

1980

New Zealand Department of Scientific and Industrial Research
GEOPHYSICS DIVISION

NEW ZEALAND SEISMOLOGICAL REPORT

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1980

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New Zealand Department of Scientific & Industrial Research
GEOPHYSICS DIVISION

NEW ZEALAND
SEISMOLOGICAL
REPORT
1980



SEISMOLOGICAL
OBSERVATORY
BULLETIN

E - 162

POSTAL SERVICE

All measurement and interpretation of records is carried out at the central station. Requests and communications should therefore be sent to :

**The Superintendent
Seismological Observatory
P.O. Box 1320
Wellington
New Zealand.**

Correspondents are asked to note that surface mails from Europe and the Americas are infrequent, and that articles not sent by air-mail may take four or five months to reach us.

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SCIENTIFIC STAFF IN 1980

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I.C.Feldwick
C.H.Gough
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APIA

Superintendent: C.A.Y.Hewson (until November)
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R.Taia. (from July)

NIUE

Observer: A.T.Pringle. (until May)
A.B.Waters. (from May)

NADI

Observer: H.N.Kashyap.

RAOUL ISLAND

Observers: P.B.Leaper
B.G.Coburn.

CAMPBELL ISLAND

Observer: C.D.Wenham.

SCOTT BASE

Observer: C.A.Roper.

INTRODUCTION

The form and content of this bulletin follows that established in the 1977 Report (E-159).

Teleseismic data do not appear in this Report, but are sent to the International Seismological Centre and published in their bulletins. Seismologists urgently requiring unpublished New Zealand data may apply to the Observatory. Definitive epicentres of local earthquakes are normally available within about three months of their occurrence, and these Reports ready for printing by the middle of the following year.

M. A. LOWRY
Editor

PRINCIPAL EARTHQUAKES IN 1980

1980 was another year of relatively low seismic activity in and around New Zealand, with no shock of magnitude (M_L) 6.0 or greater occurring within 900 km of the central Seismological Observatory at Wellington. It seems likely, however, that insurance payments resulting from earthquakes in 1980 will be higher than in 1979, as one of the biggest shocks had an epicentre close to a populous area, and gave rise to claims to the Earthquake and War Damage Commission totalling several hundred thousand dollars.

The extensive damage was caused by the magnitude 5.6 event in Hawkes Bay on October 5th (origin 80/597). The epicentre was a few kilometres south of Hastings, but the highest intensity of shaking (MM 8) was reported from Napier. The surface geology of the area gives no obvious reason for this disparity, but the epicentre determination was well constrained and serious mislocation in this part of the country is thought unlikely. Possibly transmission of energy in some directions was favoured by details of near surface structure which lie obscured by overlying sediments.

Although its epicentre lay some tens of kilometers further south, this shock revived local memories of the disastrous 1931 Hawkes Bay earthquake, at a time when commemorative ceremonies to mark the fiftieth anniversary of the earlier event were being planned. The new epicentre was within the network of seismograph stations, and less than 20km from one of them, and consequently the depth of the origin (30km) is known with more certainty than that of most other damaging shocks in New Zealand. Only one apparent foreshock could be recognised on the records from the standard seismograph network and this had registered only on an instrument too close for reliable magnitude estimation, but a value of M_L close to 2.0 seems likely. Several aftershocks having magnitudes up to 3.9 occurred during the first few days after the main shock.

The strongest shock in New Zealand during 1980 occurred on 22 December (origin 80/798). The epicentre was just north of Tauranga, but no reports have been received of it being felt there or at nearby Whakatane. Intensities were apparently highest in Gisborne, and

the shock was felt as far south as Wellington. The absence of strong shaking near the epicentre of an earthquake of such a magnitude (M_L 5.8) is not unusual considering the focal depth of 247 km. The zone of occurrence of deep earthquakes that emerges from the shallow activity along the East Coast dips under the volcanic region and the Bay of Plenty. Attenuation of seismic energy is apparently very slight within this slanting zone, accounting for the high intensities experienced in the East Coast area. Directly above the zone, however, there is a region of high attenuation, and the result in this case was markedly reduced ground motion near the epicentre, as evidenced by the lack of felt reports from Tauranga and Whakatane.

The earthquake on December 22 was the largest of a number of moderate earthquakes which were widely felt in the North Island while, for most of the year, the South Island remained relatively undisturbed. Nelson and Marlborough, subjected in the past to some of New Zealand's major historical earthquakes, were rather quiet during 1980, while the East Coast of the North Island experienced several moderate shocks. Before the October 5 shock already mentioned, earthquakes of magnitude 5.2 and 4.9 off the mouth of the Porangahau River on July 3 had already been felt in Napier (origins 80/365 and 80/369).

Further south, a magnitude 5.6 earthquake occurred near Hunterville on June 23 (origin 80/342). It was felt over much of the central North Island, waking people from New Plymouth to Napier. Two smaller shocks both of magnitude 4.5 near Kapiti Island on July 15 and 19 (origins 80/411 and 80/422) caused some alarm in the Wellington area and north to Wanganui.

There was a swarm of small earthquakes near Palmerston North from late August to mid-September. About a dozen were felt and many more were detected by seismographs, particularly the sensitive instrument at Mangahao.

In the south of the South Island, an earthquake of magnitude 5.4 at a depth of 92 km under Lake Te Anau was felt from Earnslaw station, near the northern end of Lake Wakatipu, to Centre Island in Foveaux Strait on January 28 (origin 80/037).

Still further south, an earthquake at an unusual depth appears to have occurred beneath the Solander Trough or possibly the Auckland Slope, between Auckland Island and The Snares (origin 80/406).

With its epicentre over 1100km from Wellington, this earthquake lies outside the area normally covered by the New Zealand mainland network, but if the depth (235km) is confirmed by overseas observations this origin will be of interest because it supports the suggestion that deep activity extends much farther to the south of New Zealand than has previously been accepted. A nearby origin in 1965 was assigned a depth of 210km, but regarded with some suspicion.

As in 1979, volcanic activity in New Zealand was limited to intermittent ash and steam eruptions from White Island. The volcanoes in the central North Island remained quiet.

THE INSTRUMENTAL NETWORKS

DESCRIPTION

The system of seismograph stations under the scientific direction of the Seismological Observatory at Wellington in 1980, comprised a standard network of 39 stations covering the main islands of New Zealand and extending over the south-west Pacific from Samoa, Fiji, and Rarotonga, to the Antarctic; two smaller and more closely-spaced networks near Wellington and in the Lake Pukaki district; and specialised or temporary stations established for research purposes.

The stations of the standard network are of two kinds, one having short-period instruments intended to record shocks originating within about 1000 km, and the other equipped with long-period instruments designed to provide information about more distant earthquakes and about the internal structure of the Earth. These functions interlock, and every station yields information of both kinds. Most of the instruments record photographically, but at stations where facilities for photographic work would be difficult to provide, or where instantly visible records are needed for tsunami warning or other civil defence purposes, pen-and-ink or heated stylus recorders are in use.

The Pukaki network consists of nine stations set up by the New Zealand Electricity Department in 1975 to monitor any changes in seismicity that might accompany the raising and subsequent management of the level of Lake Pukaki for power generation. The stations transmit their outputs to a central recorder at Twizel, and the records are analysed at the Observatory in Wellington. Normally the full set of stations is read only for earthquakes close to Lake Pukaki, but readings from any station can be used to supplement data from the standard network when necessary.

The Wellington network is technically similar, but is intended primarily for research. It is also used in the rapid location of shocks of public interest or of importance for civil defence.

Also near Wellington is the 'Seismic Research Observatory' at South Karori. This is a specialised instrument sponsored by the United States Geological Survey and is one of about ten similar installations distributed around the world. The three-component seismometer is enclosed in a gas-filled capsule and has been lowered

to a position about 10 m below sea-level in a bore-hole 165 mm in diameter and about 100 m deep. The outputs are transmitted by land-line to the Observatory at Kelburn, where both conventional analogue records on paper and digital records on magnetic tape are made. Three-component long-period and one vertical component short-period outputs are recorded.

Additional contributions to the standard network come from one station operated by the Geology Department of Otago University at Dunedin, and from four volcanological research stations, one on White Island operated by the Geology Department of the Victoria University of Wellington, and three in the Tongariro National Park operated by the Geophysical Survey of the D.S.I.R. The stations are not under the control of the Observatory, but their readings are available for inclusion in the local epicentre-location programme when this is helpful.

CHANGES TO THE NETWORKS IN 1980

During 1980, one station of the standard network ceased operation, another was relocated, and the number of components of ground motion recorded at four others was reduced. Operation of one station of the Wellington Network also terminated.

The three component station at Mount John (MJZ) had to be closed on June 25th when it proved impossible to find a replacement for the former operator, after he left. The nearby telemetering seismograph of the Pukaki Network, Mount John Pukaki (MJP) continues to function.

The standard network seismometer from Kaikoura West (KKY), was moved on August 17th to Kaikoura (KKZ), where it now operates with a photographic paper recorder.

Because of the increase in the price of photographic paper and chemicals, in mid-June the number of instruments operating was reduced to two short-period components at the stations at Cape Reinga (CRZ) and Gisborne (GNZ), now both recording z and n only, and Karapiro (KRP), which now records z and e only. Recording by long period instruments at Roxburgh (ROX) and Karapiro (KRP) was stopped at the same time.

The seismometer at the Wellington Network station at Wright's Hill (WHW) was not replaced after being stolen in March.

INDEX OF STATION CODES

Throughout the tabular sections of this Report stations are identified by the internationally recognised abbreviations allotted by the United States National Earthquake Information Service, and used by the International Seismological Centre, Newbury, Berkshire, England. Codes for stations of the New Zealand networks are:

STANDARD NETWORK

Afiamalu	AFI	Gisborne	GNZ	Oban	OBZ
Apia	API	Glacier Shelter	GSZ	Onerahi	ONE
Auckland	AUC	Great Barrier	GBZ	Raoul Island	RAO
Borland Lodge	BRZ	Kaikoura	KKZ	Rarotonga	RAR
Campbell Island	CBZ	Kaikoura West	KKY	Roxburgh	ROX
Cape Reinga	CRZ	Kaimata	KAI	Scott Base	SBA
Cashmere	CMZ	Karapiro	KRP	Taradale	TRZ
Castlepoint	CAZ	Mangahao	MNG	Tarata	TNZ
Chateau	CNZ	Milford Sound	MSZ	Tuai	TUA
Chatham Islands	CIZ	Mount John	MJZ	Wairakei	WNZ
Cobb River	COB	Nadi	NDF	Wellington	WEL
Dunedin	DNZ	Ngauruhoe	NGZ	Whakatane	WTZ
East Cape	ECZ	Niue	NUE	White Island	WIZ
		Oamaru	OMZ		

PUKAKI NETWORK

Bush Stream	BSP	Hogget Hill	HHP	Rhoboro Hills	RHP
Diadem	DMP	Mt John Pukaki	MJP	Tara Hills	THP
Huxley Gorge	HGP	Mount Mary	MMP	Tomahawk	TMP

WELLINGTON NETWORK

Baring Head	BHW	Makara Radio	MRW	Wainui Dam	WDW
Big Hill	BLW	Moikau	MOW	Wellington	WEL
Cannon Point	CAW	Mount Morrison	MTW	Wright's Hill	WHW
Kapiti Island	KIW	Tory Channel	TCW		

SEISMIC RESEARCH OBSERVATORY

South Karori SNZO

GEOGRAPHICAL POSITIONS

STA	LATITUDE			LONGITUDE			ALT m	GEOCENTRIC DIRECTION COSINES		
	d	m	s	d	m	s		A	B	C
AFI	13	54	34 S	171	46	38 W	706	-0.961 070	-0.138 883	-0.238 864
API	13	48	26 S	171	46	30 W	2	-0.961 482	-0.138 981	-0.237 142
AUC	36	51	36 S	174	46	41 E	79	-0.798 711	0.072 997	-0.597 271
BHW	41	24	33 S	174	52	17 E	10	-0.749 202	0.067 242	-0.658 919
BLW	41	22	07 S	175	28	29 E	340	-0.750 333	0.059 386	-0.658 387
BRZ	45	46	45 S	167	32	19 E	190	-0.683 352	0.151 009	-0.714 301
BSP	43	52	14 S	170	06	15 E	750	-0.712 478	0.124 294	-0.690 598
CAW	41	06	32 S	175	04	04 E	330	-0.752 855	0.064 969	-0.654 972
CAZ	40	54	15 S	176	13	34 E	6	-0.756 343	0.049 890	-0.652 270
CBZ	52	33	03 S	169	09	33 E	30	-0.599 744	0.114 851	-0.791 907
CIZ	43	57	18 S	176	33	56 W	45	-0.720 923	-0.043 266	-0.691 663
CMZ	43	35	10 S	172	38	23 E	255	-0.720 670	0.093 091	-0.687 000
CNZ	39	12	00 S	175	32	51 E	1116	-0.774 682	0.060 323	-0.629 467
COB	41	05	16 S	172	44	02 E	213	-0.749 824	0.095 604	-0.654 693
CRZ	34	25	55 S	172	40	47 E	140	-0.819 834	0.105 318	-0.562 833
DNZ	45	51	59 S	170	30	54 E	15	-0.689 197	0.115 147	-0.715 366
DMP	44	24	51 S	169	49	38 E	820	-0.705 389	0.126 574	-0.697 427
ECZ	37	41	37 S	178	32	46 E	40	-0.793 026	0.020 128	-0.608 855
GBZ	36	13	04 S	175	28	52 E	70	-0.806 157	0.063 714	-0.588 261
GNZ	38	38	39 S	178	01	21 E	30	-0.782 622	0.027 022	-0.621 911
GSZ	39	16	40 S	175	35	14 E	2600	-0.773 872	0.059 720	-0.630 520
HGP	44	06	09 S	169	50	39 E	590	-0.709 150	0.127 032	-0.693 519
HHP	44	19	39 S	170	20	44 E	490	-0.707 545	0.120 364	-0.696 343
KAI	42	31	33 S	171	24	31 E	82	-0.730 944	0.110 433	-0.673 443
KIW	40	51	50 S	174	54	42 E	320	-0.755 456	0.067 268	-0.651 738
KKY	42	25	12 S	173	41	31 E	101	-0.735 998	0.081 360	-0.672 077
KKZ	42	25	19 S	173	41	47 E	105	-0.735 981	0.081 300	-0.672 102
KRP	37	55	30 S	175	32	15 E	64	-0.788 423	0.061 531	-0.612 049
MJP	43	59	28 S	170	27	34 E	960	-0.711 801	0.119 633	-0.692 118
MJZ	43	59	14 S	170	27	58 E	1000	-0.711 861	0.119 558	-0.692 069
MMP	44	08	33 S	170	16	42 E	950	-0.709 615	0.121 573	-0.694 022
MNG	40	37	07 S	175	28	55 E	396	-0.758 859	0.059 965	-0.648 488
MOW	41	25	18 S	175	15	07 E	430	-0.749 489	0.062 253	-0.659 083
MRW	41	13	57 S	174	42	18 E	235	-0.751 022	0.069 604	-0.656 599
MSZ	44	40	14 S	167	55	01 E	38	-0.697 720	0.149 363	-0.700 627
MTW	41	09	34 S	175	30	07 E	282	-0.752 750	0.059 217	-0.655 638
NDF	17	45	25 S	177	27	00 E	30	-0.952 009	0.042 398	-0.303 118
NGZ	39	11	00 S	175	36	49 E	1400	-0.774 933	0.059 443	-0.629 241
NUE	19	04	35 S	169	55	41 E	56	-0.931 186	-0.165 400	-0.324 864
OBZ	46	54	18 S	168	06	55 E	26	-0.670 966	0.141 208	-0.727 918
OMZ	45	04	14 S	170	54	53 E	95	-0.699 729	0.111 895	-0.705 591
ONE	35	46	33 S	174	21	45 E	30	-0.809 242	0.079 882	-0.582 019
RAO	29	15	06 S	177	55	06 W	110	-0.873 304	-0.031 743	-0.486 140
RAR	21	12	45 S	159	46	24 W	28	-0.875 524	-0.322 593	-0.359 711
RHP	44	06	03 S	170	05	02 E	899	-0.709 695	0.124 068	-0.693 499
ROX	45	28	33 S	169	19	13 E	106	-0.691 423	0.130 393	-0.710 586
SBA	77	51	01 S	166	45	22 E	38	-0.206 194	0.048 529	-0.977 307
SNZO	41	18	37 S	174	42	17 E	-10	-0.750 134	0.069 526	-0.657 621
TCW	41	12	48 S	174	16	33 E	150	-0.750 697	0.075 250	-0.656 347
THP	44	32	42 S	169	53	17 E	760	-0.703 954	0.125 545	-0.699 062
TMP	44	18	54 S	170	07	12 E	720	-0.707 215	0.123 175	-0.696 186
TNZ	39	11	14 S	174	22	49 E	123	-0.773 432	0.076 105	-0.629 294
TRZ	39	33	12 S	176	49	17 E	17	-0.771 946	0.042 870	-0.634 241
TUA	38	48	29 S	177	09	02 E	274	-0.780 343	0.038 841	-0.624 145
WDW	41	16	07 S	174	59	37 E	130	-0.750 950	0.065 784	-0.657 074
WEL	41	17	10 S	174	46	06 E	122	-0.750 486	0.068 718	-0.657 304
WHW	41	17	51 S	174	44	17 E	383	-0.750 320	0.069 103	-0.657 453
WIZ	37	31	42 S	177	11	21 E	40	-0.794 075	0.038 988	-0.606 568
WNZ	38	37	53 S	176	06	10 E	350	-0.781 416	0.053 234	-0.621 736
WTZ	37	59	05 S	176	59	18 E	43	-0.789 092	0.041 516	-0.612 871

INSTRUMENTATION AND LITHOLOGY

STANDARD NETWORK

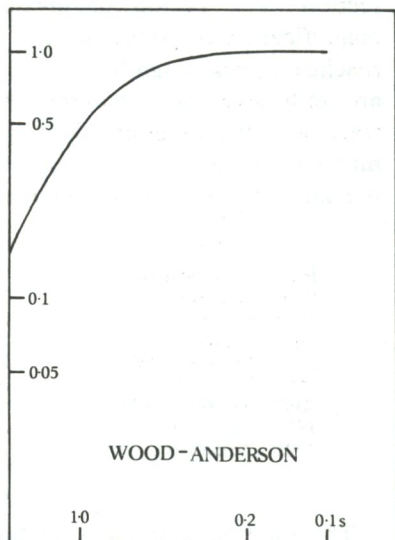
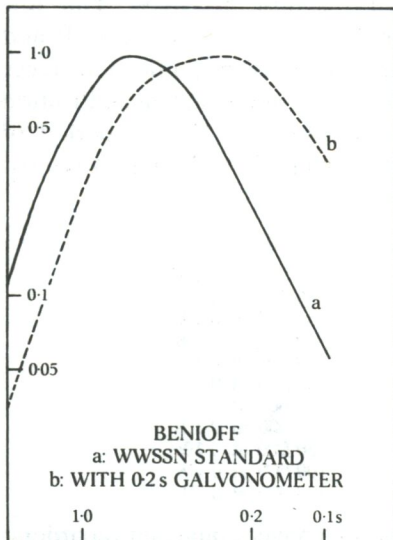
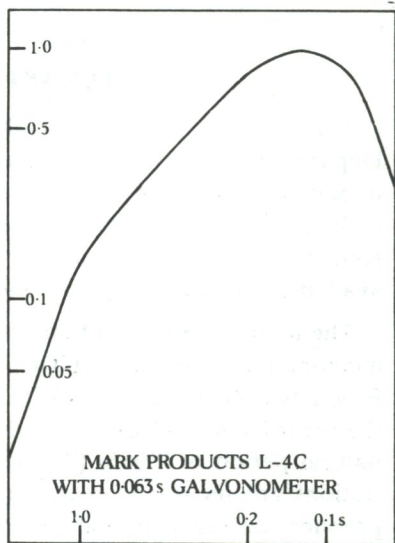
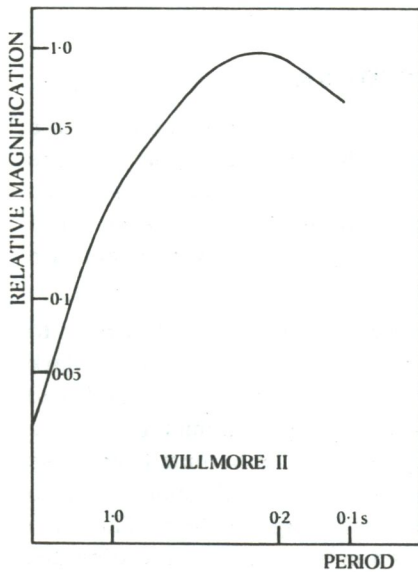
Stations are listed in the alphabetical order of their international three-letter code designations. Pendulum and galvanometer periods, T_o and T_g , are given in seconds. The damping of electromagnetic instruments, when not listed, may be assumed to be critical. Magnifications listed are for the period of maximum response, except in the case of World-Wide Standard instruments, where the magnifications are given at the conventional periods of 1.0 and 15 seconds. Typical period response curves for Willmore II, Benioff, Wood-Anderson and Mark Products L-4C seismographs are shown at the end of this section.

	Instrument	Compt	T_o	T_g	Damping	Magnification
AFI	AFIAMALU					
	World-Wide Standard Station.					
	Foundation: Basaltic lava flows.					
	Benioff	ZNE	1.0	0.75		12500 at 1.0s
	Press-Ewing	ZNE	15	100		750 at 15s
API	APIA					
	Foundation: Coral sand on Recent and Pleistocene basalt.					
	Johnson-Matheson (photo-cell amplifier used with heated stylus recorder).					
		Z	1.2	0.20		
AUC	AUCKLAND					
	Foundation: Volcanic beds on Tertiary sandstone and mudstone.					
	Willmore I (photo-cell amplifier used with pen-recorder) until 4 March.					
			Z	1.0	1.0	
	Mark Products L-4C (with Kinometrics VR-1 pen-recorder) from 4 March.					
		Z	1.0			3800 at 0.25s
BRZ	BORLAND LODGE					
	Foundation: Quaternary gravels.					
	Willmore II	Z	1.0	0.25		29100 at 0.25s
	Wood-Anderson	N	0.80		crit.	2800
CAZ	CASTLEPOINT					
	Foundation: Quaternary mudstone.					
	Willmore II (with Kinometrics VR-1 pen-recorder).					
			Z	1.0		
	The magnification may be reduced when high seas are running.					
CBZ	CAMPBELL ISLAND					
	Foundation: Basalt.					
	Willmore II	Z	1.0	0.25		5000 at 0.25s
CIZ	CHATHAM ISLANDS					
	Foundation: Clay over basalt.					
	Willmore II	Z	1.0	0.25		4440 at 0.20s
			N	1.0	0.25	
		E	1.0	0.25		4400 at 0.25s

Instrument	Compt	T_0	T_g	Damping	Magnification
CMZ CASHMERE Foundation: Rhyolite. Mark Products L-4C (Output telemetered to Kinometrics VR-1 pen-recorder at Canterbury Museum).	Z	1.0			24000 at 0.20s
CNZ CHATEAU Foundation: Volcanic ash and lava. Willmore I (Output telemetered to Kinometrics VR-1 pen-recorder).	Z	1.0			Variable
This station is operated by the Geophysical Survey, D.S.I.R., for volcanological research. The magnification is changed as necessary.					
COB COBB RIVER Foundation: Schist. Willmore II	Z	1.0	0.25		27300 at 0.20s
CRZ CAPE REINGA Foundation: Cretaceous basic volcanics. Willmore II	Z	1.0	0.25		9350 at 0.25s
	N	1.0	0.25		10200 at 0.20s
	E	1.0	0.25		9790 at 0.20s
Operation of short period E component ended in June.					
DNZ DUNEDIN Foundation: Basaltic lava flow. Willmore I (with Kinometrics pen-recorder).	Z	1.0			12000 approx.
This station is operated by the Geology Department of Otago University.					
ECZ EAST CAPE Foundation: Mudstone and sandstone. Willmore II	Z	1.0	0.25		4800 at 0.33s
GBZ GREAT BARRIER Foundation: Tertiary volcanics. Willmore II	Z	1.0	0.25		23800 at 0.25s
GNZ GISBORNE Foundation: Alluvium on Tertiary mudstone. Willmore II	Z	1.0	0.25		27000 at 0.25s
	N	1.0	0.25		29500 at 0.20s
	E	1.0	0.25		25200 at 0.20s
Operation of short period E component ended in June.					
GSZ GLACIER SHELTER Foundation: Recent andesite. Mark Products L-4C (Output telemetered to Kinometrics VR-1 pen-recorder).	Z	1.0			Variable
This station is operated by the Geophysical Survey, D.S.I.R., for volcanological research. The magnification is changed as necessary.					
KAI KAIMATA Foundation: Moraine and river gravels over Tertiary mudstone and sandstone. Wood-Anderson	X	0.80		crit.	2800
This instrument is oriented so that the X component lies north-east.					
KKY KAIKOURA WEST Foundation: Tertiary limestone and sandstone. Willmore II	Z	1.0	0.20		40000 at 0.20s
35mm film recorder. Magnification as seen on 8 × viewer. Station replaced by Kaikoura (KKZ) in June.					

	Instrument	Compt	T_o	T_g	Damping	Magnification
KKZ	KAIKOURA					
	Foundation: Tertiary limestone and mudstone.					
	Willmore II	Z	1.0	0.25		12000 at 0.25s
Replaced Kaikoura West (KKY) in June. Records on photographic paper.						
KRP	KARAPIRO					
	Foundation: Greywacke.					
	Benioff	Z	1.0	0.20		46700 at 0.25s
		N	1.0	0.20		approx. 40000 unstable
		E	1.0	0.20		41000 at 0.50s
Press-Ewing	ZNE	15	100		1000 approx. at 15s	
Operation of short period N and all long period components ended in June.						
MJZ	MOUNT JOHN					
	Foundation: Greywacke.					
	Willmore II	Z	1.0	0.25		30500 at 0.25s
		N	1.0	0.25		43600 at 0.25s
		E	1.0	0.25		41100 at 0.25s
Station closed in June.						
MNG	MANGAHAO					
	Foundation: Greywacke.					
Willmore II	Z	1.0	0.25		52000 at 0.33s	
MSZ	MILFORD SOUND					
	Foundation: Gneiss.					
	Willmore II	Z	1.0	0.25		49800 at 0.25s
NDF	NADI					
	Foundation: Recent clays.					
	Willmore II (photo-cell amplifier used with heated stylus recorder).					
	Z	1.25	0.20		6000 approx.	
NGZ	NGAURUHOE					
	Foundation: Recent volcanic flows.					
	Mark Products L-4C (Output telemetered to Kinematics VR-1 pen-recorder).					
	Z	1.0			Variable	
This station is operated by the Geophysical Survey, D.S.I.R. for volcanological research. The magnification is changed as necessary.						
NUE	NIUE					
	Foundation: Hard coral.					
	Willmore II (with Kinematics VR-1 pen-recorder).					
	Z	1.0			17200 at 0.10s	
OBZ	OBAN					
	Foundation: Weathered granite.					
	Mark Products L-4C (with Kinematics VR-1 pen-recorder).					
	Z	1.0			12000 at 1.0s	
OMZ	OAMARU					
	Foundation: Recent deposits overlying Tertiary limestone.					
	Willmore II	Z	1.0	0.20		11500 at 0.20s
ONE	ONERAHI					
	Foundation: Basalt.					
	Wood-Anderson	E	0.80		crit.	2800
RAO	RAOUL ISLAND					
	Foundation: Volcanic rock.					
	Willmore II	Z	1.0	0.25		4800 at 0.25s

	Instrument	Compt	T_o	T_g	Damping	Magnification
RAR	RAROTONGA					
	World-Wide Standard Station.					
	Foundation: Basalt.					
	Benioff	ZNE	1.0	0.75		6250 at 1s
	Press-Ewing	ZNE	15	100		375 at 15s
ROX	ROXBURGH					
	Foundation: chlorite schist.					
	Willmore I	Z	1.0	0.25		11500 at 0.25s
	Galitzin	Z	12	12		200 approx.
		NE	24	24		300 approx.
	Operation of long period components ended in June.					
SBA	SCOTT BASE					
	World-Wide Standard Station.					
	Foundation: Frozen basaltic debris resting on lava flows.					
	Benioff	ZNE	1.0	0.75		12500 (summer) at 1.0s 25000 (autumn) 50000 (winter & spring) 750 at 15s
	Press-Ewing	ZNE	15	100		
TNZ	TARATA					
	Foundation: Pleistocene mudstone.					
	Willmore II	Z	1.0	0.25		4570 at 0.20s
TRZ	TARADALE					
	Foundation: Quaternary sands and silts, overlying Quaternary limestone.					
	Willmore II	Z	1.0	0.25		5550 at 0.25s
TUA	TUAI					
	Foundation: Thick Tertiary sandstone and mudstone.					
	Willmore II	Z	1.0	0.25		7080 at 0.25s
WEL	WELLINGTON					
	World-Wide Standard Station.					
	Foundation: Greywacke.					
	Benioff	ZNE	1.0	0.75		6250 at 1.0s
	Press-Ewing	ZNE	15	100		750 at 15s
	Wood-Anderson	NE	0.80		crit.	1400
		E	0.80		crit.	280
	Imamura	Z	1		5:1	2
		NE	4		5:1	2
	The Benioff vertical component operates both photographic and heated-stylus recorders. There is also a pen-recorder operated by a Willmore I seismometer.					
WIZ	WHITE ISLAND					
	Foundation: Recent andesite.					
	Mark Products L-4C (Output telemetered to Kinematics VR-1 pen-recorder).					
		Z	1.0			Variable
	This station is operated by the Geology Department of Victoria University of Wellington for volcanological research.					
WNZ	WAIRAKEI					
	Foundation: Pumice breccia.					
	Willmore I	Z	1.0	0.25		200 (nominal)
WTZ	WHAKATANE					
	Foundation: Weathered Jurassic greywacke.					
	Willmore II	Z	1.0	0.20		24000 at 0.20s



PERIOD RESPONSE CURVES
SHORT PERIOD SEISMOGRAPHS

PUKAKI NETWORK

The stations of the Pukaki network are operated by the Department of Energy Resources, Electricity Division and are intended to monitor any changes in regional seismicity associated with the use of the lake for the generation of electric power. The records are interpreted and retained at the Observatory and are available for other seismological studies.

The network consists of nine permanent stations linked by radio to a common film recorder at Twizel. The seismometers used are Mark Products L-4C instruments with a natural period of one second, and the recorder is a Teledyne Develocorder with galvanometers having a natural period of 0.063s (frequency 16Hz). The outputs from some stations are recorded on two traces after electrical modification to produce different period response and magnification. The high magnification response curve is shown in the diagram preceding this section. The period of maximum response is 0.10s. The low magnification response curve is similar to that of a Willmore II and reaches a peak magnification at 0.20s. The low magnification traces are set to give one fifth of the magnification of the high magnification trace at 1.0s. Magnifications quoted below are for the period of maximum response and refer to the image projected on the screen of the Develocorder, which magnifies the film ten times.

Station	Component	Magnification
BSP Bush Stream	Z	750 000 at 0.10s
DMP Diadem	Z	750 000 at 0.10s
HGP Huxley Gorge	Z	750 000 at 0.10s
HHP Hogget Hill	Z	750 000 at 0.10s
MJP Mt John Pukaki	Z	750 000 at 0.10s
MMP Mount Mary	Z	750 000 at 0.10s
RHP Rhoboro Hills	Z	750 000 at 0.10s
THP Tara Hills	Z	750 000 at 0.10s
TMP Tomahawk Gully	Z	750 000 at 0.10s
	N	100 000 at 0.20s
	E	100 000 at 0.20s

The equipment at Twizel includes two conventional pen-recorders, which can be connected to the output of any of several stations. They are normally used to record the outputs of the Rhoboro Hills (RHP) and Tara Hills (THP) seismometers, providing magnifications of 275,000 at 0.10s. The lithological foundation at all stations is Mesozoic Greywacke.

WELLINGTON NETWORK

The stations of the Wellington network are linked by radio or land-line to a common recorder at the main observatory site at Kelburn. The seismometers used are Mark Products L-4C instruments with a natural period of 1.0 second, except in the case of WEL, where the vertical component signal is derived from the Benioff short-period instrument of the World-Wide Standard Station. The recorder used is a Teledyne Develocorder with galvanometers having a period of 0.063s (frequency 16Hz). Magnifications quoted refer to the most sensitive channel, as projected on the screen of the Develocorder, which magnifies the film trace ten times. In some cases a second channel operating at a lower gain is also recorded. Magnifications in parentheses have been empirically determined by comparing amplitudes recorded at these stations with amplitudes recorded at calibrated stations.

Station	Component	Magnification at 0.10s
BHW Baring Head	Z	350 000
BLW Big Hill	Z	400 000
CAW Cannon Point	Z	480 000
KIW Kapiti Island	Z	(320 000)
MOW Moikau	Z	210 000
MRW Makara Radio	Z	400 000
MTW Mount Morrison	Z	400 000
TCW Tory Channel	Z	(1 000 000)
WDW Wainui Dam	Z	630 000
WEL Wellington	Z	(1 500)
	Z	110 000
WHW Wright's Hill	N	280 000
Station closed in March		

The lithological foundation at all stations is Jurassic-Permian Greywacke.

N.B. The films from both the Wellington and Pukaki networks are normally read on a viewer which has a magnification twice that of the Develocorder.

SEISMIC RESEARCH OBSERVATORY

This station is sponsored by the United States Geological Survey. A three-component seismometer sealed in a gas-filled capsule is placed in a borehole 165mm in diameter and about 100m deep. Both digital and analogue recordings are made from the three long-period and the vertical component short-period outputs. The recorder is at the observatory site in Kelburn, and the signals are transmitted to it by land-line. The ground surface is 88m above and the seismometer 10m below sea-level.

Station	Component	Magnification
SNZO South Karori	ZNE	20 000 at 25s
	Z	6 250 at 1.0s

The lithological foundation is Jurassic-Permian Greywacke.

TIMING ARRANGEMENTS

Unless stated otherwise, times in this Report are given in Universal Time (strictly UTC, defined in a later section). For most seismological and civil purposes this may be regarded as the Mean Solar Time of the Greenwich meridian.

Throughout the standard network, minute marks derived from quartz crystal clocks of high stability appear on records as abrupt trace deflections of about two seconds duration. Radio time-signals also trigger the trace deflector so that the relationship between the locally generated minute marks and Universal Time can be established. In most cases these are the signals of the New Zealand Time Service, for which the Observatory is administratively responsible, and which are transmitted hourly through the stations of Radio New Zealand, but in areas where local reception is bad, the Australian station VNG is used. It is estimated that the total error in time-signal recording resulting from signal transmission and delay in operation of the trace deflector should never exceed 30 milliseconds. Further details of the New Zealand Time Service appear later in this Report.

Stations of the World-Wide Standard Seismograph Network have the timing arrangements usual at such stations. At other stations beyond New Zealand time signals originating at the Observatory or from VNG are used.

Time-pulse signals of one second period are displayed on the topmost and lowest traces of the Wellington and Pukaki network records. At Wellington they are derived directly from the national time-service, and at Pukaki from VNG. Additional periodic markings identify hours and minutes.

It is sometimes desirable to know the local civil time at which an earthquake occurred. The times now used for civil purposes in New Zealand (except the Chatham Islands) are New Zealand Standard Time, and New Zealand Daylight Time, which are defined in the Time Act, 1974. New Zealand Standard Time is 12^h, and New Zealand Daylight Time is 13^h ahead of U.T. The period of Daylight Time is specified periodically by Order in Council, as provided by the Act, and normally extends from 02^h NZST on the last Sunday in October until 02^h NZST on the first Sunday in March of the following year.

The time observed in the Chatham Islands is 45 minutes in advance of that currently in use in New Zealand. New Zealand Standard Time is observed at Scott Base, in Fiji and on Raoul and Campbell Islands. Times observed elsewhere in the South Pacific are decided by the governments of the respective countries. Those affecting places which sometimes report earthquakes to the Observatory are:

Western Samoa	11 ^h 00 ^m	behind U.T.
Niue	11 ^h 00 ^m	behind U.T.
Rarotonga	10 ^h 00 ^m	behind U.T.
Tonga	13 ^h 00 ^m	ahead of U.T.
Norfolk Island	11 ^h 30 ^m	ahead of U.T.

Note that Western Samoa, Niue, and Rarotonga are on the opposite side of the International Date Line from New Zealand.

The first of the three phases was observed on the 19th of August at 10.15 a.m. at the station at Whangarei. It was a very small earthquake, but it was the only one of its kind recorded in the North Island of New Zealand. The second phase was observed on the 20th of August at 11.15 a.m. at the station at Whangarei. It was a very small earthquake, but it was the only one of its kind recorded in the North Island of New Zealand. The third phase was observed on the 21st of August at 12.15 p.m. at the station at Whangarei. It was a very small earthquake, but it was the only one of its kind recorded in the North Island of New Zealand.

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INSTRUMENTAL DATA

CONTENT

This section contains origin times, epicentres, focal depths, magnitudes, and station readings of earthquakes in the New Zealand region that have been located from instrumental data.

In the area within 10° of Wellington, the Observatory attempts to determine origins for all earthquakes of magnitude (M_L) 4.0 or greater, and any other earthquakes reported felt. The data include many other shocks read to ensure the fullest possible coverage down to magnitude 4.0. A list of the origins and magnitudes follows the full listing of data and results.

In the more intensively studied areas around Lake Pukaki and Wellington, coordinates of all locatable seismic events are calculated using data from closely-spaced local networks of seismometers. Station readings are not published, but origins and magnitudes are listed at the end of this section.

DETERMINATION OF ORIGINS

Earthquake origins are determined using the phases P, Pn, P*, Pg, and the corresponding S phases. In computing travel times, (except for origins listed under the Pukaki and Wellington Network headings), it is assumed that the New Zealand crust is 33 km thick, and is divided into two uniform layers by a discontinuity at a depth of 12 km. Above the discontinuity the velocities of P and S are 5.5 and 3.3 km/s respectively (Pg and Sg) and below it they are 6.5 and 3.7 km/s (P* and S*). Travel times for Pn and Sn, which travel in the mantle, are calculated using mantle velocities of 8.1 km/s for Pn and 4.6 km/s for Sn. Several studies have shown that these values are close to the average velocities for Pn and Sn in New Zealand. Travel times for P and S from sub-crustal earthquakes are derived from the Jeffreys-Bullen *Seismological Tables* (British Association for the Advancement of Science, 1958), and, at the base of the crust, correspond to a velocity of 7.8 km/sec for P and 4.4 km/sec for S. It is known that the mantle in New Zealand is not laterally homogeneous, but until such time as more accurate travel times can be routinely calculated, the Jeffreys-Bullen approximation will continue to be used, maintaining consistency with earlier reports.

Calculations are carried out by a PDT 150 intelligent terminal (operated as a stand-alone machine) using FORTRAN programs developed on a PDP 11/34 computer by W. D. Smith, E. G. C. Smith and A. J. Haines. A provisional origin is repeatedly adjusted to obtain the best agreement between observed arrival-times for the various phases, and times computed from tables. More precisely, the origin is adjusted to minimise the sum of the squares of the weighted residuals (observed minus computed arrival-times).

In general, all four coordinates of the earthquake origin are calculated (origin time, latitude, longitude, and focal depth). In some cases, however, the focal depth is not allowed to vary, but is restricted to some chosen depth. This is most commonly done for crustal earthquakes. Unless there is a station within 25 km of a shock in the upper crust, or within 50 km of a shock in the lower crust, a nominal depth of either 12 or 33 km is assigned, according to the crustal phases present, and to the goodness of fit of the resulting solutions. The letter R (for 'restricted') after the depth indicates that the depth has been fixed at the given value.

In routine origin determinations sufficient of the stations nearest to the epicentre are read to yield a satisfactory solution, together with a selection of other stations from which readings are recorded but not used. The fact that no readings from a station have been reported is not necessarily an indication that the station did not record the shock. Even at close stations, a reading may be omitted because a high microseism level confused the onset. Failure to produce a usable reading may also result from time lost during record-changing, or occasionally from instrumental or human failures.

Origins determined from Pukaki and Wellington network data are obtained using a modified program with different convergence criteria, in conjunction with velocity models that have been found to be appropriate for the two areas. These models are given immediately before the data from the respective networks.

In using the results in this section, it is essential to keep in mind that the positions of earthquakes with epicentres outside the network of seismograph stations can be very uncertain, even though the readings may be consistent with the computed origin (*i.e.* the residuals are small). The solutions presented are in all cases based upon uniform procedures and laterally homogeneous models. For origins determined using the standard network, the model approximates average conditions in the New Zealand region, but as the real structure is known to be asymmetrical, the true origin could be very different from the one calculated. Care should

therefore be taken not to attach significance to an epicentre in an unusual place or a focus at an unusual depth, without investigating the uncertainties of the determination.

Because well-established local models have been used to calculate the origins listed under the Wellington and Pukaki Network headings, systematic errors in these results should be small.

MAGNITUDES

The magnitudes assigned to local earthquakes are intended to be values of M_L as originally defined by C. F. Richter (*Bull. Seism. Soc. Am.* 25: 1-32, 1935), but his procedure for performing the magnitude calculation at other than the standard distance of 100 km has been modified, to take account of the observed characteristics of energy propagation in New Zealand, including the effects of focal depth. (For full details, see Haines, A.J.: A local magnitude scale for New Zealand earthquakes. *Bull. Seism. Soc. Am.* 71: 275-94.)

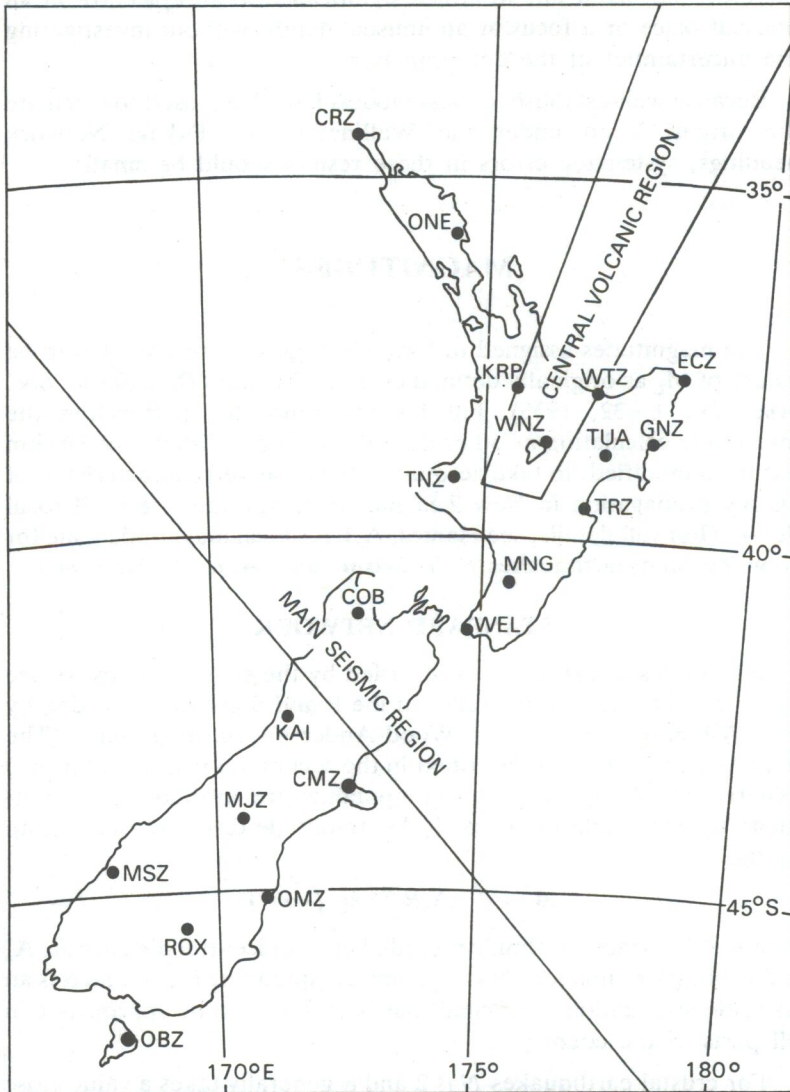
STANDARD NETWORK

Magnitudes of earthquakes recorded by the standard network are based on the largest amplitudes in the P and S groups, recorded by the Willmore vertical and Wood-Anderson seismographs. (The deployment of these is described in the section on instrumentation.) Where two Wood-Anderson components are available, the root-mean-square amplitude is used. An amplitude-distance relationship of the form

$$A = A_0 R^{-N} \exp(-\alpha R)$$

where A is a trace amplitude recorded at an epicentral distance R , A_0 is a calibration function, N is a geometric spreading factor and α is an inelastic attenuation coefficient, has been found to be appropriate in all parts of the country.

For crustal earthquakes N is 2 and α generally takes a value close to 0. With these values, the relationship describes head-wave propagation with no attenuation. In the Central Volcanic Region, however, (see Map, p.28) α takes values of 0.8 deg^{-1} for P waves and 1.05 deg^{-1} for S waves. Adjustments are therefore made according to the distance travelled in the volcanic region.



Stations and regions used in the Standard Magnitude Determination

For deep earthquakes in the Main Seismic Region the same parameters as for crustal earthquakes apply (*i.e.* $N = 2$, $\alpha = 0$) provided that (i) R now measures the slant distance from the focus to the base of the crust, and (ii) stations to the west of the volcanic region or south of the Main Seismic Region are not used, because the structure demands different spreading and attenuation terms there.

For deep earthquakes in Fiordland the same amplitude-distance formula is used, with (i) N given the value 1 (*i.e.* body wave propagation), (ii) α increasing with focal depth, and (iii) stations in the Main Seismic Region (apart from COB) not used, because of variations of the coefficients N and α . Milford Sound (MSZ) and Borland Lodge (BRZ) should ideally be excluded for the same reason, but at least one of them is sometimes needed to obtain any estimate of magnitude, and MSZ readings have been used, with $N = 2$, $\alpha = 0$, a station correction of 0.1, and the result given only half weight.

TABLE 1

MAGNITUDE CORRECTIONS FOR THE TWO CLASSES OF FOCAL DEPTH, FOR P AND S PHASES RECORDED ON WILLMORE AND WOOD-ANDERSON INSTRUMENTS.

