52.3N 172.2W h = 53km
	iX	Z	41 30						
23	iPKP	Z	01 20 26						USCGS: 32.9N 116.3W h = 27km
23	eP	Z	04 26 49						USCGS: 38.7N 68.7E h = 25km
	epP	Z	26 57						
	e(PP)	Z	31 00						
23	e(P)	Z	15 07 02						
24	iPKP	Z	05 11 21						USCGS: 42.9N 145.3E h = 44km
	ipPKP	Z	11 34						
24	iP	Z	09 23 35				+		USCGS: 15.0S 167.6E h = 60km
24	eP	Z	17 38 00						USCGS: 6.0S 149.9E h = 96km
	iX	Z	38 14						
24	eiP	Z	19 06 12						
24	iP	Z	21 10 10						USCGS: 21.3S 173.1E h = 258km
	iX	Z	10 13						
	iX	Z	10 41						
24	iPKP	Z	23 00 06				+		USCGS: 43.0N 145.0E h = 18km
	iX	Z	00 25						
25	iPKP	Z	07 19 28						Large Microseisms.
	i(pPKP)	Z	19 43						USCGS: 53.5N 161.2W h = 36km
	iX	Z	19 52						
25	eP	Z	21 37 33						USCGS: 8.1S 122.8E h = 191km
	iX	Z	37 48						
	epP	Z	38 14						
26	iP	Z	02 57 24						Record confused by large Microseisms and local disturbance.
									USCGS: 20.1S 168.9E h = 125km
27	iP	Z	02 03 04				-		USCGS: 15.3S 13.1W h = 49km
	iX	Z	03 10						
27	ePKP	Z	16 41 23						USCGS: 46.6N 154.1E h = 31km
	iX	Z	41 51						
27	ePP	Z	17 06 05						USCGS: 18.3N 146.6E h = 27km
	iX	Z	06 26						
	iX	Z	06 47						
27	iP	Z	17 14 27						USCGS: 2.2N 128.6E h = 263km
28	iP	Z	06 41 07						USCGS: 15.1S 70.2W h = 185km
	iX	Z	41 26						
28	iP	Z	07 52 54						USCGS: 12.7S 169.6E h = 662km
	iX	Z	53 05						
28	eiP	Z	08 19 43						
28	iP	Z	09 55 43						USCGS: 18.6S 178.0W h = 574km
	ipP	Z	57 44						
28	eP	Z	15 10 33						Southern Indian Ocean.
28	iP	Z	20 38 57						USCGS: 22.9S 113.4W h = 56km
28	eiP	Z	21 40 18						USCGS: 14.0S 74.4W h = 73km
	iPcP	Z	40 20						
	ipP	Z	40 44						
	ePP	Z	43(00)						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
AUGUST (cont'd)			h. m. s.					km	
29	eP	Z	04 28 08						USCGS: 14.0S 166.2E h = 60km
29	iP	Z	10 56 06				-		USCGS: 7.2S 128.3E h = 166km
	ipP	Z	56 47						
29	eiPKP	Z	15 11 02						USCGS: 52.2N 170.8W h = 41km
	iX	Z	11 09						
	ipPKP	Z	11 17						
	i(PKP)2	Z	11 33						
29	iP	Z	21 46 00				-		USCGS: 15.4S 168.1E h = 25km
29	ePKP	Z	22 56 11						USCGS: 52.9S 166.7W h = 66km
30	eP	Z	22 28 15						USCGS: 3.3S 135.9E h = 87km
31	iP	Z	00 34 24						USCGS: 28.1S 176.7W h = 56km
	i(PcP)	Z	34 36						
31	e(P)	Z	01 03 38						
31	iP	NEZ	02 00 58				-		USCGS: 10.6S 70.9W h = 626km
	iX	Z	01 56						Partly confused by following shock.
	ipP	Z	03 10						
	esP	Z	04 13						
	iPP	Z	05 05						
	iSKS	NE	10 36						
	iX	NE	11 42						
	e(SP)	NE	12 47						
31	iP	NEZ	02 09 28				-		USCGS: 10.4S 70.7W h = 629km
	iSKS	NEZ	19 09						
	iS	NE	19 34						
	iX	NEZ	19 51						
	i(SP)	NE	21 24						
	iPKKP	Z	26 18						
	eSS	NE	26 36						
	esSS	NE	29 54						
	eSSS	NE	30 32						
	$e(P^1P^1)$	Z	34 04						
	iP^1P^1	Z	34 28						
	$e(SKPP^1)$	Z	36(40)						
	$e(P^1P^1P^1)$	Z	55 04						
	$iP^1P^1P^1$	Z	55 44						
31	eP	Z	03 08 55						
31	iP	Z	03 42 20						USCGS: 15.2S 177.4W h = 439km
31	iP	Z	04 09 34						USCGS: 15.3S 172.8W h = 25km
31	iP	Z	23 36 53				+		USCGS: 3.2S 139.4E h = 108km
SEPTEMBER									
1	iP	NEZ	00 16 39						USCGS: 59.3S 27.3W h = 131km
	iPP	NE	18 10						
	iS	NEZ	22 16						
	iSS	N	24 50						
	iLq	E	25 05						
	eScS	E	26 37						
	eLr	NE	26 53						
	L Max.	N	27.3	22					
	M	E	30.9	17					
	eX	Z	38(58)						
	eX	Z	46 56						
	iP^1P^1	Z	48 55						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
SEPTEMBER (cont'd)			h. m. s.	s.				km	
1	iP	Z	15 03 33						
1	iP	Z	16 48 46						USCGS: 16.4S 176.6W h = 437km
1	iP	Z	18 53 02				+		USCGS: 18.0S 178.3W h = 619km
	epP	Z	55 10						
1	iPKP	Z	19 09 29						Large Microseisms.
	ipPKP	Z	09 41						USCGS: 13.5S 92.5W h = 37km
	ePP	Z	11(06)						
1	i(P)	Z	23 38 39						
2	iPKP	EZ	00 45 56						Large Microseisms.
	e(PPS)	NE	01 03 03						USCGS: 52.0N 170.9W h = 39km
2	i(P)	Z	01 02 47						
2	eL	E	04 06.1						USCGS: 56.6S 147.1E h = 44km
2	iP	Z	06 30 37						USCGS: 28.6S 176.5W h = 23km
	i(PcP)	Z	30 48						
2	iP	Z	11 01 08						USCGS: 2.0S 67.5E h = 132km
3	i(P)	Z	04 59 21						
3	iP	Z	07 26 58						
3	iP	Z	09 14 36						
3	iP	Z	16 51 37						
4	iPKP	Z	01 11 56				+		USCGS: 52.1N 173.4E h = 41km
4	iPKP	Z	10 08 50				+		USCGS: 51.4N 178.1W h = 35km
	iX	NEZ	08 53						
	ipPKP	Z	09 00						
	ePP	Z	12 37						
4	iP	Z	16 21 24				+		USCGS: 1.3N 127.7E h = 156km
4	iPKP	Z	17 35 18						USCGS: 52.1N 173.8E h = 67km
4	ePKP	Z	19 32(30)						USCGS: 52.8N 167.1W h = 47km
	iX	Z	32 41						
4	iP	Z	22 45 41				-		USCGS: 20.2S 175.8W h = 181km
5	ePKP	Z	00 59 14						USCGS: 16.2S 172.6W h = 49km
5	ePKP	Z	02 57(35)						USCGS: 80.0N 2.3W h = 18km
5	$iPKP_1$	Z	11 51 34						USCGS: 59.8N 150.6W h = 44km
	$ipPKP_1$	Z	51 48						
	$iPKP_2$	NEZ	55 27						
	iX	Z	55 45						
	iX	Z	56 48						
	eSKP	Z	58 12						
	ePP	EZ	59 18						
	iX	Z	12 00 06						
	$e(PcPP^1)$	Z	02 57						
	ePPP	Z	03 17						
	eSKKS	E	06 18						
5	e(P)	Z	15 21 22						
5	eP	Z	16 42 14						
5	iP	Z	17 22 20						
	eX	Z	22 37						
5	eP	Z	22 11 56						
6	eP	Z	06 13 40						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
SEPTEMBER (cont'd)			h. m. s.	s.					
