MAY 1960 – FEB 1961 Jan

Instrument out of action until May? (It was "out of action" from Sept 15th 1959)

COMMONWEALTH OF AUSTRALIA

DEPARTMENT OF NATIONAL DEVELOPMENT

BUREAU OF MINERAL RESOURCES, GEOLOGY AND GEOPHYSICS

(Jan-Feb 1961 Cards at end of 1960 Cards.)

203 Collins Street,
MELBOURNE. VIC.

SEISMOLOGICAL BULLETIN

MAWSON - ANTARCTICA

109

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

Foundation: Felspar Porphyry.

Instruments: Benioff Short Period Vertical: T_s 1.0 sec., T_g 0.2 sec.

Benioff Long Period Horizontals (Two Components) T_s 1.0 sec., 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 1960	Phase	Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
MAY		h. m. s.	s.				km	
19	eP	10 20 49	0.8					USCGS: 17S 66E
19	iPKP	17 05 57						USCGS: 53N 166W
	iPKP	06 23						
20	iP	00 35 56						USCGS: 37½S 147½E
	i(PcP)	36 21						
21	iP	10 14 03						USCGS: 37½S 73½W
	iS	23 15						
	iX	34 14						
	eL	38						
	e(P)	42						
21	iP	11 05 07						USCGS: 37½S 72½W
21	iP	12 32 32						USCGS: 37½S 73W
21	iP	13 11 13						USCGS: 37½S 72½W
21	iP	14 10 31						USCGS: 37½S 72½W
21	iP	14 43 13						USCGS: 37½S 72½W
21	iP	15 20 03						USCGS: 37½S 73W
21	iP	19 17 36						Chile.
22	iP	03 57 42						USCGS: 37½S 73W
22	iP	06 12 16						USCGS: 38S 73½W
22	iP	08 22 32						USCGS: 37½S 73W
22	iP	10 41 50						USCGS: 38S 73½W

Date 1960	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	
22	iP	10 43 54						USCGS: 37½S 73W
22	iP	12 27 54						USCGS: 38S 73W
23	iP	07 19 31						USCGS: 48S 77W
23	iP	08 24 12						USCGS: 40½S 75½W
23	iP	10 03 33						USCGS: 37½S 73W
23	iP	10 48 40						USCGS: 43½S 73½W
23	iP	14 10 55						South of Chile.
28	iP	11 16 55						USCGS: 38S 73W
29	iP	07 50 42						USCGS: 38S 72½W
29	iP	08 45 33						USCGS: 37½S 73W
29	iP	08 18 43						
29	iP	14 16 48						USCGS: 37½S 73W
29	iP	20 09 36						USCGS: 0 121½E
29	iP	21 34 39						Southern Chile.
29	iP	21 50 52						
30	i(P)	07 11 34						Small Local.
30	iP	07 21 56						Small Local.
31	iP	02 51 07						USCGS: 39½S 75W
31	iPKP	11 21 08						USCGS: 18N 62W
31	iPP	11 22 31						
31	iP	13 23 38						USCGS: 7½S 156E
31	iX	16 30 43						
31	iP iX	21 10 56 12 52						USCGS: 5½S 109½E h = 600km
JUNE								
1	iX	05 14 08						USCGS: 38S 73W
1	iP	13 09 49						
1	iP	14 17 36						
1	iP	21 23 42						USCGS: 42S 74W
1	iP	22 42 43						
2	iP	06 08 25						USCGS: 46½S 74W

Date 1960	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	iP	07 59 45						USCGS: 5½S 151,1E
2	iP	08 47 10						USCGS: 40S 74W
2	iP	18 24 56						USCGS: 18½N 61W
2	iP i(pP)	19 10 32 12 35						USCGS: 20½S 178W h = 550km
2	iP	21 42 44						USCGS: 38½S 74W
3	iP	07 50 53						USCGS: 5½S 151E
3	iP ipP	13 26 15 28 57						USCGS: 17½S 179½W h = 600km
3	iP ipP	13 35 15 37 56						USCGS: 17½S 179W h = 600km
3	iP	18 28 27						USCGS: 42½S 75W
4	iPKP	02 46 14						USCGS: 70N 95½W
4	iP	03 14 02						USCGS: 39S 73½W
6	eP iX iX iS eL M	06 06 06 13 08 13 44 14 20 22 32 38						USCGS: 45½S 73W
6	iP	17 26 00						USCGS: 46S 73½W
7	iP	05 33 29						USCGS: 40½S 72W
7	iP	07 12 50						USCGS: 16S 174½W
7	iP iX	11 02 12 07 49						
7	iP	13 07 00						
8	i(P) iX	05 23 21 21 52 13						
9	iX	05 15 22						USCGS: 9S 112½E h = 350km
9	iP	11 36 02						USCGS: 18S 169E
9	iX	15 21 30						
10	iP	09 20 53						USCGS: 15½S 174W
10	iP	12 10 56						USCGS: 6½S 131E
10	iP	14 41 05						USCGS: 37S 75W
11	iP ipP	00 46 50 47 55						USCGS: 21S 64½W h = 285km
11	iP i(S)	08 03 00 03 24						