Station	Willmore P		Willmore S		Wood-Anderson	
	≤33 km	>33 km	≤33 km	>33 km	≤33 km	>33 km
CMZ	0.00		0.15			
COB	0.10		0.10			
CRZ	0.20		0.50			
ECZ	0.55	0.35	0.80	0.70		
GNZ	-0.05	-0.05	0.10	0.10		
KAI					0.30	
KRP	-0.30		0.00			
MJZ	-0.30		-0.05			
MNG	-0.40	-0.45	-0.15	-0.20		
MSZ	-0.30		-0.20			
OBZ	-0.05		-0.10			
OMZ	0.10		0.15			
ONE					0.15	
ROX	0.10		0.05			
TNZ	0.35		0.55			
TRZ	0.25	0.40	0.45	0.40		
TUA	0.35	0.35	0.65	0.70		
WEL					0.30	0.30
WNZ	0.90	1.25	1.05	1.65		
WTZ	-0.15	0.00	0.25	0.30		

Corrections are applied to allow for station characteristics. These include the differences in site effects, frequency response and magnification of the instruments. They are determined empirically in such a manner as to give the most consistent estimates of magnitude from the different stations, and their absolute level is adjusted to give a standard Wood-Anderson instrument at Wellington a zero correction, a procedure that can be justified on *a priori* grounds and provides a smooth connection with New Zealand magnitudes published before 1977.

Station corrections (Table 1) are added to the individual estimates of magnitude, which are then averaged. The trace amplitudes (mm) on which estimates of magnitude are based are given, but not the actual ground motion. Individual estimates not used in determining the mean for any of the above reasons, or because the station corrections are not known, are marked with an asterisk.

PUKAKI NETWORK

The maximum amplitude on the viewing screen is used, together with a formula developed by Eaton (*Open File Report*, U.S. Geological Survey, 1970) which has been modified for consistency among stations and calibrated against available stations of the national network (*e.g.* MJZ) using a few selected shocks. This procedure is being refined and the formula may be further modified in subsequent years. Magnitudes presented here must therefore be regarded as provisional. There is no evidence that station corrections are required. Individual estimates of magnitude are averaged to produce the value presented in the list of origins.

WELLINGTON NETWORK

Magnitudes are calculated using both the maximum amplitude on the viewing screen and the duration of the signal. The formulae are empirical, developed by R. Robinson for maximum consistency among stations. Both scales were calibrated against the Wood-Anderson determination at Wellington, for a selection of shocks that were large enough to record there. The formulae are

$$M_T = -0.81 + 2.30 \log_{10} T_i + C_i$$

$$M_A = \log_{10} A_i - 1.71 + 1.56 \log_{10} R_i + K_i$$

where T_i is the duration in seconds at station i , A_i is the amplitude (mm) on the viewing screen, R_i is the slant distance from the focus (km), and C_i and K_i are the station corrections for determinations from durations and amplitudes respectively. Values of C and K are listed in Table 2. Individual estimates of magnitude are averaged to give the final values which appear in the list of origins.

TABLE 2

MAGNITUDE CORRECTIONS USING AMPLITUDES AND DURATIONS FOR STATIONS OF THE WELLINGTON NETWORK.

Station	Amplitudes	Durations
BHW	0.27	0.22
BLW	0.06	0.09
CAW	-0.33	0.00
KIW	-0.32	0.03
MOW	0.13	0.19
MRW	-0.09	0.13
MTW	-0.05	0.15
TCW	-0.42	-0.03
WDW	-0.10	0.11
WEL	0.00	0.24
WELA†	1.59	
WELO†	1.71	
WHW	-0.22	0.02

† WELA is a Wood-Anderson instrument and WELO is a low gain vertical instrument, both at Wellington.

DATA FROM THE STANDARD NETWORK

The first line printed for each earthquake gives the reference number, used throughout the Report. The second line gives the parameters of its origin, the standard error of the residuals, and the average of the magnitude determinations. The standard error is derived from the equation

$$\text{S.E.} = \sqrt{\frac{\sum_{i=1}^n (w_i r_i / 100)^2}{n - m}}$$

where r_i is the i th residual, w_i is its weight, n the number of readings, and m the number of parameters determined. Below each parameter of the origin, its standard error is printed, or if the parameter was restricted to a particular value, the letter R. When the number of readings and the number of parameters to be determined is the same, the standard error is not defined. This is indicated by printing ND.

The information listed for each station includes the arrival times of the various phases, the directions of ground motion, the residuals, the epicentral distance in degrees ($1^\circ = 111\text{km}$), the azimuth of the station from the epicentre, in degrees east of north, and magnitudes computed as already described. The directions of ground motion are indicated by the following letters: U - up, D - down, N - north, S - south, E - east, W - west. When the instruments are not oriented towards cardinal points, the letters are X for a movement in the northeast and F in the southwest quadrant (as at KAI), Y for one in the northwest and J in the southeast quadrant.

Residuals are listed for all readings used in calculating the origin and in certain other cases. A weight, in the range 0 to 100, is assigned to each residual by Jeffreys' method (Jeffreys H., 1939: *Probability Theory*, Cambridge University Press), which severely diminishes the weight given to residuals greater than three standard errors. The absence of a weight indicates that that reading was suppressed by the seismologist who processed the earthquake, and was not used in determining the origin.

		18 ^h 28 ^m 11 ^s .0			37°.63s	176°.38E	210 km	80/ 001						
		± 2.0			0.06	0.12	21	M = 4.2						
							S.E. of RES. 1.4							
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
GBZ	P	18	28	45.8		-0.7	100	1.58	333					
GNZ	P	18	28	47.8		0.6	100	1.65	129		4.0	4.2		
	S		29	14.6		-0.5	100							
NGZ	eP	18	28	49.7		2.3	97	1.66	201					
MNG	P	18	29	01.9		-0.5	100	3.07	193		4.2	4.2		
	S			41.5		-0.8	100							
COB	eP	18	29	19		-0.6	100	4.46	218					2.8*
	eS		30	13		0.3	100							
AMPLITUDES:		GBZ	0.9		GNZ	1.7 4.3		NGZ	0.7					
		MNG	2.8 3.6		COB	0.3								

		20 ^h 20 ^m 54 ^s .0			40°.29s	173°.43E	212 km	80/ 002						
		± 0.8			0.05	0.07	7	M = 4.5						
							S.E. of RES. 1.6							
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
COB	iP	20	21	27.1		2.3	99	0.96	213		4.2*	3.7*		
	S			48.5		-0.2	100							
TNZ	eP	20	21	28.8		1.3	100	1.32	34		3.1*	3.5*		
	e			46.7										
	eS			52		-1.4	100							
WEL	P	20	21	29.0		0.7	100	1.42	135	4.8				
	S			53.7		-1.1	100							
MNG	P	20	21	31.2		1.3	100	1.60	103					
	e			49.5										
CNZ	iP	20	21	34.0		0.7	100	1.96	57					
	eS			22 06		2.4	99							
NGZ	P	20	21	34.9		1.1	100	2.02	57					
	S			22 04.2		-0.3	100							
CAZ	P	20	21	37.9		2.0	100	2.21	107					
	e			22 04.3										
	S			10.3		2.1	99							
KRP	eP	20	21	44.0		0.7	100	2.87	35		2.9*	3.0*		
	eS			22 19.5		-1.8	100							
TUA	P	20	21	48.0		0.6	100	3.23	64		4.5	4.4		
	S			22 27.3		-1.5	100							
CMZ	eP	20	21	49		0.2	100	3.35	190		3.4*	4.5*		
	S			22 29.0		-2.3	99							
WTZ	eP	20	21	50.8		-1.0	100	3.60	51		4.1	4.2		
	eS			22 35		-1.6	100							
GNZ	P	20	21	55.8		-0.0	100	3.91	67		4.9	4.6		
	e			22 37.0										
	S			41.2		-2.4	99							
RHP	P	20	22	04.8		1.1	100	4.55	212					
	S			55.2		-2.5	99							
AMPLITUDES:		COB	6.0 5.5		TNZ	0.2 0.7		WEL	6.0					
		CNZ	9.7 9.0		NGZ	18 13		CAZ	2.5 7.5					
		KRP	0.4 0.5		TUA	0.8 0.6		CMZ	0.6 11					
		WTZ	0.6 0.8		GNZ	3.7 2.6		RHP	4.8 6.5					

		18 ^h 24 ^m 15 ^s .4			38°.48s	176°.75E	5 km	80/ 003			
		± 0.3			0.02	0.02	R	M = 3.4			
							S.E. of RES. 0.9				

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TUA	Pg	18	24	24.0		-0.6	100	0.45	136		3.2	3.5
	Sg			30.0		-0.7	100					
WIZ	Pg	18	24	25.2		-0.9	100	0.53	21		3.4	3.5
	Sg			33.0		-0.3	100					
WNZ	ePg	18	24	26.0		-0.1	100	0.53	253		3.1	
GNZ	Pg	18	24	36.0		0.1	100	1.01	100		3.8	3.2
	Sg			51.2		1.7	98					
TRZ	Pg	18	24	37.7		0.6	100	1.07	177		3.6	3.2
	e			57								
KRP	Pg	18	24	37.0		-0.7	100	1.11	300		3.1	3.4
	Sg			54.0		1.4	99					
NGZ	Pg	18	24	37.7		-0.6	100	1.13	231			
	i			39.5								
CNZ	eSg			54.5		0.9						
	ePg	18	24	39.8		0.5	100	1.19	232			
MNG	i			41.2								
	eSg			57.0		1.7						
MNG	P*	18	24	59.0		1.6		2.35	204		3.5	
	ePg		25	06.3		3.4						
AMPLITUDES:		TUA		2.6	5.2	WIZ		10	11	WNZ	0.3	
		GNZ		5.2	1.9	TRZ		1.3	0.8	KRP	0.7	1.0
		NGZ		8.0		CNZ		1.5	1.2	MNG	1.1	

FELT: Murupara (34) MM IV

JAN 04 01^h28^m26^s.6 36°.66S 177°.45E 221 km M = 4.8
 ± 0.6 0.04 0.05 6 S.E. of RES. 0.7 80/ 004

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	P	01	29	01		-0.3	100	1.37	196		4.4	4.4
	S			27.5		-0.8	100					
GBZ	iP	01	29	02.8	D	-0.9		1.66	285			
	e			18								
KRP	iP	01	29	06.9	DNE	0.1	100	1.98	230		3.7*	3.0*
	S			39		1.1	99					
GNZ	P	01	29	08.1	U	0.8	100	2.03	167		4.7	4.8
	S			38.5		-0.2	100					
TUA	P	01	29	09.5		1.0	99	2.16	186		4.4	5.0
	e			14								
AUC	S			41		0.0	100					
	iP	01	29	09.0	U	0.4	100	2.16	264			
ONE	eP	01	29	13		-0.9	99	2.65	289			
TRZ	P	01	29	16.6		-0.4	100	2.93	190		4.8	5.1
	e			23								
CNZ	S			56		-0.1	100					
	P	01	29	16.7		-0.5	100	2.95	210			
TNZ	S			56		-0.5	100					
	e			30	04.5							
MNG	eP	01	29	24		0.4		3.50	223		3.3*	3.4*
	S			30	12.5	4.6						
WEL	iP	01	29	29.6	U	-3.1		4.24	201		5.3	5.2
	e			30	14							
KAI	S			20		-3.9						
	P	01	29	39		-4.0		5.08	204	4.9		
CMZ	S			30	38	-4.5						
	e(S)	01	31	31		-7.0		7.49	217	3.8*		
								7.84	207		3.0*	3.8*

	e			14.5								
COB	e(Sg)			39								
	ePn	12	17	04								
	eSn		18	34								
AMPLITUDES:		OBZ		2.8	9.5	MSZ		2.1	3.2	OMZ		0.3
		MJZ		0.7	0.8	COB		0.1	0.1			

JAN 05 19^h10^m01^s.9 38°.70s 175°.61E 146 km M = 3.6
 ± 0.9 0.03 0.04 7 S.E. of RES. 0.8 80/ 007

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CNZ	iP	19	10	23.6		0.7	100	0.50	185			
KRP	iP	19	10	24.3	D	-0.3	100	0.77	356		3.2*	
	S			42		0.0	100					
TNZ	P	19	10	27.7	U	0.6	100	1.07	242		3.1*	
TRZ	P	19	10	29		-0.1	100	1.28	133		3.4	3.4
	S			51		1.1	99					
WTZ	(S)	19	10	49.5		-0.8	100	1.30	57			3.1
GNZ	P	19	10	36.5		0.7	100	1.89	89		3.6	3.6
	S			11 01.5		-0.4	100					
MNG	iP	19	10	35.4	U	-0.8	100	1.93	183		4.1	3.9
	e			11 00								
	(S)			01.5		-1.0	99					
WEL	S	19	11	16.5		-2.3		2.66	194	3.3		
MJZ	S	19	12	43.5		-7.3		6.55	215			2.5*
AMPLITUDES:		KRP		2.1		TNZ	0.3			TRZ	0.3	0.6
		WTZ			0.4	GNZ	0.7	1.0	MNG		6.0	4.2
		WEL	0.1			MJZ		0.1				

JAN 05 22^h34^m09^s.5 37°.52s 177°.06E 12 km M = 4.0
 ± 0.4 0.02 0.03 R S.E. of RES. 0.8 80/ 008

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPg	22	34	18.7	U	-0.5	100	0.47	187		3.3	3.8
	Sg			25.5		-0.2	100					
KRP	Pn	22	34	32.9	D	0.5	100	1.27	251		3.6	3.9
	Pg			38		2.6						
	(Sn)			48.5		-1.0	99					
TUA	iP*	22	34	33.4	D	0.7	100	1.29	177		4.1	4.5
	S*			51.5		1.6	97					
GNZ	P*	22	34	33.0	U	-0.9	100	1.36	146		4.3	4.4
	Pg			37		-0.0						
	eSg			55		-0.4	100					
	e			58								
GBZ	Pn	22	34	40		0.2	100	1.82	315			
	Pg			46.5		0.2						
	S*			35 06		0.4	100					
TRZ	ePg	22	34	49.5		-1.3		2.04	185		4.3	4.0
CNZ	P*	22	34	45.5		-0.3	100	2.06	215			
	(Pg)			48.5		-2.6						
ONE	P*	22	34	58		-0.2	100	2.78	308			
	Pg			35 07		1.2						
MNG	Pn	22	34	59		-1.5		3.33	201		3.8	3.8
	P*			35 07		-0.5						
	e			25								
	e(Sn)			44		5.0						
COB	e(Pn)	22	35	26		4.1		4.90	222		3.7	

	P*	34	-0.2				
AMPLITUDES:	WTZ	8.0	18	KRP	1.3	2.2	TUA 2.0 5.3
	GNZ	7.7	14	GBZ	1.2	1.3	TRZ 1.5 1.0
	MNG	0.9	0.9	COB	0.1		

80/ 009

JAN 07 06^h34^m12^s.4 38°.69S 175°.83E 136 km M = 4.8
 ± 0.4 0.02 0.02 3 S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	P	06	34	30.9	U	-0.3	100	0.22	74			
	e			34.5								
	e(S)			48		2.5						
NGZ	iP	06	34	31.6		-0.7	99	0.52	199			
	e(S)			47.5		-0.2	100					
CNZ	iP	06	34	32.0		-0.5	100	0.56	204			
GSZ	eP	06	34	32.5		-0.4		0.61	198			
	S			49.5		0.8	99					
KRP	P	06	34	34.4	U	0.2	100	0.80	343		3.4*	3.6*
	e			47.5								
	S			51		-0.0	100					
TUA	iP	06	34	36.6	D	0.3	100	1.03	97		4.4	5.0
	e			48								
	S			55		0.4	100					
TRZ	iP	06	34	37.5	U	-0.0	100	1.15	138		4.9	4.8
	(S)			57		0.4						
WTZ	iP	06	34	37.2	D	-0.2	100	1.15	53		4.8	4.5
	e			51								
	S			56		-0.6	99					
GNZ	iP	06	34	43.8	US	0.1	100	1.72	89			
	e			59.5								
	e(S)			35 05		-2.5						
MNG	iP	06	34	44.3	U	-2.1		1.94	188			
GBZ	P	06	34	53.8	D	0.6	99	2.48	353			
	e			35 02								
WEL	P	06	34	52.8		-3.5		2.72	197	4.8		
	e			35 07								
	S			25		-4.6						
COB	iP	06	35	01.0	D	-4.0		3.38	224		4.4*	4.4*
	S			40.5		-4.6						
KAI	S	06	36	17		-9.2		5.10	220	4.1*		
CMZ	P	06	35	27		-5.7		5.45	205		3.6*	4.6*
	S			36 25		-9.8						
MJZ	P	06	35	44.0		-4.9		6.66	216		3.8*	4.1*
	S			36 53		-10.8						
OMZ								7.36	208		3.8*	3.8*
CIZ	eP	06	36	06		2.1		7.78	135			
	S			37 25		-5.8						
MSZ								8.41	222		3.6*	3.6*
AMPLITUDES:	WNZ	2.0	1.0	KRP	3.3	6.5	TUA	4.5	18			
	TRZ	11	20	WTZ	20	13	GBZ	1.2				
	WEL	3.2	4.5	COB	4.5	17	KAI	1.1				
	CMZ	0.6	9.0	MJZ	1.6	3.5	OMZ	0.5	1.0			
	CIZ	1.1	0.9	MSZ	0.7	1.4						

FELT: Ngaio (68) MM III

80/ 010													
JAN 09		02 ^h 43 ^m 32 ^s .5			46°.78S		165°.49E		12 km		M = 4.2		
		± 0.8			0.03		0.06		R		S.E. of RES. 0.8		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
OBZ	Pn	02	44	02.6	D	-0.0	100	1.81	95		4.7	4.6	
	Sn			25.5		0.3	100						
MSZ	Pn	02	44	15		0.0	100	2.71	40		4.5	4.4	
	eP*			20		0.1							
DNZ	Sg		45	05		1.1	99						
	Pn	02	44	28		0.9	100	3.60	77				
	Sn		45	09		0.6	100						
OMZ	S*			19		-3.1							
	ePn	02	44	34.5		-0.2	100	4.16	68		4.0	4.3	
	(P*)			42		-2.5							
	S*		45	38		-0.7	100						
RHP	(Sg)			56		3.5							
	Pn	02	44	35		-0.3	100	4.20	52				
MJZ	ePn	02	44	39		-0.2	100	4.48	53		4.3	4.4	
	e(P*)			52		1.8							
CMZ	Sn		45	28		-1.6	98						
	eSg	02	46	50		-3.9		5.98	60		3.7	4.0	
KAI	Sn	02	46	08		2.1		5.99	47	4.2			
COB	Pn	02	45	24.5		1.0		7.73	45		4.0	3.9	
	Sn		46	53		5.4							
MNG	eP*	02	46	22		6.2		9.50	53		4.0		
AMPLITUDES:		OBZ		12	26	MSZ		6.2	9.0	DNZ		2.2	2.8
		OMZ		0.3	1.3	MJZ		1.6	2.5	CMZ		0.1	0.3
		KAI	0.2			COB		0.1	0.3	MNG		0.2	

80/ 011												
JAN 09		07 ^h 05 ^m 02 ^s .6			37°.72S		179°.02E		12 km		M = 4.1	
		± 1.1			0.05		0.08		R		S.E. of RES. 1.0	
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	iP*	07	05	24.3	UE	-0.1	100	1.21	220		4.1	4.1
	e			33.5								
WTZ	S*			40		-0.6	100					
	Pn	07	05	30.5	U	0.1	100	1.63	260		4.1	4.2
	Sn			53		1.8	99					
TUA	S*			55		1.8						
	Pn	07	05	33.5		0.4	100	1.83	233		3.9	4.1
TRZ	Sn			54.5		-1.4	99					
	Pn	07	05	42		-0.4	100	2.51	223		4.1	4.4
KRP	e			06								
	Sn			13.5		1.1	100					
	Pn	07	05	45.5		-0.4	100	2.77	265		3.9	4.0
	P*			50		-1.0						
NGZ	Pg			57		-1.6						
	Sn		06	17		-1.5	99					
	Pn	07	05	50		0.3		3.05	240			
CNZ	(Sn)			06		-2.2						
	Pn	07	05	50.5		0.1	100	3.10	241			
GBZ	Sn		06	27		0.5	100					
	Pn?	07	05	53.5		1.5		3.21	297			
TNZ	Pn	07	06	04		2.3		3.92	247		4.1	
MNG	Pn	07	05	59.9	U	-2.7		4.00	222		4.0	4.2
	e			06		43.5						

	Sn	45	-2.9								
ONE	Pn	07 06 10.5	4.8	4.22	296						
WEL	Sn	07 07 03	-5.5	4.85	221	4.2					
COB	Pn	07 06 26	-2.9	5.92	233		3.8	3.9			
	Sn	07 32	-2.2								
CRZ	Pn	07 06 35	3.6	6.10	301		4.7				
CIZ	Sn	07 08 02	0.1	7.07	153						
KAI	Sn	07 08 07	-6.5	7.55	228	4.4					
CMZ				7.60	218					4.2	
MJZ	Sn	07 08 42	-6.5	9.01	223					4.3	
AMPLITUDES:	GNZ	7.5	11	WTZ	5.1	5.5	TUA	0.8	1.4		
	TRZ	0.9	2.1	KRP	0.6	0.6	GBZ	0.9			
	TNZ	0.1		MNG	1.2	2.1	WEL	0.2			
	COB	0.1	0.5	CRZ	0.2		CIZ		0.7		
	KAI	0.2		CMZ		0.3	MJZ		0.5		

80/ 012

JAN 09 11^h20^m27^s.2 36°.55S 177°.35E 255 km M = 3.9
 ± 0.6 0.05 0.08 5 S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	11	21	06.0	U	0.1	100	1.46	191		3.9	3.7
	S			36			100					
KRP	P	11	21	10.5	U	0.1	100	2.00	226		2.8*	
GNZ	P	11	21	12.4	D	0.5	100	2.16	166		4.2	4.1
	S			46.5			100					
TUA	P	11	21	12.5		-0.3	100	2.26	184		3.4	3.9
	S			47.5		-0.7	99					
NGZ	eP	11	21	20		0.0	100	2.97	207			
TRZ	P	11	21	20		-0.7	99	3.03	188		3.7	3.8
	S			22 03		0.7	99					
TNZ	e(P)	11	21	27.5		1.2		3.53	221			
MNG	P	11	21	32.1	U	-3.5		4.32	199		4.5	4.0
	S			22 24		-4.8						
WEL	S	11	22	43		-3.5		5.15	202	3.9		
COB	e(P)	11	21	51		-2.5		5.80	217		3.0*	2.7*
	S			22 54		-6.9						
MJZ	S	11	24	09		-6.7		9.11	213			2.7*
AMPLITUDES:	WTZ	0.9	0.6	KRP	0.4			GNZ	1.4	2.0		
	TUA	0.1	0.3	TRZ	0.1	0.3		MNG	3.1	1.1		
	WEL	0.1		COB	0.1	0.2		MJZ		0.1		

80/ 013

JAN 09 11^h49^m16^s.8 40°.84S 172°.51E 0 km M = 3.6
 ± 0.7 0.03 0.04 5 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	iPg	11	49	22.2		-0.7	100	0.30	145		3.5	
	(Sg)			25		-1.9						
WEL	P*	11	49	50.5		1.2	100	1.76	105	3.9		
	S*			50 14		0.9	100					
KKY	P*	11	49	50.5		0.4	100	1.81	151			
	eS*			50 15.5		1.0	100					
KAI	ePg	11	49	55		0.3	100	1.88	206	3.7		
	Sn			50 12.5		-1.3	100					
	(S*)			17		0.6						
TNZ	P*	11	49	57		0.5	100	2.19	42		3.5	3.8
	Pg			50 05		3.9						
	S*			27		1.2	100					

MNG	Sg		36		5.4					
	P*	11 49	58.6	D	0.7	100	2.28	85	3.9	4.0
	Sg		50 32		-1.3	100				
CMZ	P*	11 50	08.5		2.5	97	2.74	178	3.3	3.1
	eS*		43		0.5					
	eSg		52		2.6					
CNZ	P*	11 50	07.5		-0.3		2.85	56		
	Pg		15		0.5					
	Sg		53		0.1					
NGZ	P*	11 50	08.4		-0.3	100	2.91	56		
	Pg		16		0.5	100				
	Sg		54		-0.6	100				
MJZ	Pn	11 50	12		0.4		3.49	205	3.7	3.6
	Sn		54		1.4					
TRZ	Pg	11 50	30		1.5		3.55	70	3.5	3.3
	S*		51 09		2.5					
KRP	Pn	11 50	18		3.0		3.74	40	3.6	3.5
	P*		26.5		3.5					
	Sg		51 17.5		-5.3					
TUA	P*	11 50	28.5		-0.8		4.11	62		
WTZ	e(P*)	11 50	39.5		3.7		4.49	52	4.0	
MSZ	Pn	11 50	33		-0.7		5.11	220	3.7	3.5
	eSn		51 31		-0.5					
	eSg		52 09		0.1					

AMPLITUDES:		COB	20	WEL	1.0	KAI	0.6
	TNZ	0.2	0.6	MNG	3.0	4.8	CMZ 0.2 0.2
	MJZ	0.6	0.6	TRZ	0.1	0.1	KRP 0.4 0.4
	WTZ	0.1		MSZ	0.3	0.3	

JAN 09 15^h22^m03^s.5 38°.55S 176°.80E 33 km M = 4.3
 ± 0.4 0.02 0.03 R S.E. of RES. 1.1 80/ 014

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TUA	iPn	15 22	12			-0.2	100	0.38	134			
WNZ	Pn	15 22	14.4			-0.2	100	0.55	261		4.4	4.3
	P*		17			2.2						
	Sn		22.5			-0.3	100					
	S*		32.5			9.4						
WTZ	iPn	15 22	14.9		D	-0.1	100	0.58	15		4.0	4.1
	(Sn)		25			1.6	99					
GNZ	iPn	15 22	19.4		UE	-0.8	100	0.96	96			
TRZ	iPn	15 22	19.8		D	-1.0	100	1.01	179		4.3	
	Sn		35.5			1.8	99					
NGZ	iPn	15 22	21.6			-0.8		1.13	235			
	P*		28.5			4.3						
KRP	iPn	15 22	22.1		DSE	-1.0	100	1.17	302		4.3	4.1
	Sn		38			0.3	100					
CNZ	iPn	15 22	22.0			-1.1	100	1.18	236			
	P*		30			5.0						
	S*		42			1.1	100					
TNZ	Pn	15 22	34			-0.3		2.00	251		4.5	4.7
	eP*		45.5			6.6						
	S*		23 11			5.8						
MNG	Pn	15 22	35.0			-3.6		2.31	206		4.5	4.7
	P*		40			-4.1						
	S*		23 12			-2.5						
GBZ	Pn	15 22	41.4		D	-0.5		2.56	335			
WEL	Pn	15 22	45.5			-4.6		3.15	209	4.5		

	P*		55		-3.5							
	Sn		23 21		-4.3							
	S*		33		-6.7							
ONE	Pn	15 22	54		0.7	3.38	324	4.5				
	Sn		23 34		3.2							
COB	ePn	15 22	59		-3.1	4.03	230		4.6	4.4		
	eSn		23 53		6.6							
KAI	e(Sn)	15 24	23		-3.9	5.71	224	4.5				
	e(S*)		58		1.6							
CMZ	Sn	15 24	27		-5.2	5.94	211		3.7	4.1		
MJZ	ePn	15 23	42		-3.8	7.24	219		4.3	4.5		
	Sn		25 01		-2.3							
CIZ	Pn	15 23	45		-2.6	7.36	139					
	Sn		24 59		-7.4							
	i		25 02.5									
OMZ						7.87	212			4.0		
MSZ						9.05	225		4.1	4.3		
AMPLITUDES:	WNZ		5.0 6.7	WTZ		30 37	TRZ		8.5			
	KRP		10 5.0	TNZ		0.9 1.5	MNG		12 24			
	GBZ		3.4	WEL	1.2		ONE	0.4				
	COB		1.5 3.5	KAI	0.4		CMZ		0.1 0.4			
	MJZ		0.5 1.0	CIZ		0.8 1.5	OMZ		0.2			
	MSZ		0.2 0.6									

JAN 09 16^h55^m38^s.6 33°.62S 179°.82W 254 km M = 4.6
 ± 2.8 0.24 0.48 85 S.E. of RES. 1.8 80/ 015

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	16	56	55		-1.0	100	5.08	210		5.3	4.4
	S		57	55.5		-0.9	100					
GNZ	P	16	56	58.3		-0.6	100	5.32	199		4.5	4.6
	e		57	59								
	eS		58	03		1.3	100					
KRP	eP	16	57	05.5		1.5	99	5.72	220		2.9*	
TRZ	S	16	58	28		-0.5	100	6.52	204			4.5
MNG	P	16	57	28		-3.8		7.94	207		4.5	4.5
	S		58	57		-3.6						
WEL	S	16	59	16.5		-3.3		8.78	208	4.3		
COB	P	16	57	48		-4.0		9.53	216		3.2*	2.9*
	e		59	31								
	e(S)			34		-2.7						
	e			37								
CMZ	S	17	00	18		-5.2		11.57	208			3.4*
MJZ	S	17	00	48		-3.4		12.82	213			2.8*
AMPLITUDES:	WTZ		4.8 0.7	GNZ		0.8 1.6	KRP		0.2			
	TRZ		0.4	MNG		1.0 1.2	WEL	0.1				
	COB		0.1 0.2	CMZ		0.3	MJZ		0.1			

JAN 09 21^h30^m04^s.6 46°.73S 165°.43E 12 km M = 3.9
 ± 1.2 0.04 0.10 R S.E. of RES. 1.1 80/ 016

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	Pn	21	30	35.5		0.1	100	1.85	96		4.2	4.1
	Sn			58		-0.5	100					
MSZ	Pn	21	30	48		1.0	100	2.70	41		4.1	4.0
	eP*			51.5		-0.3						
	S*		31	27		-0.2	100					

	Sg		35.5	-0.1	100					
DNZ	ePn	21 31	00	0.3	100	3.64	78			
	e(Sn)		42	0.8	100					
OMZ	(Pg)	21 31	25	-4.0		4.18	69	3.8	4.0	
	eSn		59.5	5.2						
	eS*	32 18		6.6						
RHP	Pn	21 31	08	0.5	100	4.20	53			
	P*		17.5	0.0						
	Pg		28	-1.6						
MJZ	ePn	21 31	09	-2.3	95	4.49	54	4.1	4.2	
	P*		23	0.6						
	e(Sn)	32 02		0.2						
KAI	e(S*)	21 32	56	-9.9		5.99	48	3.9		
CMZ	Sg	21 33	23	-3.4		5.99	61		3.5	
COB	Pn	21 31	56.5	1.0		7.72	46	4.0	3.5	
	eSn	33 23.5		3.9						
MNG	e(Pn)	21 32	24	4.1		9.50	54		3.7	
AMPLITUDES:	OBZ		3.5 7.0	MSZ		2.7 3.8	DNZ		0.9 1.6	
	OMZ		0.2 0.6	MJZ		1.0 1.6	KAI		0.1	
	CMZ		0.1	COB		0.1 0.1	MNG		0.1	

80/ 017

JAN 13 08^h03^m10^s.6 45°.00S 167°.72E 91 km M = 3.5
 ± 0.8 0.03 0.07 5 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
MSZ	iP	08 03	24.7		U	0.0	100	0.36	23		3.8	3.6		
	S		36			0.5	100							
BRZ	P	08 03	28			-0.3	100	0.79	189					
	S		41			-0.7	99							
RHP	iP	08 03	42.4		D	0.2		1.92	63					
	S		04 07			1.3								
OBZ	P	08 03	43			0.7	99	1.93	172		3.5	3.9		
	iS		04 06			0.1	100							
MJZ	iP	08 03	45.6		D	-0.6	100	2.21	64		3.4	3.6		
	S		04 12.5			-0.1	100							
OMZ	iP	08 03	47.3		D	0.2	100	2.27	93		4.0	3.1		
	e(S)		04 14.5			0.5								
CMZ	eS	08 04	49			-3.2		3.81	70			3.2		
COB	eP	08 04	28.5			-1.2		5.37	45				3.3	
	eS		05 26			-4.8								
AMPLITUDES:	MSZ		29 35	BRZ		1.0		OBZ		0.7 3.8				
	MJZ		0.8 1.5	OMZ		1.2 0.3		CMZ		0.1				
	COB		0.1											

80/ 018

JAN 13 10^h50^m34^s.1 31°.58S 179°.44W 33 km M = 4.5
 ± 1.3 0.09 0.28 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	Pn	10 52	14			0.3	100	7.04	204		5.1	4.3		
	i		16.0		U									
	eSn		53 28			-1.1	99							
	e		31											
GNZ	ePn	10 52	17.5			-0.5	100	7.35	196		4.7	4.6		
	Sn		53 37			0.2	100							
KRP	Pn	10 52	21.5			0.6	100	7.56	212		4.9			
TUA	Pn	10 52	23			-0.2	100	7.74	200		4.4	4.3		
	eSn		53 47			1.0	99							

TRZ	Sn	10 53 59.5	-5.4	8.52	200	4.5
NGZ	Pn	10 52 32.5	-2.5	8.59	207	
MNG	Pn	10 52 44	-9.0	9.92	203	4.6 4.6
	Sn	54 24.5	-13.8			
WEL	Sn	10 54 42.5	-16.0	10.75	204	4.6
COB	Sn	10 54 53	-20.9	11.39	211	3.9
AMPLITUDES:	WTZ	2.1 0.3	GNZ	0.6 0.7	KRP	0.3
	TUA	0.1 0.1	TRZ	0.2	MNG	0.6 0.8
	WEL	0.1	COB	0.1		

JAN 13 20^h07^m03^s.6 46°.78S 165°.40E 12 km M = 3.9
 ± 0.7 0.04 0.05 R S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
BRZ	Pn	20	07	33		-0.5	99	1.79	57		
	Sn			56		0.0	100				
OBZ	e(Sg)		08	04		0.0					
	Pn	20	07	34.5		-0.1	100	1.87	95		4.1 4.0
MSZ	Sn			58		0.1	100				
	Pn	20	07	47		0.3	100	2.75	41		3.9 3.9
ROX	P*			53		1.3					
	eSg		08	34		-2.3					
OMZ	Pn	20	07	51		0.6	99	3.02	66		
	e(Pg)	20	08	28		-0.7		4.21	68		
RHP	e(S*)		09	15		3.4					
	ePn	20	08	07		-0.1	100	4.25	53		
MJZ	P*			16.5		-0.8					
	Pg			26		-3.5					
COB	e(S*)		09	20		7.3					
	ePn	20	08	09		-2.0		4.54	54		4.0 3.9
COB	e			18.5							
	P*			25		2.8					
COB	Sn		09	00		-1.9					
	e(Pn)	20	08	58		2.8		7.78	46		3.5
COB	e		10	20							
	Sn			23		3.2					
AMPLITUDES:	BRZ	1.2			OBZ	2.9 5.3	MSZ	1.7 2.7			
	MJZ	0.7 0.7			COB	0.1					

JAN 14 06^h31^m58^s.9 45°.17S 167°.54E 75 km M = 4.3
 ± 1.0 0.03 0.07 8 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
MSZ	iP	06	32	13.6	U	0.4	100	0.57	28		
	S			24.5		0.5	100				
BRZ	P	06	32	13		-0.7	100	0.61	180		
	S			24		-0.7	100				
ROX	P	06	32	23		1.2	100	1.29	104		
OBZ	iP	06	32	28.7	U	0.4	100	1.78	167		4.4 4.6
	S			50		-0.2	100				
RHP	iP	06	32	32.6	D	-0.2	100	2.11	60		
	S			59		1.2	100				
DNZ	iP	06	32	34.8	D	0.7	100	2.20	109		
	S			33 01.5		1.3	99				
OMZ	iP	06	32	36.5	D	-0.3	100	2.39	89		4.3 4.3
	S			33 03		-1.9	99				
MJZ	P	06	32	35.8	D	-1.1	100	2.40	62		4.3 4.8

	e		47.5						
	S	33	04	-1.2	100				
KAI	S	06 33	42.5	1.1		3.85	48	4.1	
CMZ	eP	06 32	57	-2.0		3.99	68		3.7 4.3
	(S)		33 42	-2.8					
COB	eP	06 33	18	-3.1		5.58	45		4.0 4.3
	S		34 20	-4.5					
MNG	eP	06 33	41	-5.3		7.40	55		3.2* 3.2*
	e		51						
	e		34 02						
	e(S)		35 03	-6.5					
	e		14						
TNZ	S	06 35	17.5	-3.0		7.85	43		3.2*
KRP	S	06 35	51	-7.6		9.40	42		2.8* 2.7*
AMPLITUDES:	BRZ	16		OBZ	7.5	26	DNZ	16	8.0
	OMZ	2.9	5.2	MJZ	8.0	24	KAI	0.5	
	CMZ	0.4	2.1	COB	0.3	1.5	MNG	0.5	0.6
	TNZ	0.1		KRP	0.1	0.1			

FELT: Lake Te Anau (120) MM IV

JAN 15 02^h49^m13^s.9 48°.23S 165°.06E 12 km M = 4.2
 ± 1.2 0.07 0.10 R S.E. of RES. 0.9 80/ 021

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	Pn	02	49	52.5	D	-0.4	100	2.46	58		4.4	4.8
	P*			54.5		-2.5						
	Sn		50	22		-0.3	100					
BRZ	Pn	02	50	00		-0.1	100	2.98	36			
	Sn			33		-1.9	95					
MSZ	ePn	02	50	15.5		0.5	100	4.08	30		4.2	4.2
	(P*)			20		-4.6						
	Sn		51	02		0.8	100					
	(S*)			09		-8.7						
DNZ	eSn	02	51	10		0.6	100	4.42	60			
RHP	ePn	02	50	33		-0.2	100	5.41	42			
	e			42								
	(P*)			48		0.6						
	Sn		51	33.5		0.2	100					
MJZ	e(P*)	02	50	50		-1.8		5.67	44		4.1	4.1
	e(Sn)			51 42		2.5						
	(S*)			52 03		-2.6						
COB	ePn	02	51	24		1.8		9.00	40		4.1	3.6
	Sn			53 01		1.5						
AMPLITUDES:	OBZ	3.8	20	BRZ	1.0	MSZ	1.5	2.5				
	DNZ	0.6		MJZ	0.6	0.7	COB	0.1	0.1			

JAN 15 08^h20^m39^s.0 38°.79S 175°.27E 227 km M = 3.7
 ± 1.2 0.05 0.08 8 S.E. of RES. 1.2 80/ 022

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
NGZ	iP	08	21	10		0.7	100	0.48	146			
	e(S)			34		1.2	100					
TNZ	(P)	08	21	11		0.3	100	0.80	240		2.7*	
KRP	P	08	21	11		-0.1	100	0.89	14		2.4*	
	S			35.5		-0.5	100					
TRZ	P	08	21	16.0		1.2	100	1.43	123		3.8	3.5

TUA	S		43.5		0.9	100						
	eP	08 21	15.5		0.3		1.47	91		3.2	3.9	
	S		43		-0.2	100						
WTZ	P	08 21	15		-1.0	100	1.57	60		3.4	3.3	
	S		44		-0.7	100						
MNG	iP	08 21	18.5	D	0.1	100	1.84	175		3.7	4.2	
	S		46.5		-2.2	97						
GNZ	iP	08 21	21.8	D	0.3		2.16	87		4.2	3.9	
	e		53									
	S		54.5		0.2							
WEL	S	08 21	59		-2.1		2.53	189	3.9			
COB	P	08 21	29.0	D	-1.7		3.01	220		3.9*	2.7*	
	(S)		22 09		-1.8							
RHP	(P)	08 22	14		-0.8		6.59	215				
AMPLITUDES:		TNZ	0.1	KRP	0.2	TRZ	0.4	0.4				
		TUA	0.1 0.5	WTZ	0.3 0.3	MNG	1.7	6.3				
		GNZ	1.7 1.2	WEL	0.3	COB	1.3	0.3				

80/ 023

JAN 15 10^h51^m26^s.9 36°.77s 177°.23E 232 km M = 3.6
 ± 2.6 0.13 0.21 13 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	S	10 52	29			0.3	100	1.23	189			3.1
GNZ	P	10 52	08			-0.0	100	1.98	162		3.7	3.6
	e		15									
	S		40			0.3	100					
TUA	S	10 52	40			-0.8	99	2.04	182			3.7
TRZ	eP?	10 52	17			0.5		2.80	187		3.6	3.2
	e		21									
	eS		55.5			0.5	100					
MNG	P	10 52	26.6		U	-4.9		4.09	199		4.2	3.7
	S		53 14.5			-7.2						
WEL	S	10 53	30.5			-9.2		4.90	202	3.8		
COB	eP?	10 52	42			-7.9		5.56	218			2.4*
	S		53 44			-10.5						
AMPLITUDES:		WTZ	0.2	GNZ	0.6 0.8	TUA	0.2					
		TRZ	0.1 0.1	MNG	1.7 0.7	WEL	0.1					
		COB	0.1									

80/ 024

JAN 15 15^h45^m31^s.8 40°.15s 174°.93E 12 km M = 3.8
 ± 0.3 0.01 0.03 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iPg	15 45	44.9			0.2	100	0.63	138			3.6
	Sg		53.5			0.2	100					
TNZ	Pg	15 45	52.3		U	-0.8	100	1.05	336		3.2	3.8
	Sg		46 08			0.6	100					
CNZ	P*	15 45	50.8			-0.3	100	1.06	27			
	Sg		46 07			-0.7	100					
NGZ	P*	15 45	50.8			-0.9		1.10	29			
WEL	Pg	15 45	54			-1.0	100	1.14	186	3.9		
	Sg		46 09			-1.4	99					
	e		11									
TRZ	eP*	15 46	00			0.2	100	1.57	68		3.7	3.9
	(Pg)		03			-0.7						
	eSg		25			0.1						
COB	ePn	15 46	04.5			1.0		1.92	240		3.9	3.7

	P*		06.5		0.8	100					
	S*		32.5		1.6	99					
TUA	ePn	15 46	08.5		1.4	99	2.18	53		3.9	3.6
	P*		10.5		0.3						
	eS*		40.5		1.7	99					
	Sg		46		0.7						
KRP	ePn	15 46	08		-0.3	100	2.28	12		4.5	4.6
	P*		11		-0.7	100					
	S*		39.5		-2.1	99					
WTZ	ePn	15 46	13.5		-0.6		2.69	37		4.1	4.0
	eP*		19		0.1						
	Sn		48		2.1						
	S*		52		-2.2						
GNZ	Pn	15 46	16		0.1		2.83	59		3.8	3.6
	Pg		31		2.0						
	Sn		50.5		1.3						
MJZ	eP*	15 47	02		2.4		5.08	219		3.7	3.4
	Sn		46		2.8						
AMPLITUDES:		MNG	17		TNZ	0.5 2.7	WEL	2.6			
		TRZ	0.9 1.8		COB	1.2 2.7	TUA	0.6 0.3			
		KRP	2.7 2.7		WTZ	0.9 0.5	GNZ	0.6 0.6			
		MJZ	0.3 0.2								

FELT: Wanganui (57) MM IV

80/ 025

JAN 16 00^h09^m51^s.8 37°.59S 178°.30E 12 km M = 4.1
 ± 1.4 0.05 0.07 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	iPg	00	10	13.2	D	-0.4	100	1.08	192		4.3	4.2
	Sg			27.5		-0.7	100					
WTZ	iPg	00	10	14.9	U	0.5	100	1.12	249		4.3	4.0
	Sg			29		-0.4	100					
TUA	P*	00	10	20		1.1	100	1.52	216		4.0	4.0
	Pg			23		0.5	100					
	Sg			44		1.0	100					
WNZ	e(P*)	00	10	30		2.5		2.02	238		4.2	4.0
	e(S*)			54		-0.1						
KRP	P*	00	10	31		0.2	100	2.21	260		4.0	
NGZ	Pg	00	10	43		-2.3	97	2.65	232			
TNZ	e(P*)	00	10	51		-1.2		3.47	241		4.4	
MNG	Pn	00	10	48		-0.3		3.73	215		3.8	
	Pg			11 04		-3.3						
COB	Pn	00	11	14.5		1.4		5.55	229		4.2	3.7
	P*			23		-4.7						
	e			35								
	eSn			12 16		1.4						
CIZ	Sn	00	13	00		-0.4		7.46	150			
AMPLITUDES:		GNZ	15 16		WTZ	15 7.0	TUA	1.3 1.6				
		WNZ	0.2 0.2		KRP	1.1	TNZ	0.2				
		MNG	0.8		COB	0.3 0.3	CIZ	0.4				

80/ 026

JAN 17 06^h31^m17^s.9 37°.48S 178°.47E 33 km M = 3.9
 ± 0.6 0.02 0.04 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	iPn	06	31	37.6	U	-0.4	100	1.21	197		4.0	3.9

	Sn		53		-0.1	100						
WTZ	iPn	06 31	38.4	U	-0.5	100	1.28	246		4.1	4.3	
	Sn		54		-0.6	100						
TUA	ePn	06 31	44.5		0.0	100	1.68	218		3.7	3.8	
	Sn		32 04		-0.4	100						
KRP	Pn	06 31	53.8		0.0	100	2.37	258		3.9	3.8	
	Sn		32 21		0.2	100						
TRZ	Pn	06 31	54		-0.8	99	2.44	211		3.6	3.8	
	Sn		32 24		1.4	95						
GBZ	Pn	06 31	59		0.6	100	2.71	297				
	e		32 56									
NGZ	Pn	06 32	00.2		0.3	100	2.82	232				
	Sn		31		-0.6	100						
MNG	Pn	06 32	11.1	D	-3.6		3.91	216		3.7	3.9	
	Sn		55		-2.7							
WEL	Sn	06 33	13.5		-4.8		4.76	216	4.0			
COB	Sn	06 33	40		-1.5		5.73	229		3.8	3.8	
MJZ	Sn	06 34	50		-7.7		8.90	221			3.9	
AMPLITUDES:		GNZ	5.0	7.0	WTZ	8.0	12	TUA		0.6	0.9	
		KRP	0.7	0.5	TRZ	0.3	0.6	GBZ		0.5	0.4	
		MNG	0.6	1.2	WEL	0.2		COB		0.1	0.4	
		MJZ		0.2								

80/ 027

JAN 17 11^h27^m05^s.7 39°.31S 174°.46E 260 km M = 3.8
 ± 0.9 0.05 0.06 6 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	eP	11 27	39.5			0.2	100	0.14	333			
	S		28 05			-0.2	100					
CNZ	eP	11 27	42			0.8	100	0.85	83			
	e(S)		28 09			0.1						
NGZ	eP	11 27	43			1.5		0.90	82			
	S		28 10.5			1.1	100					
MNG	iP	11 27	46.0		U	0.6	100	1.52	149		4.2	4.4
	S		28 16			-0.1	100					
TRZ	S	11 28	22			1.4	99	1.84	98			3.5
WEL	e(P)	11 27	48			-1.1		1.98	173	3.5		
	S		28 22			-0.7	100					
TUA	P	11 27	51.5			0.8	100	2.15	77		3.4	3.4
	S		28 25			-0.5	100					
COB	iP	11 27	50.5		U	-0.6	100	2.21	216		4.2*	3.0*
	S		28 26			-0.5	100					
WTZ	(P)	11 27	51.5			-1.3		2.38	57			3.6
	S		28 28			-1.5	99					
GNZ	P	11 27	58			0.2	100	2.85	78		3.8	4.0
	S		28 36.5			-1.5	99					
	e		41.5									
KAI	S	11 28	58			-2.0		3.96	215	3.0*		
CMZ								4.48	197			2.9*
MJZ	S	11 29	29			-5.2		5.55	211			3.2*
AMPLITUDES:		TNZ			0.2	MNG	5.0	9.5	TRZ			0.3
		WEL	0.1			TUA	0.1	0.1	COB		3.5	0.8
		WTZ			0.3	GNZ	0.4	1.0	KAI	0.1		
		CMZ			0.2	MJZ		0.5				