6	iP	Z	08 26 37				+		USCGS: 2.8N 125.8E h = 58km
	iX	Z	26 46						
6	eP	Z	09 58 46						
	iX	Z	59 01						
6	i(P)	Z	22 56 06						
7	eP	Z	09 30 51						
8	eP	Z	03 12 46						USCGS: 40.9S 90.2W h = 25km
8	eiP	Z	09 01 15						
8	iP	NEZ	11 33 56				+	4370	USCGS: 56.1S 27.3W h = 125km
	iPP	NE	35 28						
	i(PcP)	Z	35 24						
	iScP	EZ	39 38						
	iS	NE	39 49						
	isS	E	40 38						
	eX	NE	41 39						
	eSS	N	42 32						
	eX	E	42 37						
	eLq	NE	42 57						
	i(ScS)	NE	43 50						
	eLr	NE	45 26						
	eX	Z	12 03 45						
	iP^1P^1	Z	06 06						
8	iP	Z	17 42 26						USCGS: 0.4S 123.3E h = 169km
9	ePKP	Z	09 30 15						USCGS: 52.5N 169.4W h = 61km
9	ePKP	Z	12 06 54						USCGS: 51.7N 174.9W h = 50km
9	eP	Z	15 36 26						USCGS: 10.6S 164.4E h = 79km
10	eP	Z	03 02 24						USCGS: 31.3S 178.1W h = 50km
10	iP	NEZ	04 56 52				-		USCGS: 22.7S 63.1W h = 519km
	iPcP	Z	56 59						
	ipP	EZ	58 47						
	iX	Z	58 56						
	eX	E	59 15						
	eSKS	NE	05 06(18)						
	$eSKPP^1$	Z	26 01						
10	iP	Z	11 52 46						USCGS: 8.2S 121.7E h = 21km
10	iP	Z	17 56 02				+		USCGS: 24.4S 70.1W h = 77km
	iX	Z	56 10						
10	eP	Z	18 20(31)						USCGS: 27.6S 177.8W h = 152km
	epP	Z	21 07						
10	iP	Z	18 27 37						USCGS: 18.8S 178.5W h = 619km
11	iPKP	Z	03 06 23				-		USCGS: 51.3N 179.7W h = 15km
11	iP	Z	06 08 20						USCGS: 28.3S 67.9W h = 60km
	isP	Z	08 51						
11	eP	Z	11 48 51						USCGS: 1.1N 120.3E h = 81km
11	iP	Z	14 58 20				+		USCGS: 36.6S 69.0W h = 226km
11	eP	Z	20 10 03						USCGS: 4.1S 134.3E h = 19km
11	iPKP	Z	22 33 28						USCGS: 10.8N 62.4W h = 134km
12	iPKP	Z	00 06 22						USCGS: 42.8N 145.4E h = 18km
12	iP	Z	00 28 47				+		USCGS: 18.1S 177.9W h = 548km

Date 1961	Phase		Time (G.M.T.) h. m. s.	Per. s.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ km	Remarks
12	iP	Z	01 26 16				-		USCGS: 18.3S 169.1E h = 208km
12	eP	Z	05 32 11						USCGS: 11.4S 164.9E h = 25km
12	eP	Z	12 10 10						USCGS: 23.0S 176.2W h = 39km
12	iP	NEZ	19 36 26				+		Horizontal components confused by microseisms.
	iX	Z	36 46						USCGS: 59.4S 29.2W h = 25km
	ePP	EZ	37 52						
	i(PcP)	Z	38 22						
	eS	NEZ	42(24)						
13	e(P)	Z	03 27(48)						USCGS: 5.6S 144.8E h = 100km
	iX	Z	28 05						
13	eiP	Z	14 15 26						USCGS: 9.3S 112.9E h = 93km
	ipP	Z	15 48						
13	i(pP)	Z	14 15 54						USCGS: 10.0S 113.1E h = 104km
13	iP	NEZ	21 30 06						USCGS: 41.6S 73.2W h = 154km
	eX	E	39 03						
	iP^1P^1	Z	58 39						
14	eP	Z	18 40(56)						Large Microseisms.
									USCGS: 56.2S 139.9W h = 25km
14	iP	Z	18 55 52						USCGS: 23.6S 179.9W h = 521km
15	iP	Z	21 34 47						USCGS: 10.7S 112.7E h = 100km
	iX	Z	35 01						
16	iP	Z	13 55 30						Large Microseisms.
17	iP	Z	23 34 24				+		USCGS: 5.9S 147.4E h = 45km
	ipP	Z	34 38						
	esP	Z	34 42						
	iX	Z	34 54						
18	eP	Z	11 30 39						
18	eP	Z	15 49(34)						USCGS: 21.0S 173.6E h = 28km
19	iP	NEZ	02 37 17				+		USCGS: 20.3S 63.2W h = 609km
	iPcP	NE	37 21						
	ipP	NEZ	39 19						
	isP	EZ	40 14						
	iPP	Z	40 35						
	iPPP	Z	42 23						
	eSKS	NE	46 45						
	iS	NEZ	46 53						
	eX	E	50 16						
	esS	N	50 22						
	iX	NE	50 38						
	eSSS	NE	55 28						
	eP^1P^1	Z	03 03 44						
	$e(pP^1P^1)$	Z	05 59						
	$i(SKPP^1)$	Z	06 08						
19	eP	Z	05 10 42						
19	iP	Z	09 31 13						USCGS: 2.4N 126.3E h = 84km
19	iP	N Z	09 39 06						
	iX	Z	39 13						
	i(PP)	N	39 42						
	eX	N	40 53						
	eX	Z	41 23						
	eL	N	51.1						
19	iP	Z	11 18 10						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
SEPTEMBER (cont'd)			h. m. s.	s.					
19	iP	Z	13 56 40				+		USCGS: 1.2N 125.5E h = 54km
	epP	Z	56 53						
	i(PcP)	Z	57 08						
19	eP	Z	16 12 49						
19	iP	Z	18 36 38				+		USCGS: 21.6S 179.4W h = 639km
19	iP	NEZ	21 41 41				-		USCGS: 60.1S 22.9W h = 56km
	ePP	Z	42 59						
	iPcP	EZ	44 08						
	eS	NE	47 15						
	eLq	N	50(06)						
	eLr	NE	53(18)						
21	eP	Z	14 07 55						
21	eiP	Z	18 31 27						USCGS: 26.2S 70.8W h = 18km
	i(PcP)	Z	31 37						
	iX	Z	31 59						
23	iP	Z	08 27 56				+		USCGS: 28.5S 177.2W h = 20km
	iPcP	Z	28 12						
23	iP	Z	10 30 10						
	eX	Z	31 35						
23	eP	Z	12 38 17						
23	iP	Z	15 16 33				-		
24	iP	Z	04 51 03						
24	eP	Z	09 48 59						
	iX	Z	50 46						
24	iP	Z	17 00 11				+		USCGS: 56.5S 26.2W h = 25km
	ePP	Z	01 23						
	iPcP	Z	02 19						
24	iPKP	Z	19 23 39				-		USCGS: 18.4N 98.6W h = 81km
	ipPKP	Z	23 55						
24	ePKP	Z	21 59 37						USCGS: 33.3N 141.3E h = 93km
	iPP	Z	22 00 42						
	eX	Z	00 57						
24	iP	Z	22 12 39						
25	iP	Z	01 35 27						
26	$ePKP_1$	Z	02 46 59						USCGS: 60.3N 153.0W h = 125km
	$iPKP_2$	NEZ	47 51						
	iX	Z	48 02						
26	eP	Z	10 57 56						Large Microseisms.