1960 Date	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	
11	iP	15 26 27						USCGS: 9S 152½E
	iX	28 31						
	eS	36 39						
	eL	56						
11	iP	16 50 00						USCGS: 9½S 152½E
11	iP	17 20 12						USCGS: 9S 152½E
12	iP	04 07 50						USCGS: 22½S 179E
	i(pP)	09 55						
	iX	10 00						
12	iP	07 09 09						USCGS: 29½S 179W
12	eP	07 31 27						USCGS: 36S 98W
12	iP	15 15 25						
13	iP	05 57 40						USCGS: 44½S 76½W
13	i(P)	12 46 02						
13	i(P)	23 32 36						
14	iP	03 05 00						USCGS: 43S 73W
14	iP	13 50 32						USCGS: 9S 152½E
15	iPKP	15 55 48						USCGS: 41N 142½E
15	iP	23 00 59						USCGS: 32S 177½W
	iX	01 05						
	iX	04 09						
15	iP	23 40 04						USCGS: ½S 133E
15	iP	23 42 42						USCGS: 26S 178½E
16	i(P)	03 10 54						
16	iP	09 16 01						USCGS: 35S 179E
16	iP	10 30 49						USCGS: 2S 69E
16	i(P)	11 45 23						
16	iP	04 14 06						USCGS: 18S 178W
20	iP	02 12 19						USCGS: 38S 73½W
	iX	40 37						
	M	45 20						
20	iP	13 10 45						USCGS: 39½S 73W
	iS	19 48						
	iX	35 13						
	eL	37						
	i(PKPPKP)	39 00						
	M	43 30						
20	iP	17 11 05						USCGS: 38½S 74W
20	iP	14 34 25						

Date 1960	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	
23	iP	12 19 50						USCGS: 7S 127½E
24	iP	22 46 14						USCGS: 30S 177½W
25	iP	00 11 52						USCGS: 8S 118E
25	iP	02 14 06						USCGS: 30½S 177W
26	iP	16 56 37						USCGS: 26S 71E
27	i(P)	17 01 40						
30	iPKP	20 19 28						USCGS: 60N 151W
JULY								
1	iPKP	08 18 35						USCGS: 56N 165E
	iPKP	18 40						
2	iPKP	04 49 17						USCGS: 51½N 173½W
2	iP	09 08 29						USCGS: 45½S 73½W
	i(pP)	08 35						
2	iP	12 03 20						USCGS: 56S 27W
2	i(P)	12 09 00						
3	iPKP	03 39 06						USCGS: 52N 174W
	iPKP	39 17						
3	i(PKP)	07 36 02						USCGS: 52N 173½W
	i(PKP)	36 19						
3	i(PKP)	20 40 26						USCGS: 50½N 177W
3	i(PKP)	23 14 05						USCGS: 50½N 177W
	i(PKP)	14 13						
4	iPKP	04 48 38						USCGS: 52N 131½W
	i(PKP)	49 35						
4	i(PKP)	13 30 03						USCGS: 52N 131W
4	i(P)	21 40 02						
5	iPKP	05 27 38						USCGS: 51½N 178½W
	iX	28 02						
6	i(P)	07 12 23						
6	iP	23 29 02						USCGS: 5S 125E
7	iP	15 58 02						
7	iP	16 57 20						
7	iP	17 48 58						
7	iP	21 52 07						USCGS: 39S 73W