JAN 20 09^h28^m22^s.3 38°.26S 176°.11E 167 km 80/ 028
 ± 1.8 0.07 0.08 12 S.E. of RES. 1.7 M = 3.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	P	09	28	46.8		0.8	100	0.56	306			2.3*
	S		29	04.8		0.6	100					
WTZ	iP	09	28	46.3	U	-0.8	100	0.75	69		3.8	3.2
	eS		29	04		-2.1	99					
NGZ	eP	09	28	51		2.2	99	1.00	203			
TRZ	iP	09	28	53.9	D	1.4	100	1.40	157		3.7	3.3
	eS		29	17		1.2	100					
	e			21								
GNZ	P	09	28	54.3		0.3	100	1.55	105		3.7	3.6
	eS		29	17		-1.3	100					
MNG	P	09	29	03.2		-0.4	100	2.40	191			
	eS			35		-0.4	100					
COB	S	09	30	05		-2.6	99	3.84	222			2.9*
AMPLITUDES:		KRP			0.3	WTZ		2.2	0.7	NGZ		1.3
		TRZ			0.4	GNZ		1.0	1.3	COB		0.4

JAN 21 15^h08^m19^s.9 39°.29S 175°.10E 12 km 80/ 029
 ± 0.3 0.02 0.02 R S.E. of RES. 1.2 M = 4.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CNZ	iP*	15	08	26.9	D	-0.3	100	0.36	76			
TNZ	iP*	15	08	31.9	U	1.1	100	0.57	280		3.9	4.1
	Sg			41.5		2.1	99					
TRZ	ePn	15	08	44		0.0	100	1.36	102		4.4	4.1
	e			51								
	e?		09	13.5								
MNG	iPn	15	08	43.0	U	-0.9	100	1.36	168			
KRP	iPn	15	08	42.1		-2.5	98	1.40	14			
	e(Sn)			59		-4.0						
TUA	ePn	15	08	48		-0.2	100	1.66	74		4.1	3.9
	e			57.8								
	eSg?		09	17.8		1.6	99					
CAZ	ePg	15	08	56.4		-0.5	100	1.83	152			
	e			57.8								
	e(Sg)		09	25		3.4						
WTZ	ePn	15	08	54		1.7	99	1.97	49		3.9	
	e		09	06								
WEL	Pn	15	08	53.3		0.4	100	2.01	187	3.9		
	ePg			58.5		-2.1	99					
	eSn		09	18.5		0.9	100					
GNZ	ePn	15	08	57.5		-0.2	100	2.37	75			4.0
	ePg		09	09		1.2	100					
	eSn			26		-0.2	100					
	e			55								
COB	ePn	15	08	59.3		-0.9	100	2.56	225		4.5	4.1
	e		09	02								
	Sn			30.8		0.2	100					
	e			36.8								
GBZ	eP*?	15	09	14.5		0.8	100	3.09	6			
ONE	eP*?	15	09	25		3.2		3.55	350	4.1		
	e			10								
	e			03								
CRZ	ePn	15	09	36		-0.7	100	5.23	337		4.3	4.3

	eSn	10 33		-1.8	99							
MJZ	ePn	15 09 45		-0.1	100	5.84	215			4.0	4.0	
	eSn	10 50		0.4	100							
AMPLITUDES:	TNZ	6.6	16	TRZ	3.2	2.0	TUA			0.6	0.4	
	CAZ	2.9	3.7	WTZ	0.7		WEL	0.8				
	GNZ		0.8	COB	3.0	4.2	GBZ			0.7		
	ONE	0.4		CRZ	0.3	0.3	MJZ			0.4	0.5	

FELT: Taumarunui (39) to Ohakune (49), maximum intensity MM V

JAN 22 01^h51^m59^s.7 45°.23S 166°.76E 12 km M = 3.8
 ± 0.8 0.03 0.06 R S.E. of RES. 0.7 80/ 030

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	Pn	01	52	30.7		-0.7	100	1.93	151		3.9	3.8
	eP*			33		-0.7	100					
	S*			53 00.0		1.0	99					
RHP	Pn	01	52	41.6		0.5	100	2.63	66			
	e(Sn)			53 18		5.8						
	eS*			20		-0.1	100					
MJZ	ePn	01	52	45.5		0.4	100	2.92	66		3.8	3.9
	eSn			53 19		-0.4	100					
OMZ	ePn	01	52	45.7		0.3	100	2.94	88		4.0	3.6
	eSn			53 19		-0.8	99					
AMPLITUDES:	OBZ			1.7	3.5	RHP		8.0	9.0	MJZ	1.0	1.8
	OMZ			0.6	0.5							

JAN 23 08^h56^m53^s.8 39°.05S 174°.90E 193 km M = 3.9
 ± 1.1 0.04 0.07 8 S.E. of RES. 1.4 80/ 031

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CNZ	iP	08	57	21.9	U	1.7	100	0.52	107			
	eS			42		1.3	100					
KRP	iP	08	57	25.0	DNE	0.3	100	1.23	24		3.2*	2.7*
	eS			48		-0.6	100					
TRZ	P	08	57	28.9		1.1	100	1.57	109		3.8	3.8
	(S)			57.8		3.8						
MNG	P	08	57	29.4		1.1	100	1.63	164			
	e			49								
	eS			54		-1.0	100					
TUA	eP	08	57	30		0.3	100	1.77	83		3.8	4.0
	eS			57		-0.4	100					
WTZ	P	08	57	30.9		-0.6	100	1.95	58		3.7	3.9
	eS			58 01		0.3	100					
CAZ	P	08	57	34.3		1.0	100	2.12	152			
	eS			58 06		2.2	99					
WEL	eS	08	58	04		-2.2	99	2.24	183	3.9		
GNZ	iP	08	57	37.1	D	-0.2	100	2.47	82		4.3	4.3
	e			58 04								
	eS			08		-2.9	97					
COB	eP	08	57	39		-0.1	100	2.63	219		3.0*	3.0*
	eS			58 13		-1.2	100					
AMPLITUDES:	CNZ			3.3	2.3	KRP		1.3	0.5	TRZ	0.4	1.0
	TUA			0.4	0.6	WTZ		0.6	1.2	CAZ	0.4	0.5
	WEL	0.4				GNZ		1.8	3.4	COB	0.2	0.8

JAN 23		23 ^h 28 ^m 48 ^s .8			39°.09S		174°.86E		214 km		80/ 032		
		± 1.2			0.05		0.07		8		M = 4.0		
											S.E. of RES. 1.6		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W S
TNZ	eP	23	29	18		0.7	100	0.38	255				
	eS			41		1.8	100						3.1* 2.8*
CNZ	P	23	29	18.7		0.9	100	0.55	102				
	eS			39.5		-0.6	100						
KRP	P	23	29	22.1		-0.0	100	1.28	25				2.7*
	eS			47		-0.9	100						
TRZ	eP	23	29	26		1.2	100	1.59	108				3.9 3.9
	eS			54		1.4	100						
MNG	P	23	29	25.7		0.8	100	1.60	163				
	eS			51		-1.8	100						
TUA	P	23	29	28.4		1.6	100	1.81	82				4.1 4.0
	e			30									
	eS			56		-0.2	100						
CAZ	S	23	30	02.9		1.8	100	2.10	150				
GNZ	P	23	29	33.7		-0.4	100	2.51	81				4.3 4.1
	eS			30 06		-3.1	98						
COB	iP	23	29	34.4	U	-0.4	100	2.57	219				3.9* 3.2*
	eS			30 08		-2.3	99						
AMPLITUDES:		TNZ		0.3 0.2	CNZ			3.3 2.1	KRP				0.4
		TRZ		0.4 1.1	TUA			0.7 0.5	CAZ				1.5
		GNZ		1.7 1.7	COB			1.5 1.2					

JAN 24		10 ^h 15 ^m 50 ^s .3			44°.97S		167°.71E		119 km		80/ 033		
		± 1.1			0.06		0.08		11		M = 5.2		
											S.E. of RES. 1.5		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W S
MSZ	iP	10	16	08.2	U	0.7	100	0.33	26				
BRZ	iP	10	16	10.1	UF	-0.5	100	0.82	189				
	S			24.5		-1.8	99						
RHP	iP	10	16	24.0	D	1.0	100	1.91	64				
DNZ	iP	10	16	27.2	U	0.9	100	2.17	115				
	e			49									
	eS			54		0.6	100						
MJZ	iP	10	16	27.2	DS	0.4	100	2.20	64				5.0 5.3
	eS			55		0.8	100						
OMZ	P	10	16	28.8		1.1	100	2.28	94				4.8
	eS			55		-0.8	100						
KAI	eP	10	16	48		2.0	99	3.63	49				5.2
	eS			17 29		0.7	100						
COB	eP	10	17	08		-1.2	100	5.35	45				5.5 5.1
	eS			18 09		-1.1	100						
WEL	eP	10	17	23		0.4	100	6.34	57				3.6*
	eS			18 31		-3.2	95						
AMPLITUDES:		BRZ		35 19	73	DNZ		37 32	MJZ				22 45
		OMZ			8.5	KAI		2.0	COB				3.0 2.0
		WEL			0.3								

FELT: Manapouri (139)

JAN 26		07 ^h 44 ^m 41 ^s .9			44°.96S		167°.62E		97 km		80/ 034		
		± 1.2			0.04		0.07		8		M = 3.6		
											S.E. of RES. 1.5		

JAN 28		11 ^h 34 ^m 08 ^s .1			41°.61S		174°.80E		24 km		80/ 036 M = 3.7		
		± 0.4			0.03		0.04		2		S.E. of RES. 1.1		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
BHW	P*	11	34	14.0		0.3	100	0.21	15				
WEL	P*	11	34	15.3		0.0	100	0.32	356	3.6			
	S*			21.5		1.0	100						
TCW	Pn	11	34	18.8		-1.3	100	0.56	315				
BLW	Pn	11	34	19.5		-0.6	100	0.56	65				
MNG	iPn!	11	34	28.1		0.4	100	1.12	28				
KKY	ePn	11	34	26.5		-1.8	99	1.16	225				
	e			32.5									
CAZ	Pn	11	34	29.7		-0.3	100	1.29	57				
	e			36									
	eSn			48		1.6	99						
COB	Pn	11	34	34.3		-0.6	100	1.64	288	4.0	3.4		
	eSn			56		1.0	100						
TNZ	ePn	11	34	45		-0.8	100	2.44	352	3.7	3.9		
	e			35 19.5									
NGZ	e	11	34	49.5				2.50	15				
	eSn			35 17.3		1.6	99						
CMZ	e(P*)	11	34	57.5		4.9		2.54	218	3.4	3.2		
	eS*			35 27.5		1.6	99						
TRZ	e	11	35	05				2.56	38	3.5	3.5		
	eS*			26		-0.8	100						
KRP	e?	11	34	55				3.73	9			4.3	
	e			35 19									
	eS*			36 01		-0.4	100						
GNZ	eSn	11	35	49		0.7	100	3.86	41			3.7	
WTZ	e	11	35	24				4.00	26			3.8	
	eSn			51		-0.5	100						
AMPLITUDES:		WEL	17		CAZ	0.5	1.5	COB	2.4	1.9			
		TNZ	0.3	0.6	NGZ	3.5	5.6	CMZ	0.3	0.3			
		TRZ	0.2	0.3	KRP		0.5	GNZ		0.4			
		WTZ		0.4									

See also Wellington Net origin

JAN 28		12 ^h 30 ^m 57 ^s .9			45°.19S		167°.63E		92 km		80/ 037 M = 5.4		
		± 1.0			0.04		0.08		10		S.E. of RES. 1.3		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
MSZ	iP	12	31	15.1	U	1.5	100	0.56	22				
BRZ	iP	12	31	14.0	F	0.2	100	0.59	186				
	eS			24.5		-1.5	100						
OBZ	iP	12	31	26.5	U	-0.9	100	1.75	169	5.1			
RHP	P	12	31	33.2		1.6	99	2.06	59				
	eS			57		0.6	100						
DNZ	iP	12	31	34.2	D	1.6	99	2.14	109				
	eS			58		-0.3	100						
OMZ	iP	12	31	36.6	D	1.4	100	2.33	88	5.3	5.6		
	e(S)			58		-4.9							
MJZ	iP	12	31	36.2	UN	0.6	100	2.36	60	5.2			
	eS			32 03		-0.6	100						
KAI	eP	12	31	57		1.2	100	3.82	47				
	eS			32 39		-0.7	100						
CMZ	eP	12	31	57		-0.4	100	3.93	68	5.3	5.5		

eS		07 51		-0.2 100							
AMPLITUDES:	GBZ	0.8		WTZ	3.4 2.5		GNZ	1.2 3.0			
	KRP	0.5		TUA	0.4 0.5		CRZ	0.3			
	TRZ	1.2		NGZ	0.5 1.2		MNG	1.0 1.2			
	WEL	0.2		CIZ	0.6 0.8						
JAN 31		05 ^h 59 ^m 38 ^s .7		39°.51S		174°.32E		221 km		80/ 040	
		± 0.8		0.03		0.05		6		S.E. of RES. 1.1	
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
TNZ	iP	06	00	09.0	D	1.1	100	0.32	8		3.2* 3.4*
	eS			32		1.5	99				
	e			53							
NGZ	iP	06	00	12.3	D	1.1	100	1.05	72		
	eS			36		-0.3	100				
MNG	iP!	06	00	14.8		1.0	100	1.42	142		
	e			35							
	eS			41		-0.1	100				
WEL	eP	06	00	17		-0.2	100	1.81	169	4.0	
	eS			46		-1.0	100				
KRP	iP	06	00	17.9	DSE	0.3	100	1.84	31		3.3* 2.6*
	eS			47		-0.7	100				
TRZ	iP	06	00	20.0	U	1.5	99	1.93	92		4.1 4.1
	e			50							
COB	iP	06	00	18.9	U	-0.2	100	1.99	217		4.5* 3.5*
	e			44							
	eS			48		-2.1	98				
CAZ	P	06	00	19.3		-0.1	100	2.02	134		
	eS			52		1.4	99				
TUA	iP	06	00	22.8	D	0.5	100	2.31	73		4.3 4.1
	eS			56		0.0	100				
WTZ	iP	06	00	24.2	D	-1.0	100	2.58	55		4.3 4.2
	eS			01 00		-1.3	100				
GNZ	iP!	06	00	30.2		0.2	100	3.01	74		4.4
	e			01 04							
	eS			08		-1.8	99				
AMPLITUDES:	TNZ	0.3 0.7		NGZ	9.0 12		WEL	0.6			
	KRP	1.3 0.3		TRZ	0.5 1.3		COB	7.0 3.0			
	CAZ	0.4 2.0		TUA	0.8 0.5		WTZ	1.6 1.3			
	GNZ	2.5									
FEB 01		02 ^h 27 ^m 02 ^s .0		40°.22S		175°.04E		103 km		80/ 041	
		± 1.2		0.04		0.06		12		S.E. of RES. 1.6	
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
MNG	iP!	02	27	19.2		0.7	100	0.52	140		
	eS			29.5		-1.5	100				
WEL	eS	02	27	38		-2.4	99	1.09	191	3.2	
	P	02	27	26.2		1.8	99	1.13	127		
CAZ	eS			43.5		2.1	99				
	P	02	27	25.0		0.4	100	1.15	334		3.3* 3.5*
	e			40							
	eS			43		1.2	100				
	e			54							
COB	e?	02	27	40				1.96	243		2.8* 2.9*
	e			56							
	eS			59		0.2	100				

KRP	eP	02 27 39		-0.6	100	2.32	10			2.8* 2.7*
	eS	28 07		-0.5	100					
GNZ	P	02 27 45		-1.0	100	2.80	57			3.8 3.6
	eS	28 18		-1.1	100					
AMPLITUDES:	WEL	0.4		CAZ	0.8 0.5	TNZ				0.6 1.2
	COB	0.2 0.8		KRP	0.4 0.4	GNZ				0.6 0.6

80/ 042

FEB 01 18^h05^m43^s.4 32°.96S 179°.56E 234 km M = 4.5
 ± 3.4 0.17 0.18 31 S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	eP	18	07	06		1.2	100	5.44	202		4.3	4.4
	eS		08	08		-0.2	100					
GNZ	e	18	08	11				5.81	192			4.7
	eS			15		-1.6	100					
TRZ	eS	18	08	45		2.5	99	6.95	198			4.5
MNG	eP	18	07	40		-1.6	100	8.32	202		4.2	4.7
	e			09 07								
	eS			13		-1.0	100					
WEL	eS	18	09	31		-2.0	100	9.15	203	4.9		
COB	e?	18	08	18				9.78	212			3.2*
	eS			09 49		1.5	100					
CIZ	eS	18	10	25		0.5	100	11.39	166			
AMPLITUDES:	WTZ		0.4	0.7	GNZ			1.8	TRZ			0.4
	MNG		0.5	1.8	WEL	0.3			COB			0.4

80/ 043

FEB 02 02^h43^m50^s.7 37°.43S 176°.56E 221 km M = 4.0
 ± 1.0 0.05 0.07 7 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	02	44	20.2	U	-0.8	100	0.66	148		4.0	3.6
	eS			44		-0.4	100					
KRP	iP	02	44	22.9	U	0.4	100	0.94	238		3.1*	
GNZ	iP	02	44	28.0	D	-0.1	100	1.68	137			
	e			51								
	eS			57		-0.0	100					
CNZ	P	02	44	32.0		1.5	98	1.94	204			
	e(S)			45 08		6.7						
TRZ	eS	02	45	06		1.3	99	2.13	174			4.1
	e			11								
MNG	iP	02	44	44.7	U	-0.6	100	3.29	194			4.3
	e			45 21.5								
	eS			27		-0.7	100					
WEL	eS	02	45	45		-0.0	100	4.09	199	4.1		
COB	eP	02	45	03		0.4	100	4.71	218			3.0*
	eS			58		-0.5	100					
AMPLITUDES:	WTZ		2.2	1.1	KRP		1.0	CNZ			0.6	0.3
	TRZ			1.1	MNG		3.6	WEL	0.2			
	COB			0.5								

80/ 044

FEB 02 12^h40^m27^s.9 38°.02S 176°.26E 190 km M = 3.6
 ± 1.2 0.05 0.07 7 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	eP	12	40	53		-1.3	100	0.58	87		3.1	3.4
	e(S)			41 08.5		-6.2						

KRP	iP	12 40 55.0	UW	0.7 100	0.58 279	3.5* 2.4*	
	eS	41 14		-0.7 100			
TUA	eP	12 40 58		0.9 100	1.05 139	3.7 3.6	
	eS	41 18.5		-1.3 100			
NGZ	eP	12 41 01		2.1 99	1.27 203		
	eS	25		2.1 99			
GNZ	P	12 41 01.8		0.6 100	1.52 115	3.3 3.8	
	eS	25		-1.9 99			
TRZ	P	12 41 03.2		1.3 100	1.59 164	3.7 3.7	
	eS	29		0.9 100			
MNG	iP!	12 41 13.7		0.2 100	2.66 193		
	eS	47		-1.8 99			
CAZ	eS	12 41 55		1.6 100	2.88 181		
WEL	eP	12 41 23.5		0.3 100	3.46 199	4.0	
	eS	42 05		-0.9 100			
COB	eP	12 41 30		-1.4 100	4.10 221	3.1* 3.2*	
	eS	42 19		-1.3 100			
AMPLITUDES:		WTZ	0.4 0.8	KRP	3.3 0.3	TUA	0.5 0.4
		NGZ	1.8 1.1	GNZ	0.4 1.8	TRZ	0.3 0.7
		WEL	0.3	COB	0.2 0.8		

80/ 045

FEB 02 13^h12^m26^s.8 40°.96S 175°.48E 12 km M = 3.7

S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iP**	13	12	32.6		-1.2	100	0.34	0			
CAZ	iP*	13	12	37.1	D	-0.6	100	0.57	85			
	eS*			47		1.5	100					
WEL	eP*	13	12	38.5		-0.2	100	0.63	239	3.4		
	eS*			48		0.7	100					
	eSg			49		0.7	100					
TRZ	Pn	13	12	54.4		-1.7	100	1.74	37			3.2
	eSg			13 27		1.4	100					
NGZ	Pn	13	12	55.3		-1.3	100	1.78	3			
	iP*			57.2		-1.1	100					
	eS*			13 21		-0.8	100					
COB	ePn	13	12	59		-1.7	99	2.08	266		4.0	3.6
	eSn			13 26		-0.2	100					
	eS*			32		1.1	100					
KRP	e(Pn)	13	13	16.5		2.8		3.03	1		3.9	4.3
	e			55								
	eS*			14 02		2.6	98					
AMPLITUDES:		CAZ	6.1	18	WEL	2.7		TRZ	0.3			
		NGZ	0.4	COB	1.3	2.0	KRP	0.4	0.7			

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FEB 02 15^h26^m23^s.0 32°.28S 179°.54W 475 km M = 4.7

S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	eP	15	28	02		-0.9	100	6.36	206		5.0	4.6
	e(S)			29 15		-7.0						
GNZ	eP	15	28	04		-1.9	99	6.66	197		5.0	4.7
	e			07								
	eS			29 26		-1.4	100					
KRP	eP	15	28	10		1.2	100	6.93	214		3.3*	
TUA	eP	15	28	11		0.9	100	7.06	202		4.6	4.6
	eS			29 35		0.2	100					

TRZ	eP	15 28 19.5	1.1 100	7.84 201	4.7 4.6
	eS	29 51	1.2 100		
MNG	eP	15 28 33	-0.5 100	9.24 204	4.8 4.7
	eS	30 17	-0.1 100		
WEL	eS	15 30 35	1.3 100	10.09 205	
COB	eS	15 30 45	-2.0 99	10.76 213	3.2*
AMPLITUDES:	WTZ	1.3 0.6	GNZ	1.3 1.1	KRP 0.4
	TUA	0.2 0.2	TRZ	0.2 0.3	MNG 1.2 1.3
	COB	0.3			

80/ 047

FEB 02 19^h56^m11^s.4 40°.91S 175°.63E 7 km M = 3.7
 ± 0.3 0.01 0.02 2 S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
MTW	iPg	19 56	17.9		U	0.9 100		0.27 201			
MNG	iPg!	19 56	18.0			0.2 100		0.31 339			
CAZ	iP*	19 56	19.6		U	-1.2 99		0.45 89			
	eS*		28			0.7 100					
CAW	iP*	19 56	21.6		D	0.5 100		0.47 245			
BLW	iP*	19 56	21.1		U	-0.0 100		0.48 194			
KIW	iP*	19 56	23.1		D	0.7 100		0.55 275			
MOW	iP*	19 56	22.6		D	-0.4 100		0.58 209			
WDW	iP*	19 56	23.3		D	0.0 100		0.60 233			
WEL	iP*	19 56	25.7		D	-0.2 100		0.76 240		3.3	
	eS*		37.5			1.2 99					
MRW	iP*	19 56	26.0		D	-0.2 100		0.77 245			
WHW	iP*	19 56	26.0		D	-0.3 100		0.77 240			
CNZ	P*	19 56	41.3			-0.9 100		1.71 358			
	ePg		46			0.0 100					
	eS*		57 05			-0.0 100					
COB	Pn	19 56	46.4			-1.2 99		2.20 264		3.6 3.5	
	ePg		55			-0.9 100					
	eS*		57 20			0.3 100					
KRP	eP*	19 57	07			3.0 23		2.99 359		3.8 4.0	
	eS*		43			-0.2 100					
AMPLITUDES:	CAZ	6.0 27	WEL	1.4	CNZ	2.0 5.0					
	COB	0.5 1.5	KRP	0.3 0.4							

See also Wellington Net epicentre 80/162

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FEB 03 02^h04^m11^s.1 38°.88S 174°.59E 12 km M = 3.4
 ± 0.7 0.03 0.04 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
NGZ	iP*	02 04	28.3		D	1.5 100		0.85 111			
	Pg		29.6			1.1 100					
	S*		37.7			-0.6 100					
	eSg		40.5			0.4 100					
KRP	eP*	02 04	32.9			-0.0 100		1.21 38		3.2 3.4	
	eS*		48			-1.0 100					
MNG	eP*	02 04	45			0.8 100		1.87 159			
	eS*		05 07			-1.8 99					
WEL	eS*	02 05	24			-1.0 100		2.41 177			
COB	ePn	02 04	51			-1.5 100		2.63 212		3.7 3.4	
	eS*		05 33			1.5 100					
AMPLITUDES:	NGZ	9.0 31	KRP	1.5 2.7	COB	0.4 0.7					

FEB 04 20^h59^m02^s.1 31°.91s 179°.93w 493 km M = 5.1
 ± 2.1 0.13 0.32 31 S.E. of RES. 2.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ONE	eP	21	00	41		0.8	100	6.12	229	3.7*				
WTZ	P	21	00	43.0		-1.8	100	6.57	202		5.6	5.2		
	e			46.0										
	e		01	48.0										
	e			53.3										
CRZ	P	21	00	45.2		-0.8	100	6.70	246		3.5*			
GNZ	eP	21	00	48.5		0.1	100	6.93	193		5.1	5.1		
	eS		02	08		-4.6	97							
KRP	eP	21	00	51		1.2	100	7.06	211		3.9*	3.1*		
	e(S)		02	21		5.8								
TUA	eP	21	00	50.5		-1.6	100	7.29	198		4.8	4.9		
	eS		02	23		3.7	99							
TRZ	eP	21	01	01.5		1.1	100	8.08	198		5.1	5.2		
	eS		02	36		1.8	100							
CNZ	eP	21	01	01		-0.2	100	8.16	206					
	e(S)		02	45		9.3								
TNZ	eP	21	01	08		1.9	100	8.62	211		3.9*			
MNG	eP	21	01	12		-2.9	99	9.45	202		5.4	5.1		
	e			14										
	e		02	54										
	eS		03	00		-0.6	100							
CAZ	eP	21	01	18		2.6	100	9.50	198					
	e(S)		03	10		8.4								
WEL	eS	21	03	17		0.2	100	10.29	203	4.9				
COB	eS	21	03	27		-1.7	100	10.90	211					3.5*
AMPLITUDES:		ONE	0.4			WTZ	4.7	2.0	CRZ	0.2				
		GNZ	1.7	2.5		KRP	1.5	0.3	TUA	0.3		0.4		
		TRZ	0.4	1.2		CNZ	0.3	0.4	TNZ	0.3				
		MNG	4.5	2.8		CAZ	0.8	0.8	WEL	0.2				
		COB	0.6											

FEB 05 04^h12^m30^s.1 38°.14s 175°.94E 187 km M = 4.0
 ± 1.0 0.04 0.05 7 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
KRP	iP	04	12	55.3	UW	-0.1	100	0.38	304		3.6*	2.6*		
	eS		13	15.5		0.7	100							
WTZ	P	04	12	57.0		-0.5	100	0.85	80		3.6	3.8		
	eS		13	16		-2.8	95							
CNZ	P	04	13	01.0		1.6	99	1.11	196					
	e			28										
TUA	P	04	13	01.1		1.2	100	1.16	125		4.0	4.1		
	eS			24		1.1	100							
TRZ	iP	04	13	04.7	U	1.1	100	1.57	154		4.4	4.3		
	eS			30		0.6	100							
TNZ	eP	04	13	05.3		1.4	100	1.61	229		3.2*	3.1*		
	e(S)			35		5.0								
GNZ	iPn	04	13	04.9		-0.1	100	1.72	108		4.1	4.1		
	e			28										
	eS			31		-0.9	100							
MNG	iP!	04	13	13.1		-0.6	100	2.50	188					
	eS			46		-1.2	100							

CAZ	eS	04 13 54	1.1	100	2.77	175						
WEL	eP	04 13 23	0.1	100	3.28	196	4.1					
	eS	14 03	-0.7	100								
COB	eP	04 13 29	-1.2	100	3.85	219				3.3*	3.5*	
	eS	14 15.5	-1.1	100								
AMPLITUDES:	KRP	4.5 0.5	WTZ	1.0	2.0	CNZ	1.2	1.3				
	TUA	0.9 1.2	TRZ	1.5	2.8	TNZ	0.3	0.3				
	GNZ	2.2 3.5	CAZ	1.6	WEL	0.4						
	COB	0.3 1.6										

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FEB 05 10^h33^m13^s.3 31°.08s 176°.99w 340 km M = 4.8
 ± 2.6 0.13 0.21 41 S.E. of RES. 2.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GBZ	e(P)	10	35	16		6.7		8.11	229			
	e			32								
WTZ	P	10	35	10.8		-3.1	99	8.50	214		4.9	4.9
	eS			36 48		-1.1	100					
GNZ	eP	10	35	14		-1.1	100	8.59	207		4.6	4.9
	eS			36 50		-1.1	100					
ONE	eP	10	35	17.5		2.1	100	8.61	235	3.6*		
TUA	e(P)	10	35	28		6.9		9.09	210		5.0	5.0
	eS			37 04		2.0	100					
KRP	e(P)	10	35	34		11.5		9.20	220		3.3*	
	e(S)			37 17		12.5						
CRZ	P	10	35	23.3		-0.7	100	9.32	246		4.1*	
	eS			37 07		-0.1	100					
TRZ	eS	10	37	22		3.4	99	9.85	209			4.8
MNG	eP	10	35	51		3.1	99	11.31	211		4.3	4.7
	eS			37 49		-1.3	100					
WEL	eS	10	38	07		-1.9	100	12.17	211	5.1		
COB	e(P)	10	36	20		11.9		12.99	217		3.6*	3.4*
	eS			38 27		0.2	100					
AMPLITUDES:	GBZ	1.1	WTZ	0.7	0.9	GNZ	0.4	1.4				
	ONE	0.3	TUA	0.4	0.4	KRP	0.3					
	CRZ	0.7	TRZ	0.4	MNG	0.3	1.0					
	WEL	0.3	COB	0.2	0.4							

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FEB 07 13^h32^m46^s.0 37°.11s 177°.45E 173 km M = 3.9
 ± 1.4 0.06 0.12 10 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	13	33	13.1		0.3	100	0.94	203		3.9	3.8
	e			30.5								
	eS			32.8		-0.6	100					
GNZ	iP!	13	33	19.2		0.6	100	1.59	164			
	e			36								
	eS			42		-1.8	99					
GBZ	eP	13	33	21		0.1	100	1.82	299			
TRZ	eP	13	33	29.5		0.9	100	2.48	191			3.9
	eS			34 04		2.6	98					
NGZ	eP	13	33	30		0.9	100	2.52	214			
MNG	P	13	33	45.0		-0.3	100	3.82	203		3.8	3.9
	eS			34 30		-1.1	100					
COB	eP	13	34	04		-2.0	99	5.41	221		3.2*	2.9*
	eS			35 08		0.1	100					

AMPLITUDES: WTZ 2.3 2.2 GBZ 0.3 0.2 TRZ 0.7
 NGZ 1.0 MNG 0.8 1.2 COB 0.2 0.3

80/ 053

FEB 08 01^h24^m45^s.9 31°.40s 178°.93w 302 km M = 5.1
 ± 1.8 0.11 0.19 36 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	eP	01	26	32		-0.7	100	7.38	206		5.1	5.1
	eS		27	57		0.5	100					
GNZ	eP	01	26	34		-2.0	100	7.65	198		5.1	5.2
	eS		28	01		-1.5	100					
KRP	eP	01	26	41.5		1.9	100	7.95	213		3.3*	
	e			45.0								
	e(S)		28	14		5.0						
TUA	eS	01	28	12		0.5	100	8.06	202			5.5
TRZ	eS	01	28	28		-0.8	100	8.85	202			5.3
NGZ	eP	01	26	54		2.0	100	8.95	208			
	eS		28	34.5		3.2	98					
MNG	eP	01	27	06		-2.0	100	10.26	205		4.6	5.0
	e		28	56								
	eS			59		-1.2	100					
CAZ	eS	01	29	01		0.6	100	10.27	201			
WEL	eS	01	29	17		-1.9	100	11.10	205	5.3		
CIZ	eP	01	27	38		0.3	100	12.68	172			
	e			48								
	eS		29	55		1.2	100					

AMPLITUDES: WTZ 1.7 1.8 GNZ 1.5 3.0 KRP 0.4
 TUA 1.3 TRZ 1.5 NGZ 0.4 0.7
 MNG 0.7 2.6 CAZ 0.5 WEL 0.6
 CIZ 1.3 0.8

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FEB 08 02^h54^m43^s.9 37°.75S 177°.57E 33 km M = 3.5
 ± 1.2 0.07 0.06 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPn!	02	54	54.9		0.4	100	0.51	243		3.7	3.7
	eSn		55	03		0.7	100					
GNZ	Pn	02	55	00.6		0.0	100	0.96	158		3.3	3.3
	eSn			13		0.0	100					
TUA	e(P*)	02	55	09		4.7		1.11	197			3.5
KRP	Pn	02	55	09.8		0.2	100	1.62	263		3.5	3.9
	eSn			28		-0.8	100					
NGZ	ePn	02	55	18		1.9	99	2.10	226			
	eS*			48		-0.7	100					
MNG	Pn	02	55	29.7		-2.7	97	3.29	209		3.3	3.5
	eSn			56		1.0	100					
COB	eSn?	02	56	59		8.6		5.01	227			3.6

AMPLITUDES: WTZ 21 19 GNZ 1.9 2.5 TUA 1.0
 KRP 0.6 1.2 NGZ 2.0 3.0 MNG 0.3 0.7
 COB 0.3

80/ 055

FEB 08 02^h56^m50^s.4 37°.61S 177°.45E 100 km M = 3.8
 ± 1.7 0.10 0.09 10 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	02	57	08.5	U	1.9	100	0.52	224		3.8	4.0

	e				14.5								
	eS				18.0		-0.9	100					
GNZ	P	02 57			13.9		1.4	100	1.13	157		3.7	
	eS				29		-0.3	100					
TUA	eS	02 57			30		-1.2	100	1.22	191		3.9	
KRP	iP	02 57			18.3	D	0.6	100	1.55	258		3.1*	2.6*
	eS				37		-1.3	100					
TRZ	e	02 57			59				2.01	194		3.8	
NGZ	eP	02 57			26.5		1.3	100	2.13	222			
	eS				53		1.9	100					
MNG	P	02 57			40.0		-2.3	99	3.37	206		4.0	3.7
	e				47.5								
	e				58 32								
COB	eP	02 58			03		-2.1	99	5.05	225		3.2*	2.8*
	eS				59 04		1.4	100					
AMPLITUDES:	WTZ				8.0	11	GNZ	2.5	TUA			1.5	
	KRP				1.2	0.4	TRZ	1.0	NGZ			3.2	4.6
	MNG				1.7	1.0	COB	0.2	0.3				

80/ 056

FEB 09 14^h44^m10^s.3 46°.40S 165°.75E 33 km M = 4.3
 ± 2.0 0.08 0.17 R S.E. of RES. 2.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	ePn	14 44		32		-0.8	100	1.39	64			
	eSn			47		-2.7	99					
OBZ	Pn	14 44		36.5		-0.6	100	1.71	108		4.4	4.5
	eP*			42		1.3	100					
	eSn			55.5		-1.8	100					
MSZ	ePn	14 44		45		-0.3	100	2.30	42		4.6	4.5
	eP*			50		-0.9	100					
	e(Sn)			45 16		4.3						
ROX	Sn-Pn			25		-5.0		2.65	71			
DNZ	Pn	14 44		59.4		-0.3	100	3.36	83			
	eSn			45 37		0.1	100					
RHP	iPn	14 45		07.1	D	1.0	100	3.83	55			
	e(Sn)			56		7.7						
OMZ	ePn	14 45		10		3.5	99	3.85	72		4.1	4.0
	eSn			52		3.1	99					
MJZ	ePn?	14 45		14		3.9		4.12	56		4.6	4.4
	eP*			18		-3.7	99					
	e			25								
	eSn			55		-0.2	100					
CMZ	e(Pn)	14 45		36		5.2		5.64	63			3.9
	e			46 16								
COB	(Pn)	14 45		59.0		5.0		7.33	46			3.9
	eSn			47 14		1.5	100					
AMPLITUDES:	BRZ			9.0				6.6	24	MSZ		11 14
	DNZ			1.0	1.3	RHP		11	10	OMZ		0.5 0.8
	MJZ			3.5	2.5	CMZ			0.3	COB		0.3

80/ 057

FEB 10 00^h46^m36^s.8 37°.92S 176°.36E 178 km M = 4.1
 ± 1.5 0.05 0.08 10 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	00 47		01.0	U	-0.5	100	0.50	97		4.1	3.5
	eS			18		-2.6	99					
KRP	iP!	00 47		03.4		1.1	100	0.65	270		3.4*	2.7*

TRZ	eS	13	1.1	100								
	e	10 23 13.8			2.44	62						3.5
	e	28										
CMZ	e	10 23 29			3.02	200						3.8*
	S	37.7			-0.6	100						
KRP	P	10 23 04.0			0.8	100	3.05	23				3.0* 3.2*
	e	15.8										
	eS	38			-0.9	100						
GNZ	e	10 23 48.5			3.72	57						4.2
	eS	53			-2.3	99						
RHP	e	10 23 32			4.45	220						
	eS	24 11.5			-1.9	99						
AMPLITUDES:		WEL	1.4	MNG	4.5	10	TNZ	0.4	2.0			
		CNZ	3.6 6.5	TRZ			0.3	CMZ	2.8			
		KRP	0.5 0.9	GNZ			1.5	RHP	0.3	2.0		

80/ 060

FEB 13 19^h22^m12^s.3 31°15S 178°27E 188 km M = 5.7
 ± 3.3 0.21 0.38 69 S.E. of RES. 2.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
GBZ	(P)	19	23	48.3		13.7		5.57	204		
WTZ	eP	19	23	55		3.0	99	6.90	188		5.8 5.5
	e			57.0							
	e(S)			25 20		10.3					
KRP	e	19	25	35				7.13	198		4.0*
GNZ	eP	19	23	59		-0.6	100	7.49	181		
	eS			25 21		-2.5	100				
CNZ	P	19	24	13.7		2.8	100	8.34	195		
	e(S)			25 53.5		9.9					
TRZ	eP	19	24	14		1.3	100	8.48	188		5.3
	e(S)			25 52		5.3					
TNZ	e(P)	19	24	21		6.3		8.63	201		4.2* 4.0*
	e			26 11							
MNG	e?	19	24	17.5				9.72	193		6.0 5.9
	eP			25		-3.8	99				
	e(S)			26 09		-6.8					
CAZ	e(S)	19	26	22.5		3.0		9.88	189		
WEL	eP	19	24	37		-2.1	100	10.51	195		
	eS			26 35		0.8	100				
CIZ	eP	19	25	15		-1.4	100	13.43	164		
	eS			27 43		1.4	100				
AMPLITUDES:		GBZ	3.0	WTZ	10	5.5	KRP	2.2			
		CNZ	3.8 7.5	TRZ	0.8	TNZ	0.6	0.6			
		MNG	20 20	CAZ	6.0	WEL	2.0	1.5			
		CIZ	0.3 0.6								

80/ 061

FEB 14 01^h54^m15^s.9 38°96S 177°32E 12 km M = 3.7
 ± 0.5 0.02 0.04 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
TUA	Sg-Pg			04		0.9	100	0.20	319		
GNZ	iP*!	01	54	28.7		0.8	100	0.63	60		
TRZ	Pg	01	54	32.0		1.6	99	0.71	213		3.5
	e(Sg)			44		4.0					
WTZ	iP*	01	54	33.1	U	-1.2	100	1.01	345		3.8 4.0
	eS*			47		-0.8	100				
CNZ	ePn	01	54	41		0.5	100	1.40	260		

	ePg		45		0.7	100				
	eSg		55 03		-0.2	100				
KRP	ePn?	01 54	46.0		0.8	100	1.74	306		4.0
	ePg		51.1		-0.0	100				
MNG	iPn	01 54	49.7	D	-1.5	99	2.18	220		3.5 3.6
	e(Pg)		55 02.5		2.5					
	eSn		17		-0.7	100				
WEL	eSn	01 55	37		-1.3	100	3.04	219		3.8
AMPLITUDES:		TUA	21 38	TRZ	2.5	WTZ	6.6	8.5		
		CNZ	2.3 4.0	KRP	2.1	MNG	1.2	1.9		
		WEL	0.2 1.9							

80/ 062

FEB 14 03^h51^m48^s.6 38°.94S 177°.27E 12 km M = 3.5
 ± 0.5 0.03 0.03 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
TUA	Sg-Pg			04		1.4	100	0.16	324		
GNZ	P*	03 52		00.9		-0.0	100	0.66	64		
	eS*			11		1.1	100				
TRZ	P*	03 52		03.2		1.4	100	0.71	209		3.4 3.4
	e(Pg)			07		3.9					
	e(Sg)			19		6.3					
WTZ	iP*	03 52		05.3	U	-1.1	100	0.97	347		3.5 3.8
	S*			18.8		-0.7	100				
CNZ	ePn	03 52		12.5		-0.2	100	1.37	258		
	eSg			35.5		0.7	100				
KRP	ePn	03 52		18		0.8	100	1.69	306		3.9
	Pg			23.1		0.2	100				
MNG	Pn	03 52		21.4		-2.3	98	2.18	219		3.5 3.2
	e(Pg)			36		3.4					
	e(Sg)			53 07		5.1					
AMPLITUDES:		TUA	10 10	TRZ	1.9 3.2	WTZ	3.8 5.8				
		CNZ	1.3 3.2	KRP	1.6	MNG	1.3 0.8				

80/ 063

FEB 14 13^h17^m38^s.5 39°.17S 177°.64E 12 km M = 3.7
 ± 1.1 0.05 0.09 R S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
TUA	S*-P*			09		1.7	100	0.52	313		4.0 4.0
GNZ	iP*	13 17		49.9	DNE	-0.1	100	0.60	30		
TRZ	eP*	13 17		55		2.7	99	0.74	239		3.5
	eS*			18 01.5		-0.9	100				
WTZ	iP*	13 18		01.0	U	-0.7	100	1.29	336		3.8 4.0
	ePg			06.5		1.8	100				
	eS*			17.0		-1.8	100				
NGZ	ePn	13 18		05.5		-0.0	100	1.57	269		
KRP	Pn	13 18		14		1.8	100	2.07	306		3.7
	ePg			19		-1.3	100				
MNG	ePn	13 18		12.5		-1.6	100	2.20	228		3.5 3.2
	e			31							
	e(Sg)			19 09		16.2					
AMPLITUDES:		TUA	10 13	TRZ	2.2	WTZ	4.0 5.5				
		NGZ	4.5	KRP	0.7	MNG	1.1 0.7				

					80/ 064							
FEB 14	13 ^h 41 ^m 20 ^s .8	33°.39s	178°.08E	314 km	M = 4.9							
		± 1.7	0.10	0.16	19	S.E. of RES. 1.6						
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	eP	13	42	36		0.3	100	4.67	191		4.9	4.9
	eS		43	35		0.7	100					
KRP	(P)	13	42	45.4		6.3		4.98	204		3.4*	
GNZ	eP	13	42	40		-2.3	99	5.25	180		4.8	4.8
	eS		43	46		-0.1	100					
NGZ	P	13	42	56.0		3.5	94	6.12	198			
	eS		44	05		0.5	100					
TRZ	eP	13	42	53.5		-0.4	100	6.24	189		4.7	4.9
	eS		44	06		-1.0	100					
MNG	eP	13	43	07.5		-1.9	99	7.51	195		5.1	4.9
	eS		44	34		-0.6	100					
WEL	eP	13	43	19		0.0	100	8.32	198	4.8		
	eS		44	52		-0.2	100					
CIZ	e	13	44	07				11.35	160			
	eS		46	00		0.8	100					
AMPLITUDES:		WTZ	2.0	2.2	KRP	0.7	GNZ	1.5	2.5			
		NGZ	2.3	1.2	TRZ	0.3	1.2	MNG	4.5	3.5		
		WEL	0.3		CIZ		0.3					

					80/ 065							
FEB 15	11 ^h 52 ^m 29 ^s .7	42°.66s	172°.91E	33 km	M = 4.1							
		± 0.2	0.01	0.02	R	S.E. of RES. 0.6						
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KKY	P*	11	52	42.6	U	0.4	100	0.63	68			
	S*			54		2.7						
CMZ	iPn	11	52	46.3	D	0.1	100	0.94	192		4.0	4.1
	Sn			58.5		0.1	100					
KAI	Pn	11	52	48.9	X	0.4	100	1.12	276	4.4		
	Sn			53 02		-0.5	100					
COB	Pn	11	52	54.2	U	-0.6	100	1.57	355		4.7	4.1
	Sn			53 14.5		0.9	99					
WEL	Pn	11	53	00		0.1	100	1.95	46	4.0		
	eP*			06		1.7						
	e			10								
	Sn			22.5		-0.1	100					
MJZ	Pn	11	53	03.5		-0.1	100	2.22	233		3.8	4.3
	P*			12		3.1						
	Sn			29		-0.1	100					
RHP	Pn	11	53	07.7	U	0.1		2.52	234			
	P*			13		-0.8						
	Sn			37.5		1.4						
MNG	Pn	11	53	10.4	D	-1.2	97	2.81	44		4.1	4.2
	P*			19		0.2						
	Sn			43		-0.1	100					
OMZ	Pn	11	53	11		-0.6		2.81	210		4.0	3.9
	Sn			43		-0.2						
DNZ	ePn	11	53	22		-0.9		3.64	207			
	Sn			54 04		0.9						
TNZ	Pn	11	53	24		1.0		3.64	18		4.1	4.5
	Sn			54 05.5		2.2						
NGZ	Pn	11	53	31.5		3.2		4.03	31			
	P*			42		2.3						

	Sn	54	15	2.4			
TRZ	eSn	11	54	23	4.3	4.28	45
BRZ	Pn	11	53	39.5	-1.5	4.97	229
	P*			51	-4.5		
	Sn			54	34	-1.0	
TUA	Sn	11	54	36	-0.3	5.02	41
KRP	Pn	11	53	43	-0.4	5.14	24
	Sn			54	40	0.8	
OBZ	Pn	11	53	47.5	-0.1	5.44	217
	Sn			54	47	0.4	
GNZ	eP*	11	54	04	-2.2	5.59	46
	Sn			48.5	-1.5		
WTZ	eP**?	11	54	08	1.4	5.62	35
	Sn			49	-1.6		
ONE	S*	11	55	56	-4.0	6.97	10
CIZ	Sn	11	55	43	0.1	7.79	103