26	eP	Z	07 24(45)						
27	eP	Z	12 56 49						USCGS: 37.0S 73.1W h = 141km
27	iP	NEZ	06 45 40				-		USCGS: 17.4S 178.7W h = 576km
	epP	Z	47 47						
	isP	Z	48 37						
	ePP	Z	49 08						
	iSKS	NEZ	55 10						
	iS	NE	55 17						
	eSP	Z	56 16						
27	eP	Z	10 29 03						
27	eiP	Z	10 59 05						USCGS: 0.8S 123.8E h = 226km

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
SEPTEMBER (cont'd)			h. m. s.	s.				km	
27	ePKP	Z	11 41 38						USCGS: 52.3N 168.7W h = 27km
	iX	Z	41 42						
	epPKP	Z	41 47						
	iX	Z	42 11						
27	iP	NEZ	12 14 34				+		USCGS: 59.4S 24.2W h = 110km
	ipP	Z	14 53						
	isP	Z	15 15						
	iPP	EZ	15 56						
	isPP	Z	16 21						
	iPcP	Z	16 59						
	eS	NEZ	20 20						
	eScS	E	24 37						
	eL	N	25 08						
27	ePKP	Z	19 40 37						USCGS: 52.5S 168.7W h = 42km
	iX	Z	40 42						
	ipPKP	Z	40 49						
	iX	Z	40 53						
	iX	Z	41 13						
27	ePKP	Z	19 46 54						
	iX	Z	47 00						
	ipPKP	Z	47 12						
	iX	Z	46 24						
28	iP	NEZ	01 35 00				+		USCGS: 3.9S 102.0E h = 78km
	iX	Z	35 07						
	i(PcP)	NEZ	35 15						
	iX	Z	36 13						
	eX	Z	38 04						
	iP^1P^1	Z	02 03 08						
	$e(pP^1P^1)$	Z	03 26						
28	iP	Z	06 22 58						Large Microseisms.
29	eP	Z	08 57 49						USCGS: 13.8N 94.0E h = 133km
	epP	Z	58 19						
29	iPKP	Z	17 09 35						USCGS: 42.9N 145.4E h = 37km
	epPKP	Z	09 47						
29	iP	Z	19 18 09				+		USCGS: 0.5N 122.4E h = 110km
	ePcP	Z	18 16						
	ipP	NEZ	18 41						
	eX	Z	19 17						
30	e(P)	Z	11 17 47						
30	iP	Z	19 25 49				-		
	iX	Z	27 44						
OCTOBER									
1	iP	Z	07 55 56						USCGS: 22.2S 172.8E h = 122km
2	iP	Z	06 04 35						USCGS: 33.9S 179.6E h = 30km
	iX	NEZ	04 43						
	ipP	NEZ	04 46						
2	iP	Z	06 32 20						USCGS: 7.6S 107.0E h = 85km
	ipP	Z	32 36						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
OCTOBER (cont'd)			h. m. s.	s.				km	
2	eiP	NEZ	07 13 35						USCGS: 33.8S 179.5E h = 57km
	iX	NEZ	13 44						
	ipP	Z	13 50						
	eL	NE	33.1						
2	iP	Z	11 14 13				-		
2	iP	Z	12 04 58						USCGS: 1.5S 138.3E h = 41km
2	iP	Z	15 43(12)						
3	iP	Z	06 15 44						USCGS: 17.6S 167.5E h = 33km
3	iP	Z	11 25 56						USCGS: 5.2S 143.8E h = 204km
3	eP	Z	19 12 02						Solomon Islands.
3	iP	Z	20 39 17						
3	iP	Z	22 32 55				+		USCGS: 31.4S 179.6W h = 372km
4	iP	Z	02 35 43				+		USCGS: 13.2S 166.5E h = 66km
	ipP	Z	36 02						
4	iP	Z	07 19 36						USCGS: 21.2S 177.8W h = 475km
4	iP	Z	10 59 14						USCGS: 5.4S 154.2E h = 204km
5	iP	Z	01 34 22				+		
	eX	Z	34 31						
5	eP	Z	15 52 57						USCGS: 1.2S 125.6E h = 186km
5	eP	Z	16 29 48						
5	iP	Z	18 20 38				+		USCGS: 19.4S 169.0E h = 58km
	i(pP)	Z	20 51						
	iX	Z	21 17						
5	iSKP	Z	23 22 10						USCGS: 51.0N 149.7E h = 518km
	iX	Z	22 14						
6	e(SKP)	Z	01 48 00						USCGS: 47.6N 157.0E h = 31km
6	iP	Z	06 59 18						USCGS: 10.1S 163.0E h = 50km
6	e(PKP)	Z	08 21 31						USCGS: 16.0N 97.9W h = 32km
6	iP	Z	19 51 12				+		USCGS: 15.4S 167.8E h = 161km
6	iP	Z	22 49 37						
7	iP	Z	08 22 49				+		USCGS: 56.3S 26.9W h = 99km
	iX	Z	22 54						
	ipP	Z	23 10						
	isP	Z	23 23						
	iPcP	Z	24 51						
7	iP	Z	08 27 31				-		USCGS: 21.3S 67.5W h = 149km
	iX	Z	28 31						
7	eP	Z	13 29 23						
7	e(P)	Z	13 34 28						
7	iP	Z	14 30 31				-		
7	$ePKP_1$	Z	16 13(59)						USCGS: 43.5N 128.8W h = 25km
	$iPKP_2$	Z	14 23						
7	eiP	Z	17 39 09						USCGS: 20.1S 68.3W h = 179km
	iX	Z	39 37						
7	iP	Z	19 32 06						USCGS: 56.2S 27.3W h = 76km
	ipP	Z	32 27						
8	eP	Z	01 04 59						USCGS: 3.8S 128.5E h = 178km

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
OCTOBER(cont'd)			h. m. s.	s.				km	
8	$iPKP_1$	Z	03 17 37				-		USCGS: 51.6N 170.9W h = 25km
	ipPKP	Z	17 48						
	$iPKP_2$	Z	18 06						
8	iP	Z	11 57 46						USCGS: 9.8S 160.4E h = 94km
8	iP	Z	12 53 21						USCGS: 29.9S 71.8W h = 65km
	ipP	NEZ	53 38						
	isP	NEZ	53 45						
	iX	Z	53 54						
	iX	Z	54 29						
8	$iPKP_1$	Z	22 16 34						USCGS: 53.1N 166.7W h = 48km
	ipPKP	Z	16 47						
	isPKP	Z	16 55						
	$iPKP_2$	Z	16 57						
8	iP	Z	23 05 17						
8	iP	NEZ	23 53 42						USCGS: 1.6N 127.3E h = 102km
	isP	Z	54 19						
	eX	Z	55 45						
	i(PP)	Z	56 40						
	iSKS	NEZ	24 03 45						
	$e(SKPP^1)$	Z	23 23						
9	iP	Z	01 49 07				-		USCGS: 21.9S 175.5W h = 48km
9	iP	Z	10 39 55						USCGS: 5.9S 147.7E h = 71km
9	iP	Z	10 53 51						USCGS: 6.7S 128.9E h = 21km
9	iP	Z	11 17 11						USCGS: 13.2S 167.8E h = 26km
9	eP	Z	11 24 04						
	iX	Z	24 09						
9	iP	Z	22 26 35				-		Molucca passage Area.
10	iP	Z	03 55 46				-		USCGS: 22.9S 180.0E h = 576km
	ipP	Z	57 49						
	esP	Z	58 48						
10	iP	Z	04 11 47				+		South Banda Sea.