Date 1960	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	
8	ePKP	10 28 57						USCGS: 52N 174½W
	ePKP	29 06						
8	iP	14 56 26						USCGS: 7S 129E
8	iP	15 35 43						USCGS: 14S 168E
9 ?	i(PKP)	00 44 23						USCGS: 50N 177½W
9	i(P)	17 55 02						
10	iP	00 16 48						USCGS: 0 98E
11	i(P)	07 40 47						USCGS: 54S 140½E
11	iP	12 08 01						USCGS: 16S 172W
11	i(PKP)	12 14 06						USCGS: 51½N 173W
	i(PKP)	14 22						
13	eP	08 02 19						USCGS: 53½S 1½E
	i(S)	07 30						
	eL	09 15						
13	iX	13 39 56						
13	i(P)	15 32 31						
13	i(P)	17 15 13						
14	iP	10 39 38						USCGS: 5N 127½E
14	iP	10 56 06						USCGS: 23½S 180 h = 600km
14	iP	18 51 29						USCGS: 7N 38½E
15	iP	05 11 21						USCGS: 12S 45½E
16	iP	04 56 54						USCGS: 21½S 67W
16	i(P)	19 12 59						
17	iX	01 52 01						
17	iX	20 02 03						
17	iP	19 54 22						USCGS: 10S 13W
17	iX	20 02 03						
18	iP	01 05 56						USCGS: Nicobar. Is.
18	iP	01 27 14						USCGS: Nicobar. Is.
18	iP	01 55 49						USCGS: 4½S 151E
	iX	56 19						
18	iP	07 59 33						
18	iP	19 00 53						USCGS: 7S 51½E
	i(pP)	01 02						
19	iP	11 24 33						Argentina- Chile.

Date 1960	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	
20	iPKP	09 49 59						USCGS: 49N 157½E
20	eX	14 46 23						
20	iP	21 11 07						USCGS: 20½S 169E
20	iP	21 45 46						Local.
20	iP	21 49 26						South Chile.
21	iX	00 22 47						
23	i(P)	00 14 59						
23	i(P)	02 49 09						
23	iP	07 42 52						USCGS: 21½S 179½W
24	iPKP	02 46 24						USCGS: 50½N 177½W
24	ePKP	10 08 30						USCGS: 56N 164E
24	i(P)	10 48 30						
24	e(P)	18 20 04						
24	i(P)	23 25 26						
25	ePKP	04 00 39						USCGS: 55N 163E
25	ePKP	11 31 11						USCGS: 54N 159E
27	iP	04 04 33						USCGS: 59.4S 25.1W h = 65km
27	iP	10 15 27						USCGS: 44.7S 75.1W h = 25km
27	iP	21 12 41						
28	i(P)	10 48 13						Local.
29	i(P)	00 36 08						USCGS: 19½S 170½E
29	i(P)	02 02 25						
29	i(P)	15 24 55						
29	iPKP	17 50 31						USCGS: 40.1N 142.3E h = 50km
29	i(P)	23 11 27						
31	iP	03 08 11						USCGS: 5.1S 150.0E h = 25km
31	iP	07 17 00						USCGS: 6.0S 150.0E h = 93km
AUGUST								
2	iPKP	06 34 26						USCGS: 51.5N 178.3W h = 34km
2	iP	09 42 02						USCGS: 28.2S 176.6W h = 60km
3	i(P)	01 24 30						

Date 1960	Phase	Time (G.M.T.)	Per	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
		h. m. s.	s.				km	
AUGUST (cont'd)								
4	iPKP	07 54 25						USCGS: 51.4N 179E h = 83km
4	i(P)	11 26 54						
4	iPKP	14 25 02						USCGS: 51.3N 178.8E
5	i(P)	22 47 10						
6	iP	15 00 31						USCGS: 42.4S 74.8W h = 35km
7	i(P)	11 49 20						
7	e(P)	14 36 49						
8	iPKP	01 38 51						USCGS: 55.5N 166.3E
11	iPKP	02 56 30						USCGS: 52.2N 176.2W h = 97km
11	iP	03 05 14						USCGS: 0.0 121.6E h = 46km
11	iP	05 03 17						USCGS: 8.8N 126.1E h = 79km
13	iPKP	07 29 56						USCGS: 41N 142E h = 60km
	ipPKP	30 21						
	iPP	31 38						
13	iP	14 25 54						USCGS: 39.7S 74.8W h = 61km
	ipP	26 13						
	iPP	28 19						
	iS	34 55						
	isS	35 15						
	iSS	39 50						
	eLq	42 50						
	eLr	46 30						
	M	54 52						
14	iP	14 52 58						USCGS: 7.2S 146.2E h = 200km
14	iP	22 58 01						USCGS: 23.5S 66.4W h = 245km
	ipP	58 51						
15	eP	07 08 20						USCGS: 13.4S 65.8E
15	iP	09 00 12						
15	iP	14 43 02						USCGS: 13.5S 67.0E h = 25km
	i(pP)	43 13						
15	i(P)	22 01 54						
16	iP	03 00 04						USCGS: 16.5S 71.5W h = 113km
	i(pP)	00 29						
16	iX	22 39 26						USCGS: 7.6S 128.8E h = 63km
17	eP	09 44 26						USCGS: 20.1S 11.4W h = 87km
17	iP	18 21 01						USCGS: 1.7S 138.6E h = 45km
18	iP	11 18 36						
18	iP	22 56 16						USCGS: 11.4S 166.2E h = 62km