AMPLITUDES:

CMZ	8.0	18	KAI	8.0	COB	11	11
WEL	1.0		MJZ		1.7	7.0	MNG
			DNZ		0.3	1.0	TNZ
TRZ	0.7	1.2	BRZ	0.6	0.1	1.0	TUA
KRP	0.7	0.6	OBZ		0.8	1.5	GNZ
WTZ	0.1	0.6	CIZ			0.2	

80/ 066

FEB 16 09^h32^m06^s.1 46°.94s 165°.27E 12 km M = 4.2
 ± 1.4 0.07 0.12 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
BRZ	Pn	09	32	37.8	D	-0.5	100	1.95	54					
	e(P*)			42		1.4								
	Pg			45		-0.6								
	Sn			33	01	-1.4	99							
OBZ	S*			04		-2.3								
	Pn	09	32	39.4		1.2	100	1.95	90		4.2	4.4		
	Pg			46		0.4								
MSZ	Sn			33	01.5	-0.9	100							
	Pn	09	32	51		-0.6	100	2.93	40		4.2	4.3		
	P*			56		-1.3								
ROX	Sn			33	27	1.1	100							
	Sn-Pn			38		1.2	100	3.18	64		4.4	4.5		
DNZ	Pn	09	33	04.3		1.0	100	3.79	75					
OMZ	e(Sn)			50		3.5								
	e(Pn)	09	33	13.5		2.4		4.36	67		4.0	4.2		
	P*			18		-3.6								
RHP	(Pg)			34		-0.2								
	Pn	09	33	13		1.1		4.42	52					
	(P*)			17.5		-5.2								
MJZ	eS*			34	17.5	-2.7								
	eP*	09	33	31		3.5		4.70	53		4.4	4.3		
	Pg			37		-4.1								
CMZ	Sn			34	06	-2.4								
	ePg	09	34	05.5		-5.7		6.19	60		3.7	4.0		
	eSg			35	28	-6.6								
MNG							9.72	53					3.6	

AMPLITUDES:

BRZ	2.5	2.7	5.2	OBZ	3.3	12	MSZ	2.5	5.7
ROX		1.5	5.0	DNZ	0.5	1.4	OMZ	0.3	1.0
MJZ		1.6	1.8	CMZ	0.1	0.3	MNG		0.1

80/ 067

FEB 16 09^h52^m32^s.6 46°.82S 165°.36E 12 km M = 3.5
 ± 0.7 0.04 0.06 R S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	Pn	09	53	03		-0.1	100	1.84	56			
	Pg			10		0.2						
	S*			29.5		0.2	100					
OBZ	Pn	09	53	04.5		0.6	99	1.89	94		3.8	3.6
	Sn			27		-0.5	100					
MSZ	Pn	09	53	16		-0.3	100	2.80	41		3.5	3.4
	(P*)			25		3.5						
	(Pg)			32		2.8						
	e(S*)		54	01		2.8						
DNZ								3.70	77			
RHP	Pn	09	53	36		-0.7		4.29	52			
	(P*)			41		-6.1						
MJZ	e(P*)	09	53	57		5.1		4.58	54		3.2	3.5
	eSn			54 31		-1.0						
AMPLITUDES:		BRZ	0.5	0.5	0.9	OBZ	1.6	2.5	MSZ	0.6	0.8	
		DNZ			0.4	MJZ	0.1	0.3				

80/ 068

FEB 16 10^h20^m26^s.6 46°.74S 165°.40E 12 km M = 3.7
 ± 1.4 0.05 0.11 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	Pn	10	20	56		-0.2	100	1.77	58			
	(P*)			21 00		2.0						
	S*			22.5		1.2	99					
OBZ	Pn	10	20	57.5		-0.2	100	1.87	96		3.8	3.7
	Sn			21 20.5		-0.5	100					
MSZ	Pn	10	21	10		0.8	100	2.72	41		3.9	3.7
	P*			17		2.8						
	S*			48.5		-1.3	99					
	Sg			54.5		-3.8						
DNZ								3.65	78			
OMZ	e(P*)	10	21	43		3.6		4.20	69		3.2	
	(S*)			22 27		-7.1						
RHP	(P*)	10	21	35.5		-4.4		4.23	53			
MJZ	(Pg)			45		-7.0						
	e(P*)	10	21	39		-5.7		4.51	54		3.7	3.8
	ePg			52		-5.8						
	Sn			22 24		-0.4						
AMPLITUDES:		BRZ	1.1	0.9	1.7	OBZ	1.6	3.1	MSZ	1.4	1.9	
		DNZ		0.7		OMZ		0.1	MJZ	0.4	0.6	

80/ 069

FEB 16 13^h37^m18^s.6 32°.30S 177°.75W 33 km M = 4.8
 ± 1.4 0.12 0.20 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	Pn	13	38	58.5		-0.9	100	7.13	216		4.5	4.8
	Sn			40 15.5		-0.3	100					
GNZ	Pn	13	39	01.5		0.9	100	7.21	207		4.7	4.8
	Sn			40 19		1.1	100					
TUA	Pn	13	39	08		0.6	100	7.71	211		5.1	5.1
	Sn			40 30.5		0.6	100					

KRP	Pn	13 39 09	-0.4	100	7.86	223	4.7	5.2
	e(P*)	36	2.3					
	e(Sn)	40 34	0.5	100				
CRZ	e(P*)	13 39 40	-1.0		8.29	253	5.3	
TRZ	Pn	13 39 17.5	-0.3	100	8.48	210	4.7	4.7
	Sn	40 46	-2.2	97				
MNG	Pn	13 39 32.5	-5.2		9.94	211	4.2	4.8
	Sn	41 17	-6.3					
WEL	Sn	13 41 36.5	-7.4		10.79	212	4.9	
CIZ	e(Pn)	13 40 08	6.4		11.68	176		
	e(Sn)	42 03	-2.3					
CMZ					13.58	211		4.5
MJZ	Sn	13 43 12	-10.5		14.89	215		4.9
MSZ					16.67	218	4.6	4.0
BRZ					17.63	216		
AMPLITUDES:	WTZ	0.7 1.2	GNZ	0.8 1.6	TUA	0.7 0.8		
	KRP	0.2 0.4	CRZ	0.2	TRZ	0.3 0.4		
	MNG	0.3 1.6	WEL	0.2	CIZ	0.2 0.5		
	CMZ	0.2	MJZ	0.6	MSZ	0.2 0.1		
	BRZ	0.1						

80/ 070

FEB 16 13^h56^m15^s.7 38°.84S 175°.94E 12 km M = 3.3

± 0.4 0.02 0.04 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
WNZ	P*	13	56	19.3		-1.7	99	0.24	32		
	(Pg)			20.5		-0.6					
	Sg			26		1.4	100				
NGZ	P*	13	56	23.7		-0.5	100	0.43	216		
CNZ	P*	13	56	24.3		-0.7	100	0.48	220		
	Pg			26		0.4					
	(Sg)			32.5		0.3					
GSZ	e(P*)	13	56	26		0.2		0.52	212		
	e(Sg)			37.5		3.9					
TUA	P*	13	56	32.5		-0.6	100	0.94	89	3.6	
	(Pg)			35		0.0					
KRP	P*	13	56	32.1		-1.2	100	0.96	341	3.4	
	Pg			33.5		-1.8					
	e			37.5							
	S*			47.5		1.2	100				
	Sg			52		3.6					
TRZ	P*	13	56	35.5		1.7	99	0.99	137	3.4	3.3
	S*			48.5		1.4					
	(Sg)			54.5		5.1					
WTZ	P*	13	56	36.5		-0.6	100	1.19	44	3.2	
TNZ	P*	13	56	39		0.5	100	1.27	253	3.4	2.9
	S*			55		-0.3					
	e(Sg)			57 00		1.5					
GNZ	P*	13	56	44.5		-0.4	100	1.64	84	3.4	
	(Pg)			47		-2.0					
	e			51.5							
	e(Sg)			57 18		6.9					
MNG	Pn	13	56	47		1.0	100	1.82	191	3.6	2.9
	e(Sg)			57 15		-2.0					
AMPLITUDES:	WNZ	1.8 3.0	TUA	1.0	KRP	2.0					
	TRZ	0.7 0.8	WTZ	0.7	TNZ	0.3 0.1					
	GNZ	0.6	MNG	1.4 0.3							

		14 ^h 06 ^m 03 ^s .1			32°.13s	178°.03W	33 km	80/ 071				
		± 1.4			0.14	0.30	R	S.E. of RES. 1.1				
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GBZ	e(P*)	14	07	53		-6.3		6.75	231			
WTZ	Pn	14	07	42.5		-1.5	99	7.13	214		4.7	4.8
	Sn			09 00		-0.4	100					
GNZ	Pn	14	07	46		0.3	100	7.26	205		4.9	4.9
	P*			08 09.5		1.5						
	e			29								
	Sn			09 03		-0.5	100					
TUA	Pn	14	07	52.5		0.2	100	7.74	209		5.2	5.1
	Sn			09 14		-1.0	100					
KRP	Pn	14	07	54.5	U	1.0	100	7.83	221		5.2	
	P*			08 17		-0.7						
CRZ								8.12	251		5.3	
TRZ	Pn	14	08	02.5		-0.3	100	8.51	208		4.7	4.8
	e			09 31								
	Sn			35		1.5	99					
CNZ	(P*)	14	08	41		7.1		8.78	215			
TNZ	e(Pn)	14	08	15		0.5		9.37	219		5.1	
MNG	Pn	14	08	19		-3.6		9.96	210		4.3	4.9
	Sn			10 02		-6.4						
WEL	Sn	14	10	21		-7.9		10.82	210	5.0		
CIZ	e(Pn)	14	08	54		5.3		11.87	175			
	e(Sn)			10 51		-3.3						
CMZ								13.61	210			4.7
MJZ	ePn	14	09	28		-2.0		14.90	214		4.8	4.9
	Sn			11 57		-10.1						
MSZ								16.66	217		4.8	4.5
BRZ								17.63	215			
AMPLITUDES:		GBZ		1.7	WTZ	1.1	1.2	GNZ		1.1	2.0	
		TUA	0.9	0.8	KRP	0.7		CRZ		0.2		
		TRZ	0.3	0.5	TNZ	0.1		MNG		0.4	1.8	
		WEL	0.3		CIZ	0.1	0.3	CMZ			0.3	
		MJZ	0.4	0.7	MSZ	0.3	0.3	BRZ	0.2	0.1	0.4	

		14 ^h 24 ^m 44 ^s .4			38°.78s	175°.93E	12 km	80/ 072				
		± 0.3			0.03	0.04	R	S.E. of RES. 1.0				
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	P*	14	24	48.0	U	-1.0	100	0.20	42			
	e(Pg)			50		1.0						
	e(Sg)			56		3.9						
NGZ	P*	14	24	52.5		-1.1	100	0.47	211			
CNZ	P*	14	24	53.4		-0.9	100	0.51	215			
	Pg			55.5		0.5						
	S*			59		-2.5						
GSZ	P*	14	24	54		-1.2		0.57	208			
	Pg			55		-1.0						
	Sg			25 05		1.2						
KRP	P*	14	25	01.5		0.4	100	0.91	340		3.8	3.3
	(Pg)			02.5		-0.4						
	(S*)			17		3.7						
	Sg			19		3.8						
TUA	P*	14	25	01		-0.8	100	0.95	92		3.8	

INSTRUMENTAL DATA

TRZ	P*	14 25 04	0.7	100	1.03	138	3.8	3.6	
	Pg	09.5	4.0						
	e(Sg)	23	3.4						
WTZ	P*	14 25 05	-0.2	100	1.15	47	3.6		
	Pg	07	-0.7						
TNZ	P*	14 25 08	0.7	100	1.28	251	3.7	3.5	
GNZ	P*	14 25 14.5	0.9	100	1.65	86	3.9		
	Pg	19.5	1.8						
MNG	Pn	14 25 16.5	1.1	100	1.87	191	4.2	3.5	
	Pg	24.5	2.3						
	e	26 00							
WEL	e(Pg)	14 25 35	-3.2		2.65	199	3.5		
	eSg	26 11	-3.0						
AMPLITUDES:		WNZ	4.5	6.0	KRP	5.5	1.6	TUA	1.5
		TRZ	1.8	1.4	WTZ	1.6		TNZ	0.5
		GNZ	1.6		MNG	5.0	1.1	WEL	0.1

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FEB 16 18^h33^m07^s.3 32°.02s 178°.30w 33 km M = 4.6
 ± 2.3 0.26 0.57 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	Pn	18	34	46		-1.7	99	7.10	212		4.5	4.7
	Sn		36	05		1.1	100					
GNZ	Pn	18	34	52		2.0	99	7.26	203		4.5	4.8
	Sn		36	07		-0.8	100					
TUA	Pn	18	34	56		-0.3	100	7.73	207		4.9	4.9
	Sn		36	19		0.0	100					
KRP	e	18	35	08				7.77	219		4.8	
	eP*		19.5			-1.3						
CRZ	e(P*)	18	35	24		0.3		7.94	250		5.0	
TRZ	Sn	18	36	37		-0.6	100	8.50	206			4.7
MNG	ePn	18	35	23.5		-3.0		9.94	209		4.0	4.7
	Sn		37	04.5		-7.7						
WEL	Sn	18	37	25.5		-7.2		10.80	209	4.7		
CIZ	Sn	18	37	52		-9.6		12.01	174			
CMZ								13.59	209			4.2
MJZ	Sn	18	39	00		-10.4		14.87	213		4.2	4.6
MSZ								16.60	217		4.3	4.3
AMPLITUDES:		WTZ	0.6	1.0	GNZ	0.5	1.7	TUA			0.4	0.5
		KRP	0.3		CRZ	0.1		TRZ				0.4
		MNG	0.2	1.1	WEL	0.1		CIZ				0.2
		CMZ		0.1	MJZ	0.1	0.3	MSZ			0.1	0.2

80/ 074

FEB 17 05^h33^m13^s.4 38°.11s 176°.13E 192 km M = 5.0
 ± 0.6 0.03 0.05 4 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	iP	05	33	40.0	UE	0.3	100	0.50	292		4.1*	4.1*
	S		34	00		-0.0	100					
WNZ	P	05	33	40		0.2	100	0.52	183		4.5	4.8
	e(S)		34	04		3.9						
	e			13								
WTZ	iP	05	33	40.6	D	0.1	100	0.69	80		5.0	5.1
	S		34	00		-1.5	99					
WIZ	P	05	33	42.7	U	0.1	100	1.02	55			
TUA	iP	05	33	43.7	D	0.8	100	1.06	131		4.8	5.3
	S		34	06		0.3	100					

NGZ	iP	05 33 43.6		0.1	100	1.14	201		
	S	34 08		1.2	99				
CNZ	iP	05 33 43.7		-0.1		1.18	203		
	(S)	34 14		6.7					
GSZ	iP	05 33 44.2		-0.1		1.24	200		
	S	34 09.5		1.3					
TRZ	iP	05 33 47.9	U	0.9	100	1.54	160		
	(S)	34 12		-0.9	100				
GNZ	iP	05 33 48.3	USE	0.9	100	1.57	110		
	(S)	34 11		-2.6					
TNZ	iP	05 33 48.8	U	-0.1	100	1.75	231	4.7*	
MNG	iP	05 33 56.0	U	-1.8	97	2.56	191		
	(S)	34 26		-6.1					
ONE	P	05 33 59.5		-0.4	100	2.73	328	3.5*	
	S	34 36		0.2	100				
CAZ	P	05 33 59.5		-1.1		2.79	179		
	S	34 36		-1.1					
WEL	P	05 34 04.2	U	-3.1		3.34	198	5.1	
	S	43.5		-5.4					
KAI						5.70	218	4.3*	
CMZ						6.07	205		4.6* 4.9*
MJZ	P	05 34 51.8		-6.1		7.27	214		4.1* 4.6*
	S	36 10		-9.5					
OMZ						7.98	208		4.3* 4.1*
CIZ	(P)	05 35 17		9.0		8.04	139		
	e	36 41							
	(S)	46		8.5					
DNZ	P	05 35 13.5		-4.6		8.81	207		
	S	36 46		-9.5					
MSZ						9.01	221		3.8* 4.1*
BRZ	P	05 35 27.5		-5.8		9.98	217		
	S	37 12		-10.9					
OBZ						10.59	211		3.7* 3.6*
AMPLITUDES:	KRP	12	14	WNZ	0.6	1.1	WTZ	32	40
	TUA	6.2	21	TNZ	8.5		ONE	0.7	
	WEL	3.9		KAI	1.7		CMZ	5.6	15
	MJZ	2.5	9.7	OMZ	1.6	1.9	CIZ	0.5	1.8
	DNZ	1.1	1.0	MSZ	1.2	4.2	BRZ	0.5	0.4 1.3
	OBZ	0.4	0.9						

FELT: Mahia (54)

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FEB 17 16^h29^m59^s.8 34°.92S 179°.14E 252 km M = 4.6
 ± 1.0 0.08 0.10 21 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	16	30	59.3		0.8	100	3.52	209		5.0	4.7
	e			31 40								
	S			44		-0.3	100					
GNZ	P	16	31	03.1	U	1.0	100	3.82	193		4.6	5.0
	S			50		-0.6	100					
KRP	P	16	31	06.5		0.2	100	4.18	223		3.2*	
TUA	eP	16	31	06.5		-0.1	100	4.20	202		4.4	4.7
	S			58		-0.5	100					
WNZ	S	16	32	03.5		-0.1	100	4.44	212			5.3
TRZ	P	16	31	15		-1.0	100	4.99	201		4.3	4.7
	eS			32 17		1.5	98					
NGZ	P	16	31	16.5		-1.0	100	5.11	212			

	e(S)	32 17		-1.2					
CRZ	S	16 32 23.5		0.0	100	5.35	273		3.3*
TNZ	P	16 31 25		-0.1		5.71	220		3.2*
MNG	P	16 31 30.5	D	-2.9		6.39	206		4.6 3.9
	S	32 41.5		-5.2					
WEL	P	16 31 40		-4.1		7.24	207	4.5	
	S	32 58		-7.8					
CIZ	S	16 34 12		12.0		9.62	161		
CMZ						10.02	208		3.2*
MJZ	S	16 34 28.5		-9.0		11.27	214		2.9* 3.1*
AMPLITUDES:									
	WTZ	4.0	2.8	GNZ	1.7	7.5	KRP	0.5	
	TUA	0.4	0.7	WNZ		0.3	TRZ	0.2	1.1
	CRZ		0.2	TNZ	0.1		MNG	1.7	0.5
	WEL	0.2		CIZ		0.3	CMZ		0.2
	MJZ		0.1	0.2					

FEB 18 05^h47^m17^s.3 39°.15S 174°.81E 213 km M = 3.9
 ± 1.3 0.05 0.09 9 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	iP	05	47	45.7	U	0.1	100	0.33	263		3.3*	
GSZ	P	05	47	47.5		1.1	100	0.62	103			
	S		48	10		1.1	100					
KRP	P	05	47	51.5		0.4	100	1.35	25		2.4*	2.5*
	S		48	17		-0.2	100					
MNG	iP	05	47	53.2		0.4	100	1.56	161		4.1	4.2
	S		48	19		-1.4	100					
TRZ	P	05	47	54.5		1.1	100	1.61	105		3.7	3.8
	S		48	23		1.8	99					
TUA	P	05	47	56		0.4	100	1.85	80		4.0	3.9
	e		48	20								
	S			25		-0.3	100					
WTZ	iP	05	47	56.8	D	-0.9	100	2.06	56		4.0	3.6
	eS		48	26.5		-2.4	98					
WEL	S	05	48	29		-1.3	100	2.14	181	4.0		
COB	iP	05	48	00.6	U	-1.8		2.51	219		3.7*	3.5*
	S			33		-4.4						
GNZ	P	05	48	03.1		0.2		2.56	80			
	S			36.5		-1.8						
CMZ								4.73	200			3.7*
RHP	eP	05	48	43		-3.6		6.09	214			
	S		49	49.5		-6.7						
AMPLITUDES:												
	TNZ		0.4			KRP	0.2	0.3	MNG		5.0	7.4
	TRZ		0.3	0.8		TUA	0.5	0.4	WTZ		1.0	0.5
	WEL	0.5				COB	1.0	2.6	CMZ			1.2

FEB 18 13^h43^m21^s.6 44°.97S 167°.74E 12 km M = 3.6
 ± 1.0 0.05 0.09 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	iP*	13	43	37.6	D	0.8	100	0.82	190			
	e(Pg)			44		5.6						
	S*			50		2.1	99					
ROX	S*-P*			17		0.7	100	1.22	115		4.0	3.3
RHP	iPn	13	43	53.1	D	0.2	100	1.89	63			
	Sn			44		0.6	100					
OBZ	ePn	13	43	52		-1.8	99	1.95	172		3.4	3.8

	e(P*)		53.5		-2.6						
	Sn	44	16		-1.9	99					
	(S*)		17.5		-4.3						
DNZ	Pn	13	43	56.5	0.0	100	2.15	116			
	e(S*)		44	29		1.2					
OMZ	iPn	13	43	57.8	D	-0.1	100	2.26	94	4.2	3.5
	Sn		44	25		-0.1	100				
CMZ	e(Pg)	13	44	33		-5.1		3.78	70		3.1
	e			53							
	(Sn)		45	00		-1.9					
COB	e(Pn)	13	44	39		-0.9		5.34	45		3.1
	Sn		45	39		-0.2					
AMPLITUDES:	BRZ	2.5	1.5	4.6	ROX		3.6	2.0	OBZ	0.6	3.2
	DNZ		1.2	0.4	OMZ		2.0	0.7	CMZ		0.1
	COB			0.1							

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FEB 18 17^h36^m51^s.9 37°.29S 177°.63E 166 km M = 5.0
 ± 1.3 0.05 0.09 13 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	iP	17	37	13.4	D	-1.5	100	0.42	236			
	e(S)			27.5		-5.1						
WTZ	iP	17	37	16.6	U	-0.6	100	0.86	216			
GNZ	iP	17	37	22.8		1.0	100	1.39	167			
TUA	P	17	37	24	U	0.3	100	1.57	194		4.9	4.8
	e(S)			48		-0.1						
KRP	eP	17	37	26.6	DNE	0.8	100	1.78	248		4.0*	3.8*
	S			51		-1.1	100					
WNZ	P	17	37	27.0	U	0.9	100	1.80	222		5.2	5.0
	e(S)			53.5		0.9						
GBZ	iP	17	37	28.4	D	-0.3	100	2.03	301			
TRZ	iP	17	37	32.8	U	0.4	100	2.35	195		5.0	5.0
	S			38 05		1.4	100					
NGZ	iP	17	37	35.0		1.1	100	2.47	219			
	e(S)			38 08		1.7						
ONE	P	17	37	41		0.0	100	3.03	299			
TNZ	P	17	37	43.5		0.6	100	3.19	232		3.7*	3.7*
	S			38 24		2.0	99					
MNG	P	17	37	47.8	U	-2.0	99	3.73	206		5.0	5.1
	S			38 31		-3.3	96					
WEL	P	17	37	58.5		-2.2		4.57	208	5.2		
	S			38 50		-3.8						
CRZ	P	17	38	06.5		1.0		4.93	304		3.5*	
	e			14								
COB	P	17	38	08.8	U	-2.6		5.37	224		4.1*	4.1*
	S			39 10		-2.8						
KAI								7.09	221	4.0*		
CMZ								7.35	210		3.3*	4.4*
CIZ	e(P)	17	38	51		5.0		7.99	148			
	e(S)			40 15		-0.1						
RHP	P	17	38	56		-2.0		8.90	218			
	S			40 29.5		-7.1						
OMZ	P	17	39	00		-3.0		9.28	211		3.5*	3.6*
	S			40 38		-7.5						
DNZ	S	17	40	57		-7.7		10.10	210			
BRZ	P	17	39	30		-0.2		11.37	219			
	S			41 29		-5.5						

AMPLITUDES:	TUA	6.5	5.0	KRP	7.1	4.8	WNZ	1.3	0.8
	GBZ	19		TRZ	4.3	9.0	TNZ	0.5	0.7
	MNG	12	20	WEL	2.7		CRZ	0.3	
	COB	1.5	5.5	KAI	0.7		CMZ	0.2	4.3
	OMZ	0.2	0.6	DNZ		0.5	BRZ	0.2	0.1

FEB 18 20^h38^m36^s.7 38°.89S 176°.01E 124 km M = 4.2
 ± 0.8 0.03 0.04 6 S.E. of RES. 1.0 80/ 079

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WNZ	P	20	38	54		-0.2	100	0.27	16					
	e(S)			39 08		0.5								
NGZ	iP	20	38	55.4		0.6	100	0.42	226					
	S			39 09		0.3	100							
GSZ	iP	20	38	56.0		0.7		0.50	220					
	S			39 10		0.5								
TUA	P	20	38	59		0.8	100	0.89	85			4.1	4.4	
	i			39 08										
	S			15		0.3	100							
TRZ	P	20	38	59.4	U	1.0	100	0.92	137			4.4	4.2	
	S			39 16		1.0	100							
KRP	iP	20	39	00.0	DSE	0.4	100	1.03	339			3.5*	3.0*	
	S			16.5		-0.5	100							
WTZ	iP	20	39	00.8	D	-0.4	100	1.19	41			4.0	4.1	
	e			15										
	S			18.5		-1.4	99							
TNZ	P	20	39	03.3	U	0.8	100	1.30	256			3.3*	3.3*	
	e(S)			21		-1.1								
	e			23										
GNZ	eP	20	39	06		0.1	100	1.59	82			3.8	4.3	
	(S)			27		-1.0	100							
MNG	iP	20	39	07.6	U	-0.4	100	1.77	193			4.3	4.2	
	S			29		-2.6	89							
WEL	P	20	39	16.6	U	-1.8		2.57	201	4.0				
	S			47.5		-2.3								
COB	P	20	39	25.9	U	-2.7		3.34	228			3.3*	3.4*	
	S			40 05		-3.0								
KAI	S	20	40	44		-5.0		5.05	222	3.1*				
CMZ	S	20	40	49		-7.2		5.34	207				3.6*	
CIZ	e	20	41	41				7.53	135					
	(S)			49		-0.6								
BRZ	S	20	42	29		-3.5		9.31	220					
AMPLITUDES:	WNZ	0.6	1.0	TUA	2.9	5.3	TRZ	4.6	7.0					
	KRP	3.8	1.5	WTZ	3.7	5.0	TNZ	0.5	0.7					
	GNZ	1.8	8.0	MNG	12	12	WEL	0.6						
	COB	0.4	1.8	KAI	0.1		CMZ		1.0					
	BRZ		0.1											

FEB 19 02^h48^m00^s.9 39°.57S 174°.40E 238 km M = 4.2
 ± 0.9 0.04 0.06 6 S.E. of RES. 1.2 80/ 080

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TNZ	P	02	48	32.7	U	0.5	100	0.38	358			3.2*	3.2*	
	S			56.5		0.0	100							
GSZ	P	02	48	35.8		1.2	100	0.96	73					
	S			59.5		-1.3	100							
MNG	iP	02	48	38.7	U	1.7	99	1.34	142			4.1	4.4	

	S	49 05.5		0.4	100							
WEL	S	02 49 11		0.2	100	1.74	171	3.7				
KRP	P	02 48 40.8	D	-0.6	100	1.87	29			3.1*		
	S	49 14.5		1.7	99							
TRZ	eP	02 48 39		-2.5		1.87	90			4.3	4.3	
	e	49 00.5										
	S	14		1.1	100							
COB	iP	02 48 42.7	U	0.2	100	1.98	220			4.4*	3.5*	
	S	49 13		-1.6	99							
TUA	S-P	34.5		0.1	100	2.27	71			4.5	4.2	
WTZ	iP	02 48 47.3	D	-1.1	100	2.57	53			4.2	3.9	
	S	49 25		-0.2	100							
GNZ	iP	02 48 53.1	U	0.4	100	2.97	73			4.7	4.4	
	S	49 31		-1.9	99							
KAI						3.73	216	3.4*				
CMZ	P	02 49 08.		0.6		4.23	198			3.5*	4.1*	
	S	56.5		-2.7								
AMPLITUDES:	TNZ	0.3	0.4	MNG	4.6	12	WEL	0.3				
	KRP	0.8		TRZ	0.9	2.0	COB	6.0	2.7			
	TUA	1.1	0.6	WTZ	1.2	0.7	GNZ	3.5	2.7			
	KAI	0.3		CMZ	0.6	3.5						

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FEB 19 12^h44^m25^s.0 41°.61S 178°.43E 33 km M = 4.3
 ± 0.4 0.02 0.03 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	Pn	12 44	54.8			1.6	99	1.81	292			
	i	45	11									
	e(S*)		21			-0.0						
TRZ	Pn	12 45	01			-0.2	100	2.39	329		4.1	4.3
	P*		06.5			-0.6						
	e(Sn)		28			-0.5						
MNG	Pn	12 45	01.5			-0.3	100	2.44	293		4.1	4.3
	eSn		29			-0.6	100					
WEL	ePn	12 45	06.5			0.1	100	2.77	275	3.9		
	(P*)		16			2.5						
	Sn		36.5			-1.1	100					
TUA	Pn	12 45	08.8		U	-0.2	100	2.97	340		4.6	4.5
	Sn		41			-1.2	100					
GNZ	Pn	12 45	08.5			-0.7	100	2.98	354		4.4	4.5
	Sn		45			2.4	98					
GSZ	Sn	12 45	47.5			0.0	100	3.19	316			
NGZ	Pn	12 45	14.5			1.7	99	3.24	317			
	e(Sn)		44.5			-4.4						
WNZ	(Sn)	12 45	57			2.6		3.47	328		4.6	
	(S*)		46 08			-2.7						
WTZ	Pn	12 45	19			-1.3	100	3.79	342		4.4	4.4
	P*		28			-2.8						
	Sn		46 01			-1.0	100					
TNZ	Pn	12 45	24			1.8	99	3.93	307		4.0	4.5
	e(Sn)		46 05.5			0.1						
	e		11									
KRP	Pn	12 45	27			-0.3	100	4.30	328		4.4	4.4
	P*		39			-0.6						
	Sn		46 13			-1.4	100					
COB	Pn	12 45	26.5			-1.0	100	4.32	275		4.3	4.1
	Sn		46 17			2.2	99					
CIZ	Pn	12 45	28.5			0.3	100	4.36	124			

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CMZ	Sn	46	16	0.1	100						
	Pn	12	45	32.5	-0.3	100	4.72	243		4.3	4.4
	(P*)		52		5.5						
	Sn	46	23	-1.2	100						
KAI							5.31	258	4.1		
GBZ	Pn	12	45	49.5	1.0		5.86	336			
MJZ	Pn	12	45	55	0.1		6.33	245		4.2	4.0
	Sn	47	02.5		-0.5						
ONE	e(Pn)	12	46	05	5.8		6.64	330			
AMPLITUDES:		TRZ	1.0	2.2	MNG	4.0	8.2	WEL	0.4		
	TUA	1.4	1.4	GNZ	2.5	4.8	WNZ			0.3	
	WTZ	1.9	1.8	TNZ	0.2	1.0	KRP			0.8	0.6
	COB	0.6	1.3	CIZ	1.8	2.5	CMZ			0.6	1.4
	KAI	0.2		GBZ	0.4		MJZ			0.6	0.5

FEB 21 21^h51^m34^s.6 39°.96S 176°.75E 12 km M = 3.4
 ± 0.8 0.04 0.07 R S.E. of RES. 2.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	iPg	21	51	45.1	U	1.9	100	0.41	8		3.3	3.8
	S*			50		1.4	100					
	(Sg)			55.5		6.6						
CAZ	S*	21	52	06		-1.0	100	1.03	203			
NGZ	P*	21	51	57.0		1.2	100	1.17	311			
	S*			52		1.6	100					
MNG	Pg	21	51	58.2	U	-0.2	100	1.17	235		3.1	3.5
	S*			52		-3.4	99					
TUA	P*	21	51	55		-1.1	100	1.19	15		3.3	3.5
	e(Pg)			52		1.7						
WNZ	S*			08.5		-3.5	99					
	e(Pg)	21	52	09		5.6		1.42	339		3.8	3.6
GNZ	e(Sg)			24		1.5						
	Pg	21	52	11		3.1	99	1.65	37		3.5	3.4
WTZ	Sn			22		-1.5	100					
	Pg	21	52	15		0.3	100	1.98	5		3.2	3.6
WEL	e			26								
	(Sg)			47		5.5						
KRP	Sn	21	52	34		1.8	100	2.01	228	3.0		
	P*	21	52	14.5		0.5	100	2.24	335		3.3	3.4
COB	eSn			37		-0.8						
	Sg			48		-2.2	100					
	e(Pg)	21	52	39		-1.6		3.27	249		3.3	3.0
	e			44								
AMPLITUDES:	Sn			53		1.6	100					
	eSg			26		1.4						
AMPLITUDES:		TRZ	4.5	20	MNG	1.7	5.8	TUA			0.5	0.8
	WNZ	0.2	0.2	GNZ	0.9	1.3	WTZ				0.4	0.9
	WEL	0.1		KRP	0.2	0.2	COB				0.1	0.2

FELT: Waipawa (60) MM III

FEB 22 09^h45^m25^s.3 35°.79S 178°.48E 180 km M = 4.1
 ± 0.5 0.04 0.06 11 S.E. of RES. 0.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GBZ	P	09	46	08		-0.1	100	2.47	259			
WTZ	P	09	46	08.2	D	-0.2	100	2.50	208		4.3	3.8

	S		41.5		-0.2	100					
GNZ	iP	09 46	12.8	U	-0.2	100	2.88	187		4.2	4.3
	S		50		0.3	99					
KRP	P	09 46	17		0.2	100	3.18	227		2.8*	
TUA	S	09 46	56.5		-0.3	100	3.19	199		4.0	
TRZ	e(S)	09 47	15		0.6		3.99	199		4.1	
MNG	P	09 46	40.5		-4.4		5.37	205		4.0	4.2
	S		47 39		-7.6						
WEL	S	09 47	58		-8.4		6.22	207	4.0		
COB	e(S)	09 48	17.5		-6.4		6.96	219		2.8*	
CMZ	e(S)	09 48	59.5		-12.6		9.00	208		2.9*	
MJZ	eS	09 49	29		-12.3		10.24	214		2.7*	
AMPLITUDES:											
	GBZ		0.4		WTZ	1.9	0.7	GNZ		1.2	2.4
	KRP		0.3		TUA		0.3	TRZ			0.5
	MNG		0.7	1.2	WEL	0.1		COB			0.2
	CMZ			0.1	MJZ		0.1				

80/ 084

FEB 23 10^h26^m02^s.0 35°.84S 178°.07E 229 km M = 4.3
 ± 1.1 0.07 0.14 12 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
GBZ	P	10 26	43.6		D	-0.7	100	2.13	259					
WTZ	P	10 26	46.6			0.5	100	2.31	202		4.0	4.2		
	S		27 20			-0.3	100							
GNZ	P	10 26	51.4		D	0.0	100	2.80	181		4.5	4.7		
	S		27 30			0.3	100							
KRP	P	10 26	54			1.4	98	2.91	224		2.6*			
TUA	e	10 27	32					3.05	194			4.3		
	e(S)		39.5			4.7								
	e		46											
TRZ	P	10 27	02.4		D	-1.0	99	3.84	195		4.1	4.4		
	S		51			-0.2	100							
NGZ	P	10 27	04			0.2	100	3.87	210					
MNG	P	10 27	17.0		D	-3.2		5.19	202		4.6	4.2		
	S		28 17.5			-3.5								
WEL	S	10 28	34			-5.9		6.03	204	4.0				
COB	eS	10 28	49.5			-6.1		6.71	217			3.0*		
MJZ	S	10 30	06			-5.6		10.02	213			2.7*		
AMPLITUDES:														
	GBZ		1.0		WTZ	0.9	1.5	GNZ		2.6	5.5			
	KRP		0.2		TUA		0.5	TRZ		0.2	1.0			
	MNG		2.5	1.4	WEL	0.1		COB			0.3			
	MJZ			0.1										

80/ 085

FEB 23 14^h58^m14^s.5 36°.77S 177°.75E 154 km M = 4.7
 ± 0.4 0.03 0.04 6 S.E. of RES. 0.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WIZ	P	14 58	38.5			-0.3	100	0.88	210					
WTZ	iP	14 58	43.4		U	0.2	100	1.36	206		4.7	4.7		
	S		59 05			-0.3	100							
GNZ	iP	14 58	49.2			0.4	100	1.89	174		4.8			
	S		59 15.5			0.2	100							
GBZ	P	14 58	49.1		D	0.0	100	1.91	286					
TUA	P	14 58	50.5			-0.8	97	2.10	193		4.3	4.7		
	e		59 13.5											
	S		19.5			-0.1	100							
KRP	iP	14 58	51.7		DNE	0.2	100	2.11	236		3.9*	3.4*		

TRZ	S	59 20	0.1	100					
	P	14 58 59	-2.2		2.88	194		4.4	4.8
	e	59 06.5							
NGZ	S	36	-0.8						
	iP	14 59 00.7	-1.3		2.94	214			
	S	39.5	1.1						
TNZ	P	14 59 09	-1.5		3.60	227		3.5*	
MNG	iP	14 59 13.7	-5.1	D	4.24	204		4.8	4.8
	S	15 00 02	-6.3						
WEL	P	14 59 23.8	-6.0		5.08	206		4.7	
	S	15 00 19.5	-8.7						
COB	P	14 59 32.5	-7.3		5.82	221		3.7*	3.5*
	S	15 00 37	-9.0						
KAI					7.55	218		3.2*	
MJZ	P	15 00 17.5	-6.0		9.11	215		3.5*	3.3*
	S	01 51	-13.4						
MSZ					10.86	220		3.4*	2.9*
AMPLITUDES:	WTZ	13 13	GNZ	10	GBZ	0.6			
	TUA	1.1 3.0	KRP	5.3 1.8	TRZ	0.8 4.1			
	TNZ	0.3	MNG	6.5 8.0	WEL	0.7			
	COB	0.5 1.1	KAI	0.1	MJZ	0.5 0.4			
	MSZ	0.4 0.2							

80/ 086

FEB 24 00^h37^m17^s.9 36°.60s 179°.14w 33 km M = 4.0
 ± 1.1 0.09 0.09 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
GNZ	iPn	00	38	01.9	U	-1.1	99	3.04	227		4.4	4.0		
	Sn			37		0.1	100							
WTZ	Pn	00	38	07.5		-0.2	100	3.38	245		4.1	4.1		
	Sn			44.5		-0.7	100							
TUA	Pn	00	38	11.5		-0.2	100	3.68	232		4.1	4.0		
	Sn			53.5		1.2	99							
TRZ	(P*)	00	38	27.5		-5.7		4.35	226		4.0	4.0		
	e(Sn)			39 13		4.8								
KRP	ePn	00	38	22.5		0.3	100	4.45	251		3.9			
	e(P*)			28		-7.0								
	Sn			39 11		0.2	100							
NGZ	ePn	00	38	29		0.8	100	4.89	237					
	P*			43		0.6								
	Sn			39 20		-1.3	99							
MNG	Pn	00	38	37.5		-3.4		5.82	225		4.0	3.9		
	Sn			39 42		-1.7								
WEL	Sn	00	39	59		-5.1		6.67	224	4.0				
COB	Pn?	00	39	03.5		-4.0		7.77	232		4.0	3.5		
	e			07										
	Sn			40 26		-4.5								
AMPLITUDES:	GNZ	2.1	1.4	WTZ	1.2	1.1	TUA	0.3	0.3					
	TRZ	0.2	0.3	KRP	0.2		MNG	0.5	0.6					
	WEL	0.1		COB	0.1	0.1								

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FEB 24 07^h44^m35^s.6 44°.08s 171°.15E 12 km M = 3.5
 ± 0.2 0.01 0.01 R S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
MJZ	iP*	07	44	45.5	DNE	0.2	100	0.50	280		3.2	2.9		
	S*			52		-0.3	100							

	(Sg)		56.5		3.6					
RHP	iP*	07 44	50.6	D	0.7	98	0.76	268		
	eSg		45 02		0.2					
OMZ	iP*	07 44	53.8	U	-0.1	100	1.01	190	3.6	3.4
	S*		45 07.5		0.1	100				
CMZ	P*	07 44	56.6	D	-0.4	100	1.19	66	3.8	4.2
	S*		45 13		0.2	100				
DNZ	P*	07 45	09.5		1.3		1.84	194		
	S*		34		1.5					
MSZ	Pn	07 45	15		1.2		2.39	255	4.0	3.6
	P*		21		3.4					
	S*		51		2.0					
BRZ	eSn	07 46	01		2.1		3.08	235		
COB	ePn	07 45	24.5		-0.4		3.21	22	3.3	
	P*		34.5		2.9					
AMPLITUDES:		MJZ	8.8 5.2	OMZ	2.1 3.0	CMZ	3.0	12		
		DNZ	0.3 0.8	MSZ	2.4 1.9	COB	0.1			

FELT: Geraldine (118) MM IV

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FEB 24 09^h36^m46^s.2 39°.93s 175°.86E 33 km M = 3.9
 ± 0.3 0.01 0.03 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	iP*	09 36	59.5			-0.1	100	0.68	342			
	S*		37 11			1.6	99					
MNG	iP*	09 37	00.5		U	-0.1	100	0.75	203		3.7	3.8
	S*		11.5			0.3	100					
NGZ	iP*	09 37	00.6			-0.4	100	0.77	346			
	S*		12.5			0.7	100					
TRZ	(P*)	09 37	00.8		D	-1.2	100	0.83	63		3.9	4.0
	e(S*)		14			0.4						
	e		15.5									
CAZ	(P*)	09 37	06			1.0	100	1.02	164			
	e		10									
	(S*)		20			1.1	100					
WNZ	P*	09 37	10			0.0	100	1.31	8		3.8	4.3
	Sn		25			1.3	100					
	S*		28			0.4	100					
TNZ	P*	09 37	09.6		U	-1.2	100	1.37	302		4.1	4.1
	eS*		30.5			1.3	100					
TUA	Pn	09 37	09			-1.3	100	1.50	42		3.9	3.6
	e(P*)		11			-2.2						
	e(S*)		35			1.7						
WEL	Pn	09 37	12			0.5	100	1.59	211	3.5		
	P*		15.5			0.8						
	e(Sn)		31			0.6						
	(S*)		35.5			-0.4	100					
KRP	ePn	09 37	16			-1.3	100	2.02	353		4.0	4.2
	(P*)		20			-1.9						
	Sn		40			-0.7	100					
	S*		52			3.4						
GNZ	Pn	09 37	17.1		U	-1.5	99	2.12	53		3.8	
	Sn		45			2.0	99					
WTZ	Pn	09 37	17.5			-1.4	100	2.13	25		3.6	4.0
	eP*		24			0.1						
	Sn		44.5			1.1	100					
COB	Pn	09 37	25			-0.9	100	2.65	243		4.3	3.8

	P*	30	-2.7				
	eS*	38 04	-3.4				
MJZ	(P*)	09 38 24.5	-0.2	5.71	223	3.8	4.0
	Sn	39 08	-1.4				
AMPLITUDES:	MNG	16 25	TRZ	4.5	8.7	WNZ	0.2 0.9
	TNZ	2.4 2.8	TUA	1.1	0.7	WEL	0.5
	KRP	1.2 1.3	GNZ	1.2		WTZ	0.9 2.2
	COB	1.8 2.0	MJZ	0.3	0.5		

FELT: Kimbolton (62) MM V

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FEB 25 09^h47^m50^s.1 38°.33s 176°.08E 160 km M = 3.5
 ± 1.6 0.06 0.07 11 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	P	09	48	14		0.7	100	0.59	314		2.5*	2.3*
	S			31.5		0.5	100					
WTZ	e(S)	09	48	30		-3.2	95	0.80	64			3.0
NGZ	(P)	09	48	17.5		2.1	99	0.93	203			
TUA	S	09	48	37		1.6	100	0.96	120			3.4
GNZ	P	09	48	22	U	0.6	100	1.56	102		3.1	3.4
	S			45		-0.4	100					
MNG	iP	09	48	30.2	U	0.1	100	2.33	191		4.5	3.5
	S			49 01		0.1	100					
CAZ	P	09	48	33.5		0.4	100	2.57	178			
WEL	P	09	48	39		-1.0	100	3.11	198	3.4		
	S			49 18		-0.3	100					
COB	eP?	09	48	47		-1.4		3.77	222		2.8*	2.8*
	S			49 32		-1.3	100					
MJZ	S	09	50	45		-6.2		7.06	215			2.5*
AMPLITUDES:	KRP	0.4	0.3	WTZ	0.4	TUA	0.4					
	GNZ	0.3	0.8	MNG	9.5	1.3	WEL	0.1				
	COB	0.1	0.4	MJZ	0.1							

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FEB 25 12^h52^m39^s.8 45°.27s 167°.45E 84 km M = 4.8
 ± 0.5 0.02 0.04 5 S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	iP	12	52	54.5	D	0.1	100	0.51	173			
	S			53 05.5		0.1	100					
MSZ	iP	12	52	56.1	U	0.2	100	0.68	29			
ROX	(S-P)			17.5		-0.5	100	1.33	100			
OBZ	P	12	53	07.9		-0.4	100	1.70	164		4.9	4.7
	S			29		-0.7	100					
RHP	iP	12	53	15.7	U	0.4	100	2.21	59			
DNZ	iP	12	53	16.1	D	0.5	100	2.23	107			
	e			40								
	S			43.5		1.4	96					
OMZ	iP	12	53	18.7	D	0.0	100	2.46	87		4.9	4.9
	S			47		-0.7	100					
MJZ	iP	12	53	18.9	UN	-0.4	100	2.51	60		4.7	5.1
	e			33								
	S			48.5		-0.4	100					
KAI	eP	12	53	40.5		0.9		3.97	48	4.6		
	S			54 24		-1.1						
COB	P	12	54	00.5		-2.8		5.70	45		4.7	4.5
	S			55 05		-3.0						

WEL	S	12 55 25.5	-6.5	6.66	56	3.2*	
MNG	P	12 54 25.5	-3.0	7.51	55		3.6* 3.4*
	e	33.5					
	S	55 49.5	-3.3				
KRP	P	12 54 55.5	-0.2	9.51	42		3.2*
AMPLITUDES:	OBZ	23 33	DNZ	30 26	OMZ	10 16	
	MJZ	14 40	KAI	1.0	COB	1.1 1.8	
	WEL	0.1	MNG	1.1 0.9	KRP	0.3	