10	iP	NEZ	08 38 16				+		USCGS: 5.4S 154.3E h = 154km
	eX	Z	38 40						
	ipP	Z	38 52						
10	iP	Z	16 19 20						
	eX	Z	19 27						
	iX	Z	19 35						
10	iP	NEZ	17 37 07				+		USCGS: 4.7S 138.2E h = 36km
	iPcP	Z	37 13						
	iX	Z	37 57						
	iX	Z	38 40						
	e(PP)	Z	39 12						
10	eiP	Z	00 41 11				-		USCGS: 28.8S 175.9W h = 88km
	iPcP	Z	41 25						
	ipP	Z	41 32						
10	iP	Z	04 15 07						USCGS: 2.5S 140.9E h = 18km
11	iP	Z	06 31 54						USCGS: 15.4S 172.4W h = 25km
11	$i(PKP_2)$	Z	07 24 53						USCGS: 57.5N 154.1W h = 42km
	iX	Z	24 59						
11	iP	Z	09 40 45				+		USCGS: 11.6S 166.3E h = 52km
	ipP	Z	40 59						
11	iP	Z	12 41 38				-		USCGS: 13.2S 75.5W h = 130km
	ipP	Z	42 13						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
OCTOBER(cont'd)			h. m. s.	s.				km	
11	iP	Z	16 15 15				+		USCGS: 24.5S 179.8E h = 560km
11	iP	Z	22 14 00						USCGS: 10.5S 165.9E h = 135km
12	iP	Z	03 55 12						USCGS: 5.4N 126.0E h = 124km
	iX	Z	55 27						
	ipP	Z	55 44						
12	eP	Z	06 13 58						USCGS: 29.0S 144.9E h = 25km
	eX	Z	14 46						
12	iP	Z	08 36 49				+		USCGS: 5.6S 151.9E h = 41km
12	iPKP	Z	14 12 17						USCGS: 19.1N 66.0W h = 63km
	ipPKP	Z	12 36						
12	iP	Z	14 59 22						
	iX	Z	59 37						
12	iP	Z	16 55 18						
	iX	Z	55 31						
12	iP	Z	22 04 42						USCGS: 60.7S 153.8E h = 25km
	epP	Z	04 51						
	ePP	Z	06(03)						
13	iP	Z	02 34 25				+		USCGS: 6.3N 126.8E h = 60km
13	iP	NEZ	05 06 40						USCGS: 55.9S 27.2W h = 67km
	ipP	E	06 55						
	iPP	NEZ	08 18						
	i(PcP)	NEZ	08 42						
	iX	EZ	09 16						
	iX	Z	10 25						
	iScP	Z	12 17						
	iS	NEZ	12 46						
	iX	Z	15 18						
	eSS	NE	15 32						
	eSSS	NE	16(02)						
	iScS	NEZ	16 40						
	eX	NE	17 21						
	eL	N	17.7						
13	iP	NEZ	10 54 09				+		USCGS: 60.3S 34.3W h = 44km.
	iX	EZ	54 15						
	ipP	EZ	54 21						
	isP	N Z	54 28						
	ePP	NEZ	55 38						
	iPPP	Z	55 01						
	iPcP	Z	56 21						
	iX	Z	56 29						
	eS	NE	11 00 08						
13	eP	Z	14 59(52)						
	iX	Z	15 00 05						
13	iP	Z	17 40 16				-		USCGS: 22.0S 176.9W h = 155km
	iX	Z	40 17						
	iPcP	Z	40 22						
	epP	Z	41 01						
	isP	Z	41 13						
13	eiP	Z	19 58 19						
14	eP	Z	03 55 18						
14	eiP	Z	05 21 00						
14	iP	Z	06 19 29						
14	iP	Z	16 25 49				-		USCGS: 19.1S 168.4E h = 28km
	iX	Z	25 56						
	ipP	Z	26 00						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
OCTOBER (cont'd)			h. m. s.	s.				km	
14	ePKP	Z	22 18 16						USCGS: 51.1N 159.1E h = 80km
15	eiP	Z	05 33 04						
15	eP	Z	09 52 53						
15	eX	Z	15 58 48						
	iX	Z	59 03						
15	eP	Z	17 28 03						
	iX	Z	28 08						
	iX	Z	28 18						
	iS	Z	28 35						
15	iP	Z	17 18 58				-		USCGS: 4.1S 102.3E h = 66km
	ipP	Z	19 13						
15	eP	Z	21 29 34						USCGS: 6.9S 125.4E h = 558km
16	iP	Z	03 39 45				+		USCGS: 19.9S 176.1W h = 224km
16	iP	Z	11 54 08						USCGS: 38.3S 74.4W h = 25km
	ipP	Z	54 16						
	i(sP)	Z	54 22						
16	iP	Z	16 12 37				+		
16	eP	Z	21 57 09						
17	eP	Z	00 29(02)						USCGS: 13.7S 76.1W h = 42km
17	eiP	NEZ	04 33 45						USCGS: 55.8S 0.5E h = 25km
	ipP	NEZ	33 57						
	iX	Z	34 14						
	iPP	EZ	34 47						
	eS	NE	38 58						
	eL	N	40 02						
	e(SS)	E	40 18						
	iScP	Z	40 28						
17	iP	Z	07 41 22						
17	eP	Z	10 03 53						USCGS: 14.9S 168.4E h = 25km
17	iP	Z	14 23 20						
17	iP	Z	18 53 10				-		
18	iP	Z	03 01 22				+		USCGS: 29.9S 177.6W h = 65km
	i(PcP)	Z	01 41						
18	iPKP	Z	11 04 07						USCGS: 53.6N 165.6W h = 47km
	ipPKP	Z	04 19						
18	iP	NEZ	17 03 12				+		USCGS: 36.7S 72.6W h = 67km
	iX	E	03 17						Records confused by microseisms.
	iX	NE	03 22						
	iPcP	NEZ	03 33						
	iPP	Z	05 52						
	eX	Z	06 48						
	iS	NE	12 27						
	eX	NE	15 59						
	eP^1P^1	Z	31 02						
18	iP	Z	17 27 11						
18	iP	Z	17 42 00						
18	iP	Z	18 21 43				+		USCGS: 36.9S 73.5W h = 55km
	iX	Z	21 48						
	ipP	Z	21 58						
19	iPKP	Z	05 29 31				-		USCGS: 35.8N 117.9W H = 22km
	iX	Z	29 34						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
OCTOBER (cont'd)			h. m. s.	s.				km	
19	iP	Z	08 42 40				+		USCGS: 36.9S 72.7W h = 61km
	iX	Z	42 50						
19	iP	Z	09 19 48						USCGS: 55.2S 146.0E h = 86km
19	iP	NEZ	11 30 15						USCGS: 37.1S 69.8W h = 155km
	iPcP	Z	30 50						
	ipP	N Z	30 56						
	iX	Z	30 66						
	isP	Z	31 12						
	ePP	Z	32 51						
	eS	NE	39 12						
	eSP	Z	39 33						
19	iPKP	Z	11 15 26				+		USCGS: 43.0N 139.2E h = 242km
19	iP	Z	19 33 54				+		USCGS: 55.3S 146.4E h = 50km
	ipP	Z	34 07						
	isP	Z	34 16						
	eX	Z	34 31						
	iPP	Z	35 23						
	ePPP	Z	35 49						
	iPcP	Z	36 04						
19	iP	Z	20 37 14						USCGS: 17.6S 174.0W h = 25km
20	$iPKP_1$	Z	06 00 26				+		USCGS: 51.8N 176.0W h = 36km
	$iPKP_2$	Z	00 46						
20	iP	Z	07 58 55						
	iX	Z	59 08						
20	iP	Z	08 17 20				+		USCGS: 7.9S 117.9E h = 25km
21	iP	Z	11 55 11				-		USCGS: 18.0S 178.5W h = 618km Large microseisms.
21	iP	Z	17 46 52				+		USCGS: 10.8S 166.0E h = 192km
21	iPKP	Z	22 41 33						USCGS: 51.6N 176.0W h = 35km
21	i(P)	Z	23 38 04						
22	iP	Z	10 02 28						USCGS: 19.9S 172.4E h = 181km
	iPcP	Z	02 39						
22	iP	Z	14 52 44						USCGS: 17.6S 179.6W h = 549km
22	eP	Z	18 52 29						USCGS: 17.7S 168.2E h = 41km
	iX	Z	52 34						
23	iP	NEZ	00 16 00				+		USCGS: 60.4S 33.4W h = 25km
	iX	Z	17 06						
	iPP	NEZ	17 31						
	i(PPP)	EZ	18 16						
	iX	Z	18 24						
	iPcP	Z	18 29						
	eX	Z	20 19						
	eS	E	22 05						
	eLr	NE	24 58						
	i(SSS)	NE	25 18						
	eLr	NE	27.0						
23	iP	Z	00 26 42						
23	iP	Z	01 35 48				-		USCGS: 28.9S 70.5W h = 125km
	iX	Z	36 01						
	epP	Z	36 20						
	isP	Z	36 31						
23	eiP	Z	01 59 15						
	eX	Z	02 01 28						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
OCTOBER (cont'd)			h. m. s.	s.				km	
23	eP	Z	03 18 07						
	eX	Z	19 48						
23	iP	Z	06 14 53						USCGS: 6.2S 130.3E h = 60km
	eX	Z	15 20						
	eX	Z	16 47						
24	ePKP	Z	07 44 18						USCGS: 45.0N 146.4E h = 82km
	i(pPKP)	Z	44 48						
24	iP	Z	07 48 47				-		USCGS: 16.5S 178.3E h = 40km
24	iP	Z	15 42 09				+		USCGS: 0.3N 123.9E h = 130km
	ipP	Z	42 40						
	isP	Z	42 56						
24	iP	Z	17 51 54						
24	iP	Z	18 11 38				-		Sandwich Island Area.