Date 1960	Phase	Time (G.M.T.)	Per	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
		h. m. s.	s.				km	
AUGUST (cont'd)								
19	i(P)	05 57 00						
19	i(P)	12 05 44						
19	i(P)	17 23 08						
20	i(P)	10 00 59						
20	iP	20 17 57						USCGS: 35.6S 15.4W h = 37km
20	i(P)	21 29 12						
21	iP	00 30 22						USCGS: 4.3S 143.3E h = 39km
21	iP	01 11 39						USCGS: 5.5S 149.5E h = 177km
21	iP iS	13 01 55 12 01						USCGS: 4.9N 125.1E h = 211km
21	iP	17 33 43						USCGS: 15.3S 176.0W h = 24km
23	iP	22 57 38						USCGS: 14.5S 176.4W h = 56km
24	iPKP	02 03 44						USCGS: 56.3N 163.8E h = 25km
24	i(P)	22 28 03						
25	i(P)	03 50 55						
25	iPKP	18 01 46						USCGS: 52.7N 169.6W h = 38km
25	iP	23 13 29						USCGS: 37.8S 73.5W h = 109km
26	iP	00 25 17						USCGS: 37.8S 73.2W h = 25km
26	iP	18 39 37						USCGS: 13.5S 165.9E h = 56km
29	i(P)	11 59 43						
29	i(P)	17 25 01						
31	i(P)	16 47 13						
SEPTEMBER								
2	iP	11 04 20						USCGS: 15.2S 167.4E h = 163km
2	i(P)	18 43 56						
2	iPKP	22 22 33						USCGS: 52.0N 171.4W h = 49km
3	iP ipP iS iScS	12 53 24 54 58 13 03 06 03 16						USCGS: 6.1S 154.5E h = 457km
3	iP	05 53 56						USCGS: 20.9S 174.4W h = 61km
5	iP	09 48 32						USCGS: 48.9S 121.2E h = 89km
5	i(P)	12 18 00						

Date 1960	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	
6	iP	10 09 28						USCGS: 34.0S 179.2W h = 117km
7	iP	01 26 51						USCGS: 37.2S 16.1W h = 25km
7	i(P)	08 28 27						
8	iP	11 20 15						USCGS: 6.2N 126.2E h = 47km
10	iP	10 56 15						USCGS: 4.0N 122.6E h = 629km
	i(pP)	58 21						
10	iS	11 05 39						
10	iP	14 16 59						USCGS: 11.2S 163.1E h = 48km
11	i(P)	09 51 27						
11	iP	11 02 52						USCGS: 33.5S 179.1W h = 76km
11	i(P)	22 03 00						
12	iP	16 12 25						USCGS: 7.0S 117.0E h = 611km
12	iP	22 46 11						USCGS: 5.5S 130.5E h = 57km
13	i(P)	15 31 09						
13	i(P)	15 58 13						
14	e(P)	16 01 55						
14	iP	23 31 00						USCGS: 20.9S 174.1W h = 25km
15	iP	03 43 25						USCGS: 16.5S 167.3E h = 134km
17	iPKP	08 24 50						USCGS: 49.4N 155.2E h = 28km
17	iP	13 11 19						USCGS: 6.3S 154.4E h = 134km
17	iP	16 06 56						USCGS: 6.3S 148.8E h = 79km
17	iP	20 08 33						USCGS: 20.9S 174.5W h = 28km
20	iP	00 53 06						USCGS: 29.8S 177.9W h = 493km
20	iP	03 15 21						USCGS: 36.9S 177.2E h = 91km
20	iP	03 47 08						USCGS: 28.2S 177.9W h = 47km
21	iP	03 00 51						USCGS: 8.1S 149.4E h = 115km
21	iPKP	10 58 28						USCGS: 53.4N 166.0W h = 38km
22	iP	05 49 14						USCGS: 3.4S 29.1E h = 29km
22	iP	09 16 36						USCGS: 3.3S 29.3E h = 28km
	ipP	16 47						
	iPP	18 03						
	iS	25 42						
22	iP	09 25 57						USCGS: 2.8S 29.8E h = 20km
	ipP	26 07						
	eS	35 01						
	eL	35 31						