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FEB 25 13^h10^m56^s.1 39°.83s 177°.14E 33 km M = 4.2
 ± 0.4 0.02 0.05 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TUA	iPn	13	11	13.5	U	-0.1	100	1.02	0		4.7	4.4
	Sn			27		0.4	100					
CAZ	iPn	13	11	16.7	U	-0.4	100	1.28	213			
	Sn			34.5		1.7	98					
NGZ	iPn	13	11	18.0		-0.0	100	1.35	298			
	Sn			35		0.6	100					
GNZ	Pn	13	11	19.0		0.6	100	1.37	30		3.8	
	(P*)			21		0.1						
	e(Sn)			32		-3.0						
	e			39								
WNZ	Pn	13	11	19		-0.3	100	1.44	326		4.5	4.4
	(P*)			23.5		1.4						
	(Sn)			37		0.2						
	e(S*)			42		0.6						
MNG	iPn	13	11	18.5	U	-1.5	98	1.49	238		4.0	4.0
	(P*)			28		5.0						
	Sn			38		0.0	100					
WTZ	iPn	13	11	24.1	U	-0.8	100	1.84	356		4.4	4.2
	Sn			47		0.5	100					
TNZ	(Pn)	13	11	34		3.9		2.23	286		3.9	3.8
	P*			37		1.6						
	Sn			57		1.3						
KRP	iPn	13	11	29.8	U	-0.9		2.28	326		4.0	4.4
	i			36								
	Sn			56		-0.8						
WEL	Pn	13	11	29		-2.3		2.32	230	4.1		
	Sn			55.5		-2.3						
COB	Pn	13	11	46.5		-2.2		3.59	248		4.0	3.6
	e			12 17								
	Sn			27		-1.3						
GBZ	Pn	13	11	51.9	U	-0.1		3.84	340			
KAI	Sn	13	13	01		-3.6		5.09	236	4.3		
CIZ	Pn	13	12	27.5		2.5		6.25	133			
	Sn			13 33		0.7						
MJZ	Pn	13	12	26		-2.2		6.49	228		3.9	4.5
	Sn			13 34		-3.9						
OMZ	Sn	13	13	46.5		-3.2		6.97	219			4.1
MSZ	Sn	13	14	20		-3.5		8.38	232			4.2
AMPLITUDES:	TUA	15 8.3	GNZ	2.5	WNZ	1.1 1.1						
	MNG	9.0 10	WTZ	7.0 4.0	TNZ	0.5 0.6						
	KRP	1.2 2.2	WEL	1.0	COB	0.5 0.6						
	GBZ	0.7	KAI	0.3	MJZ	0.3 1.5						
	OMZ	0.3	MSZ	0.6								

FELT: Hastings (60) MM IV

	(S*)		45		-0.5							
	(Sg)		55		3.4							
TNZ	Pn	09 07	26		2.7		2.63	230		5.1	5.2	
	P*		31		3.0							
	Pg		38		2.9							
	eSg	08 10			-0.6							
MNG	Pn	09 07	32		-0.5		3.30	200		4.8		
	P*		44		4.5							
WEL	P*	09 07	52		-1.6		4.13	204		4.4		
	Pg	08 03			-2.4							
	e(Sn)		34		3.4							
	e(S*)		46		-1.4							
CRZ	Pn	09 07	52.5		1.6		4.65	310		4.3	4.1	
	Pg	08 13			-2.9							
	Sn		50		7.0							
COB	ePn	09 07	56		2.4		4.85	221		4.8	3.3	
	ePg	08 23			3.1							
	e(S*)	09 04			-4.9							
KAI							6.58	219		4.5		
CMZ	P*	09 08	39		-1.8		6.90	207		4.7		
MJZ	e(Pg)	09 09	28		1.8		8.14	215		4.8		
MSZ	e(Pn)	09 09	05		2.7		9.89	221		4.5		
AMPLITUDES:	KRP		23 35	TUA		11 18	WNZ			0.9		
	GBZ		25 20	TRZ		8.5 5.2	TNZ			1.5 1.5		
	MNG		7.5	WEL	0.3		CRZ			0.2 0.1		
	COB		1.1 0.1	KAI	0.2		CMZ			0.5		
	MJZ		1.0	MSZ	0.3							

FELT: Elstow (25), Pikowai (27) and Ohope (35)

FEB 28 12^h33^m33^s.2 37°.52s 177°.00E 12 km M = 4.0
 ± 0.6 0.03 0.04 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP*	12 33		41.4	D	-0.8	100	0.46	181		3.5	4.0
	(S*)			48		-0.7						
	e			58.5								
KRP	P*	12 33		55		-0.3	100	1.23	250		4.0	4.2
	Pg			58		-0.1						
	Sg		34	15		0.2	100					
	e			18								
TUA	P*	12 33		56		-0.3	100	1.29	175		4.4	4.2
	Pg			59.5		0.2						
	S*		34	13		-0.5	100					
	Sg			18.5		1.8						
WNZ	ePg	12 34		01.5		1.6		1.31	212		3.6	
GNZ	Pn	12 33		58		0.5	100	1.38	145			
	Pg		34	00		-1.1						
	Sg			21		1.2						
GBZ	Pn	12 34		02.5		-0.5	100	1.78	316			
	Pg			10		0.7						
	(S*)			31		2.6						
NGZ	P*	12 34		11		2.8		1.99	213			
	e(Sn)			32		1.7						
TRZ	Pn	12 34		08		1.6	98	2.03	184		4.3	3.9
	Pg			14.5		0.2						
	e(Sg)			48		6.2						
TNZ	Pn	12 34		19		4.2		2.65	230		4.3	

	P*		22		2.5				
MNG	ePn	12 34	26		2.1	3.31	200		4.0 3.7
	P*		35.5		4.6				
	e(Sn)	35	02.5		0.4				
CRZ	e(Pn)	12 34	44.5		2.1	4.67	310		
AMPLITUDES:	WTZ	12 30	KRP	4.0 4.5	TUA	3.5 2.6			
	WNZ	0.1	GBZ	3.7 3.0	TRZ	1.4 0.7			
	TNZ	0.2	MNG	1.2 0.7					

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FEB 29 07^h25^m09^s.7 32°.37s 178°.68w 181 km M = 5.1
 ± 1.0 0.05 0.07 12 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GBZ	P	07 26	40.0			0.2	100	6.17	230			
WTZ	P	07 26	44.0			-1.8	99	6.63	211		5.4	5.1
	eS	28	02.0			1.3	100					
ONE	eP	07 26	48			1.3	100	6.70	238			
GNZ	eP	07 26	47			-1.2	100	6.82	202		5.1	5.3
	S	28	05			-0.1	100					
TUA	P	07 26	54.0			-0.2	100	7.27	207		5.1	5.0
KRP	P	07 26	54.2			-0.3	100	7.30	219		3.6*	3.5*
CRZ	P	07 26	57.8			0.2	100	7.51	252		4.3*	
	eS	28	22.0			0.3	100					
TRZ	P	07 27	03.2			-1.1	100	8.05	206		5.2	4.9
	eS	28	35.0			0.8	100					
NGZ	P	07 27	06.4			-0.4	100	8.23	213			
	eS	28	39.7			1.2	100					
MNG	eP	07 27	18.0			-5.3		9.49	208		4.6	5.0
	e	29	04			-3.7						
	eS	29	04			-3.7						
	e	06.5										
WEL	S	07 29	25.4			-2.3	98	10.34	209	5.1		
CIZ	S	07 30	01			1.6	99	11.69	172			
CMZ	eS	07 30	31.0			-1.4	100	13.12	209			
MSZ	eP	07 28	48			0.3	100	16.14	217		3.6*	3.2*
	eS	31	40.0			-0.6	100					
BRZ	eP	07 29	01			1.6	99	17.12	215			
AMPLITUDES:	GBZ	1.0	WTZ	4.1 2.2	GNZ	2.0 5.0						
	TUA	0.8 0.6	KRP	0.8 0.8	CRZ	1.2						
	TRZ	0.7 0.7	MNG	1.0 2.6	WEL	0.5						
	CIZ	0.5	MSZ	0.4 0.3								

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FEB 29 17^h28^m59^s.5 34°.08s 178°.40w 245 km M = 4.5
 ± 1.3 0.15 0.24 20 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	eP	17 30	21.3			0.6	100	5.40	211		4.6	4.7
	eS	31	25			1.1	100					
WTZ	P	17 30	19.5			-1.2	100	5.40	222		4.7	4.6
	S	31	23.0			-1.0	100					
TUA	S-P	1	08			-0.5	100	5.93	216			4.8
KRP	eP	17 30	31.5			0.4	100	6.24	230		3.1*	
TRZ	eS	17 31	52			-0.7	100	6.68	214			4.2
MNG	eP	17 30	54.5			-0.9	100	8.14	215			4.0
	eS	32	21.5			-4.7						
WEL	eS	17 32	44.5			-1.3	99	9.01	215	4.5		
COB	eS	17 33	08.0			1.3	99	9.93	223			

COB	Pn	06 05	19.0	-0.2	100	3.34	27	5.1	4.4
	eP*		28.5			2.6			
	Sn		58.5	-0.1	100				
WEL	ePn	06 05	30	0.7	100	4.08	48	4.5	
	Sn	06	17.0	0.7	100				
MNG	ePn	06 05	40.3	-0.6	100	4.93	47	4.7	
	i(P*)		48.3	-4.8					
AMPLITUDES:		KAI	11	DNZ	40	BRZ	6.4	9.0	
		COB	7.2 5.0	WEL	0.7	MNG	3.7		

FELT: Te Ngawai (117) MM V, Erewhon (107), Hakataramea Valley
(117) MM IV

MAR 03 14^h16^m42^s.0 35°.56S 179°.56E 300 km M = 4.4
± 1.5 0.13 0.25 17 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	14	17	39.3		-0.7	100	3.19	220		4.3	4.4
	e			18 22.6								
	S			25.9		0.6	100					
GNZ	P	14	17	43.4		2.1	99	3.32	201		4.6	4.5
	S			18 26		-1.7	99					
TUA	P	14	17	46.5		0.3	100	3.78	210		4.3	
	S			18 37.7		1.3	100					
KRP	P	14	17	48.0		-0.8	100	4.00	233		3.1*	
TRZ	eP	14	17	54.9		-0.0	100	4.54	208		4.3	4.5
	eS			18 50.8		-1.1	100					
MNG	P	14	18	11.0		-0.8	100	5.99	211		4.5	4.3
	S			19 23.0		0.7	100					

AMPLITUDES: WTZ 0.9 1.2 GNZ 2.0 2.2 TUA 0.3
KRP 0.4 TRZ 0.2 0.8 MNG 1.7 1.3

MAR 03 16^h12^m19^s.4 39°.25S 177°.82E 12 km M = 3.2
± 1.5 0.07 0.09 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	P*	16	12	30.0		-1.3	100	0.63	15			
	S*			40.8		0.8	100					
TUA	P*	16	12	31		-1.3	100	0.68	310		3.0	3.6
	S*			41		-0.7	100					
TRZ	P*	16	12	34.8		0.1	100	0.83	249		2.8	
	e(S*)			51.5		5.5						
	e			55.2								
	e			57.3								
WTZ	eP*	16	12	45.2		0.3	100	1.43	333			
KRP	eP*	16	13	00.8		2.2	99	2.23	306		3.4	
	e			06.2								

AMPLITUDES: TUA 0.7 3.0 TRZ 0.4 KRP 0.3

MAR 03 19^h00^m22^s.0 38°.06S 176°.10E 172 km M = 4.3
± 0.7 0.03 0.05 5 S.E. of RES. 1.3

STN	PHASE	H	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	iP	19	00	47.0	U	1.2	100	0.46	287		2.9*
	S			01 05.4		1.3	100				
WTZ	iP	19	00	45.7		-1.3	100	0.71	84		4.0 4.2

	S	01 04.2		-2.1	99							
TUA	P	19 00 49.8		-0.1	100	1.12	132		4.0	4.4		
TRZ	P	19 00 55.8		1.3	100	1.59	159		4.2	4.3		
	S	01 20.3		0.8	100							
GNZ	iP	19 00 53.8		-1.0	100	1.62	112					
TNZ	P	19 00 59.8		3.6		1.75	230		3.1*	3.1*		
GBZ	iP	19 00 56.8	U	-0.9	100	1.91	345					
MNG	iP	19 01 06.2	U	0.2	100	2.60	190		4.9	4.7		
	S	40.1		0.4	100							
ONE	eP	19 01 08.0		1.2	100	2.67	328					
WEL	P	19 01 16.0		0.3	100	3.38	197	4.3				
	S	57.0		-0.1	100							
CMZ	eS	19 02 59.0		-1.6	99	6.12	204					
MJZ						7.30	214				3.6*	
RHP	eS	19 03 33.9		-1.0	100	7.56	215					
CIZ	eS	19 03 49.0		1.4	100	8.09	139					
MSZ						9.03	220				3.2*	
AMPLITUDES:		KRP		1.0	WTZ	3.8	5.6	TUA	1.1	2.9		
		TRZ		1.0	2.9	TNZ	0.2	0.3	GBZ	2.6		
		MNG		20	16	WEL	0.6		MJZ	1.1		
		CIZ		0.5	MSZ	0.5						

MAR 03 23^h32^m13^s.7 37°.95s 176°.38E 189 km M = 4.2
 ± 1.1 0.05 0.05 7 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	23	32	38.9		-0.7	100	0.49	94		3.8	
KRP	P	23	32	39.9		-0.5	100	0.67	272		2.9*	
	S	33	01.0			-0.1	100					
TUA	P	23	32	42.8		-0.0	100	1.05	145		3.8	4.1
	S	33	01.4			-4.0						
NGZ	P	23	32	47.1		1.6	99	1.37	206			
GNZ	iP	23	32	45.9		-0.5	100	1.47	119			
	eS	33	12.1			0.5	100					
TRZ	eP	23	32	49.5		1.5	99	1.64	168			4.2
TNZ	P	23	32	52.7		1.0	100	2.00	231		3.4*	
MNG	iP	23	32	59.5		-0.9	100	2.75	194		4.7	4.5
	S	33	35.3			-1.1	100					
COB	eP	23	33	18		-0.5	100	4.22	221			3.2*
	eS	34	09			0.3	100					
CMZ	eS	23	34	53.8		-3.4		6.31	206			
AMPLITUDES:		WTZ		2.3	KRP	0.8		TUA	0.6	1.2		
		TRZ		2.1	TNZ	0.4		MNG	10	7.9		
		COB		0.9								

MAR 04 01^h03^m37^s.3 38°.51s 176°.78E 33 km M = 3.6
 ± 0.3 0.02 0.03 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TUA	P*	01	03	46		-0.6	100	0.41	136		3.5	3.4
	S*			55		1.8	99					
WTZ	P*	01	03	48.6		0.1	100	0.55	17		3.1	3.5
	S*			58.1		1.3	99					
WNZ	eP*	01	03	48.0		-0.5	100	0.55	257		3.0	
	e			52.8								
GNZ	P*	01	03	54.8		-0.8	100	0.98	98		3.7	
	S*			04 08.5		-0.6	100					

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TRZ	iP*	01 03	57.0	0.4	100	1.04	178		
	iS*	04	11.6	0.8	100				
	i		16.5						
KRP	iPn	01 03	56.1	-0.3	100	1.14	300		3.8
	Sn	04	11.3	0.6	100				
TNZ	Pn	01 04	09.0	0.9	100	2.00	249		4.0
MNG	ePn	01 04	11.3	-1.4	99	2.33	205		3.5 3.5
	i		14.8						
	eP*		19.2		0.8				
	eS*		46		-3.1				
GBZ	ePn	01 04	14	-1.1	100	2.51	335		
WEL	e	01 05	06			3.18	209		3.8
	eS*		11		-3.2				
COB	Pn	01 04	38.2	2.1		4.04	229		4.2 3.7
	eSn	05	19	-1.4					
	e		27.0						
	e		30.0						
AMPLITUDES:		TUA	6.0 5.0	WTZ	4.3 9.5	WNZ	0.2		
		GNZ	4.0	KRP	3.0	TNZ	0.3		
		MNG	1.1 1.5	GBZ	0.2 0.3	WEL	0.2		
		COB	0.5 0.6						

MAR 04 11^h09^m01^s.0 37°.57s 179°.65w 33 km M = 3.9
 ± 1.0 0.05 0.04 R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	Pn	11 09	33.8			0.2	100	2.12	239			
	eSn		59			0.9	99					
WTZ	Pn	11 09	41.9		D	0.5	100	2.70	260		4.0	3.9
	eSn		10 11.8			0.0	100					
TUA	eSn	11 10	15			0.5	100	2.81	243			3.8
TRZ	eSn	11 10	28.2			-0.6	100	3.40	233			3.9
KRP	eSn	11 10	39.5			0.4	100	3.83	263			
	e		46.3									
MNG	ePn	11 10	09.4			-1.5	97	4.86	230			
	e		11.0									
	eSn		11 03.6			-0.2	100					
CIZ	Sn	11 11	50.9			0.6	100	6.79	161			
AMPLITUDES:		WTZ	1.3 0.9	TUA	0.3	TRZ	0.4					
		CIZ	0.3									

MAR 05 18^h27^m47^s.7 46°.37s 166°.61E 33 km M = 3.9
 ± 0.9 0.03 0.07 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	Pn	18 28	02.9			-0.4	100	0.88	48			
	Sn		14.9			0.1	100					
OBZ	P*	18 28	07.0			-2.1	98	1.17	118		4.0	3.9
	Sn		22.7			0.9	100					
MSZ	ePn	18 28	18.4			0.7	100	1.93	29		3.7	3.9
	eP*		21.1			-0.9	100					
	eS*		46.5			-1.1	100					
	i		48.1									
ROX	eP*	18 28	22.5			-2.3		2.10	66			
	eS*		48			-4.4						
OMZ	S*-P*		42			-1.0	100	3.28	68			3.9
RHP	P*	18 28	47.0			1.0	100	3.35	48			

MAR 08 02^h47^m56^s.8 39°.16S 175°.39E 119 km 80/ 109
 ± 0.5 0.02 0.03 4 S.E. of RES. 1.1 M = 4.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
NGZ	iP	02	48	13.8		0.4	100	0.17	98					
	eS			26		0.0	100							
GSZ	iP	02	48	14.2		0.7	100	0.19	128					
	S			27.7		1.5	99							
WNZ	P	02	48	17.0		0.3	100	0.76	46				4.4	
TNZ	iP	02	48	18.0		1.1	100	0.79	268				3.8*	3.4*
TRZ	eP	02	48	22.2		1.4	99	1.17	110				4.2	4.0
	eS			38.9		-0.1	100							
KRP	iP	02	48	21.8		0.3	100	1.24	5				3.7*	3.5*
	iS			39.0		-1.4	100							
TUA	P	02	48	23.6		0.1	100	1.41	76				4.1	4.3
MNG	iP	02	48	25.2	U	1.1	100	1.46	177				4.2	4.4
	eS			42.2		-2.5	95							
WTZ	P	02	48	26.4		-0.6	100	1.72	47				3.7	4.2
	eS			49		-0.9	100							
CAZ	eS	02	48	52.6		-0.2	100	1.85	160					
GNZ	iP	02	48	32.1	U	0.0	100	2.12	77					
	eS			56.9		-1.6	99							
WEL	P	02	48	33.0		0.1	100	2.18	193	4.3				
	S			59.8		-0.1	100							
COB	P	02	48	40.6		-0.7	100	2.81	226					
	eS			49 13.9		-1.0	100							
RHP	P	02	49	28.7		-0.2	100	6.34	217					
	S			50 34.3		-6.3								
CIZ	P	02	49	49.3		1.6	99	7.70	131					
	eS			51 07		-6.8								

AMPLITUDES: WNZ 0.8 TNZ 2.1 1.1 TRZ 2.2 3.2
 KRP 5.3 3.9 TUA 1.6 2.3 MNG 13 21
 WTZ 1.0 4.0 WEL 1.5

MAR 08 12^h20^m27^s.8 40°.69S 175°.84E 71 km 80/ 110
 ± 0.3 0.02 0.03 6 S.E. of RES. 0.7 M = 4.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
MNG	iP	12	20	35.9	D	-3.5	0	0.28	284					
CAZ	iP	12	20	40.7		0.7	100	0.37	127					
	eS			50.5		1.3								
MTW	P	12	20	41.9		0.4	100	0.54	208					
KIW	P	12	20	43.3	D	-0.1	100	0.73	256					
WDW	P	12	20	45.5		0.4	100	0.86	227					
WEL	iP	12	20	47.2	D	0.3	100	1.01	233	4.1				
	S			59.8		-1.4	98							
TCW	P	12	20	50.8	D	0.2	100	1.30	245					
TRZ	P	12	20	51.8		0.4	100	1.36	34				4.5	
	eS			58.2										
CNZ	eS			21 09.2		-0.1	100							
	P	12	20	54.2		0.9	99	1.50	351					
NGZ	S			21 12.0		-0.6	100							
	iP	12	20	53.7		0.3	100	1.51	353					
TNZ	eS			21 12		-0.8	100							
	eP	12	20	59		0.7	100	1.87	323				4.2*	4.5*
	eS			21 21.3		0.3	100							

WNZ	eP	12 21 07.5	6.5	2.06	6	5.0	
TUA	eP	12 21 00.9	-1.0	99	2.13	29	4.2
	e	08.5					
COB	P	12 21 05.0	-0.6	100	2.39	259	4.1* 3.9*
	e	14.0					
GNZ	eP	12 21 08.3	-0.9	100	2.65	40	4.0
	eS	39.8	-0.4	100			
KRP	eP	12 21 12.2	1.3	98	2.77	355	3.8* 4.0*
WTZ	eP	12 21 11.7	-0.2	100	2.84	19	4.2
KAI					3.80	240	3.8*
RHP	eP	12 21 48.0	-0.4	100	5.46	229	
CIZ	eP	12 22 02.5	-0.5		6.52	123	
	eS	23 11	-5.6				
MSZ	eP?	12 22 09	-1.8		7.07	233	3.3*
	e	17					
AMPLITUDES:		WEL 4.1	TRZ 4.2	TNZ 3.1	8.1		
		WNZ 0.9	TUA 1.0	COB 3.3	6.7		
		GNZ 1.9	KRP 3.8	6.2	WTZ 1.4		
		KAI 0.7	CIZ 1.0	MSZ 0.5			

FELT: Wanganui (57), Palmerston North (62) MM IV

MAR 08 19^h00^m52^s.0 41°.29S 172°.27E 12 km M = 3.3
 ± 0.5 0.04 0.04 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	iP*	19	00	59.3		-0.8	100	0.40	60		2.9	2.7
	S*		01	04.9		-0.9	100					
TCW	eP*	19	01	18.7		-0.3	100	1.51	88			
	eS*			39.5		0.4	100					
KKY	P*	19	01	18.3		-1.3	100	1.55	137			
	S*			41.3		1.2	100					
MRW	P*	19	01	23.9		-0.6		1.84	89			
	S*			47.7		-1.0						
WEL	ePn	19	01	23.5		0.3	100	1.88	91			
	eS*			48.5		-1.6	99					
CAW	Pn	19	01	27.0		0.6	100	2.12	86			
MNG	ePn	19	01	33.9		1.9	99	2.52	76		3.5	3.4
BSP	ePn	19	01	39.3		0.3	100	3.03	211			
RHP	ePn	19	01	42		0.2	100	3.24	209			
TRZ	ePn?	19	01	51.5		0.9	100	3.89	65		4.0	
MSZ	eSn?	19	02	52		-1.2	100	4.65	222			

AMPLITUDES: COB 3.0 6.3 MNG 0.9 1.0 TRZ 0.3

FELT: Arapito (74)

MAR 08 19^h52^m31^s.5 44°.33S 168°.42E 12 km M = 3.7
 ± 0.6 0.04 0.04 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	iP*	19	52	40.7		-0.4	100	0.49	226		3.8	3.7
	S*			46.8		-1.2	100					
RHP	P*	19	52	54.8		1.3	100	1.21	80			
	S*			53 08.7		-1.0	100					
ROX	P*	19	52	56.0		0.9	100	1.31	151			
MJZ	eP*	19	52	59		0.5	100	1.51	78		3.5	3.6
	S*			53 17.0		-1.5	99					
BRZ	eP*	19	52	59.0		-0.6	100	1.57	203			

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	S*	53	22	1.5	99				
OMZ	S*-P*		25	-0.4	100	1.93	113	3.8	3.5
DNZ	eP*	19	53	10	0.9	100	2.13	137	
	S*			37.5	0.3	100			
OBZ	ePn	19	53	14.0	1.7	99	2.58	185	4.0
	eP*			16.6	-0.2	100			
	eS*			49	-1.7	99			
AMPLITUDES:	MSZ	35	53	RHP	23	27	MJZ	1.8	3.5
	OMZ	1.0	1.1	DNZ	0.4	1.3	OBZ	1.1	

MAR 09 04^h46^m01^s.7 37°.87S 175°.97E 242 km M = 3.9
 ± 1.5 0.06 0.11 14 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
KRP	P	04	46	34.0		0.6	100	0.34	260		3.0*			
WTZ	P	04	46	33.9		-1.1	99	0.82	99		3.5			
TUA	P	04	46	38.3		0.2	100	1.32	136		3.9	3.9		
	eS			47 07.3		0.9	100							
TRZ	P	04	46	43.1		1.0	100	1.81	159		4.1	3.8		
	eS			47 12.0		-1.4	99							
MNG	P	04	46	51.0		-0.6	100	2.77	188		4.0	3.9		
	S			47 30.2		-0.2	100							
WEL	S	04	47	46.5		0.9	100	3.54	195					
COB	S	04	47	56.5		-0.5	100	4.08	217					3.0*
AMPLITUDES:	KRP			0.9		WTZ		0.6	TUA		0.5	0.5		
	TRZ			0.5	0.6	MNG		2.0	2.0	COB		0.5		

MAR 09 06^h31^m58^s.8 32°.18S 178°.80W 295 km M = 5.1
 ± 1.1 0.07 0.10 16 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	P	06	33	29.3		1.7	99	5.92	201		5.3	5.1		
WTZ	eP	06	33	37.0		-0.7	100	6.75	210		5.4	5.1		
	eS			34 55.5		0.3	100							
GNZ	P	06	33	40.8		0.6	100	6.96	201		5.2	5.0		
	eS			34 59		-0.8	100							
KRP	eP	06	33	46.3		0.9	100	7.38	217		3.7*			
TUA	P	06	33	46.1		0.5	100	7.40	205		5.2	5.3		
TRZ	eP	06	33	54.5		-0.8	100	8.17	205		5.1	5.0		
	eS			35 25		-1.7	99							
MNG	eP	06	34	11.2		-1.7	99	9.60	207		4.7	5.1		
	eS			35 59		0.5	100							
WEL	eS	06	36	18.2		0.7	100	10.46	208					
COB	eP	06	34	31.7		-0.8	100	11.20	215					
	eS			36 35		1.0	100							
CIZ	eS	06	36	50		0.4	100	11.90	172					
AMPLITUDES:	ECZ			1.6	1.1	WTZ		3.2	2.1	GNZ		2.5	2.6	
	KRP			1.0		TUA		0.9	1.1	TRZ		0.5	1.0	
	MNG			1.0	3.0	CIZ		1.0						

MAR 09 06^h55^m18^s.1 32°.89S 178°.34W 300 km M = 4.8
 ± 1.5 0.16 0.30 22 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P	06	56	51.4		-0.8	100	6.35	216		4.9	4.8		
	eS			58 05.0		-1.2	100							

GNZ	P	06 56 54.0	0.5	100	6.46	206	4.9	4.9		
	eS	58 07.5	-1.0	100						
TUA	eP	06 57 00.2	0.7	100	6.95	211	4.8	4.8		
	eS	58 20.0	0.8	100						
KRP	eP	06 57 02.0	0.8	100	7.09	223	3.4*			
TRZ	eS	06 58 38.2	2.2	98	7.71	209				
MNG	eP	06 57 25.5	-1.3	100	9.17	211		4.8		
	S	59 08	-0.2	100						
WEL	S	06 59 26	-1.3	100	10.03	211				
COB	S	06 59 46.2	0.4	100	10.85	219				
AMPLITUDES:		WTZ	1.3	1.0	GNZ	1.3	2.0	TUA	0.4	0.4
		KRP	0.5		MNG		1.7			

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MAR 09 14^h27^m58^s.4 38°.53s 175°.67E 177 km M = 3.6
 ± 0.9 0.04 0.04 7 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	P	14	28	23.3		-0.2	100	0.61	350		2.9*	
	S			43.0		0.1	100					
WTZ	P	14	28	26.0		-1.3	99	1.17	63		3.2	
TUA	eP	14	28	27.5		0.0	100	1.19	104		3.7	3.5
	eS			50.5		0.5	100					
TNZ	eP	14	28	29.0		1.3	99	1.21	236			
TRZ	P	14	28	31.0		1.9	98	1.36	139		3.9	
GNZ	P	14	28	33.9		0.0	100	1.84	94		3.9	3.4
	S			29 00.3		-1.0	100					
MNG	P	14	28	37.0		0.3	100	2.10	184		3.4	3.9
	S			29 05.8		-0.4	100					
WEL	eS	14	29	22		0.1	100	2.84	194			
COB	eP	14	28	53.0		0.3	100	3.42	221			
	eS			29 33		-1.5	99					
AMPLITUDES:		KRP		0.9		WTZ		0.4		TUA	0.5	0.3
		TRZ		0.6		GNZ		1.4	0.6	MNG	0.9	3.2

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MAR 10 14^h21^m18^s.4 46°.76s 167°.03E 33 km M = 4.3
 ± 1.3 0.05 0.11 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	P*	14	21	34.0		1.0	100	0.76	101		4.2	4.0
	eSn			41.5		-1.1	100					
BRZ	P*	14	21	38.0		0.3	100	1.04	20			
	Sn			49.0		-0.4	100					
MSZ	Pn	14	21	50.7		-1.0	100	2.18	17		4.6	4.5
OMZ								3.19	59		4.3	4.0
RHP	iPn	14	22	09.6		0.9	100	3.42	40			
	Sn			48.1		1.5	99					
MJZ	ePn	14	22	13.3		1.1	100	3.68	42		4.6	4.4
	eSn			52		-0.9	100					
CMZ	ePn?	14	22	30.5		-0.8	100	5.08	53			
COB	ePn?	14	22	57		-0.6	100	7.01	38			
AMPLITUDES:		OBZ		25	33	BRZ		18		MSZ	13	16
		OMZ		1.1	1.1	MJZ		4.0	3.8			

FELT: Awarua Radio (154) MM IV

										80/ 118				
MAR 10	20 ^h 17 ^m 58 ^s .6	33°.87S	179°.89E	376 km	M = 4.7									
										RES. 1.5				
										S.E. of				
										27				
										0.38				
										0.19				
										± 1.8				
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	P	20	19	10.2		0.9	100	3.97	196		4.9			
	eS			20 05		0.1	100							
WTZ	eP	20	19	17.8		0.6	100	4.73	209		5.0	4.5		
GNZ	P	20	19	20.1		0.1	100	5.00	197					
	S			20 22		-1.8	99							
KRP	P	20	19	24.4		0.4	100	5.37	220		3.3*			
TUA	P	20	19	24.4		0.1	100	5.41	203		4.7	4.6		
CNZ	P	20	19	35.2		0.1	100	6.37	212					
MNG	P	20	19	47.3		-2.1	99	7.60	206		5.0	4.5		
	eS			21 17		0.4	100							
WEL	S	20	21	37		2.6	98	8.45	207					
COB	S	20	21	48.5		-1.4	100	9.18	216		3.8*			
AMPLITUDES:		ECZ		1.0	WTZ	2.3	0.8	KRP		0.5				
		TUA	0.4	0.3	MNG	3.0	1.3	COB		0.4				

										80/ 119				
MAR 11	02 ^h 33 ^m 47 ^s .4	32°.81S	179°.54W	569 km	M = 4.9									
										RES. 0.9				
										S.E. of				
										14				
										0.29				
										0.15				
										± 1.0				
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	P	02	35	20.4		0.4	100	5.12	197		5.0	4.8		
	eS			36 32.5		-0.9	100							
WTZ	iP	02	35	25.1		-1.5	98	5.89	208		5.4	4.6		
	eS			36 46.4		0.9	100							
GNZ	P	02	35	29.3		0.4	100	6.16	198		5.2	4.7		
	eS			36 50.5		0.8	100							
KRP	P	02	35	32.3		0.2	100	6.50	217		3.4*			
TUA	eP	02	35	32.5		-0.2	100	6.57	203		4.8			
MNG	P	02	35	54.3		0.5	100	8.77	206		5.3	4.4		
	eS			37 34		-0.8	100							
COB	eP	02	36	09.5		0.2	100	10.32	215					
AMPLITUDES:		ECZ		0.6	0.4	WTZ	3.2	0.6	GNZ	1.9	1.1			
		KRP		0.5		TUA	0.3		MNG	4.0	0.7			

										80/ 120				
MAR 11	03 ^h 32 ^m 51 ^s .5	36°.60S	178°.27E	155 km	M = 3.8									
										RES. 1.0				
										S.E. of				
										9				
										0.12				
										0.08				
										± 1.3				
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P	03	33	23.0		-1.1	99	1.72	216		4.1	3.7		
	eS			49.5		0.4	100							
GNZ	eP	03	33	28		0.2	100	2.05	185		3.8	3.6		
	S			55.2		-0.6	100							
TUA	P	03	33	33.3		1.4	99	2.38	202		3.9			
KRP	eP	03	33	34		0.0	100	2.56	238		2.7*			
MNG	eP	03	33	59.5		-0.6	100	4.57	208				3.7	
	eS			34 53		-0.1	100							
AMPLITUDES:		WTZ		2.0	1.0	GNZ	1.0	1.0	TUA		0.4			
		KRP		0.3		MNG		0.6						

										80/ 121		
MAR 11	04 ^h 47 ^m 00 ^s .0	35°.88S	179°.40E	33 km	M = 4.0							
										RES. 1.2		
										S.E. of		
										R		
										0.11		
										0.10		
										± 1.5		

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
ECZ	Pn	04	47	30.0		0.0	100	1.93	200		3.9	3.9	
WTZ	ePn	04	47	41.5		-1.0	100	2.85	222		3.9	3.8	
GNZ	eSn	04	48	17		-0.4	100	2.97	201				
TUA	ePn	04	47	49.5		-0.9	100	3.43	211				
KRP	ePn	04	47	53		-1.2	100	3.71	235		4.4	4.4	
	eSn		48	35.5		0.4	100						
MNG	ePn	04	48	22		1.3	99	5.65	212		4.1	4.0	
	e			31.5									
COB	ePn	04	48	46		1.8	99	7.38	223				
	eSn		50	03		-0.2	100						
AMPLITUDES:		ECZ		0.4	0.6	WTZ		1.0	0.7	KRP		0.5	0.3
		MNG		0.7	0.8								

MAR 11 20^h16^m08^s.8 38°.81S 175°.62E 147 km M = 4.2
 ± 0.7 0.03 0.04 6 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CNZ	iP	20	16	31.0		1.5	99	0.40	188			
GSZ	P	20	16	31.2		1.4	100	0.47	183			
KRP	iP	20	16	33.2		0.8	100	0.89	356		3.3*	2.9*
	S			50.5		-0.1	100					
TNZ	S-P			18.5		-0.7	100	1.03	248			3.5*
TRZ	P	20	16	36.9		1.7	99	1.19	129		4.0	
	eS			56.1		0.7	100					
TUA	P	20	16	35.5		0.2	100	1.20	90		4.0	4.3
	eS			54.1		-1.4	100					
WTZ	iP	20	16	36.0	D	-0.9	100	1.36	53		4.1	3.9
MNG	iP	20	16	42.6		0.8	100	1.81	183		4.8	
	S			17 06.1		-1.0	100					
GNZ	P	20	16	43.0		0.3	100	1.89	86			
	eS			17 07		-1.7	99					
CAZ	P	20	16	47.1		1.3	100	2.14	168			
	S			17 15.2		1.1	100					
WEL	P	20	16	51.0		0.0	100	2.56	195	4.3		
	S			17 21.6		-1.7	99					
ECZ	P	20	16	50.1		-1.0	100	2.56	65		4.4	4.0
	eS			17 23		-0.3	100					
COB	eP	20	16	58.2		-0.9	100	3.18	223			3.7*
	eS			17 36		-1.5	99					
CMZ	S	20	18	22.2		-4.8		5.27	204			
MJZ	S	20	18	50		-5.6		6.46	215			3.5*
CIZ	eS	20	19	24		-3.9		7.81	134			
AMPLITUDES:		KRP		2.2	1.0	TNZ		1.0	TRZ		1.3	
		TUA		1.2	2.4	WTZ		3.3	2.2	MNG		27
		WEL	1.1			ECZ		1.0	0.4	COB		3.2
		MJZ		1.0								

MAR 12 06^h34^m03^s.5 39°.57S 174°.33E 59 km M = 3.5
 ± 0.4 0.02 0.05 9 S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	S-P			08.8		0.4	100	0.39	5		3.5*	3.5*
CNZ	P	06	34	22.0		-0.1	100	1.01	69			
	S			35.3		-0.7	100					
GSZ	P	06	34	22.0		-0.2	100	1.02	74			

	S		36.2		0.1	100					
MNG	P	06 34	27.8		0.9	99	1.37	140		3.6	3.5
	S		43.8		-0.8	100					
WEL	eS	06 34	54.2		0.7	100	1.75	169	3.3		
KRP	P	06 34	34.9		0.8	100	1.89	30		3.1*	3.2*
	S		56.5		-0.4	100					
COB	eP	06 34	34.0		-0.9	99	1.95	218		3.4*	
	e		42.0								
TUA	eP	06 34	42.0		1.9		2.32	72		3.8	
WTZ	eP	06 34	47.0		2.7		2.61	53		3.5	
AMPLITUDES:		TNZ	2.5	3.6	CNZ		32	27	GSZ	10	25
		MNG	4.6	4.3	WEL	0.2			KRP	1.1	1.4
		COB	0.8		TUA	0.4			WTZ	0.3	

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MAR 12 12^h12^m54^s.7 41°.90S 173°.45E 33 km M = 4.3
 ± 0.2 0.02 0.03 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	iP*	12	13	12.8		-0.1	100	0.97	326		4.1	3.9
WEL	P*	12	13	19.0		3.0		1.16	59	3.8		
	S*			34.0		2.3						
CMZ	ePn	12	13	25.3		2.6		1.79	199			
	eSn			46.5		2.8						
	iS*			50.0		-0.3	100					
	i			57.0								
MNG	iPn	12	13	25.6	D	0.1	100	2.00	51		4.6	4.4
	iP*			29.9		-0.1	100					
	Sn			48.0		-0.6	100					
	iS*			57.9		1.6	97					
MJZ	Pn	12	13	40.7		1.1	99	3.03	225		4.5	4.4
	e			43								
	eSn		14	13.3		-0.2	100					
	i			16.1								
CNZ	ePn	12	13	41		-0.0	100	3.13	31			
	eSn		14	16.4		0.4	100					
RHP	Pn	12	13	43.8		0.3	100	3.31	227			
TRZ								3.47	49			3.9
OMZ	eSn	12	14	29		0.1	100	3.67	209			4.1
	e			35								
TUA	ePn	12	13	52.5		-2.9		4.18	44		4.2	
	e		14	02.4								
KRP	Pn	12	13	54.5		-2.2		4.28	23			
	Sn		14	38.5		-5.0						
WTZ	ePn	12	14	02		-1.2	99	4.76	36			4.5
GNZ	Sn	12	14	54.5		-0.9	99	4.78	49			4.3
MSZ	Pn	12	14	05.6		0.4	100	4.90	234		4.6	4.3
	eSn			58		-0.5	100					
CIZ	eSn	12	16	09.2		5.6		7.61	109			
AMPLITUDES:		COB	8.3	18	WEL	1.9			MNG	20	15	
		MJZ	4.8	4.8	TRZ			0.4	OMZ		1.0	
		TUA	0.3		WTZ			0.4	GNZ		1.2	
		MSZ	2.5	2.1								

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MAR 12 12^h39^m36^s.2 37°.42S 176°.94E 1 km M = 3.5
 ± 2.0 0.07 0.08 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	Pg	12	39	41.0		0.2	100	0.22	119			
	Sg			41.8		-2.0	99					
WTZ	Pg	12	39	47.8		0.1	100	0.57	176		3.0	3.3
	iSg			55.1		-0.2	100					
KRP	e(Pg)	12	40	04.2		3.3		1.22	245			
	e			24.5								
ECZ	Pg	12	40	04.0		1.4	100	1.30	103		3.7	
	e			07.0								
TUA	ePg	12	40	04		-0.5	100	1.40	173		3.9	
GNZ	Pg	12	40	05.2		-1.2	100	1.49	145		3.7	3.3
	Sg			28.8		2.3	99					
GBZ	ePg	12	40	12.2		2.1		1.67	315			
	e			15.2								
AMPLITUDES:		WIZ		6.0	32	WTZ		2.2	3.2	ECZ		0.5
		TUA		0.8		GNZ		1.3	0.8	GBZ		0.3

Largest member of swarm near White Island

MAR 13 08^h27^m39^s.7 44°.69S 167°.75E 12 km M = 3.8
 ± 0.6 0.03 0.04 R S.E. of RES. 1.0 80/ 126

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	iPg	08	27	42.4	D	-0.6	100	0.12	81			
BRZ	eP*	08	28	00.0		0.4	100	1.10	188			
	iPg			01.8		-0.2	100					
	eSn			15.5		0.0	100					
	eSg			18.5		1.6	99					
ROX	P*	08	28	04.8		0.7	100	1.36	126		4.1	4.2
	eS*			22.5		0.3	100					
RHP	Pn	08	28	10.1		0.7	100	1.77	71			
	S*			35.5		0.9	100					
MJZ	Pn	08	28	13.6		0.1	100	2.07	71		3.6	3.9
	S*			42.1		-1.4	99					
OBZ	eP*	08	28	17.6		-1.3	99	2.23	174		3.7	3.6
	eS*			46.8		-1.4	99					
DNZ	P*	08	28	18.3		-1.5	99	2.28	122			
	eS*			50		0.3	100					
OMZ	Pn	08	28	17.3		0.9	100	2.29	101		3.9	3.7
	eSn			44.5		0.6	100					
COB	S-P			56		-1.2	100	5.14	47			3.6
AMPLITUDES:		MSZ		41		BRZ		1.8	5.0	ROX		4.0
		MJZ		1.3	3.2	OBZ		0.9	1.6	OMZ		0.9
		COB		0.3								

MAR 13 22^h17^m09^s.2 31°.73S 179°.59E 347 km M = 4.8
 ± 4.4 0.21 0.65 44 S.E. of RES. 2.2 80/ 127

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eS	22	19	51		-1.5	100	6.01	188			4.7
WTZ	P	22	18	46.0		-1.5	100	6.60	198		4.9	4.6
	eS			20 04		-0.7	100					
GNZ	S	22	20	12.5		-1.2	100	7.02	190			5.0
KRP	eP?	22	18	54		1.5	100	7.03	207		3.2*	
TRZ	eS	22	20	41		3.7	98	8.13	195			4.9
WEL	eS	22	21	24		-0.3	100	10.30	201	4.7		
COB	eS	22	21	35		-1.3	100	10.85	209			3.3*

MJZ		eS			22 22 48		-0.4 100		14.20 208					
AMPLITUDES:		ECZ			0.4	WTZ	1.1	0.7	GNZ			2.5		
		KRP	0.3			TRZ	0.7		WEL	0.2				
		COB			0.4									
													80/ 128	
MAR 14		10 ^h 18 ^m 47 ^s .5			34°.06S		179°.34E		257 km		M = 4.5			
		± 2.2			0.12		0.16		23		S.E. of RES. 2.1			
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P	10	19	57.0		0.7	100	4.36	205		4.5	4.5		
	eS			20 52		2.0	100							
GNZ	P	10	20	00.2		-0.2	100	4.70	193		4.5	4.6		
	S			54		-3.4	99							
KRP	eP	10	20	06		2.7	99	4.94	218		3.5*			
TRZ	eP?	10	20	14		-0.5	100	5.85	199		4.1	4.2		
	eS			21 23		0.5	100							
CAW	eP	10	20	37		-2.2	100	7.81	204					
	eS			22 04.5		-2.3	100							
WEL	eS	10	22	12		-0.7	100	8.07	205	5.0				
TCW	eP	10	20	42		-2.1	100	8.20	208					
	eS			22 16		0.5	100							
COB	eS	10	22	30		1.8	100	8.77	215				2.9*	
CIZ	eS	10	23	07		1.9	100	10.39	163					
AMPLITUDES:		WTZ	1.0 1.2		GNZ	1.0 2.0		KRP	0.9					
		TRZ	0.1 0.3		WEL	0.5		COB	0.2					
		CIZ	0.3											

MAR 14		21 ^h 11 ^m 32 ^s .7			44°.15S		168°.01E		12 km		M = 4.3				
		± 0.4			0.02		0.03		R		S.E. of RES. 0.7				
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S	
DMP	iPn	21	11	56.0	D	-0.4	100	1.33	102						
RHP	iPn	21	11	58.7	D	0.1	100	1.49	89						
	Sn			12 18.5		0.5	100								
TMP	Pn	21	11	59.4		0.4	100	1.53	97						
	Sn			12 18.0		-0.7	100								
BSP	iPn	21	11	59.3	U	0.1	100	1.54	80						
ROX	Sn-Pn			21		0.3	100	1.62	145						
HHP	Pn	21	12	01.5		0.2	100	1.69	97						
MJZ	Pn	21	12	03.8		1.3	98	1.78	86		4.3	4.5			
	Pg			08.5		-0.2	100								
	Sn			25		0.2	100								
OMZ									2.27	115			4.3		
DNZ	Pn	21	12	13.0		1.1	99	2.47	135						
	S*			48		-0.4	100								
OBZ	ePn	21	12	16		0.1	100	2.75	178		4.3	4.2			
	eSn			48		-0.3	100								
KAI									2.97	58	4.3				
CMZ	eP*	21	12	32		0.1	100	3.40	82						
	ePg			40		-1.4	98								
	eSg			13 28		0.8	99								
COB	ePn	21	12	41		-0.5	100	4.64	50		4.6	4.1			
	eSn			13 33		-0.6	100								
AMPLITUDES:		MJZ	9.0 18		OMZ	4.3		DNZ	10 5.2						
		OBZ	2.0 4.1		KAI	1.0		COB	1.1 1.2						