	i(pP)	Z	11 48						
	iX	Z	11 00						
	iX	Z	12 40						
	iPP	Z	13 08						
25	iP	Z	09 08 02						USCGS: 9.7S 78.6W h = 110km
25	iP	Z	13 00 17						USCGS: 34.7S 178.4W h = 25km
	iX	Z	00 21						
	isP	Z	00 29						
25	iP	Z	13 26 11						
	iX	Z	26 19						
25	iP	Z	14 32 45				+		USCGS: 20.3S 174.1W h = 25km
	iPcP	Z	32 49						
25	iP	Z	16 36 34						USCGS: 14.4N 56.7E h = 40km
25	eP	Z	22 50 33						USCGS: 20.3S 173.2W h = 25km
26	iP	Z	00 50 57				+		USCGS: 3.1S 147.4E h = 14km
	iPcP	EZ	51 03						
	eX	Z	52 44						
	iX	EZ	53 55						
	ePP	EZ	54 28						
	eSKS	NE	01 01 28						
	eS	NE	01 36						
26	iP	Z	08 27 08				+		USCGS: 37.9S 73.4W h = 55km
	iX	Z	27 18						
26	eP	Z	11 23 21						USCGS: 17.9S 167.7E h = 124km
	iPcP	Z	23 31						
26	iP	Z	11 51 46						
26	iP	NEZ	15 38 24				-		USCGS: 0.4S 98.6E h = 18km
	ipP	NEZ	38 33						
	iX	Z	39 01						
	ePP	Z	41 02						
	eS	N Z	47 51						
	e(sS)	NE	48 02						
	eSKS	NE	48 30						
	eP^1P^1	Z	16 06(27)						
26	eP	Z	15 53(40)						
26	iP	Z	16 17 02						USCGS: 0.1S 98.6E h = 87km
	iX	Z	17 11						
26	iPKP	Z	17 41 08						USCGS: 18.0N 100.0W h = 43km

1961	Phase		(G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
OCTOBER (cont'd)			h. m. s.	s.				km	
26	i(P)	Z	17 45 29						
26	eP	Z	19 39 53						USCGS: 0.3S 98.5E h = 58km
	i(pP)	Z	40 03						
	iPcP	Z	40 14						
27	eP	Z	10 41 37						USCGS: 4.7S 104.7E h = 20km
28	iP	Z	01 46 31				+		USCGS: 17.7S 178.9W h = 605km
28	iP	Z	06 13 03				+		USCGS: 11.6S 166.4E h = 34km
	e(sP)	Z	13 16						
28	eiP	Z	06 32 05						USCGS: 18.7S 168.9E h = 25km
28	iP	Z	09 35 01						USCGS: 20.3S 174.1W h = 76km
28	eP	Z	11 00 31						USCGS: 33.7N 48.5E h = 34km
28	iP	Z	14 55 00						
28	iP	Z	15 00 19				+		USCGS: 38.7S 73.3W h = 43km
	iX	Z	00.23						
	iX	Z	00 29						
	isP	Z	00 37						
28	i(P)	Z	18 30 39						
	iX	Z	30 47						
28	iP	NEZ	22 56 49				-		USCGS: 13.9S 166.0E h = 89km
	iPcP	Z	56 59						
	epP	Z	57 10						
29	eiP	Z	00 08 19						
29	$ePKP_1$	Z	09 32 15						USCGS: 49.0N 128.7W h = 16km
	$ePKP_2$	Z	33 05						
	$i(pPKP_2)$	Z	33 11						
30	i(pPKP)	Z	02 05 02						USCGS: 42.5N 126.6W h = 50km Large microseisms.
30	$ePKP_1$	Z	02 36(20)						USCGS: 42.3N 126.7W h = 36km
	$ipPKP_1$	Z	36 32						
	$i(PKP_2)$	Z	36 44						
	ePP	Z	40 18						
30	iP	Z	16 16 26				-		
	iX	Z	16 34						
	iX	Z	16 42						
30	iP	NEZ	17 46 15						USCGS: 28.5S 178.1W h = 219km
	iX	Z	46 19						
31	iPKP	EZ	02 03 27						USCGS: 51.9N 176.1E h = 35km
	i(pPKP)	Z	03 35						Record confused by microseisms.
	iX	Z	03 49						
	iX	Z	04 07						
31	iP	Z	03 30 29						USCGS: 5.0S 104.1E h = 27km
31	iP	Z	03 57 00						USCGS: 31.2S 178.3W h = 232km
31	iP	Z	04 52 25				-		
31	iP	Z	20 44 57						
	iX	Z	45 09						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
NOVEMBER			h. m. s.	s.				km	
1	iP	Z	18 04 36						
2	iP	Z	05 34 14						USCGS: 17.9S 178.5W h = 598km
2	iP	Z	17 36 08						
2	i(PKP)	Z	23 56 08						USCGS: 54.5N 162.3W h = 40km
	iX	Z	56 19						
3	iP	Z	01 34 34						
3	eiP	Z	04 16 23						USCGS: 13.4S 167.8E h = 75km
3	iP	Z	15 33 22						USCGS: 10.5S 165.8E h = 66km
	ipP	Z	33 37						
3	iP	Z	21 18 18						USCGS: 20.0S 173.8W h = 25km
3	eP	Z	22 27 35						USCGS: 22.5S 170.2E h = 91km
3	iP	Z	22 36 35						USCGS: 5.1S 131.2E h = 63km
3	iP	Z	22 51 12				+		
3	iP	Z	23 01 20						
4	iP	Z	03 16 35				+		USCGS: 2.9S 137.2E h = 51km
	ipP	Z	16 47						
	iX	Z	17 03						
4	e(PKP)	Z	03 58 03						USCGS: 50.0N 155.5E h = 32km
4	i(P)	Z	03 19 30						USCGS: 32.1N 92.2E h = 25km
4	iPKP	Z	04 54 23						USCGS: 52.4N 175.4W h = 75km
4	iP	Z	18 36 49				-		
	iX	Z	37 00						
	iX	Z	37 42						
5	iP	Z	00 31 07						USCGS: 11.6S 166.4E h = 67km
	ipP	Z	31 23						
5	iP	Z	00 32 31						
5	iP	Z	01 10 18						
5	iP	Z	10 37 35						
5	iPKP	Z	10 55 37						USCGS: 45.7N 147.9E h = 142km
	epPKP	Z	56 16						
	i(SKP)	Z	58 43						
5	iP	Z	13 16 50						USCGS: 26.8S 175.5W h = 64km
5	iP	Z	19 37 27						
6	eiP	Z	00 05 15						USCGS: 49.4S 163.3E h = 35km
	iX	Z	05 19						
	ePcP	Z	06 36						
6	eiP	EZ	05 40 41						USCGS: 13.3S 166.0E h = 210km
	iX	Z	40 53						
	iX	Z	41 09						
	ipP	Z	41 34						
	esP	Z	41 51						
	eSKS	E	50(56)						
6	iP	Z	07 22 57				-		USCGS: 34.6S 72.2W h = 16km
	ipP	Z	23 04						
	i(PcP)	Z	23 23						
	iX	Z	23 33						
6	eP	Z	13 22 11						USCGS: 6.0S 146.9E h = 25km Large microseisms.