Date 1960	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	
22	iPKP	23 06 52						USCGS: 51.5N 168.8W h = 33km
23	i(P)	06 15 05						Local.
23	iP	06 24 08						USCGS: 27.2S 179.9W h = 329km
23	iP	16 06 58						USCGS: 23.7S 179.5W h = 473km
23	iP	23 14 39						USCGS: 22.2S 174.8W h = 39km
23	iP	23 28 28						USCGS: 30.5S 67.2W h = 298km
24	iP	09 27 43						USCGS: 11.0S 163.2E h = 36km
24	iP	11 16 56						USCGS: 41.6S 179.3W h = 43km
24	iP	14 03 59						USCGS: 12.4S 166.7E h = 39km
25	iP	15 51 58						USCGS: 17.3S 173.4W h = 132km
26	iP	00 44 09						USCGS: 27.4S 68.2W h = 25km
26	iPKP	15 33 10						USCGS: 51.6N 172.2W h = 44km
	(iPKP)	33 20						
26	iP	17 11 04						USCGS: 15.9S 72.9W h = 115km
27	iP	02 24 18						USCGS: 44.6S 73.6W h = 59km
27	iPKP	06 10 54						USCGS: 51.5N 177.8E h = 102km
	iX	11 04						
27	i(P)	10 22 05						Local.
27	i(P)	14 37 48						Local.
27	i(P)	18 23 34						Local.
27	i(P)	20 31 47						Local.
28	i(P)	02 27 59						Local.
28	i(P)	06 50 44						Local.
28	i(P)	16 02 35						Local.
29	iP ? ?	06 40 41						USCGS: 17.3S 68.5W h = 115km
29	ipP	06 41 13						
29	iP	11 32 15						USCGS: 18.9N 144.7E h = 469km
	iX	33 47						
	iX	36 26						
	iX	36 39						
	i(S)	42 14						
	i(S)	43 00						
29	e(P)	21 52 50						
30	iP	07 47 50						USCGS: 41.4S 73.5W h = 53km
	iX	48 00						
	iX	48 06						
30	iX	21 16 52						USCGS: 11.1S 162.9E h = 31km
OCTOBER								
1	iPKP	16 30 40						USCGS: 52.2N 172.6W h = 41km
	iX	31 08						
2	iP	04 44 40						USCGS: 61.0S 23.3W h = 77km
	ipP	44 59						
	iX	47 07						

Date 1960	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	eP	07 19 31						USCGS: 39.0S 91.6W h = 107km
2	eP	10 18 24						
3	iP	10 24 25						USCGS: 3.3S 137.8E h = 29km
3	iP	17 23 04						USCGS: 8.1S 152.8E h = 100km
3	i(P)	20 01 41						USCGS: 05.7S 103.0E h = 51km
3	iP	22 22 19						USCGS: 22.6S 172.3E h = 243km
4	iP	10 03 37						USCGS: 7.5S 155.3E h = 134km
6	iP	16 27 45						USCGS: 38.3S 74.9W h = 53km
7	iP	15 30 07						USCGS: 7.4S 130.7E h = 45km
	iS	39 40						
	M	57 00						
8	iPKP	06 10 43						USCGS: 40.0N 129.7E h = 608km
	iX	12 12						
8	i(P)	17 44 34						
10	i(P)	23 39 50						
11	i(P)	08 19 12						Local.
11	iPKP	08 25 19						USCGS: 38.1N 107.1W h = 49km
	i(PKP)	25 27						
11	iP	18 35 36						USCGS: 16.1S 67.1E h = 100km
12	iP	09 24 07						USCGS: 15.1S 173.2W h = 25km
12	iP	18 41 50						USCGS: 6.1S 148.6E h = 119km
13	i(P)	06 05 21						USCGS: 37.8S 50.1E h = 34km
13	iPKP	15 11 59						USCGS: 54.8N 161.2E h = 35km
13	iX	18 52 51						USCGS: 3.8S 152.4E h = 213km
14	iPKP	11 53 03						USCGS: 52.1N 166.1W h = 64km
14	iP	15 41 10						USCGS: 4.8N 125.5E h = 36km
14	iP	17 59 38						USCGS: 37.9S 74.7W h = 25km
14	iPKP	21 38 54						USCGS: 51.7N 172.1W h = 50km
	iX	39 14						
	iX	41 29						
15	iP	03 06 02						USCGS: 11.0S 162.5E h = 139km
15	i(P)	12 23 09						
15	i(P)	15 51 28						Local.
16	iP	05 05 05						USCGS: 22.9S 179.3E h = 565km
16	eP	13 38 29						USCGS: 36.2S 177.3E h = 25km
16	i(P)	17 24 23						Local.
17	e(P)	09 18 48						Local.
17	iP	13 47 51						USCGS: 39.6S 88.5W h = 60km
18	iPKP	00 41 38						USCGS: 52.5N 170.2W h = 33km