										80/ 130			
MAR 15 00 ^h 00 ^m 46 ^s .2 49°.51s 164°.47E 12 km M = 4.9													
± 1.4 0.14 0.24 R S.E. of RES. 1.5													
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
OBZ	Pn	00	01	42		1.6	100	3.57	45		5.4	5.2	
	Sn			02 21		-0.4	100						
CBZ	Sn-Pn			47		-1.0		4.25	138				
BRZ	Pn	00	01	51		1.0	100	4.27	30				
	e(P*)			02 04		3.7	94						
	Sn			39		0.7	100						
ROX	Sn-Pn			57		-0.9		5.21	41				
DNZ	ePn	00	02	08		1.6	100	5.48	51				
	eSn			03 08		0.8	100						
THP	Pn	00	02	15.1		-1.2	100	6.20	39				
OMZ								6.25	47		4.8	4.7	
DMP	Pn	00	02	16.3		-1.1	100	6.28	38				
HGP	Pn	00	02	20.8		-0.3	100	6.55	36				
HHP	Pn	00	02	19.6		-1.7	100	6.57	40				
RHP	Pn	00	02	20.6		-1.8	100	6.65	38				
	eSn			03 33		-2.3	99						
MJZ	ePn	00	02	25		-0.8	100	6.89	39		4.8	4.9	
	e			03 30									
	e(Sn)			42		0.8	100						
CMZ	ePn	00	02	44		0.7	100	8.18	47		4.9	4.8	
COB	ePn	00	03	11		-0.4	100	10.24	38		5.0	4.4	
	eSn			05 01		-0.6	100						
AMPLITUDES:													
	OBZ			14	27	CBZ		1.0	2.5	BRZ	2.8	1.5	4.0
	DNZ			1.2	3.0	OMZ		1.0	1.5	MJZ		1.9	3.2
	CMZ			0.9	1.0	COB		0.5	0.5				

										80/ 131		
MAR 15 03 ^h 33 ^m 50 ^s .6 40°.38s 173°.79E 149 km M = 4.3												
± 0.9 0.05 0.08 10 S.E. of RES. 1.8												
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TCW	iP	03	34	15.5	U	0.9	100	0.91	156			
KIW	iP	03	34	15.6	U	0.4	100	0.98	120			
COB	iP	03	34	17.1		1.1	100	1.07	228			
	S			34		-1.6	100					
MRW	iP	03	34	17.1	U	0.8		1.10	141			
WEL	iP	03	34	17.7	U	0.8	100	1.17	141	4.4		
	S			36		-1.2	100					
CAW	iP	03	34	18.1	U	0.8		1.21	127			
WDW	iP	03	34	18.6	U	0.6	100	1.28	135			
BHW	iP	03	34	18.9	U	0.5		1.31	142			
MTW	iP	03	34	21.1	U	0.5	100	1.52	121			
BLW	iP	03	34	22.4		0.8		1.62	128			
CNZ	P	03	34	24.2		0.6	100	1.80	50			
	S			49		0.1	100					
NGZ	P	03	34	26		1.8	100	1.84	50			
	eS			51.5		1.6	100					
KKY	eP	03	34	27		0.5	100	2.04	182			
	e			47								
	S			54.8		0.8	100					
KRP	eP	03	34	36		-0.1	100	2.81	30		3.5*	3.8*
	e			02.7								
	S			09		-1.8	100					

INSTRUMENTAL DATA

GNZ	eP?	03 34 47	-0.8	100	3.71	63	4.1	4.5
	e	35 23						
	S	28	-3.7	98				
MJZ	S	03 35 45	-2.3	99	4.37	213	3.5*	3.6*
RHP	eP	03 35 04	4.1	96	4.63	215		
	S	51	-2.4	99				
BRZ	eS	03 36 49	-3.1		7.08	218		
AMPLITUDES:	WEL	4.1		CNZ		32	KRP	1.7 3.8
	GNZ	0.7 3.0		MJZ		1.1 2.0	BRZ	0.2

FELT: Stratford Mountain House (47) MM III

MAR 16 04^h56^m34^s.8 39°.08S 175°.78E 99 km 80/ 132
 ± 0.4 0.02 0.03 4 S.E. of RES. 1.0 M = 4.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
NGZ	P	04 56	49.0			0.0	100	0.16	231		
	S		59			-0.8	100				
CNZ	P	04 56	49.3			0.1	100	0.22	236		
WNZ	iP	04 56	50.2		U	-0.6	100	0.51	29		4.3 4.5
TRZ	iP	04 56	56.0			1.3	100	0.94	121		
	S?		57 10			0.2	100				
TNZ	S-P		17			0.6	100	1.10	264		3.9* 3.9*
TUA	iP	04 56	56.2			-0.4	100	1.11	76		4.5 4.6
	S		57 15			1.9	99				
KRP	iP	04 56	57.2		UNW	-0.2	100	1.17	351		
	S		57 13			-1.4	99				
WTZ	S-P		21.5			1.7	99	1.45	41		4.4 4.8
GNZ	iP	04 57	04.7		U	-0.6	100	1.81	77		
	(S)		26.2			-1.8	99				
CAZ	eP	04 57	06.0			0.1	100	1.85	169		
	eS		29			-0.1	100				
WIZ	eP	04 57	08			1.4	99	1.91	36		
KIW	iP	04 57	06.5		U	0.0	100	1.91	200		
MTW	iP	04 57	08.2		U	-0.8	100	2.09	186		
CAW	iP	04 57	08.6		U	-0.6		2.10	195		
WDW	iP	04 57	10.4		U	-1.1	100	2.27	195		
MRW	P	04 57	11.2			-0.8		2.30	201		
WEL	P	04 57	11.7			-0.7	100	2.34	199	4.5	
	e		17								
	eS		42			1.6	99				
	e		47								
AUC	P	04 57	14			1.3	100	2.36	340		
TCW	iP	04 57	12.9		U	-0.7	100	2.42	208		
BHW	P	04 57	12.4			-1.3		2.43	196		
ECZ	eP	04 57	15.8			0.0	100	2.58	58		4.4 4.9
	e		58 04								
GBZ	P	04 57	20.3		U	0.6	100	2.87	355		
COB	eP	04 57	22			-0.6	100	3.08	228		4.3* 4.2*
	S		58 00			1.3	100				
CMZ	eP	04 57	47			-3.1		5.08	207		3.9* 4.2*
	eS		58 41			-7.1					
MJZ	eP	04 58	07			0.0		6.33	217		
	eS		59 15			-3.5					
RHP	eP	04 58	09			-1.7		6.59	219		
CIZ	S	04 59	40			-8.1		7.53	133		
AMPLITUDES:	NGZ	20	43	WNZ	1.2	1.8	TNZ	2.2	3.0		
	TUA	6.1	8.8	WTZ	7.1	22	CAZ	1.8	3.3		

KRP	eP*	02 47 03	0.5	100	1.60	276	3.3
	ePg	04.3	-2.2	99			
	eSg	30.0	1.8	99			
NGZ	ePn	02 47 05.2	0.2		1.87	234	
	iP*	08.5	1.5				
MNG					2.99	212	3.2
AMPLITUDES:	WTZ	10 15	WIZ	3.7	1.3	TUA	0.7 1.3
	ECZ	0.6 1.3	KRP	0.5		NGZ	0.6
	MNG	0.3					

MAR 18 11^h28^m05^s.5 44°.96S 167°.76E 127 km M = 4.0
 ± 0.6 0.03 0.05 4 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
MSZ	iP	11	28	24.0	U	0.5	100	0.31	20		3.7	3.8		
	S			37		-0.2	100							
ROX	S-P			19		-0.1	100	1.21	116					
OBZ	P	11	28	39		-0.2	100	1.96	173		3.9	3.9		
	eS			29 03		-1.6	99							
DNZ	P	11	28	43		1.5	99	2.14	116					
	S			29 09		0.4	100							
MJZ	P	11	28	42.1	D	0.3	100	2.17	64		4.0	4.1		
	S			29 10		0.7	100							
OMZ	S-P			28		-0.1	100	2.24	94					
CMZ	eP	11	29	03.8		0.7	100	3.76	70		3.8	3.9		
	eS			46		-1.0	100							
COB	eP	11	29	24		0.1	100	5.32	45		4.4	4.2		
	eS			30 23		-1.5	99							
AMPLITUDES:	MSZ			11 27	OBZ	1.2	2.2	DNZ			2.3	1.1		
	MJZ			2.0 2.2	CMZ	0.2	0.2	COB			0.2	0.2		

MAR 18 14^h02^m04^s.8 45°.24S 167°.54E 74 km M = 3.7
 ± 0.4 0.02 0.04 5 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
MSZ	P	14	02	19.9		0.3	100	0.63	26		3.6	3.6		
	S			31		0.1	100							
ROX	S-P			17		-0.2	100	1.28	101					
OBZ	eP	14	02	33		-0.3	100	1.72	167		3.6	3.7		
	eS			54		-0.6	100							
THP	iP	14	02	35.0	U	0.5	100	1.81	68					
DMP	iP	14	02	35.4		0.7		1.83	64					
HGP	P	14	02	37.4		0.3	100	2.00	56					
TMP	P	14	02	37.9	D	-0.1	100	2.06	64					
	S			03 02.7		0.3	100							
RHP	P	14	02	39.2	U	0.0		2.14	59					
DNZ	P	14	02	41.0	D	1.2	98	2.19	108					
	S			03 06		0.4	100							
HHP	P	14	02	39.6		-0.3		2.20	67					
MMP	iP	14	02	40.1	U	-0.4	100	2.24	62					
BSP	P	14	02	41.1		-0.1		2.29	54					
MJZ	e(P)	14	02	42.5		-0.8	99	2.44	60		3.7	3.7		
	e			47										
	S			03 11		-1.1	99							
COB	eP	14	03	28		0.3	100	5.62	44		3.8	3.6		
	eS			04 28		-3.7	0							

AMPLITUDES: MSZ 13 26 OBZ 1.3 4.0 DNZ 2.2 1.0
 MJZ 1.7 2.0 COB 0.2 0.3

MAR 19 05^h03^m20^s.7 38°.35S 175°.79E 204 km 80/ 137
 M = 4.0
 ± 1.4 0.05 0.07 10 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
KRP	P	05	03	48.0		-0.2	100	0.47	335		3.0*	3.0*		
	S		04	09		-0.4	100							
NGZ	eP	05	03	51.8		1.8	99	0.85	189					
CNZ	eP	05	03	52		1.8	99	0.87	192					
WTZ	P?	05	03	50		-1.0	100	1.02	69		3.7			
TUA	P	05	03	52.3		0.1	100	1.17	114		4.1	3.8		
	e(S)		04	16		-0.5	100							
TRZ	S	05	04	23		2.3	98	1.45	146				4.1	
GNZ	P	05	03	58.0		0.3	100	1.78	100		4.2	3.7		
	S		04	24.8		-1.3	100							
MNG	P	05	04	02.7	U	-0.0	100	2.29	186		4.0	4.0		
	S			34		-1.3	100							
WEL	S	05	04	50		-0.7	100	3.04	195	4.3				
COB	eS	05	05	02.5		-0.5	100	3.61	220				2.5*	

AMPLITUDES: KRP 1.0 1.0 NGZ 1.1 1.1 CNZ 0.5 0.8
 WTZ 1.0 TUA 1.0 0.5 TRZ 1.7
 GNZ 2.5 1.2 MNG 2.8 3.5 WEL 0.6
 COB 0.2

MAR 19 21^h59^m04^s.0 35°.83S 177°.14E 401 km 80/ 138
 M = 4.1
 ± 3.3 0.22 0.36 25 S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	eP?	22	00	02.5		0.9	100	2.16	183		3.9	4.0		
	eS			46		-0.6	100							
GNZ	S	22	00	56		-0.3	100	2.90	166				4.2	
TUA	eS	22	00	56		-1.4	100	2.98	180				4.1	
TRZ	eS	22	01	13		3.7	94	3.73	184				4.1	
MNG	P	22	00	25.5		-0.8	100	4.96	195		4.2	4.2		
	S		01	30		-0.8	100							
KIW	P	22	00	29.7		-0.3		5.33	199					
CAW	eP	22	00	31.9		-0.2		5.53	197					
	eS		01	42		0.7								
WDW	eP	22	00	33.3		-0.6		5.69	197					
WHW	S	22	01	45.5		-0.8	100	5.78	198					
TCW	eP	22	00	34.5		-0.9		5.83	202					
	eS		01	47		-0.2								
COB	eS?	22	01	57		0.6	100	6.29	212				3.3*	

AMPLITUDES: WTZ 0.4 0.5 GNZ 1.0 TUA 0.2
 TRZ 0.3 MNG 1.0 1.1 COB 0.7

MAR 20 08^h26^m58^s.2 34°.91S 178°.86E 267 km 80/ 139
 M = 4.2
 ± 1.2 0.13 0.25 14 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P	08	27	57		0.3	100	3.42	206		4.3	4.3		
	eS		28	42		-0.2	100							
GNZ	eP?	08	28	02		1.2	100	3.79	190				4.2	
	S			48		-1.6	99							

TUA	eS?	08 28 56	-0.6	100	4.13	199	3.8	3.8
TRZ	eS	08 29 16	2.7	94	4.91	199		4.3
MNG	eP?	08 28 31	0.0	100	6.30	204	3.8	4.2
	eS	29 42	-1.7	99				
KIW	eP	08 28 36.4	0.2	100	6.71	207		
	eS	29 53.3	0.3	100				
CAW	eP	08 28 37.6	-0.6	100	6.88	205		
	eS	29 56.9	0.3	100				
WDW	eP	08 28 39.3	-1.0		7.05	204		
	eS	08 30 03	0.6	100	7.14	206	4.9	
BHW	eP	08 28 41.5	-0.9		7.22	205		
TCW	eP	08 28 42.2	-0.9	100	7.26	209		
	S	30 05.4	0.2	100				

AMPLITUDES: WTZ 0.9 0.9 GNZ 1.2 TUA 0.1 0.1
 TRZ 0.5 MNG 0.3 1.0 WEL 0.5

MAR 20 15^h02^m32^s.7 38°.59S 175°.60E 177 km M = 3.7
 ± 0.9 0.03 0.05 7 S.E. of RES. 1.0 80/ 140

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	P	15 02	58.0		U	-0.1	100	0.67	356		3.0*	2.5*
	S	03 18				0.3	100					
TUA	P	15 03	02.8			0.7	100	1.23	101		3.9	3.9
	eS	24				-0.9	100					
WTZ	P?	15 03	01			-1.3	99	1.25	61		3.3	3.3
TRZ	eP?	15 03	05			1.7	99	1.35	136		3.4	4.0
	eS	28				1.2	99					
GNZ	P	15 03	08.6			-0.2	100	1.90	92			
	S	36				-0.6	100					
MNG	P	15 03	11.1		U	0.9	100	2.03	183		3.8	3.9
	S	39.0				-0.1	100					
CAZ	eS	15 03	44.5			-1.4	99	2.37	168			
WEL	eP	15 03	19			0.0	100	2.77	193	4.1		
	eS	55				0.4	100					
COB	eS	15 04	06			-0.9	100	3.33	221			3.2*

AMPLITUDES: KRP 1.0 0.4 TUA 0.8 0.9 WTZ 0.4 0.5
 TRZ 0.2 1.7 MNG 2.0 3.9 CAZ 0.9
 WEL 0.5 COB 0.9

MAR 20 19^h54^m13^s.6 37°.49S 176°.55E 226 km M = 4.0
 ± 0.7 0.03 0.05 4 S.E. of RES. 0.9 80/ 141

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	19 54	44			-0.3	100	0.60	145		3.4	3.7
	eS	55 08				-0.0	100					
KRP	P	19 54	46.8			1.0	100	0.91	241		3.0*	
	S	55 11				0.4	100					
TUA	P	19 54	50			0.9	100	1.40	160		3.7	4.2
	eS	55 17				0.3	100					
GBZ	P	19 54	49.0			-1.2	99	1.53	326			
ECZ								1.60	98		3.8	4.0
GNZ	P	19 54	52.0			0.9	100	1.64	135			
	S	55 19				-1.1	99					
MNG	iP	19 55	08.0		U	0.2	100	3.23	195		4.8	4.3
	S	50				0.2	100					
KIW	P	19 55	12.2			0.2	100	3.60	200			
	S	58				0.5	100					

MTW	P	19 55 13.5			-0.4		3.75	192				
CAW	P	19 55 14.2			-0.2	100	3.79	197				
	S	56 02			0.4	100						
WHW	eS	19 56 04.8			-2.4	79	4.05	200				
TCW	P	19 55 18.4			0.1	100	4.11	205				
AMPLITUDES:	WTZ	0.6	1.1	KRP	0.8	TUA	0.3	1.1				
	GBZ	1.0		ECZ	0.4	0.6	MNG	10	3.9			

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MAR 21 02^h55^m42^s.8 33°.47s 179°.44w 410 km M = 4.5
 ± 1.7 0.26 0.49 24 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	02 57	02			0.9	100	4.53	201		4.3	4.5
	eS		58	03.5		0.8	100					
WTZ	P	02 57	08.8			-0.8	100	5.36	212		4.3	
	eS		58	07.2		-10.6						
TUA	eS	02 58	29			-1.1	100	6.00	206			4.6
TRZ	eS	02 58	44			-1.7	99	6.78	205			4.7
	e		52									
MNG	P	02 57	40.7			-0.5	100	8.22	208		4.5	4.7
	eS		59	15.0		0.2	100					
WEL	eS	02 59	33			0.6	100	9.06	209	4.7		
COB	eP	02 57	51			-8.9		9.84	217			3.0*
	eS		59	49		0.5	100					
AMPLITUDES:	ECZ	0.2	0.3	WTZ	0.4	TUA		0.3				
	TRZ		0.6	MNG	0.9	1.5	WEL	0.2				
	COB		0.2									

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MAR 21 07^h05^m51^s.2 47°.92s 165°.47E 33 km M = 3.7
 ± 1.0 0.10 0.15 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	Sn-Pn			23.8		-0.0	100	2.06	61		3.7	3.0
BRZ	ePn	07 06	30.5			0.6	100	2.57	34			
	eSn		58.5			-0.4	100					
MSZ	ePn	07 06	44.0			-0.8	99	3.67	28		4.2	4.0
	Sn		07	25.8		0.5	100					
RHP	ePn	07 07	03.0			0.1	100	4.99	42			
AMPLITUDES:	OBZ	0.9	0.5	MSZ	1.8	2.0	RHP	1.0				

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MAR 21 14^h59^m01^s.1 38°.92s 175°.30E 129 km M = 4.0
 ± 0.9 0.03 0.06 7 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CNZ	iP	14 59	20.1		U	0.7	100	0.34	146			
	eS		33.8			0.3	100					
NGZ	iP	14 59	20.0			0.5	100	0.36	137			
GSZ	iP	14 59	20.5			0.7	100	0.42	148			
KRP	iP	14 59	24.8		U	0.7	100	1.01	11		3.2*	3.1*
	iS		40.8			-1.0	100					
TRZ	eP	14 59	28.0			0.3	100	1.34	119		3.8	4.2
	S		48.1			0.2	100					
TUA	eP	14 59	28.0			-0.9	100	1.45	86		3.8	4.2
	eS		51.0			0.9	100					
WTZ	eP	14 59	29.0			-1.9	99	1.62	55		3.4	
MNG	iP	14 59	32.5			0.7	100	1.70	175		4.0	4.3

	iS	53.0	-2.1	98					
CAZ	P	14 59 37.8	1.0	100	2.11	161			
	eS	15 00 02.5	-1.2	100					
WEL	S	15 00 10.4	0.0	100	2.40	190	4.1		
AMPLITUDES:	CNZ	13 6.7	NGZ	8.1	GSZ	4.4			
	KRP	1.9 1.9	TRZ	0.8 4.0	TUA	0.7 1.9			
	WTZ	0.6	MNG	6.3 13	CAZ	0.5 2.6			
	WEL	0.8							

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MAR 21 15^h28^m09^s.9 37°.47S 177°.09E 5 km M = 4.9

± 0.4 0.02 0.03 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	iPg	15	28	19.0		-1.4	100	0.52	189					
ECZ	eP*	15	28	32.8		0.9	100	1.18	101		5.4	5.1		
	Pg			34.9		1.2	100							
KRP	iPn	15	28	32.3	D	-2.0	100	1.31	249		4.9	5.1		
	P*			35.4		1.2	100							
	Pg			37.3		0.8	100							
	Sn			50.6		-1.7	100							
TUA	ePn	15	28	32.2		-2.4	99	1.34	178				5.0	
	iP*			34.3		-0.3	100							
	Pg			38.5		1.6	100							
	Sg			55.5		0.5	100							
WNZ	ePn	15	28	33.4		-2.0	100	1.39	214					
	eP*			38.0		2.4	99							
GBZ	iPn	15	28	39.7	U	-1.2	100	1.80	314					
	P*			39.7		-2.7	99							
	Pg			46.0		-0.2	100							
AUC	Pn	15	28	42.7		-0.2	100	1.94	288					
	P*			48.0		3.0	98							
	iPg			52.1		2.9	99							
	S*		29	10.8		-0.1	100							
TRZ	Pn	15	28	45.0		0.1	100	2.09	186		5.0			
	P*			49.0		1.5	100							
	Pg			51.2		-1.0	100							
CNZ	ePn	15	28	44.8		-0.3	100	2.12	215					
	P*			49.0		1.2	100							
	Sn		29	08.5		-3.0	99							
GSZ	eP*	15	28	48.9		0.3		2.16	213					
	ePg			53.3		-0.2								
TNZ	ePn	15	28	53.2		-0.5	100	2.74	230					
	P*			59.2		0.7	100							
	ePg		29	05.8		0.6	100							
ONE	ePn	15	28	55.0		0.8	100	2.77	307					
	ePg		29	09.5		3.6								
MNG	ePn	15	29	00.0		-2.5	99	3.38	201		4.7			
	eP*			11.5		2.0								
WEL	eP*	15	29	24.0		0.3	100	4.22	205					
	eSg		30	33.6		1.7	100							
CRZ	Pn	15	29	21.8		1.4		4.69	309					
COB	ePn	15	29	24.5		0.6	100	4.95	222				4.2	
	eP*			36.0		-0.2	100							
CIZ	ePn	15	30	06.3		-0.2	100	8.07	145					
	eSn		31	34		-0.8	100							
AMPLITUDES:	ECZ	31	20	KRP	23	29	TUA	14						
	GBZ	17		AUC	13		TRZ	7.8						

CNZ 10 MNG 6.0 COB 1.0

FELT: Elstow (25). Frequent aftershocks for several days with S-P interval of 2 seconds at WIZ.

MAR 21 17^h27^m07^s.2 37°.53s 177°.01E 5 km M = 3.9
 ± 0.4 0.02 0.02 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPg	17	27	16.2		-0.2	100	0.45	182			
KRP	ePn	17	27	29.5		-1.0	100	1.23	251		3.7	4.0
	eP*			31.2		1.1	100					
	Pg			33.6		1.5	100					
	Sn			45.5		-2.2	99					
	eSg			49.5		0.7	100					
ECZ	P*	17	27	30.8		0.7	100	1.23	98		4.2	
	iPg			32.1		0.0	100					
	eSg			48.9		0.2	100					
TUA	P*	17	27	29.0		-1.9	99	1.28	175		3.9	
	Pg			31.3		-1.8	99					
GBZ	ePn	17	27	36.9		-1.2	100	1.79	316			
	eP*			40.4		0.7	100					
	ePg			43.2		-0.3	100					
	eS*		28	05.5		1.9						
AUC	ePg	17	27	45		-0.7		1.91	290			
	e			49.5								
NGZ	eP*	17	27	43.2		0.3		1.98	213			
	e(Pg)			52.0		4.7						
	eSn		28	07.2		1.5						
TRZ	ePn	17	27	42.0		0.7	100	2.02	184			
	ePg			49.6		1.4	100					
	eS*		28	10.0		-0.6	100					
CNZ	ePg	17	27	49.5		1.3	100	2.02	214			
	e			52.0								
	eSn		28	07.2		0.4	100					
	e			18.7								
TRZ								2.02	184			4.0
MNG	eP*	17	28	05.0		-0.5	100	3.31	201			3.7
	ePg			12.0		-2.0						

AMPLITUDES: KRP 2.0 3.1 ECZ 1.9 TUA 1.2
 GBZ 2.0 1.3 AUC 0.3 CNZ 0.3
 TRZ 0.8 MNG 0.6

MAR 22 09^h21^m59^s.8 37°.53s 177°.12E 5 km M = 3.5
 ± 0.4 0.02 0.03 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	Pg	09	22	00.8		-0.4	100	0.05	90			
WTZ	iPg	09	22	08.5	D	-0.8	100	0.47	193		3.1	3.3
	Sg			16.9		1.2	100					
ECZ	Pg	09	22	24.2		1.2	100	1.14	99		4.1	
TUA	Pg	09	22	24.0		-1.7	99	1.28	179		3.6	
	Sg			43.0		0.1	100					
KRP	eP*	09	22	23.0		-1.1	100	1.31	252		3.5	
	Pg			26.2		-0.2	100					
	Sg			45.0		0.8	100					
GNZ	ePg	09	22	24.5		-2.0	99	1.32	148		3.7	
	Sg			46.0		1.6	99					

GBZ	ePn	09 22	30.2	-1.4	100	1.85	314		
	ePg		38.8	1.5	100				
	eS*		58.6	0.5	100				
TRZ	ePn	09 22	34.5	0.4	100	2.03	187		3.6
AMPLITUDES:		WIZ	50	WTZ	4.9	7.0	ECZ		1.8
		TUA	0.6	KRP	1.0		GNZ		2.0
		GBZ	0.7	0.6	TRZ	0.3			

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MAR 22 15^h53^m09^s.9 38°.99s 178°.03E 12 km M = 4.3
 ± 0.4 0.02 0.03 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	iP*	15	53	18.0		1.0	100	0.34	359			
TUA	iP*	15	53	22.0		-1.2	99	0.71	285			
	Pg			24.0		-0.4	100					
TRZ	Pn	15	53	30.5		0.2	100	1.10	239		4.4	4.4
	Sg			46.8		-0.1	100					
WTZ	iP*	15	53	32.0		-1.2	100	1.30	321		4.3	4.4
ECZ	Pn	15	53	34.0		0.1	100	1.36	18		4.6	4.3
	Pg			36.5		-0.9	100					
WNZ	Pn	15	53	37.2		0.7	100	1.55	283		4.4	
	Pg			43.0		1.7	99					
WIZ	ePn	15	53	37.4		0.1	100	1.60	335			
NGZ	eP*	15	53	43.0		-0.3	100	1.89	263			
CNZ	Pn	15	53	43.0		1.1	100	1.94	263			
	Pg			49.0		-0.2	100					
	Sn			54 07.0		1.0	100					
KRP	ePn	15	53	47.0		1.2	99	2.23	298		4.3	4.1
	Pg			53.6		-1.4	99					
CAZ	ePn	15	53	48.0		0.3	100	2.37	215			
MNG	Pn	15	53	49.6		-0.6	100	2.55	230		4.1	4.0
TNZ	ePn	15	53	56.0		1.7	99	2.85	265		4.5	4.4
	S*			54 36.8		-0.1	100					
WEL	P*	15	54	09.0		0.0	100	3.39	226	4.3		
	Pg			18.0		-0.5	100					
	Sn			40.0		-0.8	100					
AMPLITUDES:		TRZ	8.8	13	WTZ	11	15	ECZ		4.0	3.0	
		WNZ	0.8		WIZ	7.2		NGZ		8.3		
		CNZ	8.1	10	KRP	2.7	1.4	CAZ		0.9	1.4	
		MNG	3.8	3.2	TNZ	0.6	0.5	WEL		0.7		

FELT: Mahia Beach (54)

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MAR 23 02^h45^m56^s.9 37°.49s 177°.01E 5 km M = 3.4
 ± 0.4 0.02 0.02 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	Pg	02	46	00.3		0.4	100	0.14	106			
WTZ	Pg	02	46	06.9		-0.0	100	0.49	182		3.0	3.3
	iSg			14.8		1.2	99					
ECZ	Pg	02	46	22.0		0.1	100	1.23	100		3.8	
KRP	ePg	02	46	22.0		-0.1	100	1.25	249		3.3	
	e			26.2								
	Sg			39.2		0.2	100					
	e			41.0								
TUA	Pg	02	46	23.0		-0.6	100	1.32	175		3.3	3.5
	eSg			40.5		-0.9	100					

GBZ	e	42.8		-1.4	99	1.76	315				
	eP*	02	46					27.4			
	ePg							33.7	1.1	99	
AMPLITUDES:		WTZ	2.7	5.0	ECZ	0.7	KRP	0.7			
		TUA	0.3	0.4	GBZ	0.7					

MAR 23 06^h50^m42^s.3 42°.17s 172°.32E 12 km 80/ 150
 ± 0.2 0.02 0.03 R S.E. of RES. 1.0 M = 4.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KAI	P*	06	50	56.8		0.3	100	0.76	242			
	S*			51 06.8		-0.1	100					
	iP*	06	51	01.0		-1.7	99	1.13	16	4.4	4.3	
COB	S*			15.9		-1.8	99					
	S*-P*			18.0		-1.0	100	1.44	171	4.7	4.6	
	Sg-Pg			19.0		-0.4	100					
WEL	Pn	06	51	15.6		0.0	100	2.03	65	4.6		
	Pg			23.3		-0.2	100					
	Sn			41.0		0.4	100					
MJZ	S*			45.1		0.1	100					
	Pn	06	51	18.5		-0.3	100	2.27	216	4.8	4.6	
	P*			21.2		-1.0	100					
	Sn			47.0		0.8	100					
	S*			53.0		1.0	100					
	Sg			52 00.0		1.2	100					
RHP	Pn	06	51	22.8		0.4	100	2.53	220			
	P*			25.0		-1.7	99					
	e			30.1								
MNG	e			57.5								
	iPn	06	51	26.5	U	-0.1	100	2.84	58	5.1	4.9	
	P*			32.0		0.1	100					
	Sn			58.0		-1.9	99					
OMZ	S*			52 09.0		-0.1	100					
	ePn	06	51	29.0		-0.8	100	3.08	199			
	P*			37.0		1.0	100					
CAZ	Sg	06	52	30.1		0.1	100	3.19	68			
TNZ	ePn	06	51	35.5		1.7	99	3.37	28	4.6	4.9	
	P*			41.0		0.1	100					
CNZ	e			52 29.0								
	ePn	06	51	43.0		2.6	94	3.85	41			
	e			52 36.8								
DNZ	Pn	06	51	40.0		-1.3	100	3.92	199			
	Pg			52 00.5		-1.0	100					
MSZ	e			25.5								
	e			52.0								
	Pn	06	51	42.8		-0.5	100	4.07	231	4.6	4.7	
	(Pg)			52 07.0		2.5						
	Sn			29.5		0.1	100					
	S*			45.0		-0.9	100					
TRZ	Sg			59.5		0.1	100					
	Sn	06	52	35.9		0.9	100	4.30	54	4.4	4.5	
KRP	Pn	06	51	56.5		1.7	99	4.91	31			
	e			52 08.5								
TUA	eP*	06	52	09.0		0.4	100	4.99	49	4.5		
BRZ	(Pn)	06	51	58.0		2.0		4.99	222			
	(Pg)			52 26.0		2.8						
	Sn			53.0		1.3	100					
GNZ	Sn	06	53	06.0		-0.3	100	5.60	53	4.7		

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CIZ	e(Sn)	06 54 09.0	-3.0	8.33	106	
AMPLITUDES:	COB	12 35	CMZ	18 22	WEL	4.2
	MJZ	18 13	RHP	43 30	MNG	27 23
	CAZ	1.0 4.5	TNZ	1.2 3.0	CNZ	6.5 19
	DNZ	2.8 2.1	MSZ	3.2 7.1	TRZ	0.5 0.9
	TUA	0.4	BRZ	0.5 1.4	GNZ	1.9
	CIZ	0.4				

FELT: Murchison (80), Maruia (87) MM IV, and Arapito (74)

MAR 23 11^h19^m03^s.3 32°.74s 179°.57w 471 km M = 5.2
 ± 1.3 0.18 0.36 20 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	11 20	34.1			2.9	96	5.18	197		4.8	5.1
	e(S)		21	35.5		-5.2						
WTZ	eP	11 20	37.2			-1.6	99	5.94	207		5.6	5.1
	i		39.0									
GNZ	eP	11 20	39.0			-2.6	98	6.21	198		5.2	
	e		21	55.0								
	eS		59.0			-0.2	100					
KRP	P	11 20	45.5			0.6	100	6.54	216		3.6*	3.1*
TUA	eP	11 20	46.0			0.3	100	6.62	203		5.0	5.2
	eS		22	06.0		-0.7	100					
TRZ	eP	11 20	55.0			1.0	100	7.41	202		5.0	5.4
CNZ	eP	11 20	56.0			0.3	100	7.57	210			
	eS		22	24.5		-0.3	100					
MNG	P	11 21	08.5			-0.7	100	8.81	205		5.3	5.5
	e		22	41.0								
	S		49.0			0.0	100					
WEL	eS	11 23	06.0			0.3	100	9.66	206	5.2		
COB	eP	11 21	25.0			-0.9	100	10.37	214		3.9*	3.8*
	eS		23	20.0		0.5	100					
AMPLITUDES:	ECZ		0.5	1.0	WTZ	6.3	2.2	GNZ			2.2	
	KRP		0.9	0.3	TUA	0.5	0.9	TRZ			0.4	2.2
	CNZ		0.6	1.0	MNG	4.2	8.9	WEL	0.6			
	COB		0.5	1.3								

MAR 23 20^h03^m08^s.4 37°.19s 179°.51E 33 km M = 3.8
 ± 0.8 0.05 0.06 R S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	ePn	20 03	24.0			-0.5	100	0.92	236			4.0
	Sn		36.0			-0.4	100					
GNZ	ePn	20 03	37.0			-0.5	100	1.87	219		3.6	3.5
	eSn		04	00.0		0.7	99					
WTZ	iPn	20 03	41.9			0.5	100	2.16	248		4.2	3.7
	eSn		04	06.0		-0.2	100					
TUA	ePn	20 03	45.5			-0.1	100	2.47	228		3.6	
KRP	Pn	20 03	56.8			0.6	100	3.24	256		4.0	
AMPLITUDES:	ECZ				2.9	GNZ	1.0	1.1	WTZ		3.9	0.9
	TUA		0.2			KRP	0.5					

MAR 23 21^h31^m44^s.2 33°.11s 179°.62E 361 km M = 5.3
 ± 1.6 0.13 0.21 31 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	P	21	33	04.0		2.8	98	4.66	191		4.8		5.4	
	eS		34	01.0		-0.6	100							
WTZ	P	21	33	06.2		-2.2	99	5.32	203		5.6		5.3	
	e		34	09.0										
	S			14.5		0.1	100							
GNZ	eP	21	33	12.0		-0.3	100	5.68	193		5.2		5.3	
	S		34	22.0		0.4	100							
KRP	P	21	33	14.9		0.6	100	5.85	214		4.1*		3.3*	
CRZ	P	21	33	14.8		-0.4	100	5.93	255		3.7*			
TUA	P	21	33	15.0		-1.4	100	6.03	199		5.1		5.4	
	eS		34	28.3		-0.5	100							
	i			34.0										
TRZ	eP	21	33	23.5		-2.0	99	6.82	199		5.2		5.4	
	eS		34	45.5		0.4	100							
CNZ	P	21	33	28.0		1.4	100	6.92	207					
TNZ	eP	21	33	33.5		1.2	100	7.41	213		4.2*		3.8*	
MNG	e(P)	21	33	37.0		-4.7		8.20	203		5.3		5.5	
	e		35	07.0										
	(S)			13.5		-0.7								
WEL	(P)	21	33	50.0		-1.5		9.04	204	5.3				
	(S)		35	30.0		-2.1								
COB	e(P)	21	33	57.5		-1.8		9.68	213		4.2*		3.8*	
	e(S)		35	44.0		-2.0								
AMPLITUDES:		ECZ		0.7	2.9	WTZ		7.0	4.0	GNZ		3.0	6.3	
		KRP		3.2	0.6	CRZ		0.4		TUA		0.9	2.0	
		TRZ		0.8	3.0	CNZ		1.2	2.0	TNZ		0.8	0.4	
		MNG		4.9	11	WEL	0.8			COB		0.9	1.3	

MAR 24 04^h58^m30^s.7 33°.90S 178°.68W 247 km 80/ 154 M = 4.8
 ± 1.2 0.14 0.25 19 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	04	59	39.5		-0.3	100	4.41	210		4.6		4.8	
	eS	05	00	34.0		0.4	100							
WTZ	P	04	59	50.6		-1.2	100	5.39	220		5.0		4.8	
	eS	05	00	54.0		-1.0	100							
GNZ	eP	04	59	52.0		-0.4	100	5.44	208					
	S	05	00	55.5		-0.6	100							
TUA	P	04	59	58.5		-0.3	100	5.95	213		4.9		4.8	
	eS	05	01	07.5		0.0	100							
KRP	eP	05	00	03.0		1.4	99	6.18	228		3.3*			
TRZ	eP	05	00	09.5		1.2	100	6.70	211		4.7		4.7	
	eS		01	26.5		1.9	98							
MNG	eP	05	00	26.0		-0.9	100	8.17	213					
	eS		01	57.0		-0.9	100							
WEL	(S)	05	02	15.8		-1.6		9.03	213	5.0				
COB	e(S)	05	02	31.5		-5.9		9.91	221		3.5*		3.3*	
AMPLITUDES:		ECZ		0.5	0.8	WTZ		2.3	1.6	TUA		0.6	0.5	
		KRP		0.5		TRZ		0.3	0.7	WEL	0.4			
		COB		0.2	0.5									

MAR 25 20^h39^m51^s.0 40°.42S 174°.80E 12 km 80/ 155 M = 4.2
 ± 0.2 0.01 0.02 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iP*	20	40	01.9		0.3	100	0.56	111			
WEL	P*	20	40	07.5		0.6	100	0.86	182	4.3		
	iS*			19.0		0.4	100					
	Sg			22.0		1.6	99					
CAZ	P*	20	40	12.3		-0.1	100	1.19	115			
	S*			27.0		-1.2	99					
	iSg			31.8		0.7	100					
TNZ	iPn	20	40	13.8	U	-0.1	100	1.28	345		4.4	4.9
	iSn			32.0		1.0	100					
NGZ	Pn	20	40	14.5		-0.9	100	1.39	27			
	P*			15.3		-0.4	100					
	Pg			18.5		-0.5	100					
	iSn			34.0		0.4	100					
	S*			35.2		1.1	100					
	Sg			38.0		0.3	100					
COB	Pn	20	40	20.0		0.2	100	1.71	246		4.3	4.1
	Pg			24.8		-0.8	100					
	S*			44.0		0.1	100					
	Sg			50.0		1.3	99					
TUA	eP*	20	40	32.5		-1.0	100	2.42	49		4.0	4.0
	Sn			59.2		0.6	100					
MJZ	ePn	20	41	00.5		-1.6	99	4.81	221		4.1	4.1
	e(Sn)			53.5		-2.4						
RHP	ePn	20	41	05.0		-0.8	100	5.08	222			
	Pg			32.5		-1.2	99					
	e(Sn)		42	00.0		-2.5						
AMPLITUDES:		WEL	10		CAZ	10	24	TNZ		4.5	22	
		COB	4.0	9.0	TUA	0.6	0.6	MJZ		0.8	1.0	
		RHP	1.4	3.0								

MAR 27 20^h57^m49^s.9 33°.40s 179°.64w 259 km M = 5.6
 ± 0.9 0.06 0.11 26 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	20	59	01.5		0.6	100	4.54	199		5.5	5.8
	(S)	21	00	00.0		3.7						
WIZ	eP	20	59	05.0		0.1	100	4.87	211			
GBZ	P	20	59	05.3		0.0	100	4.90	234			
WTZ	P	20	59	09.5		-1.1	100	5.34	210		5.5	5.8
	(S)	21	00	16.5		2.8						
ONE	eP	20	59	13.0		0.4	100	5.49	243	3.9*		
GNZ	eP	20	59	14.0		0.5	100	5.57	199			
	iS	21	00	18.0		-0.8	100					
AUC	P	20	59	17.5		1.9	98	5.73	231			
KRP	eP	20	59	19.3		0.7	100	5.98	220		4.5*	3.7*
	S	21	00	28.0		0.0	100					
TUA	eP	20	59	17.0		-1.7	99	5.99	205		5.2	5.9
	S	21	00	27.8		-0.4	100					
CRZ	P	20	59	23.0		-1.7	99	6.47	259		3.7*	
TRZ	eP	20	59	28.0		-0.5	100	6.78	204		5.5	5.8
	eS	21	00	46.0		0.3	100					
CNZ	eP	20	59	31.5		0.5	100	6.97	212			
	e(S)	21	00	52.5		2.3						
CAZ	eP	20	59	46.5		0.1	100	8.19	203			
	e(S)	21	01	13.0		-4.7						
MNG	e(P)	20	59	43.0		-3.5		8.20	207			
WEL	e(P)	20	59	56.0		-1.2		9.05	208	5.6		
	(S)	21	01	31.7		-5.4						

COB	e(P)	21 00 04.0	-2.6	9.79	216	4.3* 4.1*
	(S)	01 53.0	-1.0			
CIZ	e(P)	21 00 30.5	11.1	10.82	168	
	e(S)	02 23.5	6.3			
AMPLITUDES:	ECZ	3.8 7.9	WIZ	3.9 2.1	GBZ	5.9 1.1
	WTZ	7.0 14	ONE	0.9	AUC	1.6
	KRP	8.2 1.5	TUA	1.3 6.8	CRZ	0.4
	TRZ	2.0 8.0	CNZ	4.2 4.1	CAZ	3.2 11
	WEL	2.1	COB	1.3 3.2	CIZ	1.9 2.1

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MAR 27 21^h33^m10^s.2 46°.51s 165°.81E 33 km M = 3.6
 ± 1.2 0.09 0.10 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	Pn	21	33	32.0		-1.0	100	1.41	59			
	Sn			50.0		-0.1	100					
	S*			54.0		-0.5	100					
	Sn-Pn			20.5		1.1	100	1.64	105		3.2	3.1
MSZ	Pn	21	33	47.5		1.4	99	2.37	40		3.8	3.9
	S*			34 23.0		0.1	100					
RHP	Pn	21	34	06.5		-0.0	100	3.86	53			
	P*			18.5		1.2	100					
MJZ	eP*	21	34	21.0		-1.1	100	4.15	54		4.1	3.8
AMPLITUDES:	BRZ	1.9	3.0	OBZ	0.5	0.9	MSZ	1.8	3.4			
	RHP	1.9	1.3	MJZ	1.0	0.7						

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MAR 31 13^h53^m41^s.7 45°.12s 167°.54E 104 km M = 3.9
 ± 0.5 0.02 0.04 4 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	iP	13	53	58.2	U	0.0	100	0.52	31		4.2	4.1
	S			54 10.5		-0.2	100					
OBZ	P	13	54	12.4		-0.2	100	1.84	168		3.9	3.6
	S			36		0.1	100					
RHP	iP	13	54	16.2	D	0.2	100	2.08	62			
	S			42.5		1.0	98					
DNZ	iP	13	54	18.2	D	0.3	100	2.22	111			
	S			45		0.2	100					
MJZ	P	13	54	19.4	D	-0.6	100	2.38	63		3.8	4.4
	e			38								
	S			48		-0.6	100					
OMZ	iP	13	54	20.1		-0.1	100	2.39	90			
	S			48		-0.8	99					
KAI	S	13	55	25		1.2	3.82	49	3.8			
CMZ	S	13	55	24.5		-2.8	3.97	69		3.4	4.3	
COB	e(P)	13	55	02.5		-0.6	5.54	45		3.9	3.9	
	S			56 01.5								
	S			03		-3.0						
AMPLITUDES:	MSZ	41	55	OBZ	1.6	1.7	DNZ	6.0	5.3			
	MJZ	1.6	6.5	KAI	0.1		CMZ	0.1	0.8			
	COB	0.1	0.2									

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APR 01 04^h42^m38^s.2 41°.81s 172°.61E 33 km M = 3.5
 ± 0.3 0.02 0.03 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	iPn	04	42	51.1	D	-0.6	100	0.73	7		3.6	3.2
	P*			53		0.7						
KKY	Sn		43	02.3		0.6	100					
	Pn	04	42	54.2		-1.3	99	1.01	127			
KAI	P*			56.5		-0.4						
	eS*		43	12		1.2	100					
WEL	Sn	04	43	13		1.3		1.14	231	3.2		
	S*			15		0.3	100					
CMZ	Pn	04	43	04.5		-0.5	100	1.70	73	3.4		
	Sn			26		0.9	100					
MNG	Pn	04	43	06		0.0	100	1.77	179		3.1	4.1
	e(Sn)			26		-0.8						
MJZ	S*			32		-1.4	99					
	Pn	04	43	16		0.5	100	2.47	62		3.9	3.5
TNZ	e(Sn)			49		5.4						
	Pn	04	43	18		-0.4	100	2.69	215		3.5	3.4
RHP	P*			21		-4.3						
	Sn			50.5		1.8	99					
RHP	Sn	04	43	54		-1.0	100	2.95	28			3.6
	Pn	04	43	22		0.0		2.95	218			
AMPLITUDES:	e(Sn)			57		2.0						
		COB		4.3	6.0	KAI	0.5			WEL	0.3	
	CMZ		0.3	4.6	MNG		2.5	1.2	MJZ		0.6	0.6
	TNZ			0.2								

APR 01 05^h52^m06^s.0 33°.40s 178°.31w 33 km M = 4.7
 ± 1.2 0.13 0.23 R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ						4.99	210				4.8	4.9
WTZ	Pn	05	53	30.5		-0.5	100	5.97	219		4.4	4.8
	Sn		54	36		0.6	100					
GNZ	Pn	05	53	32		0.3	100	6.02	209		4.6	4.5
	(P*)			43		-6.8						
TUA	Sn		54	37		0.3	100					
	Pn	05	53	39		0.3	100	6.53	213		4.7	4.8
TRZ	(P*)			50.5		-8.0						
	e(Sn)		54	48		-0.9	99					
NGZ	e			53								
	eSn	05	55	06		-1.1		7.29	211			4.6
MNG	eSn	05	55	16		1.9		7.58	219			
	Sn	05	55	40		-2.3		8.76	213			4.5
WEL	Sn	05	55	56		-6.9		9.61	213	4.9		
	Sn	05	56	18.5		-5.3		10.48	220			4.3
CIZ	(Pn)	05	54	34.5		-0.2		10.64	173			
	(Sn)			56		-7.5						
CMZ	e			23								
	e(Sn)	05	57	06		-3.8		12.39	212			4.7
MJZ	Sn	05	57	31		-10.8		13.72	216			4.7
AMPLITUDES:	ECZ			0.5	0.8	WTZ		0.8	1.6	GNZ	1.0	1.1
	TUA			0.4	0.6	TRZ		0.4	MNG		1.0	
	WEL	0.3				COB		0.4	CIZ		0.4	0.6
	CMZ			0.4		MJZ		0.5				