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
NOVEMBER (cont'd)			h. m. s.	s.				km	
6	iP	Z	18 33 42				-		USCGS: 27.6S 66.2W h = 184km
7	iP	Z	00 51 16				+		USCGS: 21.4S 179.1W h = 653km
7	eP	Z	01 25 54						USCGS: 11.6N 126.1E h = 47km
7	iP	Z	01 29 28				-		
7	iP	Z	12 26 47				+		USCGS: 26.9S 176.3W h = 54km
	ipP	Z	27 03						
	iX	Z	27 37						
7	iP	Z	21 20 45						USCGS: 34.3S 179.2W h = 39km
	iX	Z	21 18						
9	eP	Z	01 21(07)						USCGS: 22.0S 170.1E h = 33km Confused by microseisms.
9	iP	Z	04 31 58						USCGS: 22.9S 67.9W h = 84km Confused by microseisms.
9	iP	Z	17 51 59						USCGS: 13.7S 165.7E h = 92km
9	iP	Z	18 48 51				+		USCGS: 5.9S 129.8E h = 87km
	eX	Z	59 46						
9	iP	Z	23 19 09						USCGS: 15.8S 174.9W h = 289km
10	iP	Z	02 20 37				-		USCGS: 14.3S 71.9W h = 68km
	isP	Z	21 02						
10	eP	Z	07 42 17						USCGS: 2.5S 138.3E h = 52km
	i(pP)	Z	42 29						
10	iP	Z	14 04 57						
10	iP	Z	18 12 24				-		USCGS: 17.5S 178.8W h = 586km
	iX	Z	12 31						
	eX	Z	14 25						
	ipP	Z	14 28						
11	iP	Z	03 49 37						
11	eP	Z	07 01 28						
11	iP	Z	08 59 54						USCGS: 2.3S 138.2E h = 54km
11	iPKP	Z	18 02 25						USCGS: 52.7N 169.3W h = 51km
11	eiP	Z	20 14 22						
12	iP	NEZ	02 26 40				-		USCGS: 0.8N 29.5E h = 39km
	ipP	Z	26 52						
	i(PcP)	Z	27 03						
	iX	Z	27 49						
12	iP	Z	08 30 05						USCGS: 16.9S 66.9E h = 34km
12	iP	Z	10 24 35				+		USCGS: 45.5S 167.3E h = 19km
	iX	Z	25 26						
	iPcP	Z	25 38						
12	iP	Z	18 23 29				+		USCGS: 23.2S 180.0E h = 556km
	iPcP	Z	23 34						
12	iP	Z	18 50 09						USCGS: 0.1N 126.1E h = 165km
13	iP	Z	07 52 03				-		USCGS: 3.8S 136.3E h = 34km Record confused by microseisms.
14	eP	Z	02 14 15						
14	iP	Z	12 49 51				-		USCGS: 33.9S 179.6W h = 51km
14	iP	Z	16 26 23				-		
	i(pP)	Z	27 17						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
NOVEMBER (cont'd)			h. m. s.	s.				km	
14	iP	Z	14 48 44						
14	iP	Z	17 24 59						USCGS: 5.7S 104.3E h = 16km
	iX	Z	25 19						
15	eP	Z	04 33(52)						USCGS: 4.1S 105.0E h = 126km
15	iPKP	Z	05 58 37						USCGS: 34.9N 119.1W h = 26km
	iX	Z	58 41						
15	iPKP	NEZ	07 36 10				+		USCGS: 43.1N 145.1E h = 43km
	ipPKP	Z	36 24						
	eX	Z	36 41						
	iX	Z	36 53						
	iX	Z	37 02						
	iPP	Z	38 14						
15	e(P)	Z	07 49(16)						Possibly part of previous 'quake.
	eX	NE	55 16						
15	iP	Z	10 29 16						
15	eP	Z	19 36 10						USCGS: 21.1S 175.8W h = 25km
15	iP	Z	22 09 10				-		USCGS: 56.6S 25.7W h = 41km
	ipP	Z	09 23						
	iX	Z	10 00						
	iPcP	Z	11 18						
16	iPKP	Z	08 38 31						USCGS: 18.6N 68.9W h = 147km
16	eP	Z	16 15 56						USCGS: 20.2S 172.9E h = 32km
	ipP	Z	16 06						
17	iP	Z	08 25 22				-		USCGS: 17.7S 178.6W h = 598km
17	iP	Z	09 23 27						
	i(S)	Z	23 39						
17	iP	Z	11 41 27						
17	iP	Z	12 02 07				+		
	i(PcP)	Z	02 12						
17	iPKP	Z	15 08 52				+		USCGS: 52.4N 170.7W h = 27km
17	eiP	Z	16 09 55						
17	iP	Z	19 16 02				-		USCGS: 19.6S 175.5W h = 220km
	iPcP	Z	16 10						
17	iP	Z	21 46 58						USCGS: 13.4S 167.1E h = 200km
18	eP	Z	06 14 38						USCGS: 0.9S 126.9E h = 38km
	isP	Z	14 55						
18	eP	Z	07 35 12						USCGS: 56.2S 25.2W h = 25km
	epP	Z	35 21						
	ePcP	Z	37 19						
18	iP	NEZ	11 28 40				+		USCGS: 27.0S 176.3W h = 61km
	iX	Z	28 49						
	ipP	Z	28 56						
	iX	Z	29 12						
	iPcP	Z	29 17						
	iX	Z	30 06						
	eS	NE	38 22						
	eX	E	38 34						
18	iP	Z	12 00 06				-		USCGS: 21.4S 175.8W h = 114km
	ipP	Z	00 41						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
NOVEMBER (cont'd)			h. m. s.	s.				km	
18	iPKP	Z	00 54 49				+		USCGS: 51.6N 178.5W h = 68km
	iX	Z	54 53						
	iX	Z	54 59						
	ipPKP	Z	55 06						
	iX	Z	55 21						
19	eP	Z	10 25 19						USCGS: 7.0S 154.8E h = 85km
19	iP	NEZ	23 33 49				-		USCGS: 9.8N 124.3E h = 157km
	ipP	Z	34 26						
	isP	Z	34 40						
	iX	Z	35 32						
	iPP	Z	37 01						
	eX	Z	38 02						
	eS	NEZ	43 35						
	eSKS	NEZ	43 47						
	$eSKP^1P$	Z	24 03 39						
	$i(SKP^1P)$	Z	24 03 40						
20	e(P)	Z	00 11 27						
20	iP	Z	11 56 07						USCGS: 21.8S 169.9E h = 33km
	iX	Z	56 12						
	i(pP)	Z	56 18						
21	eP	Z	07 15 33						
21	eiP	Z	11 22 33						
	iX	Z	23 06						
	iX	Z	23 22						
21	iP	Z	12 03 28						
21	iP	Z	18 14 15						USCGS: 13.4S 66.1E h = 28km
22	iP	Z	02 57 12						USCGS: 21.6S 169.9E h = 74km
	isP	Z	57 40						
22	iP	Z	10 48 00						USCGS: 21.4S 170.2E h = 52km
22	iP	Z	11 18 28						USCGS: 21.5S 169.8E h = 41km
	ipP	Z	18 41						
22	iPKP	Z	12 48 53						USCGS: 15.4N 91.7W h = 84km
22	iP	Z	20 51 00				+		USCGS: 26.8N 176.6W h = 77km Record confused by large microseisms.