Date 1960	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	eP	10 41 43						USCGS: 55.1S 129.9W h = 100km
19	eP	11 13 57						
20	iP	11 18 20						USCGS: 11.0S 164.9E h = 40km
	eS	28 55						
21	iP	06 36 49						USCGS: 6.9S 127.6E h = 134km
21	i(P)	13 55 48						
21	e(P)	21 27 28						
22	iP	08 34 22						USCGS: 10.3S 161.2E h = 93km
	ipP	34 48						
	iS	44 40						
	iX	45 07						
	eL	50 29						
	M	09 05 ..						
22	iP	22 34 27						USCGS: 4.6S 144.3E h = 170km
24	iP	05 24 11						USCGS: 15.0S 167.4E h = 145km
25	iP	09 49 14						USCGS: 6.5S 155.3E h = 100km
25	iP	12 25 24						USCGS: 43.5S 74.6W h = 32km
25	iP	18 38 24						USCGS: 18.1S 167.8E h = 100km
26	i(P)	03 02 38						Local.
26	iP	14 59 07						USCGS: 32.9S 68.7W h = 60km
26	iP	16 46 38						USCGS: 23.6S 70.2W h = 50km
26	iP	17 46 02						USCGS: 17.8S 178.6W h = 589km
26	iP	19 43 12						
27	iP	00 29 07						USCGS: 23.7S 70.2W h = 39km
27	iP	00 38 35						USCGS: 23.2S 69.7W h = 19km
27	iP	03 30 07						USCGS: 10.3S 161.5E h = 116km
27	iP	14 57 40						USCGS: 6.2S 104.0E h = 168km
27	iP	19 55 23						USCGS: 6.3S 154.7E h = 118km
27	iP	22 40 17						USCGS: 15.2S 175.0W h = 253km
28	iPKP	04 38 22						USCGS: 71.3N 8.6W h = 48km
28	iPKP	13 38(00)						USCGS: 52.0N 157.4E h = 96km
	iX	38(22)						
29	iP	09 50(24)						USCGS: 15.8S 172.9W h = 99km
30	iP	12 26 58						USCGS: 23.3S 70.3W h = 76km
30	iS	12 37 16						
30	M	13 03 ..						
30	iP	13 23 59						USCGS: 23.3S 70.6W h = 65km
30	iP	21 45 11						USCGS: 22.8S 68.0W h = 60km
	ipP	45 29						
	i(sP)	45 37						
	iS	55 19						
	i(sS)	56 04						

Date 1960	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	06 27 07						USCGS: 11.1S 12.7W h = 35km
1	iP	08 57 05						USCGS: 38.4S 74.4W h = 97km
	ipP	57 28						
	iS	09 06 12						
	eLq	14 13						
	eLr	17 41						
	M	26 ..						
1	iX	09 25 10						
1	iP	12 40 37						USCGS: 38.5S 75.1W h = 64km
2	iP	00 09 33						USCGS: 30.2S 177.7W h = 43km
2	iP	17 27 22						USCGS: 10.9S 164.9E h = 25km
2	iP	18 15 08						USCGS: 44.8S 80.2E h = 23km
3	eP	02 14 29						
3	eX	02 55 09						USCGS: 22.1S 175.1W h = 25km
3	i(P)	07 44 34						
3	i(P)	07 53 34						
3	eP	20 26 45						
3	eP	20 54 30						
4	i(P)	07 52 11						
4	iP	14 30 24						USCGS: 1.1S 126.5E h = 25km
4	iP	18 27 06						
5	i(P)	03 23 00						
6	iPKP	04 57 35						USCGS: 53.0N 159.8E h = 32km
6	iP	06 26 13						USCGS: 3.1S 177.7W h = 184km
	ipP	26 56						
	iX	27 16						
	iS	37 00						
	M	58 ..						
6	iP	22 29 58						USCGS: 52.7N 168.0W h = 42km
7	eP	07 44 52						
7	iP	22 29 21						USCGS: 40.4S 73.3W h = 25km
8	eP	00 44 40						USCGS: 31.3S 177.4W h = 25km
8	iP	00 07 56						USCGS: 30.6S 177.5W h = 25km
8	iP	11 11 05						USCGS: 31.1S 177.6W h = 18km
9	iX	01 29 58						USCGS: 21.5S 67.5W h = 131km
9	iP	03 24 56						USCGS: 60.7S 24.8W h = 37km
	ipP	25 06						
	i(S)	30 34						
	iX	32 23						
9	iP	19 44 00						USCGS: 30.7S 177.1W h = 68km
9	iP	20 18 40						USCGS: 23.2S 70.6W h = 52km
	i(PP)	21 51						
	iS	28 52						
10	iX	14 56 42						