APR 03 00^h20^m47^s.8 38°.77S 176°.65E 67 km M = 4.0
 ± 0.6 0.02 0.03 7 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
TUA	iP	00	20	58.9	D	-1.0	100	0.40	96		3.8	4.0	
	S			21 09		-0.0	100						
WNZ	eP?	00	21	00		-0.3		0.45	287		4.1	4.4	
	e			03.8									
	(S)			12		2.2							
TRZ	P	00	21	03.4	U	-0.7	100	0.80	170		4.2	4.1	
	S			18		1.8	97						
WTZ	iP	00	21	04.5	D	0.1	100	0.83	19		3.8	4.0	
	S			16.5		-0.3	100						
NGZ	iP	00	21	05.2		-0.2	100	0.91	242				
	S			17.5		-1.1	99						
CNZ	iP	00	21	05.8		-0.3	100	0.96	243				
	(S)			23		3.2							
GSZ	P	00	21	06.0		-0.3		0.97	238				
	e(S)			18.5		-1.5							
GNZ	P	00	21	08		0.3	100	1.09	84				
	e(S)			22.5		-0.2	100						
KRP	P	00	21	10.0	UN	0.6	100	1.21	314		3.2*	3.2*	
	S			26.5		0.9	100						
MNG	P	00	21	18.6	D	-2.2		2.06	206				
WEL	(P)	00	21	36.5		3.7		2.90	209	4.1			
	e			49									
	S			22 02		-4.6							
	e			16									
COB	P	00	21	45		-0.4		3.80	231		3.9*	3.6*	
	S			22 32		2.9							
KAI	S	00	23	20		8.9		5.48	225	3.4*			
CMZ	e	00	23	05				5.69	211			3.3*	
	S			08		-8.3							
MJZ	S	00	23	38		-10.5		6.99	220		2.9*	3.3*	
	e			56									
AMPLITUDES:		TUA		8.5	12	WNZ		1.8	3.0	TRZ		5.7	12
		WTZ		5.3	9.5	KRP		2.0	2.5	WEL	0.5		
		COB		1.2	2.6	KAI	0.2			CMZ			0.4
		MJZ		0.2	0.6								

APR 03 11^h56^m42^s.6 42°.90S 172°.84E 12 km M = 3.6
 ± 0.4 0.02 0.03 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CMZ	Pg	11	56	56.0		-0.9	100	0.70	192		4.1	3.9
	Sg			57 07.5		1.0	100					
KKY	Pg	11	56	58.0		-0.7	100	0.79	53			
	Sg			57 11.8		2.3	98					
KAI	Pg	11	57	06		0.7	100	1.12	289	3.6		
	Sg			20.5		0.0	100					
COB	P*	11	57	14		-0.7	100	1.82	357		4.0	3.5
	S*			39.5		0.9	100					
MJZ	Pn	11	57	15.5		-0.5	100	2.04	237		3.4	3.7
	P*			21		2.4						
	Pg			26		2.0						
	Sn			41		-0.1	100					

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	Sg		52		0.5							
WEL	S*	11	57	47		-2.0	99	2.16	42	3.1		
RHP	Pn	11	57	20.3	U	0.3		2.34	238			
	Pg			29		-0.9						
	Sg			58	08	6.6						
MNG	P*	11	57	36		0.7		3.01	42		3.7	3.4
	Sn			58	06	1.5						
MSZ	P*	11	57	53		1.3		3.99	242		3.6	3.3
	Pg			58	11	7.9						
	Sg			59	05	8.2						
BRZ	eSn	11	58	52		5.4		4.77	231			
AMPLITUDES:	CMZ		19	18	KAI	1.4			COB		1.7	2.0
	MJZ		0.9	2.1	WEL	0.1			MNG		0.9	0.7
	MSZ		0.4	0.3								

APR 04 03^h23^m04^s.7 44°.88S 167°.73E 77 km M = 3.6
 ± 0.7 0.03 0.05 6 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	iP	03	23	17.2	U	0.4	100	0.25	33			
	S			26		0.0	100					
BRZ	P	03	23	22.4	D	-0.5	100	0.91	188			
	S			35.5		-1.1	100					
ROX	e(P)	03	23	29		1.5		1.28	118			
	S			45		0.3	100					
RHP	iP	03	23	35.4	U	0.3	100	1.85	66			
	S			59		1.2	99					
OBZ	P	03	23	37.1	U	-0.6	100	2.04	173		3.8	3.7
	S			24	04	1.9	97					
MJZ	P	03	23	38.7		-0.5	100	2.16	67		3.5	3.9
	S			24	05	0.1	100					
DNZ	P	03	23	40		0.2	100	2.20	118			
	eS			24	06	0.1	100					
OMZ	P	03	23	40.5	U	-0.4	100	2.27	96		3.5	3.6
	S			24	06	-1.7	98					
KAI								3.56	50	3.4		
CMZ	e	03	24	37				3.76	72			3.6
	S			42		-3.1						
COB	e(P)	03	24	23		0.3		5.28	46		3.8	3.6
	S			25	22	-0.9						
AMPLITUDES:	MSZ		40	51	BRZ	5.0	5.5	9.0	OBZ		1.6	2.7
	MJZ		1.3	3.7	DNZ		1.0	1.2	OMZ		0.5	1.0
	KAI		0.1		CMZ			0.4	COB		0.2	0.3

APR 04 19^h34^m09^s.6 33°.53S 177°.96W 12 km M = 5.0
 ± 1.6 0.08 0.16 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	Pn	19	35	31.5		-0.3	100	5.62	223			
	(P*)			43		-3.7						
	e(Sn)			36	30	-4.0						
GBZ	Pn	19	35	37		-0.3	100	6.02	242			
	(P*)			46		-7.6						
GNZ	Pn	19	35	38		0.2	100	6.06	211		5.0	4.9
	Sn			36	45	0.5	100					
WTZ	Pn	19	35	36.5		-1.2	100	6.06	221		4.9	4.9
	Sn			36	43	-1.5	100					

	e(Sg)	37 40		6.5						
TUA	Pn	19 35 45.5		0.5	100	6.59	215		5.2	5.1
	e(Sn)	36 57.5		0.2						
AUC	e(Pn)	19 35 52		3.9		6.81	239			
	e(P*)	36 01		-6.0						
KRP	Pn	19 35 48		-0.9	100	6.88	228		5.4	5.5
	(P*)	36 03		-5.0						
	Sn	37 03		-1.1	100					
TRZ	Pn	19 35 54.5		-0.7	100	7.33	213		4.7	4.9
	(P*)	36 19		3.0						
	Sn	37 18		2.7	98					
CRZ	Pn	19 36 04		2.0	99	7.83	261		5.3	
TNZ	Pn	19 36 16		6.6		8.37	225		5.5	
	P*	25.5		-8.1						
MNG	e(Pg)	19 36 58		-9.6		8.81	215		4.6	5.1
	Sn	37 45		-5.6						
	Sg	38 58		-8.2						
WEL	Sn	19 38 04		-7.3		9.67	215	5.3		
CIZ	(Pn)	19 36 45		7.0		10.48	174			
	e	38 30.5								
	e	33								
	(Sn)	37.5		6.8						
COB	Sn	19 38 27.5		-5.6		10.57	222		4.6	4.6
KAI						12.28	220	4.6		
CMZ	Sn	19 39 11		-7.0		12.45	213		4.3	5.0
MJZ	ePn	19 37 21		-2.4		13.80	217		4.9	5.1
	Sn	39 39		-11.6						
MSZ						15.61	220		4.9	4.7
AMPLITUDES:	GBZ	2.5		GNZ	2.5	3.0	WTZ	2.5	2.1	
	TUA	1.3	1.0	KRP	1.4	1.2	TRZ	0.4	0.8	
	CRZ	0.3		TNZ	0.3		MNG	0.9	3.6	
	WEL	0.7		CIZ	0.4	0.6	COB	0.2	0.8	
	KAI	0.1		CMZ	0.1	0.7	MJZ	0.6	1.1	
	MSZ	0.5	0.5							

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APR 04 19^h55^m06^s.5 33°.53s 177°.96w 12 km M = 4.4

	STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
	GBZ	e(P*)	19	56	45		-5.5		6.02	242			
		e(Pg)		57	01		-7.2						
	GNZ	eP*	19	56	49		-2.0		6.06	211		4.4	
		e		57	25								
	WTZ	e(Pn)	19	56	36.5		1.9		6.06	221		4.2	
		e(Pg)		57	10		1.1						
	KRP	Pn	19	56	43.5		-2.3		6.88	228		4.7	
	CRZ	Pn	19	57	00		1.1		7.83	261		4.8	
	TNZ	e(Pn)	19	57	10		3.7		8.37	225			
	MNG	ePn?	19	57	17		4.8		8.81	215		4.2	4.0
		e		24									
		P*		39			1.0						
		eSn	58	45.5			-2.0						
AMPLITUDES:	GBZ			0.3		GNZ		0.6	WTZ		0.4		
	KRP			0.3		CRZ		0.1	MNG		0.4	0.3	

TRZ						7.47	212		4.4
MNG	ePn	03 35	01.5	-1.8		8.94	214		3.9 4.1
	P*		21	-10.2					
	Sn		36 29.5	-9.0					
WEL	Sn	03 36	51	-8.1		9.80	214	4.4	
COB						10.69	221		4.0
AMPLITUDES:	WTZ		0.6 0.5	GNZ		0.6 0.7	TUA		0.4 0.3
	KRP		1.0 0.7	TRZ		0.2	MNG		0.2 0.4
	WEL	0.1		COB		0.2			

APR 05 04^h34^m14^s.2 35°.00s 178°.60E 33 km M = 4.7
 ± 2.0 0.12 0.11 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GBZ	Pn	04 34	55			-1.2	100	2.83	244			
	e		35 17									
	Sn		28			0.0	100					
WTZ	Pn	04 35	00			-2.1	99	3.26	203		4.3	4.5
	P*		06			-4.9						
	eSn		44			5.7						
GNZ	Pn	04 35	06			-1.8	100	3.67	187		4.6	4.6
	P*		12			-5.9						
	Sn		48			-0.3	100					
KRP	Pn	04 35	10.1		U	0.1	100	3.82	219		5.2	5.0
	P*		15			-5.6						
	Sn		52			-0.1	100					
TUA	Pn	04 35	12			-0.0	100	3.98	197		4.8	4.6
	P*		18			-5.2						
	e(S*)		36 17.5			2.4						
TRZ	Pn	04 35	25.5			2.7	99	4.77	197		4.9	
NGZ	Pn	04 35	25.5			2.0	99	4.81	209			
CRZ	Pn	04 35	26			1.2		4.91	275		5.0	4.8
	Sn		36 19			0.7						
TNZ	Pn	04 35	32			0.9	100	5.37	218		5.3	
MNG	Pn	04 35	38			-3.4		6.14	203		4.4	4.4
	P*		53			-6.9						
	Sn		36 46			-1.5						
WEL	Sn	04 37	06			-1.6		6.97	205	4.6		
COB	e(Pn)	04 36	03			0.9		7.65	216		4.6	4.1
	Sn		37 27			3.1						
MJZ	Sn	04 38	40.5			-3.0		10.96	213			4.6
AMPLITUDES:	GBZ		1.5 1.7	WTZ		1.7 1.8	GNZ		2.0 2.5			
	KRP		2.2 0.8	TUA		1.0 0.6	TRZ		1.0			
	CRZ		0.6 0.3	TNZ		0.4	MNG		1.0 1.0			
	WEL	0.2		COB		0.3 0.3	MJZ		0.4			

APR 05 08^h38^m27^s.7 33°.49s 178°.35W 33 km M = 4.2
 ± 2.0 0.17 0.34 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	Pn	08 39	50			-1.4	100	5.88	219		4.3	4.2
	Sn		40 53.5			-1.4	100					
GNZ	Pn	08 39	52			-0.1	100	5.93	209		4.3	4.0
	Sn		40 56			-0.1	100					
TUA	Pn	08 39	59			-0.1	100	6.43	213		4.6	4.1
	Sn		41 10			1.6	99					
KRP	Pn	08 40	03			0.8	100	6.66	227		4.5	

TRZ	(P*)	08 40 24	-7.5		7.20	211		4.1	4.3
	eSn	41 25	-1.6	99					
MNG	Sn	08 41 56.5	-5.2		8.66	213		3.6	4.1
WEL	Sn	08 42 14	-8.4		9.52	213	4.3		
COB	eSn	08 42 37	-6.4		10.39	221			3.7
MJZ	Sn	08 43 48.5	-12.8		13.63	216			4.5
AMPLITUDES:	WTZ	0.6	0.4	GNZ	0.5	0.4	TUA	0.3	0.1
	KRP	0.2		TRZ	0.1	0.2	MNG	0.1	0.4
	WEL	0.1		COB			MJZ		0.3

APR 06 00^h03^m46^s.7 45°.24S 166°.73E 12 km M = 3.6
 ± 1.3 0.03 0.09 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	P*	00	04	00		-1.1	100	0.78	134			
	S*			10		-1.7	99					
MSZ	P*	00	04	03.1	U	-2.1	99	1.02	56		3.7	3.8
	(Pg)			04.5		-2.8						
	S*			17.5		-1.3	100					
	(Sg)			19.5		-1.6						
ROX	Pn?	00	04	17.5		0.2		1.84	98			
	eS*			44		0.5	100					
OBZ	P*	00	04	21		0.4	100	1.92	150		3.0	3.3
	S*			46		0.1	100					
RHP	Pn	00	04	28.6	D	0.2	100	2.65	66			
	P*			35		1.9						
	e(Sn)			05 04		4.3						
	S*			08.5		0.7	100					
DNZ	Pn	00	04	31.6	D	2.2	99	2.73	105			
	P*			37		2.6						
	e(Sn)			05 02		0.4						
	e(Sg)			20		1.3						
OMZ	Pn	00	04	33.5		0.9	100	2.96	88		3.8	3.5
	Sn			05 08.5		1.2	100					
KAI	eSg	00	06	13		0.2		4.34	53			
CMZ	eP*	00	05	08		2.6		4.54	71		3.8	3.6
	Sn			48.5		3.2						
COB	ePn	00	05	15		0.3		6.05	49		4.1	3.7
	Sn			06 28		6.7						
AMPLITUDES:	BRZ	1.7			MSZ	7.0	15	OBZ	0.2	1.2		
	DNZ	0.8	0.7		OMZ	0.4	0.4	CMZ	0.2	0.2		
	COB	0.2	0.3									

APR 06 13^h47^m38^s.2 46°.00S 167°.04E 85 km M = 3.5
 ± 0.6 0.02 0.05 4 S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	P	13	47	52		-0.1	100	0.41	58			
	S			48 02.5		-0.2	100					
OBZ	P	13	48	00.0	D	0.0	100	1.17	141		3.8	3.9
	S			16		-0.5	100					
MSZ	P	13	48	03.5	U	-0.3	100	1.47	25		3.5	3.4
	e			05.5								
	S			23.5		0.3	100					
	e			28								
ROX	P	13	48	07.5		0.9	99	1.68	73			3.4
	S			28.5		0.7	100					

DNZ	P	13 48 16.8	D	0.1 100	2.43	88		
	S	46		0.5 100				
RHP	P	13 48 22.8	D	-0.2 100	2.88	50		
	S	57		0.3 100				
OMZ	S	13 48 56		-0.7 100	2.88	73		3.3
MJZ	e	13 48 34			3.16	52		3.2 3.5
	S	49 02		-1.6 93				
COB	S	13 50 21		-3.6	6.43	42		3.5
AMPLITUDES:		BRZ 1.7		OBZ 3.2 9.0	MSZ 2.2 3.2			
		ROX 1.1		DNZ 0.9 0.8	OMZ 0.3			
		MJZ 0.3 0.7		COB 0.1				

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APR 06 15^h48^m17^s.0 46°.82S 165°.55E 12 km M = 4.4
 ± 1.1 0.05 0.10 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	Pn	15	48	46.5		0.4	100	1.73	54			
	(P*)			49.5		1.8						
	Sn		49	08.5		0.6	100					
	(Sg)			19		3.7						
OBZ	Pn	15	48	47.1	D	0.5	100	1.76	94		4.4	4.3
	(Pg)			54		1.3						
	Sn		49	09		0.3	100					
MSZ	Pn	15	48	58.6		-1.0	100	2.72	38		4.5	4.5
	e(P*)		49	03		-1.5						
	Pg			08.5		-3.4						
	S*			41.5		1.4	99					
ROX	Pn	15	49	03.5		0.8	100	2.95	64			
	e(Sn)			35		-2.2	98					
DNZ	Pn	15	49	12.4	D	1.2	100	3.57	76			
	P*			19		-0.1						
	e(Sg)			50 15		-2.3						
OMZ	Pn	15	49	18.5		-0.4	100	4.13	67		4.2	4.2
	P*			27.5		-1.2						
	S*		50	25		2.4						
RHP	Pn	15	49	20		0.3	100	4.19	51			
	eP*			31		1.3						
	e(Sn)		50	05		-2.1						
MJZ	Pn	15	49	22		-1.6	99	4.47	52		4.5	4.5
	(P*)			38		3.4						
	Sn		50	13		-0.9	100					
	e(Sg)			50		2.2						
CMZ	ePn	15	49	46.5		2.6		5.97	60		4.5	4.3
	e(P*)			50 08		8.0						
	e(Sg)			51 34		-3.9						
	Sn	15	50	58.5		8.1		5.99	46	4.6		
COB	Pn	15	50	10.5		2.5		7.73	45		4.3	4.2
	e(Sn)		51	32		-0.1						
	e			43								
AMPLITUDES:		BRZ 5.0		OBZ 7.3 14		MSZ 6.0 11						
		DNZ 2.7 3.2		OMZ 0.6 1.2		MJZ 2.5 2.7						
		CMZ 0.6 0.7		KAI 0.5		COB 0.2 0.5						

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APR 07 19^h28^m25^s.7 46°.74S 166°.12E 12 km M = 3.9
 ± 1.2 0.03 0.07 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	Pg	19	28	53.1	D	-0.5	100	1.38	46			
	Sg		29	13		0.8	99					
OBZ	Pg	19	28	54		0.3	100	1.38	98		3.4	3.8
	e		29	10.5								
MSZ	Sg			12.5		0.1	100					
	P*?	19	29	08		-0.2		2.42	32		4.0	4.1
	e(Pg)			11		-3.7						
ROX	e(Sg)			51		3.6						
	P*	19	29	11		0.4	100	2.56	62		4.5	4.1
DNZ	S*			43.5		-0.6	100					
	ePn	19	29	12.5		-2.0		3.17	76			
OMZ	e(Sn)			53.5		2.2						
	Sg			30 11		-1.5						
	ePn	19	29	19		-3.3		3.74	65		3.7	3.9
RHP	eP*			34		3.3						
	eSn			30 08		3.0						
	eS*			24		4.4						
	Pn	19	29	28		4.3		3.84	48			
MJZ	eP*			36		3.5						
	(S*)			30 17		-5.6						
	P*	19	29	43		5.8		4.12	50		4.1	4.1
CMZ	Pg			50.5		1.5						
	Sn			30 20		5.9						
KAI							5.59	58			3.7	
COB	Sn	19	31	38.5		5.6		5.66	44	3.9		
AMPLITUDES:		BRZ	2.6	2.0	4.2	OBZ	1.2	7.5	MSZ		2.5	5.0
		ROX	2.7	2.7	DNZ	0.6	1.2	OMZ		0.2	0.7	
		MJZ	1.1	1.4	CMZ		0.2	KAI	0.1			
		COB		0.3								

APR 08 09^h53^m05^s.4 45°.90S 170°.30E 12 km M = 3.7
 ± 0.4 0.02 0.03 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
DNZ	iPg	09	53	09.1	U	-0.1	100	0.15	77			
	Sg			11		-0.7	100					
ROX	Pg	09	53	20.8		-1.1	100	0.81	301			
	e(Sg)			36		3.1						
OMZ	Pg	09	53	24.0	U	-0.4	100	0.94	28		3.6	
	Sg			38.5		1.4	99					
RHP	Pg	09	53	41.0	U	-1.0	100	1.81	355			
	Sn			57.5		-0.7	100					
	Sg			54 08		1.6	99					
OBZ	Pn	09	53	36.5		0.8	100	1.82	236		3.3	3.9
	Sn			54 00		1.6	99					
MJZ	Pg	09	53	43		-1.2	100	1.92	4		3.9	3.8
	Sg			54 10.5		0.4	100					
BRZ	P*	09	53	40.0	U	0.4	100	1.93	273			
	S*			54 04		-1.1	100					
	Sg			08		-2.7						
CMZ	e(Pn)	09	53	51		1.1		2.85	37		3.7	3.7
	Pg			59.5		-3.6						
	Sg			54 39.5		-2.0						
	e			52.5								
AMPLITUDES:		DNZ	36	44	OMZ	2.5	OBZ	0.5	4.9			

		MJZ			3.0 3.5 BRZ		0.7 0.4 1.1 CMZ		0.5 0.7			
APR 08		14 ^h 22 ^m 14 ^s .7			37°.46S		176°.64E		183 km		80/ 176	
		± 0.6			0.03		0.04		4		M = 4.3	
		S.E. of RES. 0.6										
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	14	22	39.6	U	-0.8	99	0.59	152		4.0	3.7
	S			23 00		-0.2	100					
KRP	iP	14	22	42.9	U	0.2	100	0.99	242		3.1*	3.0*
	S			23 04		-0.5	100					
TUA	P	14	22	45.6	U	-0.6	100	1.41	163		4.1	4.3
	S			23 11		0.3	100					
AUC	P	14	22	49		0.8	99	1.60	291			
GNZ	P	14	22	48.4	DW	0.1	100	1.61	138		4.5	4.6
	S			23 14.5		0.3	100					
NGZ	P	14	22	51.5		0.2	100	1.91	205			
	S			23 19		-0.5	100					
TRZ	P	14	22	52.5		-0.9	99	2.10	176		4.2	4.2
	S			23 24		0.7	100					
TNZ	eP	14	22	57.5		-0.2		2.47	225		2.9*	2.7*
	e(S)			23 35		4.0						
ONE	P	14	23	00		2.2		2.48	312			
MNG	iP	14	23	04.2	D	-3.3		3.28	196		4.7	4.5
	S			43		-5.3						
WEL	S	14	23	59		-7.4		4.09	200	4.2		
COB	P	14	23	24		-1.9		4.72	219		3.2*	3.0*
	S			24 16		-5.1						
KAI								6.46	217	3.5*		
CMZ								6.84	205			3.3*
MJZ	S	14	25	29		-9.8		8.04	214			3.1*
CIZ	S	14	25	44		-1.0		8.30	144			

AMPLITUDES:		WTZ	3.4	2.0	KRP	1.2	1.1	TUA	1.2	1.9
		GNZ	6.5	11	TRZ	0.7	1.6	TNZ	0.1	0.1
		MNG	9.0	6.8	WEL	0.3		COB	0.2	0.5
		KAI	0.2		CMZ		0.4	MJZ		0.3
		CIZ		0.1						

		MJZ			3.0 3.5 BRZ		0.7 0.4 1.1 CMZ		0.5 0.7			
APR 08		15 ^h 28 ^m 17 ^s .9			44°.04S		167°.60E		12 km		80/ 177	
		± 1.4			0.08		0.10		R		M = 4.0	
		S.E. of RES. 1.0										
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	eP*	15	28	29		-1.6	99	0.67	160			
BRZ	Pn	15	28	47.9		0.7	100	1.75	181			
	Sn			29 10		0.8	100					
RHP	Pn	15	28	47.6		-0.3	100	1.79	93			
	P*			49		-0.7						
	Sn			29 10		-0.3	100					
ROX	Pn	15	28	48.5		-0.7	100	1.89	140			
	(Sn)			29 09		-3.7						
MJZ	Pn	15	28	51.5		-0.1	100	2.07	90		4.1	4.3
	P*			54		-0.4						
	Sn			29 18		1.0	100					
OMZ	Pn	15	28	59.2	D	0.5	100	2.59	115		4.3	4.2
	(P*)			29 03		-0.2						
	e(Sn)			31.5		2.0						
DNZ	Pn	15	29	01.5		0.4		2.76	132			
	P*			06		-0.2						

	e		01 02.5								
WNZ	P	15 00	23	0.2	100	2.08	219		4.0	4.4	
	(S)		50								
AUC	P	15 00	28	0.6	100	2.41	273				
	e(S)		53	-2.9							
TRZ	P	15 00	28.8	-1.6	97	2.64	196		4.7	4.4	
	e		35								
	S	01 02		0.5	100						
NGZ	P	15 00	32.4	0.3	100	2.75	218				
	(S)	01 09		4.6							
CNZ	P	15 00	33	0.3		2.80	218				
	(S)	01 13		7.5							
GSZ	eS	15 01	13	6.5		2.83	217				
ONE	eP	15 00	37	1.0		3.03	293	3.2*			
	S	01 14		2.7							
MNG	P	15 00	45	-4.6		4.01	206		4.3	4.6	
	e		53								
	S	01 31.5		-4.1							
	e		43.5								
WEL	(P)	15 01	02	0.9		4.86	208	4.4			
	S		50	-6.6							
	e	02 07									
CRZ	P	15 01	02.5	0.8		4.90	300		3.0*		
COB	P	15 01	08.5	-3.5		5.65	223		3.6*	3.4*	
	S	02 11.5		-4.6							
	e		23								
CMZ						7.64	209			3.7*	
CIZ	P	15 01	46	-0.5		8.15	150				
	S	03 11		-6.8							
MJZ	S	15 03	25	-11.2		8.91	216			3.5*	
AMPLITUDES:		WTZ	15 15	TUA	1.4 2.5	KRP	5.7 1.7				
		GBZ	2.6 2.2	WNZ	0.1 0.2	TRZ	2.1 2.2				
		ONE	0.3	MNG	2.7 5.8	WEL	0.4				
		CRZ	0.1	COB	0.5 1.0	CMZ					0.9
		CIZ	0.5 1.0	MJZ	0.7						

APR 09 20^h46^m14^s.6 36°.92S 179°.12E 33 km M = 4.3
 ± 1.1 0.04 0.08 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	Pn	20 46	44.5			0.0	100	1.93	206		4.2	4.4
	Sn		47 08.5			1.6	99					
WTZ	Pn	20 46	45.3		D	-0.1	100	2.00	237		4.3	4.6
	(P*)		50			0.0						
	Sn		47 09			0.4	100					
TUA	Pn	20 46	51.4		D	-0.1	100	2.45	219		4.5	4.4
	Sn		47 21			1.7	99					
GBZ	ePn	20 47	00			0.8	100	3.01	282			
	i		01.3		D							
	Sn		34			1.1	100					
KRP	ePn	20 46	59			-0.4	100	3.02	250			
	Sn		47 31.5			-1.6	99					
TRZ	Pn	20 47	00			-1.7	99	3.19	214		4.1	4.3
	Sn		37			-0.2	100					
NGZ	Pn	20 47	06.9			0.0	100	3.57	230			
	Sn		45			-1.4	100					
ONE	Pn	20 47	15			2.2		4.00	285			
WEL	Sn	20 48	28			-5.2		5.52	216	4.4		

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APR 11 05^h47^m09^s.4 37°.03S 177°.10E 215 km M = 4.0
 ± 1.4 0.07 0.13 9 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P	05	47	39.3		-1.2	100	0.95	185		3.9	3.6		
	eS		48	04		-0.7	100							
KRP	eP	05	47	46		1.0	100	1.53	234		2.7*			
TUA	P	05	47	47.0		-0.2	100	1.77	179		3.9			
TRZ	iP	05	47	55.3	U	0.4	100	2.53	185		4.3	3.8		
	eS		48	32		1.8	99							
GSZ	P	05	47	56.0		0.9	100	2.55	208					
MNG	P	05	48	09.0		-0.9	100	3.80	199		4.4	3.9		
	eS			56		-0.7	100							
WEL	eS	05	49	14		-0.9	100	4.63	202	4.2				
COB	eS	05	49	30		0.0	100	5.29	219				2.9*	

AMPLITUDES: WTZ 1.5 0.9 KRP 0.4 TUA 0.4
 TRZ 0.6 0.5 GSZ 0.8 MNG 3.0 1.2
 WEL 0.3 COB 0.3

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APR 11 13^h44^m30^s.3 39°.59S 173°.54E 12 km M = 3.5
 ± 0.4 0.02 0.03 R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
CNZ	ePn	13	44	57.5		-0.1	100	1.60	76					
	eSn		45	18		-0.1	100							
COB	ePn	13	44	58		0.1	100	1.62	202		3.4	3.0		
	eSn		45	17		-1.5	98							
MNG	iPn	13	45	00.8	D	0.3	100	1.81	125		3.8	4.1		
	eSn			22.8		-0.2	100							
WEL	ePn	13	45	03		0.8	100	1.93	151	3.7				
	eSn			27		0.9	100							
KRP	ePn	13	45	07.5		0.6	100	2.29	44		3.2	3.4		
	e			29										
TRZ	eSn			34		-0.5	100							
	ePn?	13	45	11		0.6	100	2.54	90					
	eS*			47		-0.9	100							

AMPLITUDES: CNZ 7.5 8.0 COB 0.6 0.8 MNG 3.7 9.6
 WEL 0.5 KRP 0.4 0.8

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APR 13 00^h31^m38^s.2 33°.19S 178°.81E 335 km M = 5.4
 ± 1.7 0.10 0.23 30 S.E. of RES. 2.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
GBZ	iP	00	32	49.0	D	1.4	100	4.09	221					
ONE	e(P)	00	32	57		5.0		4.49	234	3.5*				
AUC	e(P)	00	33	01		4.1		4.94	221					
WTZ	P	00	32	54.3		-3.5	99	5.01	197		5.7	5.4		
	i			57.2										
	eS			34		2.7	100							
CRZ	eP	00	33	03.5		3.0	99	5.26	255		3.5*			
KRP	P	00	33	03.8		1.3	100	5.43	209		4.2*			
	e			56										
	e			34										
	e			21										
GNZ	S-P			1 08		1.2	100	5.48	186					
TUA	eP	00	33	05		-1.5	100	5.77	193		5.4	5.4		

	eS	34 14	-1.7	100				
TRZ	eP	00 33 14	-1.6	100	6.55	194	5.4	5.3
	eS	34 29	-3.2	99				
CNZ	P	00 33 16.9	1.2	100	6.55	203		
	e	34 39						
TNZ	(P)	00 33 24.8	4.1		6.97	210	4.4*	3.6*
	e	35 02						
MNG	eP	00 33 28	-3.5	99	7.88	199	5.3	5.4
	i	29.8						
	e	34 55						
	eS	35 01.5	0.9	100				
CAZ	eP	00 33 32	-0.6	100	7.97	194		
	eS	35 04.5	1.8	100				
WEL	eP	00 33 39.5	-1.9	100	8.70	201	5.0	
	eS	35 18	-0.4	100				
CIZ	eP	00 34 16	2.7	100	11.35	163		
	eS	36 18	1.9	100				
AMPLITUDES:	GBZ	1.8	ONE	0.4	AUC	0.3		
	WTZ	10 7.0	CRZ	0.3	KRP	4.2		
	TUA	2.1 2.1	TRZ	1.4 2.5	CNZ	2.8 2.5		
	TNZ	1.1 0.3	MNG	5.7 9.0	CAZ	5.0 4.0		
	WEL	0.5	CIZ	0.9 1.0				

APR 13 06^h17^m10^s.6 34°.47S 179°.26E 250 km 80/ 185
 M = 4.2
 ± 1.9 0.11 0.25 35 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GBZ	eP	06	18	07		-2.6	99	3.55	239			
WTZ	P	06	18	13.8		-0.6	100	3.96	207	4.3	4.1	
	eS		19	04		-0.1	100					
GNZ	S-P			51		-1.6	100	4.28	193			
KRP	eP	06	18	23.9		2.1	99	4.58	220	3.1*		
TUA	eS	06	19	20.5		1.6	100	4.65	201		4.5	
TRZ	eP	06	18	34.3		1.9	100	5.44	200		4.2	
	eS		19	37		0.8	100					
MNG	eP	06	18	48.5		-1.4	100	6.84	205	4.0	4.1	
	eS		20	07		-0.5	100					
CIZ	eS	06	21	19		-0.8	100	10.02	162			
AMPLITUDES:	GBZ	0.7	WTZ	0.8 0.5	KRP	0.4						
	TUA	0.4	TRZ	0.3	MNG	0.4 0.6						

APR 14 03^h15^m05^s.5 34°.81S 179°.80W 33 km 80/ 186
 M = 4.5
 ± 1.1 0.06 0.08 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	ePn	03	15	54		1.5	100	3.18	204	4.5	4.6	
	eS*		16	43		0.5	100					
	e			55								
WTZ	Pn	03	16	03.8		-1.2	100	4.10	218	4.6	4.2	
	eS*		17	08		-2.0	100					
GNZ								4.21	204	4.5	4.2	
TUA	Pn	03	16	13.8		0.7	100	4.69	211	4.8	4.5	
	e		17	35.5								
ONE	ePn	03	16	17.5		1.9	100	4.88	257	4.9		
KRP	ePn	03	16	16.5		0.7	100	4.89	229	4.9	4.7	
	e		17	16								
TRZ	e?	03	16	33				5.45	209	4.6	4.3	

	e		18 03						
CNZ	ePn	03	16 28	0.3	100	5.76	219		
	e		17 42						
CRZ	ePn	03	16 33.5	-0.4	100	6.22	271	5.1	
MNG	ePn	03	16 40	-3.3	98	6.91	211	4.3	4.4
	e		57.7						
	eS*		18 34.5	0.5	100				
COB	eP*	03	17 34	0.6	100	8.61	221	4.6	4.0
	eSn		18 38.5	0.1	100				
CIZ	ePn	03	17 16	-2.4	99	9.48	166		
	eSn		19 01	1.7	100				

AMPLITUDES:	ECZ	0.7	1.0	WTZ	2.6	0.9	GNZ	1.5	1.2
	TUA	0.9	0.5	ONE	0.3		KRP	0.8	0.4
	TRZ	0.5	0.4	CNZ	0.4	1.3	CRZ	0.4	
	MNG	0.7	1.3	COB	0.3	0.3	CIZ	0.3	0.3

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APR 14 22^h51^m13^s.2 37°.14S 177°.37E 218 km M = 5.1
 ± 0.8 0.03 0.05 6 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WIZ	P	22	51	41.7		-0.4	100	0.41	201					
WTZ	iP	22	51	44.1	U	-0.2	100	0.90	200					
ECZ	iP	22	51	45.8	D	0.2	100	1.09	121		5.3	5.2		
	eS		52	09.5		-1.1	100							
KRP	P	22	51	51.0		0.8	100	1.66	241		4.1*	4.0*		
	eS		52	20		1.2	100							
TUA	iP	22	51	50.8	U	0.5	100	1.67	186		4.9	5.1		
	e		58											
	eS		52	18		-0.9	100							
WNZ	eP	22	51	52		0.6	100	1.80	214		5.1	5.0		
	e		52	38										
AUC	iP	22	51	55.0	D	0.6	100	2.10	277					
	eS		52	28		1.8	99							
TRZ	iP	22	51	58.8	U	0.7	100	2.45	190					
	eS		52	31		-1.6	99							
CNZ	P	22	52	00.0		1.3	100	2.51	214					
ONE	eP	22	52	01.1		-0.6	100	2.79	298	3.7*				
	e(S)			43.5		4.0								
MNG	P	22	52	12.9		-0.4	100	3.77	202		5.2	5.1		
	e			16.0										
	e			53										
	eS			59		-1.0	100							
CAZ	eP	22	52	16		1.5	100	3.86	193					
	e			59										
	eS			53 04		1.9	99							
WEL	eP	22	52	25		1.1	100	4.61	205	5.2				
	eS			53 17		-1.5	99							
CRZ	iP	22	52	24.4	DE	-0.2	100	4.68	304		4.1*	3.4*		
	eS			53 18		-2.0	99							
COB	P	22	52	32.0		-1.0	100	5.35	221		4.0*	3.9*		
	e			37										
	eS			53 34		-1.1	100							

AMPLITUDES:	WIZ	9.3		ECZ	16	12	KRP	9.0	7.5
	TUA	4.6	6.8	WNZ	0.8	0.6	AUC	17	3.3
	ONE	1.0		MNG	20	21	CAZ	7.2	15
	WEL	2.5		CRZ	1.2	0.3	COB	1.2	3.2

APR 15 14^h34^m21^s.9 33°.55s 178°.39w 282 km 80/ 188
 ± 1.6 0.08 0.16 34 S.E. of RES. 1.9 M = 4.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	14	35	36		-1.2	100	4.83	210		4.8	4.9		
	e		36	55										
GBZ	eP	14	35	46		-1.7	100	5.70	240					
	e?		36	46										
WTZ	eP	14	35	47		-2.0	100	5.80	219		4.6	4.9		
	e			50.2										
	e		36	08.0										
	eS			56		-1.3	100							
GNZ								5.86	209		4.9	4.8		
ONE	eP	14	35	57		1.1	100	6.37	248	3.7*				
TUA	eP	14	35	57		1.2	100	6.37	213		4.8	5.1		
	eS		37	12		2.4	99							
KRP	eP	14	35	57		-1.6	100	6.60	227		3.6*	3.5*		
	e		36	22										
	eS		37	14		-0.5	100							
TRZ	eP	14	36	08		2.8	99	7.13	211		4.8	4.6		
	eS		37	28		1.7	100							
CRZ	eP	14	36	12		2.5	99	7.48	261		3.5*			
MNG	eP	14	36	22		-1.4	100	8.59	213		4.3	4.7		
	e			50.5										
	eS		37	58		-0.9	100							
WEL	eS	14	38	17		-1.2	100	9.45	213	5.1				
CIZ	e	14	36	55				10.49	173					
	eS		38	42		0.4	100							

AMPLITUDES:

ECZ	0.8	1.0	GBZ	0.8	0.5	WTZ	0.8	1.5
GNZ	1.5	2.0	ONE	0.5		TUA	0.5	0.9
KRP	0.9	0.8	TRZ	0.3	0.5	CRZ	0.2	
MNG	0.5	1.6	WEL	0.5		CIZ	0.3	0.6

APR 16 03^h30^m42^s.7 33°.50s 178°.44w 274 km 80/ 189
 ± 1.8 0.09 0.13 28 S.E. of RES. 1.3 M = 4.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	eP	03	32	08		-1.8	99	5.82	218		4.3	4.5		
	eS		33	17.5		-0.4	100							
TUA	eP	03	32	18		1.2	100	6.39	213		4.6	4.7		
	eS		33	30		-0.5	100							
KRP	e(P)	03	32	27		7.7		6.60	226		3.1*	3.1*		
	eS		33	36		0.9	100							
TRZ	eS	03	33	48		0.7	100	7.15	211			4.6		
MNG	e(P)?	03	32	45		0.5	100	8.61	213		4.2	4.4		
	e		33	36										
	eS		34	21		0.9	100							
WEL	eS	03	34	38		-1.4	99	9.47	213	4.9				
CIZ	e	03	33	24				10.55	173					
	eS		35	04		0.3	100							

AMPLITUDES:

WTZ	0.4	0.6	TUA	0.3	0.4	KRP	0.3	0.3
TRZ	0.5		MNG	0.4	0.8	WEL	0.3	
CIZ	0.4							

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GBZ	eP	23 07 46.2	1.0	100	2.71	354			
COB	eP	23 07 51.0	-1.2	100	3.24	227			4.0° 4.0°
	eS	08 29	-1.8	99					
AMPLITUDES:		CNZ	24 16	TRZ	1.8	11	KRP	9.5	2.3
		TUA	3.6 3.5	TNZ	3.0	1.5	WTZ	8.5	7.0
		MNG	13 24	CAZ	3.6	7.0	ECZ	2.3	1.7
		WEL	1.8	GBZ	0.5		COB	2.0	6.5

APR 17 01^h08^m45^s.4 43°.23S 171°.63E 12 km M = 3.7
 ± 0.4 0.02 0.04 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
KAI	ePg	01	09	00		-0.1	100	0.72	347	3.1				
	S*			05.9		-2.7	99							
CMZ	P*	01	08	58.3		-2.3	99	0.82	116		4.1	3.8		
	e		09	04.3										
	S*			11.7		0.0	100							
MJZ	iP*	01	09	04.8	USW	-1.2	100	1.13	228		3.8	3.5		
	Pg			06.7		-1.8	100							
	eS*			23		1.8	99							
RHP	Pn	01	09	09.8		-0.5	100	1.42	231					
	eP*			11		0.2	100							
	eS*			31.5		1.8	100							
KKY	ePn	01	09	15.6		1.2	100	1.72	63					
	eS*			39		0.4	100							
OMZ	P*	01	09	19.9		0.6	100	1.92	195		4.0	3.9		
	eSg			49		-1.0	100							
COB	ePn	01	09	24		1.8	99	2.29	21		3.7	3.2		
	e			25.0										
	Sn			50.9		1.1	100							
	eS*			56		0.3	100							

AMPLITUDES: KAI 1.0 CMZ 14 10 MJZ 7.1 4.0
 RHP 12 7.0 OMZ 1.5 2.3 COB 0.5 0.6

APR 17 01^h41^m34^s.6 35°.25S 179°.78W 33 km M = 4.8
 ± 1.1 0.06 0.08 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	ePn	01	42	18		1.8	100	2.79	208		4.6	4.7		
	e			43 01										
	e			09										
WTZ	ePn	01	42	28		-1.6	100	3.77	223		4.7	4.5		
	eSn			43 14		2.8	99							
GBZ	ePn	01	42	33		0.6	100	3.98	255					
	e			43 30										
TUA	ePn	01	42	37		-0.1	100	4.32	214		4.6	4.7		
	e(Sn)			43 31		6.6								
KRP	Pn	01	42	40.8		-0.4	100	4.62	233		5.0	5.0		
	eSn			43 34		2.4	99							
AUC	ePn	01	42	44		1.8	100	4.70	248					
ONE	ePn	01	42	41		-2.8	99	4.81	262	5.0				
TRZ	e	01	44	19				5.08	211				4.6	
NGZ	ePn	01	42	52		0.4	100	5.38	222					
	eS*			44 16		-1.4	100							
TNZ	ePn	01	43	02		0.6	100	6.10	228		5.2	5.2		
	e(S*)			44 32		-6.9								
CRZ	ePn	01	43	02.5		-1.1	100	6.25	275		5.1			

MNG	eP?	01 42 58	-9.4	6.54	214	4.4	4.8			
	e	43 13								
	e	24								
	eSn	44 16	-1.8	100						
	e	37								
	e(S*)	48	-4.1							
WEL	eSn	01 44 37	-1.4	100	7.40	214	4.7			
	e	49								
CIZ	ePn	01 43 43	1.4	100	9.05	165				
	eSn	45 17	-1.0	100						
	e	22								
AMPLITUDES:		ECZ	1.0	1.7	WTZ	3.8	2.0	GBZ	0.7	0.8
		TUA	0.7	0.9	KRP	1.2	0.8	AUC	0.3	
		ONE	0.4		TRZ		1.0	NGZ	0.9	0.5
		TNZ	0.3	0.3	CRZ	0.4		MNG	1.2	3.1
		WEL	0.4		CIZ	0.5	1.1			

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APR 17 07^h21^m52^s.3 43°.35S 171°.97E 12 km M = 3.6
 ± 0.4 0.02 0.03 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CMZ	iP*	07	22	01.1	U	-1.6	100	0.54	116		3.8	3.7
	ePg			05		1.5	100					
	eS*			09.5		-0.7	100					
KAI	eP*	07	22	09		-0.2	100	0.92	333	3.2		
	eS*			23		1.4	100					
MJZ	iPn	07	22	12.9		-2.1	99	1.27	239		3.7	3.7
	P*			14.0		-1.0	100					
	eSn			31		-1.0	100					
RHP	Pn	07	22	17.0		-2.1	99	1.56	241			
	P*			20.0		-0.1	100					
	eS*			41		0.2	100					
KKY	ePn	07	22	20		0.7	100	1.57	54			
OMZ	P*	07	22	26.0		0.4	100	1.88	203		4.0	3.8
	e(Sn)			50		3.1						
COB	eP*	07	22	35		1.7	100	2.33	14		3.6	3.2
	eS*			23 03		-0.9	100					
DNZ	eP*	07	22	42		2.0	99	2.73	202			
	e(S*)			23 19		3.4						
	eSg			26		1.9	99					
ROX	eSg	07	23	29		0.6	100	2.85	221			3.3
AMPLITUDES:		CMZ	15	19	KAI	0.7		MJZ	4.5	5.2		
		RHP	23	7.5	OMZ	1.8	2.0	COB	0.4	0.6		
		DNZ	1.0	1.0	ROX	0.4						

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APR 17 09^h10^m38^s.4 40°.19S 176°.54E 12 km M = 3.7
 ± 0.5 0.02 0.05 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	P*	09	10	50.9		-0.1	100	0.67	19		3.4	3.9
	eSg			11 02.5		1.2	100					
	e			04.5								
CAZ	P*	09	10	51.1		-1.3	100	0.76	198			
	ePg			55.2		1.4	100					
	eSg			11 06		2.0	99					
	e			07.5								
MNG	iP*	09	10	52.8	U	-2.4	99	0.92	242		3.7	3.8

	i			53.4									
	ePg			56.5		-0.5	100						
	eS*	11	06			-1.5	100						
CNZ	Pn	09	11	00.5		-0.5	100	1.25	322				
	eSg			21		0.3	100						
TUA	iPn	09	11	01.4	D	-2.4	99	1.46	19		3.7	3.7	
	e			34									
	e			38									
WEL	e	09	11	25				1.74	230	3.5			
	eS*			32		-0.1	100						
WTZ	ePn	09	11	13		-1.3	100	2.23	9		3.3	3.3	
	ePg			24		0.5	100						
	eSg			56		2.4	99						
KRP	ePn	09	11	15		-1.6	100	2.39	341		3.9	3.9	
	e			23									
COB	eP*	09	11	33		1.7	100	3.03	252		3.9	3.6	
	eS*			12		1.0	100						
AMPLITUDES:		TRZ		2.1	11	CAZ		8.0	16	MNG		10	17
		CNZ		8.0	10	TUA		0.7	0.8	WEL	0.4		
		WTZ		0.4	0.4	KRP		0.6	0.5	COB		0.5	0.9

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APR 18 10^h18^m16^s.6 46°.30S 166°.10E 12 km M = 3.6
 ± 1.8 0.05 0.12 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	Pg	10	18	46.0		-1.3	100	1.52	114		3.3	3.6
	Sg			19 08.0		0.2	100					
ROX	ePg	10	19	04		-1.1	100	2.39	71		3.8	3.6
	eSg			37		-0.4	100					
DNZ	P*	10	19	12.3		1.5	99	3.10	84			
RHP	eP*	10	19	22		3.2		3.57	53			
	ePg			27.5		-1.4	100					
	i			43.2								
OMZ	ePg	10	19	30		0.7	100	3.59	72		3.6	
MJZ	ePg	10	19	35.3		0.6	100	3.86	55		3.6	
AMPLITUDES:		OBZ		0.7	3.5	ROX		0.7	1.0	DNZ		1.5
		RHP		0.4		OMZ		0.2		MJZ		0.4