25	iP	Z	14 23 50				+		USCGS: 6.3S 154.8E h = 83km
	ipP	Z	24 05						
25	iP	Z	23 07 01						USCGS: 22.3S 175.5W h = 25km
26	iP	Z	03 43 22						
27	eiP	Z	17 22(47)						USCGS: 0.6S 127.1E h = 25km
	iX	Z	23(08)						
	iX	Z	23(20)						
	eS	NE	32(50)						
27	eP	Z	23 38 09						USCGS: 60.6S 156.9E h = 46km
	iPP	Z	39 45						
28	iP	Z	08 59 17						USCGS: 5.9S 130.1E h = 117km
28	iP	Z	23 03 17						
29	eP	Z	04 54 06						USCGS: 38.5S 75.0W h = 85km
	iX	Z	54 14						
29	eP	Z	07 40 41						
29	iP	Z	09 37 27				+		USCGS: 38.3S 19.4W h = 25km
	iX	Z	37 33						
	ipP	Z	37 36						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
NOVEMBER (cont'd)			h. m. s.	s.				km	
29	iP	Z	18 15 05						
29	iP	Z	19 26 04						
	iX	Z	27 07						
29	iP	Z	22 07 29				-		USCGS: 23.1S 179.9E h = 29km
	i(PcP)	Z	07 34						
	ipP	Z	07 41						
	isP	Z	07 47						
29	iP	Z	22 27 41						USCGS: 18.0S 168.3E h = 52km
29	iP	Z	23 26 39						USCGS: 38.0S 177.7E h = 68km
30	iPKP	Z	12 38 09						USCGS: 43.8N 132.1E h = 469km
30	eP	Z	18 39 27						USCGS: 18.2S 168.0E h = 68km
30	iP	Z	20 15 10						USCGS: 18.6S 179.0W h = 431km
30	iP	Z	21 15 24				-		
30	iP	Z	21 55 37						USCGS: 2.3N 126.8E h = 55km
30	e(P)	Z	23 48 18						
	iX	Z	48 21						
DECEMBER.									
1	ePKP	Z	07 53 47						USCGS: 56.6N 158.8E h = 18km
	ipPKP	Z	53 55						
1	iP	Z	09 27 48						USCGS: 6.0S 130.8E h = 85km
1	iP	Z	09 40 33						
1	eiP	Z	15 15 28						
1	eP	Z	20 48(01)						
1	iPP	Z	21 31 13						USCGS: 26.5N 124.9E h = 206km
	epPP	Z	31 56						
	esPP	Z	32 14						
	ePPP	Z	33 21						
	i(PKKP)	Z	41 32						
2	iP	Z	18 57 58						USCGS: 22.7S 175.1W h = 89km
2	iPKP	Z	19 39 32						USCGS: 51.8N 179.6E h = 81km
3	eP	Z	04 08 19						
3	iP	Z	14 39 36						USCGS: 24.0S 68.1W h = 217km
3	eP	Z	16 26 54						USCGS: 11.6S 166.1E h = 122km
4	iPKP	Z	08 39 52						USCGS: 60.3N 160.4E h = 15km
4	iP	Z	22 50 40						
5	iP	Z	13 08 35				-		USCGS: 50.8S 139.8E h = 64km
	isP	Z	09 01						Large microseisms.
	iX	Z	09 10						
	ePP	EZ	10 11						
	ePcS	NE	14 38						
	iS	E	14 46						
	eX	E	15 47						
	eX	N	16 28						
	eL	E	18.6						
5	iP	Z	13 14 28						USCGS: 16.0S 168.1E h = 145km
6	iP	Z	06 01 06				+		USCGS: 13.7N 93.6E h = 53km

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
DECEMBER (cont'd)			h. m. s.	s.				km	
6	iP	Z	13 47 50						USCGS: 23.5S 176.0W h = 18km
	iPcP	Z	47 55						
	ipP	Z	48 01						
6	iP	Z	13 54 41						
6	iP	Z	15 30 13						USCGS: 23.7S 175.7W h = 29km
6	eiP	Z	15 51 35						USCGS: 8.2S 117.4E h = 64km
6	ePKP	Z	16 58 49						USCGS: 49.4N 155.2E h = 22km
	iX	Z	59 05						
7	iP	Z	00 30 30				+		USCGS: 23.4S 175.9W h = 45km
	ipP	Z	30 41						
	e(sP)	Z	30 49						
7	iP	Z	16 41 38						USCGS: 25.4S 175.4W h = 79km
8	iP	Z	01 08 07				-		
8	iP	Z	03 58 30						USCGS: 23.6S 175.8W h = 45km
8	eP	Z	06 19 48						USCGS: 3.0S 136.9E h = 64km
8	iP	Z	08 24 03				+		USCGS: 13.6S 120.0E h = 25km
8	iP	Z	09 48 48				+		USCGS: 1.8S 139.4E h = 55km
9	ePKP	Z	02 35(28)						USCGS: 56.3N 153.9W h = 31km
9	iP	Z	04 12 04				+		USCGS: 14.9S 75.7W h = 39km
	i(pP)	Z	12 13						
	isP	Z	12 18						
9	i(P)	Z	04 13 34						Possibly part of previous shock.
	iX	Z	14 02						
9	iP	Z	04 36 41						USCGS: 35.9S 179.3W h = 60km
	ipP	Z	36 56						
	isP	Z	37 00						
	iPcP	Z	37 14						
9	eP	Z	10 28 51						USCGS: 7.5S 108.3E h 295km
	iX	Z	29 03						
	iX	Z	29 11						
9	eP	Z	11 01 05						
	iX	Z	01 13						
9	eiP	NEZ	11 28 44				-		USCGS: 43.7S 75.2W h = 34km
	ipP	NEZ	28 55						
	iX	Z	29 26						
	iPcP	Z	29 37						
	iX	Z	29 49						
	iX	Z	30 08						
	i(PP)	Z	31 12						
	iS	NEZ	37 28						
	eSS	E	41 41						
	eL_{1}	E	43.6						
	$eP^{1}P^{1}$	Z	57 25						
	iX	Z	57 38						
9	iP	NEZ	20 00 50				+		USCGS: 21.7S 179.9E h = 620km
	ipP	Z	02 53						
	iX	Z	03 13						
	e(S)	Z	10 03						
9	iPKP	Z	21 41 40						USCGS: 56.3N 153.5W h = 19km
9	eP	Z	21 53 49						USCGS: 23.0S 176.8W h = 25km
9	iP	Z	22 51 17						USCGS: 6.0S 149.3E h 123km
11	e(P)	Z	20 41 39						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	A_E	A_Z	Remarks
DECEMBER (cont'd)			h. m. s.	s.			km	
12	iP	Z	11 48 58					
12	iP	Z	15 33 43					
12	ePKP	Z	23 25(23)					USCGS: 43.5N 146.2E h = 44km
	ipPKP	Z	25 38					
12	e(P)	Z	23 38(45)					
	iX	Z	38 56					
13	eP	Z	11 33 11					USCGS: 50.9S 73.0W h = 82km
	iX	Z	33 17					
13	eP	Z	17 01 53					USCGS: 18.9S 168.4E h = 30km
14	iP	Z	07 22 45				+	USCGS: 3.1S 140.9E h = 44km
	iX	Z	22 51					
	iPcP	Z	22 54					
	isP	Z	23 03					
	ePP	Z	26 01					
14	iP	Z	12 25 54					USCGS: 7.8S 120.5E h = 62km
14	eiP	Z	23 36 58					USCGS: 26.1S 179.3E h = 497km
15	eP	Z	1245 16					
	iX	Z	45 36					
15	eP	Z	12 48 35					USCGS: 5.5S 147.2E h = 181km
15	eiP	Z	19 48 21					USCGS: 0.9N 126.2E h = 47km
15	iP	Z	23 39 17					
16	iP	Z	09 28 40					USCGS: 26.3S 177.5W h = 61km
16	iP	Z	10 11 19				-	USCGS: 23.9S 175.4W h = 25km
	ipP	Z	11 31					
	iX	Z	11 41					
16	iP	Z	20 46 30				-	USCGS: 28.5S 179.4W h = 421km
17	eP	Z	21 45 09					USCGS: 14.4S 75.8W h = 85km
	ipP	Z	45 30					Large microseisms.