Date 1960	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	
10	iP	14 57 09						USCGS: 2.6S 139.4E h = 25km
	iX	57 16						
	iX	57 40						
	iX	58 25						
10	iS	15 07 17						
	e(SS)	12(50)						
	eX	15(05)						
	eL	19(06)						
	M	31 ..						
	M	34 ..						
10	iP	16 41 54						USCGS: 22.0S 171.6E h = 128km
	ipP	42 17						
11	eX	16 40 10						
	iX	40 27						
11	iP	22 36 10						USCGS: 6.5N 94.4E h = 25km
12	iP	11 05 58						USCGS: 6.8S 157.0E h = 75km
12	eP	22 06 05						
13	iP	06 49 21						USCGS: 1.4N 127.2E h = 59km
	iS	59 22						
	eL	07 10(55)						
13	iPKP	09 40 18						USCGS: 51.1N 168.8W h = 65km
	iPKP	40 41						
	i(SKKS)	51 08						
13	iPKP	12 45 35						USCGS: 51.7N 168.5W h = 37km
	iX	45 41						
	iPKP	45 48						
13	iPKP	13 44 15						USCGS: 51.1N 168.6W h = 25km
14	eP	02 15 22						USCGS: 53.5S 140.7E h = 21km
14	eP	09 45 13						
14	iP	14 56 13						
14	iP	22 47 17						
15	iP	06 31 52						USCGS: 62.5S 161.7W h = 46km
	eS	38(47)						
15	iP	08 30 10						
15	iP	21 51 00						USCGS: 35.0S 178.4E h = 84km
16	iP	01 34 14						USCGS: 23.7S 179.3E h = 552km
16	iP	16 22 56						
17	iP	01 39 50						USCGS: 38.5S 73.6W h = 25km
	ipP	40 02						
17	iP	04 19 19						USCGS: 30.8S 177.7W h = 71km
17	iP	05 26 40						USCGS: 43.5S 74.4W h = 123km
17	iP	09 13 00						
17	iPKP	20 06 38						USCGS: 52.4N 171.0W
17	iP	21 32 24						USCGS: 51.2S 122.6W h = 38km
18	iP	12 54 58						USCGS: 22.5S 69.4W h = 163km
18	iP	15 34 26						USCGS: 6.3S 130.0E h = 68km

Date 1960	Phase	Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	remarks
[illegible]BER (cont'd)		h. m. s.	s.				km	
[illegible]9	iP	07 16 31						USCGS: 17.6S 179.0E h = 594km
19	iP	12 29 54						USCGS: 8.6N 137.6E h = 27km
20	iP	22 15 51						USCGS: 6.8S 80.7W h = 93km
	iS	27 06						
22	iP	03 44 24						USCGS: 19.2S 173.1W h = 25km
22	iP	06 28 13						USCGS: 35.9S 52.3E h = 21km
	iPP	29 14						
	iS	35 15						
22	iP	12 39 50						USCGS: 40.0S 74.3W h = 107km
	ipP	40 05						
	iS	48 54						
23	iP	04 23 22						USCGS: 4.9S 153.8E h = 516km
23	iP	14 24 20						USCGS: 24.2S 176.1W h = 28km
	iS	34 22						
23	iP	17 04 32						USCGS: 4.6N 125.8E h = 143km
	iX	05 12						
23	iP	17 40 52						USCGS: 24.5S 176.4W h = 171km
23	iP	18 08 38						USCGS: 24.0S 176.3W
	ipP	08(53)						
23	i(P)	18 45 40						
23	iP	20 23 08						USCGS: 24.1S 175.7W h = 25km
24	iP	05 02 48						USCGS: 4.6S 153.0E h = 87km
	iS	13 09						
24	iP	07 04 44						USCGS: 24.2S 176.1W h = 23km
	ipP	04 55						
	iS	14 45						
	eL	20 ..						
	e(L)	(27 30)						
	i(M)	32 ..						
	i(M)	39 ..						
	i(T)	42 30						
24	i(P)	08 28 48						USCGS: 24.4S 176.3W h = 25km
	i(pP)	28 54						
24	iP	08 38 16						USCGS: 24.5S 175.9W h = 25km
24	i(P)	08 49 28						
24	i(P)	09 28 28						
24	iP	09 40 14						USCGS: 24.1S 176.6W h = 93km
	iX	40 24						
	iX	40 34						
26	iPKP	17 05 21						USCGS: 51.8N 168.1W h = 85km
26	iP	21 47 38						USCGS: 24.3S 175.5W h = 20km
29	iP	07 25 20						USCGS: 24.1S 180.0E h = 620km
29	iP	09 42 31						USCGS: 44.0S 74.9W h = 86km