17	eP	Z	22 19 50					USCGS: 54.5S 143.9E h = 45km
	epP	Z	20 02					
19	iP	Z	15 53 50					USCGS: 5.0N 127.2E h = 33km
	ipP	Z	53 59					
19	iP	Z	16 21 49					USCGS: 2.1S 122.6E h = 195km
20	iP	Z	01 56 32				+	USCGS: 3.0N 118.4E h = 17km
20	iP	Z	13 35 02					
20	ePKP	Z	13 43(44)					USCGS: 4.6N 75.6W h = 176km
	iPP	Z	44 28					Large microseisms.
	iX	Z	44 57					
	ipPP	Z	45 14					
	iX	Z	45 37					
21	eP	Z	12 15 26					
21	iP	Z	13 42 01					USCGS: 7.5S 129.2E h = 201km
22	eiP	Z	08 45 29					
22	iP	Z	10 45 55					USCGS: 2.8S 136.7E h = 38km
23	eP	Z	16 35 22					
24	iP	EZ	02 52 27					USCGS: 3.4S 140.3E h = 29km
	ipP	Z	52 37					
	iX	Z	52 49					

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
DECEMBER (cont'd)			h. m. s.	s.				km	
24	eP	Z	04 03(06)						USCGS: 3.2S 140.3E h = 69km
24	eP	Z	09 31 25						USCGS: 20.4S 173.6W h = 45km
24	eP	Z	10 41 14						USCGS: 3.2S 140.3E h = 69km
24	eP	Z	16 50 20						USCGS: 3.4S 140.1E h = 44km
24	iP	Z	17 10 41				+		
24	eP	Z	19 22 38						
24	eiP	Z	23 54 26						USCGS: 38.3S 74.6W h = 31km
	epP	Z	54 45						
	isP	Z	54 47						
	iPcP	Z	54 49						
25	iP	Z	08 12 50						USCGS: 3.7S 127.7E h = 47km
	iX	Z	13 09						
25	eP	Z	08 25(21)						USCGS: 1.1S 126.7E h = 25km
25	iP	Z	09 21 00						USCGS: 3.7S 127.7E h = 54km
25	iP	Z	14 07 59						USCGS: 20.4S 173.7W h = 64km
	i(PcP)	Z	08 02						
	ipP	Z	08 14						
25	iP	Z	22 35 35						USCGS: 8.9S 110.2E h = 155km
26	iP	NEZ	04 35 13						USCGS: 55.5S 110.7E h = 566km
	iX	Z	37 21						Large microseisms.
	isP	Z	38 08						
	iS	NE	43 40						
26	iP	NEZ	06 23 14				+		USCGS: 44.2S 38.1E h = 22km
	iX	NEZ	23 20						
	iX	Z	23 28						
	i(PP)	NEZ	23 46						
	eS	NE	27 59						
	iX	Z	28 19						
	iPcP	Z	28 28						
	eL	NE	28 49						
26	iP	Z	06 45 07				-		
27	iP	Z	16 58 56						USCGS: 1.7S 12.9W h = 37km
27	eP	Z	23 58 10						USCGS: 41.2S 175.7E h = 57km
	iX	EZ	58 20						
	ipP	NEZ	58 26						
	isP	Z	58 35						
	iX	Z	59 16						
	eS	NE	00 06 06						
	eScS	NE	08 15						
29	iP	Z	00 08 16						USCGS: 12.4S 166.3E h = 100km
29	iP	Z	10 13 04						USCGS: 6.3S 154.5E h = 44km
29	iP	Z	15 46 55						
29	iP	Z	19 22 16						
30	iPKP	NEZ	00 58 59				+		USCGS: 52.3N 177.7E h = 52km
	iX	Z	59 45						
	iX	Z	01 00 48						
	iX	Z	01 08						
	i(SKP)	Z	02 46						
30	iP	Z	09 11 40				-		USCGS: 22.9S 175.2W h = 41km
	i(PcP)	Z	11 45						
	ipP	EZ	11 52						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
DECEMBER (cont'd)			h. m. s.	s.				km	
30	iPKP	Z	10 34 11						USCGS: 52.0N 178.5E h = 63km
30	iP	Z	12 00 07				-		
	iX	Z	00 29						
30	ePKP	Z	17 01(28)						USCGS: 51.7N 178.5E h = 63km
	iX	Z	01 54						
30	eP	Z	19 28 19						
31	iP	Z	13 58 05						USCGS: 1.6N 127.3E h = 140km
	iX	Z	58 13						
JANUARY 1962									
1	iP	Z	10 49 18						
2	iPKP	Z	00 00 00						USCGS: 52.4N 177.7E h = 27km
	iX	Z	00 15						
2	iP	Z	02 27 43				+		
2	iP	Z	05 36(26)						USCGS: 17.8S 69.8W h = 74km
	ipP	Z	36 43						
2	eP	Z	11 59 16						USCGS: 21.8S 169.8E h = 56km
2	eP	Z	12 28 47						
2	iPKP	Z	12 42 43						USCGS: 80.0N 24.3E h = 48km
	$ePKP_2$	Z	43 04						
	iX	Z	43 31						
	iX	Z	43 48						
2	eP	Z	14 42 08						
2	iP	Z	23 19 05				+		
3	eP	Z	11 33 16						USCGS: 20.6S 174.4W h = 32km
	iX	Z	33 25						
3	iPKP	Z	18 12 39				+		USCGS: 52.2N 177.5E h = 68km
4	iP	Z	07 46 14				+		USCGS: 5.0S 130.4E h = 222km
	iPcP	Z	46 24						
	epP	Z	47 04						
5	eP	Z	00 36(16)						USCGS: 15.5S 177.7W h = 24km
	iX	Z	36 30						
5	iP	Z	08 20 56						USCGS: 15.5S 172.5W h = 60km
	iX	Z	21 02						
	iX	Z	21 09						
5	iP	Z	12 03 39						USCGS: 15.1S 167.6E h = 133km
5	eP	Z	14 12 55						USCGS: 1.6S 100.0E h = 25km
	ipP	Z	13 04						
7	iP	Z	01 50 09						USCGS: 52.0N 177.8E h = 55km
7	eP	Z	22 11 59						USCGS: 37.7S 71.7W h = 90km
8	iPKP	Z	01 19 14						USCGS: 18.5N 70.5W h = 63km
	ipPKP	Z	19 32						
	isPKP	Z	19 41						
	iX	Z	20 09						
	iPP	Z	20 52						
	i(PKKP)	Z	29 26						

Date 1961	Phase		Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
JANUARY (cont'd)			h. m. s.	s.				km	
8	iP	Z	05 54 51						USCGS: 24.2S 177.7W h = 133km
	iX	Z	55 13						
	isP	Z	55 32						
8	eP	Z	17 15(38)						USCGS: 6.4S 147.3E h = 104km
9	ePKP	Z	12 59 46						USCGS: 42.9S 144.8E h = 78km
	ipPKP	Z	13 00 01						
	iX	Z	00 09						
9	iP	Z	19 58 08						USCGS: 20.2S 66.2E h = 25km
	i(pP)	Z	58 15						
10	iPKP	Z	02 39 47						USCGS: 52.9N 169.1W h = 43km
	ipPKP	Z	39 59						
10	iP	Z	22 10 54				-		
	iX	Z	11 11						
11	iPKP	Z	03 13 44				+		USCGS: 51.6N 176.9E h = 53km
	ipPKP	Z	13 59						
11	iP	Z	03 15 01						USCGS: 28.1N 84.8E h = 38km
11	iPKP	Z	07 08 43						USCGS: 51.9N 179.3W h = 60km
	$iPKP_1$	Z	08 56						
	$iPKP_2$	Z	09 16						
	iX	Z							
12	iP	Z	10 06 18						USCGS: 31.9S 70.2W h = 24km
12	ePKP	Z	11 14 36						USCGS: 52.4N 177.7E h = 49km
13	iPKP	Z	05 08 12						USCGS: 52.3N 177.4E h = 49km
13	iP	Z	10 54 03						USCGS: 15.1S 174.0W h = 25km
16	eP	Z	11 47 04						USCGS: 30.5S 177.9W h = 39km
	iX	Z	47 08						
	ipP	Z	47 14						
	iX	Z	48 14						
18	eiP	Z	15 54 56						USCGS: 5.3S 153.7E h = 83km
18	eiP	Z	15 58 18						USCGS: 4.2S 153.6E h = 127km
18	eiP	Z	16 06 20						New Britain area.
18	eiP	Z	16 09 06						New Britain area.
	iX	Z	09 13						
21	iP	Z	13 03 27 K				-		USCGS: 17.7S 178.8W h = 558km
22	iP	Z	16 25 46						
25	iP	Z	07 38 39						USCGS: 15.8S 69.5W h = 209km
31	eP	Z	17 20 50						

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