Date 1960	Phase	Time (G.M.T.)	Per.	Amplitude A_N	Amplitude A_E	Amplitude A_Z	Δ	Remarks
DECEMBER		h. m. s.	s.				km	
1	iP	10 24 01						USCGS: 5.7S 145.9E h = 45km
2	iX	04 50 07						USCGS: 6.6S 152.5E h = 33km
2	iP	09 22 59						USCGS: 24.5S 69.9W h = 37km
	iS	33 22						
2	iP	09 49 54						USCGS: 24.3S 69.8W h =64km
	iS	10 00 05						
2	iP	19 47 09						USCGS: 41.6S 88.3E h = 35km
3	iPKP	04 42 47						USCGS: 42.8N 104.5E h = 45km
3	iPKP	07 27 19						USCGS: 52.5N 177.3W h = 70km
	iX	27 23						
3	i(P)	14 13 35						
3	iPKP	20 40 49						USCGS: 76.7N 131.1E h = 28km
4	iP	13 40 12						USCGS: 5.3S 148.8E h = 43km
4	iP	15 59 26						USCGS: 1.1N 120.6E h = 46km
5	iP	00 06 53						USCGS: 21.2S 179.0W h = 633km
5	eP	07 16 23						
5	ePKP	18 26 44						USCGS: 54.3N 161.2E h = 25km
6	e(P)	03 46 03						
6	iP	09 08 43						USCGS: 21.4S 69.0W h = 25km
	iS	19 02						
6	iP	10 57 16						Local.
7	iP	16 41 04						
8	iP	01 11 51						USCGS: 35.8S 179.6W h = 81km
8	iP	01 35 24						USCGS: 21.8S 179.4W h = 685km
8	iP	11 31 35						USCGS: 31.6S 68.9W h = 140km
11	i(P)	00 12 48						
11	iP	19 05 16						USCGS: 15.7S 166.9E h =133km
	iX	05 39						
15	iP	00 03 48						USCGS: 2.9N 126.5E h = 77km
	iS	13 59						
17	i(P)	07 25 41						
17	iP	10 47 50						USCGS: 6.4S 109.3E h = 195km
	iS	56 30						
19	iP	13 34 24						USCGS: 24.3S 69.6W h = 17km
21	iP	22 37 22						USCGS: 62.5S 167.1E h = 29km
	iX	38 01						
22	iP	06 42 43						USCGS: 30.8S 177.1W h = 46km
22	iP	12 33 11						USCGS: 30.5S 71.5W h = 110km
22	iP	21 14 28						USCGS: 6.8S 155.3E h = 460km
23	iP	09 52 45						USCGS: 3.3S 101.9E h = 134km
	iX	53 06						

Date 1960	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	iP	04 04 24						USCGS: 17.6S 66.6E h = 100km
24	i(P)	11 05 42						
24	iP	16 51 17						USCGS: 38.4S 143.6E h = 77km
26	iP	01 08 16						USCGS: 23.7S 176.9W h = 59km
26	iP	04 39 55						USCGS: 57.4S 26.2W h = 25km
	(ipP)	40 02						
	iX	41 59						
	iS	45 42						
	iX	49 52						
31	eP	18 18(46)						USCGS: 43.9S 75.0W h = 92km
	iX	18 52						
JANUARY 1961								
2	iP	10 24 13						USCGS: 12.4S 166.4E h = 161km
	ipP	24 52						
	iS	34 27						
5	iPKP	14 26 11						USCGS: 51.6N 176.3W h = 37km
5	iP	16 06 11						USCGS: 4.8S 143.0E h = 108km
	iX	06 43						
	iX	06 57						
	iS	16 16 15						
5	iP	18 09 35						USCGS: 21.2S 169.3E h = 123km
	iS	19 28						
	eL	26 ..						
5	iP	18 26 25						USCGS: 21.0S 169.1E h = 124km
	iS	36 12						
	eL	44 ..						
6	i(P)	01 08 28						
6	iPKP	06 41 20						USCGS: 51.8N 176.2W h = 48km
6	iX	21 42 28						
7	i(P)	03 10 12						
7	iP	18 24 21						USCGS: 57.2S 25.3E h = 94km
	iX	24 36						
15	i(P)	16 56 24						USCGS: 20.4S 169.5E h = 182km
16	iPKP	07 39 00						USCGS: 36.0N 141.1E h = 131km
19	iX	16 20 09						
21	i(P)	10 18 44						
22	iP	03 36 37						USCGS: 11.9S 166.2E h = 25km
	iS	47 00						
22	iP	16 21 14						USCGS: 28.5S 174.8W h = 68km
	iX	30 02						
26	iP	19 00 43						USCGS: 20.7S 169.5E h = 106km
28	i(P)	19 27 50						