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APR 18 17^h32^m09^s.3 37°.22S 176°.82E 231 km M = 4.2
 ± 1.0 0.06 0.08 7 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	17	32	40.0		-1.2	100	0.77	170		3.8	3.8
	S			33 04.8		-1.3	100					
KRP	P	17	32	44.0		0.0	100	1.23	235		2.9*	
	eS			33 13.0		2.0	99					
ECZ	P	17	32	48.2		2.5	99	1.46	109		4.1	4.1
	e			33 06.2								
	eS			13.2		-0.7	100					
GBZ	P	17	32	43.6		-2.3	99	1.48	313			
TUA	P	17	32	47.0		0.1	100	1.60	171		4.0	4.2
	S			33 16.3		0.2	100					
GNZ	S-P			29.0		-0.9	100	1.71	146		4.5	4.3
NGZ	P	17	32	53.8		1.6	100	2.18	206			
CNZ	eP	17	32	54.2		1.6	100	2.21	207			
TRZ	P	17	32	53.7		-0.1	100	2.33	180		3.9	4.0
	S			33 30		1.8	100					

MNG	P	17 33 06.0	-1.4	100	3.55	197	5.1	4.4
	eS	50	-2.4	99				
WEL	eP	17 33 17	-0.3	100	4.36	201	4.2	
	eS	34 09	-1.0	100				
COB	eP	17 33 25	-0.1	100	4.99	218	3.2*	3.2*
	S	34 25	0.9	100				
AMPLITUDES:	WTZ	1.3 1.4	KRP	0.6	ECZ	0.7 0.8		
	GBZ	1.6	TUA	0.6 0.8	GNZ	4.0 4.0		
	NGZ	1.1	CNZ	0.5	TRZ	0.3 0.8		
	MNG	15 4.5	WEL	0.3	COB	0.2 0.7		

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APR 18 18^h35^m15^s.9 38°.52s 176°.04E 115 km M = 3.7
 ± 1.9 0.05 0.11 19 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WNZ	eP	18 35	31.3			-0.7	100	0.12	154					
KRP	iP	18 35	35.3			0.2	100	0.72	327			3.4*		
NGZ	P	18 35	37.0			1.8		0.74	207					
CNZ	P	18 35	37.0			1.5	100	0.77	209					
GSZ	P	18 35	37.9			1.9	100	0.83	205					
TUA	P	18 35	37.2			0.3	100	0.92	108			3.7	3.8	
	S		52.8			-0.1	100							
WTZ	P	18 35	36.0			-0.9	100	0.93	55			3.2	3.3	
	eS		52.0			-0.9	100							
TRZ	P	18 35	40.5			0.6	100	1.20	149			4.2	3.5	
	S		36 00.8			2.6	99							
GNZ	S-P		18.8			-2.7	99	1.57	95			3.6	3.8	
MNG	P	18 35	51.0			-0.4	100	2.13	191			3.9	3.8	
	i		54.2											
	eS		36 17.0			-0.9	100							
	e		25											
WEL	eS	18 36	34			-2.8	99	2.92	199	3.6				
AMPLITUDES:	WNZ	0.2	KRP	3.8	NGZ	3.5								
	CNZ	3.1	GSZ	3.6	TUA	1.3 1.4								
	WTZ	0.8 1.1	TRZ	2.3 1.1	GNZ	1.0 2.7								
	MNG	3.0 3.0	WEL	0.2										

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APR 19 03^h33^m41^s.7 37°.89s 176°.14E 212 km M = 4.7
 ± 0.8 0.04 0.06 6 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
KRP	iP	03 34	10.0			-0.1	100	0.48	265			4.0*		
	S		30.2			-2.0	99							
WTZ	P	03 34	09.3			-1.6	99	0.67	99					
WNZ	P	03 34	11.5			0.2	100	0.75	182			4.4		
TUA	P	03 34	14.3			-0.1	100	1.21	139					
NGZ	P	03 34	16.7			1.2	100	1.36	197					
	S		43.5			1.8	99							
CNZ	P	03 34	16.7			0.9	100	1.39	199					
	eS		44			1.8	99							
AUC	eP	03 34	17			0.4	100	1.49	313					
TRZ	P	03 34	19.4			0.4	100	1.75	162			5.0	4.9	
	e		40.7											
	S		46.5			-1.1	100							
ECZ	P	03 34	20.8			0.2	100	1.92	85			4.6	4.8	
	S		50.8			0.2	100							
ONE	eP	03 34	29			1.8		2.55	325					

MNG	iP	03 34 29.9	0.0	100	2.78	190	
	e	57.5					
	eS	35 04	-3.0				
CAZ	P	03 34 33.2	0.6	100	3.01	179	
	S	35 12.1	0.0	100			
WEL	eP	03 34 38.8	-0.1	100	3.55	197	4.7
	S	35 20.2	-3.3	89			
COB	P	03 34 45.8	-0.4	100	4.15	218	3.7* 4.0*
	S	35 36.5	0.1	100			
KAI	eS	03 36 11	-4.8		5.89	217	3.9*
CMZ	eP	03 35 13	-0.6		6.29	204	3.4* 4.3*
	S	36 21.2	-3.8				
RHP	P	03 35 32.7	0.7		7.72	214	
	S	36 55.8	-2.5				

AMPLITUDES:	KRP	8.5	WNZ	0.3	NGZ	6.5	7.5
	CNZ	5.8	10 TRZ	5.0	10 ECZ	2.1	3.6
	CAZ	4.5	21 WEL	1.4	COB	0.8	5.0
	KAI	0.6	CMZ	0.3	3.5 RHP	1.2	3.5

APR 19 05^h40^m28^s.2 37°.30S 176°.79E 12 km M = 3.8
 ± 2.2 0.16 0.07 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P*	05	40	39.8		-1.5	100	0.70	167		3.4	
KRP	eP*	05	40	49.0		-0.4	100	1.18	237		3.3	
	i			51.8								
ECZ	iP*	05	40	53.9		-0.1	100	1.45	106		4.2	4.0
	S*		41	13.8		0.5	100					
TUA	P*	05	40	54.8		-0.7	100	1.54	170		3.9	
GNZ								1.66	145		4.1	3.8
MNG	eP*	05	41	31		2.4	99	3.47	197		3.4	

AMPLITUDES:	WTZ	3.0	KRP	0.8	ECZ	1.2	0.8
	TUA	0.6	GNZ	2.6	1.6 MNG	0.2	

APR 19 07^h47^m23^s.4 37°.50S 176°.94E 12 km M = 4.6
 ± 0.8 0.07 0.07 R S.E. of RES. 2.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P*	07	47	32.1		-0.7	100	0.49	175			
KRP	P*	07	47	41.3		-3.5	99	1.19	249		4.6	
ECZ	ePn	07	47	44.0		-2.5	99	1.30	99		4.9	4.8
	iP*			45.9		-0.7						
	Sn		48	05.8		1.9	100					
WNZ	ePn	07	47	45		-1.7	100	1.30	210		4.4	
	eP*			50		3.1						
TUA	ePn	07	47	45.0		-1.9	100	1.31	173		4.8	
	iP*			47.4		0.4						
NGZ	ePn	07	47	56		0.1	100	1.98	211			
	eP*		48	01.3		3.0	99					
CNZ	ePn	07	47	58.0		1.5	100	2.02	212			
	eP*		48	01.3		2.3						
	ePg			10.0		5.8						
TRZ	Pn	07	47	57.0		0.1	100	2.05	182		4.8	
	iP*		48	02.5		2.9						
ONE	ePn	07	48	06		0.3	100	2.69	309			
	ePg			21		3.1						
MNG	ePn	07	48	13.8		-0.3	100	3.31	200		3.8	

	eP*		26.0		4.9				
	iPg		31.0		0.6				
CRZ	ePn	07 48	32.8		0.9 100	4.62	310		4.5
COB	ePn	07 48	37.8		2.8 99	4.84	221		4.6
AMPLITUDES:	KRP		17		ECZ	7.1 8.0	WNZ		0.5
	TUA		7.5		NGZ		CNZ		2.2
	TRZ		3.8		MNG	0.7	CRZ		0.3
	COB		0.7						

APR 19 07^h55^m51^s.3 37°.39s 176°.94E 33 km 80/ 202
 ± 1.0 0.08 0.05 R S.E. of RES. 1.4 M = 4.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P*	07 56	02.7			-0.5	100	0.59	176					
KRP	iPn	07 56	11.9			0.2	100	1.23	244			4.2		
	iP*		14.4			0.6	100							
ECZ	ePn	07 56	10.0			-2.7	98	1.31	104			4.7	4.7	
	iP*		12.4			-2.6								
	eSn		31			2.3	99							
TUA	ePn	07 56	13.5			-0.7	100	1.42	173			4.5		
	iP*		14.2			-2.7								
	eSn		31.5			0.1	100							
NGZ	eP*	07 56	27			-0.9	100	2.07	210					
	e		35.2											
CNZ	ePn	07 56	25			1.3	100	2.12	211					
	eP*		29			0.4								
	e		36											
TRZ	Pn	07 56	24.0			-0.3	100	2.16	182			4.3		
	eP*		29.4			0.0								
ONE	eP*	07 56	35			-2.4		2.63	307					
	e		51											
MNG	Pn	07 56	42.2			0.7	100	3.42	199			3.9		
	eP*		55			4.2								
COB	ePn	07 57	06			3.9		4.93	220			4.1		
AMPLITUDES:	KRP		5.8			ECZ	4.5 5.0	TUA				3.1		
	NGZ		0.8			CNZ	1.0	TRZ				1.2		
	MNG		0.8			COB	0.2							

APR 19 19^h22^m38^s.9 33°.62s 179°.62W 307 km 80/ 203
 ± 1.7 0.10 0.23 22 S.E. of RES. 1.6 M = 4.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	19 23	52			2.4	99	4.34	200			4.4	4.4	
	eS	24	45.5			0.4	100							
WTZ	eP	19 23	56			-3.1	97	5.16	211			4.6	4.3	
	eS		25 01.5			-0.4	100							
GNZ	S-P		1 04			-0.8	100	5.37	200			4.3		
TUA	eP	19 24	06			-0.7	100	5.80	206			4.6		
KRP	eP	19 24	07			0.0	100	5.83	221			2.9*		
CRZ	eP	19 24	15			0.6	100	6.45	261			3.4*		
MNG	eP	19 24	33			-0.5	100	8.01	208			3.8	4.1	
	eS		26 05			1.5	100							
WEL	eS	19 26	22			-0.3	100	8.86	209			4.6		
AMPLITUDES:	ECZ		0.3 0.3			WTZ	0.8 0.5	GNZ				0.5		
	TUA		0.3			KRP	0.2	CRZ				0.2		
	MNG		0.2 0.5			WEL	0.2							

		APR 19 23 ^h 11 ^m 09 ^s .1			37°.56s	177°.00E	12 km	80/ 204				
		± 0.3			0.03	0.02	R	M = 4.5				
								S.E. of RES. 1.0				
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPg	23	11	18.1		0.1	100	0.42	181			
KRP	P*	23	11	31.0		-0.0	100	1.21	252		4.6	
	iPg			33.7		-0.1	100					
ECZ	ePn	23	11	29.4		-2.1	96	1.23	97		4.8	4.5
	iP*			31.9		0.5	100					
	Sg			51.5		0.6	100					
	e			56								
TUA	eP*	23	11	31.7		0.1	100	1.25	175		4.8	
	iPg			33.2		-1.3	99					
WNZ	ePg	23	11	35		-0.1	100	1.29	213		4.1	
	e			41								
GNZ								1.35	144		4.8	
AUC	ePn	23	11	41.2		0.6	100	1.91	291			
	iPg			48.5		0.8						
NGZ	ePn	23	11	42.5		1.2		1.95	213			
	eP*			46		2.4						
	ePg			50.7		2.0						
	e			57								
CNZ	eP*	23	11	47		2.6		2.00	214			
TRZ	Pn	23	11	43.5		1.6	99	2.00	184		4.7	
	iPg			49.6		0.1						
ONE	ePn	23	11	53		0.6	100	2.77	309			
MNG	ePn	23	11	59.0		-0.3	100	3.28	201		4.2	
	iP*			12 10.0		3.8						
	i			12.1								
	iPg			16.0		0.6						
CRZ	ePn	23	12	18.0		-0.7	100	4.70	310		4.5	
AMPLITUDES:		KRP	15			ECZ	7.1	4.6	TUA	9.0		
		WNZ	0.3			GNZ	22		AUC	1.6		
		NGZ	0.9			CNZ	1.7		TRZ	3.5		
		MNG	2.0			CRZ	0.3					

		APR 20 14 ^h 50 ^m 35 ^s .6			33°.15s	179°.74w	394 km	80/ 205				
		± 1.4			0.16	0.28	17	M = 4.5				
								S.E. of RES. 1.0				
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eS	14	52	59		1.2	99	4.75	197			4.5
WTZ	P	14	52	03.0		-0.4	100	5.52	208		4.6	4.5
	S			53 12.0		-0.2	100					
GNZ	P	14	52	07.5		1.3	99	5.79	198		4.2	4.5
	S			53 16.0		-1.4	99					
TUA	eS	14	53	25		-0.5	100	6.19	203			4.7
TRZ	eS	14	53	42		0.5	100	6.97	202			4.4
MNG	eP	14	52	34.8		-1.0	100	8.39	206		4.1	4.5
	e			54 00								
	eS			10.3		-0.4	100					
WEL	eS	14	54	29		0.6	100	9.23	207	4.7		
COB	eS	14	54	44		0.5	100	9.94	215			3.0*
AMPLITUDES:		ECZ	0.3		WTZ	0.7	0.6	GNZ	0.3		1.0	
		TUA	0.3		TRZ	0.3		MNG	0.3		1.0	
		WEL	0.2		COB	0.2						

APR 20 17^h43^m58^s.6 42°.32S 171°.25E 12 km M = 3.8
 ± 0.6 0.05 0.10 R S.E. of RES. 1.3 80/ 206

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KAI	P*	17	44	03.2		-0.5	100	0.23	150			
COB	ePn	17	44	25.3		-1.4	100	1.66	42		4.1	3.7
	eP*			27.2		-0.9	100					
	Sn			46.2		-1.6	99					
MJZ	Pn	17	44	28.0		-0.1	100	1.76	199		4.0	4.0
	eP*			31.0		1.2	100					
	S*			51.7		-1.3	100					
KKY	ePn	17	44	29.6		0.8	100	1.81	94			
	eP*			33.4		2.7						
RHP	Pn	17	44	31.0		0.0	100	1.97	205			
	iP*			33.5		0.1	100					
OMZ	Sn			55.2		-0.1	100					
	ePn	17	44	39		-2.7		2.76	185		3.7	3.8
	i(P*)			51		4.2						
WEL	Sn	17	44	11.8		-2.4						
	eP*	17	44	50		2.0		2.83	70	3.6		
MSZ	eSn	17	44	16		0.1						
	ePn	17	44	47.5		-2.6		3.37	225		3.9	3.9
MNG	eP*			57		-0.3						
	ePg		45	03.8		-3.0						
	Sn			25.0		-4.0						
	eS*			42.0		0.6						
	ePn	17	44	55.0		1.7	99	3.61	63			
NGZ	iP*		45	04.5		3.2						
	eSn			36		1.4						
KRP	eP*	17	45	14		-3.6		4.56	48			
	ePn	17	45	21.0		2.0	99	5.49	38		3.6	
AMPLITUDES:	COB			2.6	3.6	MJZ		4.5	5.8	RHP	14	12
	OMZ			0.4	0.9	WEL	0.2			MSZ	1.1	2.0
	NGZ			0.3		KRP	0.2					

APR 21 01^h03^m47^s.8 41°.75S 174°.29E 90 km M = 4.5
 ± 0.4 0.03 0.06 7 S.E. of RES. 1.5 80/ 207

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TCW	P	01	04	02.1		-1.1	100	0.54	359			
BHW	P	01	04	03.6		0.3	100	0.56	52			
WEL	P	01	04	03.8		0.2	100	0.58	38	4.7		
	S			12.4		-3.2	98					
WDW	P	01	04	05.3		0.6	100	0.72	48			
MOW	P	01	04	06.7		1.1	100	0.79	66			
KKY	P	01	04	07.7		2.0	99	0.80	213			
CAW	P	01	04	07.2		0.8	100	0.87	43			
KIW	P	01	04	08.8		1.0	100	1.01	28			
MTW	P	01	04	09.9		1.0	100	1.09	57			
COB	P	01	04	12.4		0.4	100	1.34	299			
MNG	P	01	04	14.4		1.1	100	1.45	39			
	S			31.0		-1.7	100					
CAZ	P	01	04	18.0		1.5	100	1.69	61			
	eS			38.3		0.4	100					

NGZ	eP	02 56 12.0	1.5	100	6.35	222			
CNZ	eP	02 56 11.5	0.3	100	6.40	223			
	e	20.0							
CRZ	eP	02 56 20	1.4	100	6.97	269	3.6*		
TNZ	eP	02 56 21	1.0	100	7.07	228	3.8*		
	e	35.8							
MNG	eP	02 56 23.7	-1.7	100	7.49	215	4.5	4.6	
	i	30.0							
	S	57 47.3	-2.0	100					
WEL	eS	02 58 07	-2.4	99	8.35	215	4.8		
COB	eP	02 56 46	-2.6	99	9.27	223	3.5*	3.3*	
	eS	58 31	0.2	100					
CIZ	e(P)	02 56 59.2	7.3		9.52	170			
	eS	58 39.5	2.8	99					
RHP	P	02 57 35	1.6	100	12.76	219			
AMPLITUDES:		ECZ	1.0	GNZ	3.5	WTZ	3.8		
		GBZ	1.5	TUA	1.0	KRP	1.6		
		TRZ	0.4	2.1	NGZ	0.6	CNZ	0.8	
		CRZ	0.3		TNZ	0.3	MNG	1.1	
		WEL	0.3		COB	0.2	0.5	CIZ	1.0
		RHP	0.3						

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APR 21 03^h00^m08^s.6 34°.65s 178°.98w 196 km M = 4.8
 ± 1.5 0.08 0.11 25 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
ECZ	P	03 01	08.1			1.7	100	3.64	213		4.8	
WTZ	P	03 01	19.0			-0.3	100	4.66	223		5.1	4.8
	eS		02 18			4.0						
GNZ	P	03 01	22			2.7	99	4.66	210		5.1	
GBZ	P	03 01	20.5			-0.4	100	4.80	249			
	e		31.8									
TUA	P	03 01	25.8			-0.3	100	5.19	216		5.2	4.7
	eS		02 29			2.8						
KRP	P	03 01	29.2			-1.1	100	5.51	232		3.7*	
	eS		02 34			0.4	100					
ONE	eP	03 01	30			-1.0	100	5.57	256			
TRZ	eP	03 01	35			-0.8	100	5.94	213		4.7	
NGZ	eP	03 01	41.0			0.9	100	6.27	222			
	e		02 53									
CNZ	eP	03 01	39			-1.7	100	6.32	222			
	e		54.0									
	e		02 01.2									
CRZ	eP	03 01	48			-0.2	100	6.89	269		3.6*	
MNG	eP	03 01	52.0			-3.0	99	7.41	215		4.2	4.5
	i		55.2									
	S		03 18			0.0	100					
WEL	eS	03 03	35			-3.1	99	8.27	215	4.6		
COB	eP	03 02	20			1.9	100	9.19	223		3.3*	
	eS		04 02			2.5	99					
CIZ	e(P)	03 02	30			8.0		9.49	169			
	eS		04 06			-0.4	100					
RHP	P	03 03	04.5			1.5	100	12.68	219			
AMPLITUDES:		ECZ	1.2	WTZ	3.5	2.4	GNZ	4.0				
		GBZ	1.2	TUA	1.6	0.6	KRP	1.3				
		TRZ	0.4	NGZ	0.6		CRZ	0.3				
		MNG	0.6	1.6	WEL	0.2	COB	0.5				

		CIZ		0.7 2.0 RHP		0.6				80/ 210	
APR 21		04 ^h 25 ^m 02 ^s .8		35°.31s		179°.00w		255 km		M = 4.2	
		± 1.7		0.09		0.20		15		S.E. of RES. 1.4	
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
ECZ	eP	04	25	56		-1.0	100	3.10	219		3.9 4.1
	eS		26	39.7		0.6	100				
GNZ	S	04	26	59		-0.6	100	4.09	215		
WTZ	P	04	26	08.0		-1.6	99	4.19	229		4.2 4.2
	S		27	01.2		-0.4	100				
GBZ	e(P)	04	26	18.5		4.3		4.58	257		
TUA	eP	04	26	15.7		0.5	100	4.66	220		4.2 4.6
	eS		27	12		0.4	100				
KRP	eP	04	26	23		2.3	99	5.11	238		3.1*
	e(S)		27	27		5.5					
NGZ	eP	04	26	26		-3.0		5.79	226		
MNG	eP	04	26	43		0.5	100	6.87	218		3.7 4.0
	eS		28	02.0		1.4	100				
CRZ	P	04	26	42.3		-0.6	100	6.90	275		3.5*
WEL	eS	04	28	18		-2.0	99	7.72	218	4.5	
AMPLITUDES:		ECZ	0.2	0.3	WTZ	0.6	0.6	TUA	0.2	0.5	
		KRP	0.4		MNG	0.2	0.5	CRZ	0.2		
		WEL	0.2								

		80/ 211									
APR 22		00 ^h 01 ^m 32 ^s .1		37°.44s		177°.16E		12 km		M = 4.1	
		± 0.4		0.03		0.04		R		S.E. of RES. 0.9	
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
WIZ	Pg	00	01	33.9		-1.0	100	0.09	165		
WTZ	Pg	00	01	43.0		-0.6	100	0.56	194		
ECZ	ePg	00	01	55.5		0.4	100	1.13	103		4.1
	i			58.8							
TUA	ePn	00	01	56.0		-0.2	100	1.37	180		4.2
	iP*			58.7		2.1					
	eSg		02	18.0		-0.3					
KRP	Pn	00	01	55.2		-1.2	99	1.38	249		4.3
	iP*			58.2		1.4					
	iPg			59.8		-0.2					
GNZ	ePn	00	01	55.8		-0.7	100	1.39	151		4.1
	ePg		02	00.3		0.2					
GBZ	ePn	00	02	02.8		0.4	100	1.82	312		
	e			11.2							
	eS*			29.0		0.7					
AUC	ePn	00	02	04.0		-0.8	100	1.99	286		
	ePg			13.0		0.6					
	eSg			41.5		2.3					
NGZ	eP*	00	02	12		2.5		2.12	214		
	e			21							
TRZ	ePn	00	02	07.0		0.3	100	2.12	187		4.0
	e			13.0							
CNZ	eP*	00	02	12		1.7		2.17	215		
	e			20.8							
ONE	ePn	00	02	16		0.2	100	2.80	306		
TNZ	eP*	00	02	22		1.0	100	2.80	231		4.4
MNG	ePn	00	02	26		1.5	99	3.44	202		3.6
	e			37							

AMPLITUDES:	ECZ	1.8	TUA	2.1	KRP	5.6
	GNZ	5.0	GBZ	1.8	TRZ	0.8
	CNZ	0.6	TNZ	0.2	MNG	0.5

APR 22 11^h15^m55^s.5 34°.98S 178°.89W 257 km M = 4.3
 ± 1.2 0.07 0.14 12 S.E. of RES. 1.3 80/ 212

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	11	16	53.5		0.3	100	3.41	217				4.2	4.3
	e			55.7										
	eS			17 39		0.8	100							
GNZ	eP	11	17	04.8		-0.3	100	4.42	213			4.3	4.2	
	S			57.5		-1.7	99							
WTZ	P	11	17	05.3		-0.5	100	4.48	227			4.4	4.3	
	S			59.7		-0.8	100							
GBZ	P	11	17	08.8		-0.3	100	4.75	253					
TUA	P	11	17	12.9		1.3	100	4.97	219			4.5	4.4	
	eS			18 14		2.9	95							
KRP	eP	11	17	17		0.3	100	5.37	235			3.0*		
ONE	eP	11	17	22		2.8		5.58	260					
TRZ	eP	11	17	20		-0.8	100	5.71	216			4.4	4.2	
	eS			18 27		-0.3	100							
CRZ	eP	11	17	36		-0.6	100	6.97	272			3.5*		
MNG	eP	11	17	40		0.8	100	7.18	217			3.9	3.8	
	eS			18 59		-1.5	99							
WEL	eS	11	19	19		-0.9	100	8.04	217	4.5				
COB	eS	11	19	43		1.5	100	8.99	225				2.9*	

AMPLITUDES:	ECZ	0.3	0.4	GNZ	0.7	0.9	WTZ	0.7	0.7
	GBZ	0.4		TUA	0.4	0.3	KRP	0.3	
	TRZ	0.2	0.3	CRZ	0.2		MNG	0.3	0.3
	WEL	0.2		COB		0.2			

APR 23 14^h57^m45^s.2 41°.86S 172°.75E 94 km M = 4.3
 ± 0.4 0.03 0.04 8 S.E. of RES. 1.5 80/ 213

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
COB	iP	14	58	03.2		0.3	100	0.76	359					
	S			14.7		-1.7	100							
KKY	P	14	58	05.3		0.9	100	0.90	129					
	iS			18.9		0.2	100							
	i			23.5										
KAI	eP	14	58	09.0		1.1	100	1.21	236	3.9*				
	S			25.1		0.1	100							
WEL	P	14	58	13.1		-0.0	100	1.62	70	4.3				
	i			16.1										
	S			37.5		3.5	96							
CMZ	P	14	58	15.0		0.5	100	1.73	183			3.7*	4.3*	
	i			30.8										
	S			35.2		-1.3	100							
MNG	P	14	58	23.4		-0.2	100	2.40	60			4.8	4.6	
	i			29.0										
	S			52.7		0.5	100							
	e			59 01.0										
MJZ	eP	14	58	28.2		0.2	100	2.72	217			3.6*	4.2*	
	e			32.0										
	S			59 00.0		0.1	100							
CAZ	S	14	58	58.5		-3.1	98	2.78	71					

TNZ	P	14 58 32.8	1.7	100	2.94	25	3.4* 4.0*
	eS	59 05	-0.5	100			
	i	07.7					
RHP	P	14 58 32.0	0.4	100	2.98	220	
	i	36.2					
	S	59 07.5	1.1	100			
CNZ	eP	14 58 39.8	2.3	99	3.40	40	
	e	44.0					
	e	47.5					
	S	59 22.8	5.8				
NGZ	eP	14 58 39.5	1.4	100	3.45	40	
	i	45.0					
	eS	59 20	1.9				
OMZ	eP	14 58 38	-0.6	100	3.48	202	3.2* 3.5*
	S	59 17.5	-1.4	100			
	e	20.8					
TRZ	e	14 58 53.5			3.86	55	4.0 3.8
	eS	59 26.5	-1.6	100			
	e	33.3					
KRP	P	14 58 52.7	0.6	100	4.47	30	3.2* 3.6*
	e	59.0					
	S	59 41.0	-2.3	99			
MSZ	P	14 58 53.8	1.2	100	4.52	230	3.9* 3.8*
	S	59 42.3	-2.0	99			
GNZ	S	14 59 55	-5.2		5.16	53	4.4
AMPLITUDES:		KAI 3.0	WEL 3.1	CMZ 2.1	14		
	MNG	20 16	MJZ 2.3	12	CAZ 1.9		
	TNZ	0.3 1.6	RHP 9.1	19	CNZ 1.6	4.8	
	NGZ	1.2 3.4	OMZ 0.3	1.1	TRZ 0.2	0.3	
	KRP	0.6 1.7	MSZ 2.7	4.4	GNZ 1.1		

APR 24 08^h59^m40^s.9 46°.68S 164°.43E 33 km M = 5.0
 ± 2.1 0.14 0.23 R S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	P	09 00	16.4			0.0	100	2.34	68			
	e	01	05.0									
OBZ	P	09 00	18.0			-1.2	100	2.55	96	5.0		
	i		19.5									
ROX	P	09 00	33.0			-0.7	100	3.61	72			
DNZ	P	09 00	42.2			-0.9	100	4.30	81			
RHP	P	09 00	50.7			1.4	100	4.75	59			
	i		55									
	i	01	01.0									
OMZ	P	09 00	49			-1.1	100	4.81	73	4.9	5.0	
	eS	01	46			3.6	98					
MJZ	P	09 00	54.0			0.8	100	5.04	60	5.3	5.5	
	e	01	01.5									
	i		13.5									
	eS		45			-2.9	99					
KAI	eS	09 02	20			-2.8		6.49	53	4.9		
CMZ	eP	09 01	14.0			-0.3	100	6.59	65		5.0	
	e		35.2									
COB	eP	09 01	38			1.6	100	8.20	50		5.0	5.0
	S	03	03			-0.9	100					
NGZ	e(P)	09 02	23			7.0		11.11	52			
KRP	eP	09 02	29			0.7		12.01	47		4.5	
CRZ	e(P)	09 03	02			9.9		13.74	30		4.9	

AMPLITUDES:	OBZ	13	DNZ	6.5	RHP	24
	OMZ	2.0 4.5	MJZ	11 21	KAI	0.8
	CMZ	1.6	COB	0.8 2.8	NGZ	0.2
	KRP	0.3	CRZ	0.2		

FELT: Stewart Island (158) MM IV

APR 24 18^h48^m53^s.5 45°.60S 166°.33E 12 km M = 3.7
 ± 1.9 0.05 0.14 R S.E. of RES. 1.7 80/ 215

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	P*	18	49	11.2		1.7	100	0.86	102			
	S*			21.5		0.4	100					
OBZ	e	18	49	35				1.80	137			2.8
	eS*			48		-1.1	100					
ROX	P*	18	49	30		-0.6	100	2.11	88		3.9	3.8
	Sn			54		0.5	100					
DNZ	eP*	18	49	43		-1.9		2.94	97			
RHP	Pn	18	49	40.2		-0.6	100	3.06	62			
	iP*			46.2		-0.7						
	Sn		50	19		2.5	99					
OMZ	Pn	18	49	44.5		0.7	100	3.28	82		3.7	
MJZ	Pn	18	49	44.2		-0.6	100	3.36	63		3.8	3.7
	eP*			52.0		0.0						
COB	Sn		50	19.5		-4.1	93					
	ePn	18	50	28		0.4	100	6.50	48		4.2	3.8
	e		51	31								
	eSn			39		0.1	100					

AMPLITUDES:	OBZ	0.4	ROX	1.0 2.0	RHP	14 6.0
	OMZ	0.3	MJZ	0.8 0.8	COB	0.2 0.3

APR 25 01^h58^m04^s.3 39°.70S 174°.06E 143 km M = 3.7
 ± 0.9 0.03 0.05 10 S.E. of RES. 1.2 80/ 216

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	eP	01	58	26.0		0.7	100	0.58	25			2.7*
	eS			43.2		1.8						
CNZ	P	01	58	31.7		0.8	100	1.25	67			
	eS			52.8		1.4						
NGZ	P	01	58	32.1		0.6	100	1.30	67			
	e			48								
MNG	eS			53.5		1.1						
	iP	01	58	33.7		0.9	100	1.42	131		4.1	3.7
WEL	S			53.7		-0.7	100					
	eP	01	58	36.0		0.5	100	1.67	161	3.4		
COB	S			58.0		-1.3	100					
	P	01	58	36.0		-0.0	100	1.72	216		4.1*	3.4*
CAZ	S			59.9		-0.3	100					
	P	01	58	41.0		1.2	100	2.04	127			
KRP	S		59	09.1		2.2	98					
	e	01	59	06				2.12	33		2.5*	2.4*
KKY	eS			08		-0.6	100					
	P	01	58	47.9		-0.7	100	2.73	186			
AUC	S			59 21.7		-0.7	100					
	iP	01	58	50.8		-0.0	100	2.90	11			
GNZ	i			54.3								
	eP	01	58	53.0		-2.5		3.26	72		3.6	3.7
	S		59	32.0		-2.5	97					

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AMPLITUDES:	TNZ	0.2	CNZ	0.7 1.0	NGZ	0.8 1.1
	MNG	7.8 4.0	WEL	0.3	COB	3.7 2.6
	CAZ	0.3 1.0	KRP	0.2 0.2	AUC	3.0
	GNZ	0.3 0.6				

APR 25 09^h20^m12^s.1 42°.82S 176°.87E 33 km M = 4.0
 ± 0.9 0.04 0.07 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WEL	S	09	21	08.8		-1.9	99	2.20	314	3.5				
KKY	eP	09	20	48.6		0.4	100	2.38	279					
	e			54.0										
MNG	P	09	20	49.1		0.2	100	2.43	334		3.7	4.0		
	S			21 14.5		-2.0	99							
CMZ	eP	09	20	59		-0.2	100	3.19	255		3.8			
	e			21 06.5										
TRZ	eP	09	20	59		-1.2	100	3.27	359		3.9	3.7		
	eS			21 37		0.5	100							
COB	eP	09	21	05		1.0	100	3.54	298				3.6	
	e			10										
	S			43.0		-0.1	100							
CNZ	P	09	21	08.6		1.7	99	3.75	344					
	S			51.0		2.7	98							
NGZ	P	09	21	08.3		1.4	100	3.76	345					
	S			49.8		1.4	100							
TUA	P	09	21	09.8		-0.7	100	4.01	3		4.5	4.6		
	eS			54.2		-0.4	100							
TNZ	eP	09	21	13		1.5	100	4.09	332		4.0	4.0		
	(S)			22 01.8		5.4								
GNZ	eP	09	21	12.5		-1.4	100	4.27	12		3.8	4.0		
	eS			22 00		-0.6	100							
KRP	eP	09	21	23		-0.9	100	4.99	348		4.1	4.4		
	e			22 16										
	eS			18		-0.1	100							

AMPLITUDES:	WEL	0.3	MNG	1.6 4.0	CMZ	0.5
	TRZ	0.3 0.3	COB	0.7	CNZ	0.7 2.0
	NGZ	0.7 1.6	TUA	0.7 0.9	TNZ	0.2 0.3
	GNZ	0.3 0.7	KRP	0.2 0.3		

APR 25 13^h07^m21^s.2 34°.50S 177°.45W 284 km M = 4.2
 ± 1.3 0.32 0.42 20 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
GNZ	eP	13	08	45.5		0.7	100	5.52	220		4.1	4.0		
	S			09 50.5		0.2	100							
TUA	eP	13	08	51.8		-0.2	100	6.11	224		4.4			
TRZ	eP	13	08	59		-1.7	97	6.82	221		4.6	4.2		
	eS			10 19		0.2	100							
MNG	eP	13	09	20		0.9	100	8.30	221		3.9	3.9		
	eS			10 51		-0.7	100							
WEL	eS	13	11	11		0.2	100	9.15	220	4.5				
COB	eS	13	11	34		0.1	100	10.18	227				3.0*	

AMPLITUDES:	GNZ	0.3 0.4	TUA	0.2	TRZ	0.2 0.2
	MNG	0.2 0.3	WEL	0.1	COB	0.2

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	S		13.0		-1.0	100						
NGZ	P	23 27	53.0		2.2	99	1.89	206				
TRZ	eS	23 28	20.2		-2.7		2.06	177				
	e		27.5									
MNG	P	23 28	06.0		-0.4	100	3.27	196		4.2	4.0	
	S		48.0		0.4	100						
WEL	eS	23 29	05.0		-0.5	100	4.08	201	4.1			
COB	eS	23 29	19		-1.2	100	4.73	219				2.8*
AMPLITUDES:	WTZ		0.6	0.8	KRP		1.1	TUA				0.7
	ECZ		0.5		GNZ		3.0	NGZ			0.3	
	MNG		2.5	2.0	WEL	0.2		COB				0.3

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APR 26 07^h45^m54^s.3 37°.38S 178°.54E 79 km M = 3.6
 ± 1.3 0.06 0.08 9 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	07	46	07.6		0.6	100	0.31	179		3.6	3.5
	iS			16.5		-0.2	100					
GNZ	P	07	46	17.4		-0.5	100	1.33	198		3.6	3.6
	e			22.4								
	S			34.2		-1.5	99					
WTZ	P	07	46	18.2		-0.2	100	1.37	243		4.2	
TUA	eP	07	46	26		1.9	99	1.80	217		3.5	3.9
	S			48.5		2.3	98					
KRP	P	07	46	32.8		-0.1	100	2.45	256		3.0*	
	e			58								
	eS			47 01		-0.8	100					
TRZ	P	07	46	33.8		-0.8	100	2.56	211		3.7	3.6
	S			47 04.8		0.1	100					
NGZ	eP	07	46	40		0.3	100	2.92	231			
MNG	eP	07	46	54		-0.9	100	4.02	215		3.4	3.4
	e(S)			47 35.4		-5.7						
COB	e(S)	07	48	20.8		-5.4		5.84	229			2.9*
AMPLITUDES:	ECZ		5.0	3.5	GNZ		1.6	2.8	WTZ		5.5	
	TUA		0.3	0.7	KRP		0.6		TRZ		0.2	0.4
	NGZ		0.2		MNG		0.3	0.4	COB			0.3

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APR 26 16^h24^m17^s.1 45°.18S 166°.67E 5 km M = 4.0
 ± 1.1 0.04 0.09 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	P*	16	24	33.8		-2.6	94	1.03	60		3.9	4.1
	S*			49.5		-0.9	100					
ROX	Pn	16	24	49		-0.3	100	1.90	100			
	eSn			25 13		-0.4	100					
OBZ	Pn	16	24	51.0		0.2	100	2.00	150		3.5	3.6
	iP*			55.8		2.8						
	Sn			25 15.5		-0.4	100					
RHP	Pn	16	25	00.0		0.1	100	2.67	67			
	iP*			05.3		0.8						
	S*			40.3		0.6	100					
DNZ	Pn	16	25	02.4		0.8	100	2.79	106			
MJZ	Pn	16	25	05.0		1.0	100	2.97	68		4.4	4.2
	eP*			12.7		3.2						
	Sn			41.0		1.8	99					
OMZ	Pn	16	25	04.8		0.2	100	3.01	89		4.4	3.8
	Sn			40		-0.2	100					

CMZ	ePn	16 25 30		4.1	4.57	72			
	eSn	26 20		2.2					
COB	ePn	16 25 43		-2.9	6.04	49		4.3	3.9
	e	47							
	eSn	26 54		0.9					
AMPLITUDES:	MSZ	12 31	OBZ	0.7 2.1	RHP	26 17			
	DNZ	0.9	MJZ	4.6 3.6	OMZ	1.5 0.8			
	COB	0.3 0.4							

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APR 26 17^h44^m26^s.7 45°.38S 167°.39E 12 km M = 3.3
 ± 0.8 0.02 0.06 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	P*	17	44	41.9		0.3	100	0.80	28		3.4	3.4
	S*			54.2		1.8	99					
ROX	eP*	17	44	50		-1.1	100	1.37	95		3.2	3.0
	eS*			45 10		0.8	100					
OBZ	P*	17	44	55.0		-0.3	100	1.61	162		3.0	3.1
	S*			45 17.8		1.2	100					
DNZ	Sn	17	45	29.8		-0.3	100	2.25	104			
RHP	Pn	17	45	02.0		-1.7	99	2.30	57			
	i(P*)			04.0		-3.3						
	eSn			31.0		-0.5	100					
	eS*			38.0		0.4	100					
OMZ	eP*	17	45	12		1.3		2.51	84			
	e(Sn)			33		-3.4						
MJZ	ePn	17	45	08.0		0.3	100	2.60	59		3.7	3.6
	iP*			10.2		-2.0						
	Sn			37.7		-0.8	100					
AMPLITUDES:	MSZ	6.3	11	ROX	0.5 0.7	OBZ	0.3 1.1					
	DNZ	0.5	RHP	7.0 5.6	MJZ	1.0 1.0						

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APR 27 04^h51^m09^s.3 40°.64S 174°.96E 93 km M = 4.0
 ± 0.4 0.03 0.04 6 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iP	04	51	23.2		-0.7	100	0.40	87			
WEL	P	04	51	26.3		0.3	100	0.66	192	4.3		
	S			37.6		-0.8	100					
CAZ	e	04	51	35.0				1.00	105			
	S			45.5		0.7	100					
	i			54.2								
CNZ	P	04	51	36.5		0.6	100	1.51	18			
	S			55.0		-0.9	100					
NGZ	P	04	51	36.8		0.5	100	1.55	19			
	S			58.0		1.4	99					
COB	P	04	51	39.0		0.2	100	1.75	255		4.0*	3.8*
	S			52 00.8		0.0	100					
TRZ	e	04	51	45				1.80	53		3.9	3.9
	e			52 14								
KKY	P	04	51	43.8		1.5	99	2.02	208			
KRP	eP	04	51	53.1		0.6	100	2.75	10		3.5*	
	S			52 24.0		-0.9	100					
GNZ	P	04	51	56.0		-1.4	100	3.10	51		3.9	3.9
	S			52 32.8		-0.6	100					
KAI	eS	04	52	38		0.6	100	3.26	234			
CMZ	eP	04	52	02.2		0.5	100	3.41	210		3.1*	3.2*

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	e			23.8								
	eS			39.5								
MJZ	eP	04	52	19		-1.5						
	e			29.5								
	S			53								
RHP	eP	04	52	24.5		-3.0	89					
	e			32.8								
	eS			53								
				17								
AMPLITUDES:		WEL	12			CAZ		1.6	12	CNZ		20 33
		NGZ		15	25	COB		3.5	8.0	TRZ		0.7 1.6
		KRP		1.7		GNZ		0.6	1.1	CMZ		0.3 0.6
		MJZ		0.6	0.8	RHP			1.2			

APR 27 19^h18^m13^s.6 44°.93S 167°.63E 51 km M = 3.0
 ± 1.5 0.06 0.14 10 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	iP	19	18	24.0		0.2	100	0.33	38		3.0	3.1
	S			32.1		0.8	100					
BRZ	P	19	18	28.5		-1.2	100	0.85	184			
	S			40.3		-1.3	99					
RHP	P	19	18	44.9		0.0	100	1.94	66			
	eS			19		0.5	100					
OBZ	eP	19	18	47.4		1.8	99	2.00	170		2.9	3.3
	e			19								
	iS			10.7		1.1	100					
DNZ	iP	19	18	48.8		-0.2	100	2.24	116			
MJZ	eP	19	18	48.2		-0.9	100	2.24	66		2.9	3.0
	S			19		-0.8	100					
COB	eS	19	20	30		-4.5		5.37	46			3.0
AMPLITUDES:		MSZ	14	27		RHP		6.3	5.5	OBZ		0.3 1.6
		DNZ	3.5			MJZ		0.5	0.7	COB		0.2

APR 28 23^h10^m01^s.2 32°.63S 179°.81E 517 km M = 5.0
 ± 1.4 0.19 0.41 22 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	23	11	33.8		2.5	99	5.16	191		4.6	4.6
	eS			12		1.3	100					
	e			55								
WTZ	P	23	11	36.0		-1.4	100	5.82	203		5.3	4.9
	S			12		-1.4	100					
GNZ	eP	23	11	39.5		-1.3	100	6.17	193		5.4	5.0
	i			42.6								
	S			13		0.1	100					
KRP	P	23	11	42.5		0.1	100	6.34	212		4.0*	
TUA	eP	23	11	44.0		-0.3	100	6.53	199		4.8	4.9
	eS			13		-0.1	100					
NGZ	P	23	11	53.8		1.1	100	7.37	206			
MNG	eP	23	12	04.8		-1.5	100	8.70	202		5.4	4.8
	eS			13		-2.3	99					
WEL	eS	23	14	03		1.4	100	9.54	204	4.8		
COB	eP	23	12	22		0.5	100	10.17	212		3.7*	3.2*
	eS			14		1.4	100					
AMPLITUDES:		ECZ	0.3	0.3		WTZ		3.0	1.1	GNZ		3.8 2.2
		KRP	2.3			TUA		0.3	0.4	NGZ		1.1

APR 30 21^h33^m32^s.5 34°.22s 178°.92w 223 km 80/ 230
 ± 2.0 0.25 0.39 28 S.E. of RES. 1.7 M = 4.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	21	34	34.7		-1.4	100	4.03	210		4.1	4.2		
	e		35	34.8										
WTZ	P	21	34	46.9		-1.4	100	5.01	220		4.8	4.3		
	eS		35	47.2		0.0	100							
GNZ	eS	21	35	48		-0.3	100	5.06	208					
TUA	eP	21	34	54.7		-0.7	100	5.57	214		4.5	4.3		
	eS		36	02		2.2	99							
NGZ	eP	21	35	11.2		2.4	99	6.62	220					
MNG	eP	21	35	25.0		1.2	100	7.79	213		3.8	4.0		
	eS		36	50		-0.8	100							
COB	eS	21	37	30		-0.9	100	9.53	222					2.9*
AMPLITUDES:		ECZ		0.2	0.3	WTZ		1.5	0.6	TUA		0.3	0.2	
		NGZ		0.3		MNG		0.2	0.4	COB			0.2	

APR 30 23^h18^m33^s.9 36°.79s 177°.10E 268 km 80/ 231
 ± 1.1 0.07 0.10 9 S.E. of RES. 1.1 M = 4.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P	23	19	11.2		-0.9	100	1.20	184		4.1	4.1		
	eS			40.5		-1.3	99							
ECZ	eP	23	19	14.0		0.2	100	1.46	129		3.8	4.1		
	e			18.8										
	e			41.3										
KRP	P	23	19	16.7		0.6	100							3.0*
	eS			45.5		1.2	100	1.68	227		4.5	4.4		
GNZ	P	23	19	18.0		0.0	100	1.99	159					
	e			46.5										
NGZ	P	23	19	25.3		-0.4	100							
	S			51.8		0.9	100	2.66	206					
CNZ	P	23	19	25.9		1.1	100	2.70	207					
MNG	P	23	19	38.7		-0.6	100	4.03	198		4.8	4.1		
	S			20 31.9		1.6	99							
WEL	eS	23	20	47		-0.6	100	4.85	201					
COB	eP	23	19	55		-1.7	99	5.48	217		3.4*	3.0*		
	S			21 01.5		0.2	100							
AMPLITUDES:		WTZ		1.7	1.8	ECZ		0.3	0.6	KRP		0.6		
		GNZ		3.0	4.0	NGZ		1.6		CNZ		1.5		
		MNG		6.1	1.6	COB		0.3	0.4					

MAY 01 16^h11^m49^s.1 34°.60s 177°.96w 288 km 80/ 232
 ± 2.4 0.19 0.33 27 S.E. of RES. 2.4 M = 4.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	16	12	56.8		-0.6	100	4.19	221		4.3	4.4		
	eS			13 55		4.4	98							
GNZ	eP	16	13	07.0		-1.7	100	5.17	218		4.8			
	i			09.2										
	S			14 11.3		0.1	100							
WTZ	P	16	13	08.1		-2.1	100	5.30	229		4.9	4.8		
	S			14 09.0		-4.9	97							
TUA	P	16	13	16.9		1.2	100	5.76	222		5.0	4.9		

	eS	14 23.2	-0.4	100					
KRP	eP	16 13 20.3	-1.0	100	6.22	236		3.1*	
ONE	eP	16 13 26	2.5	100	6.41	257			
TRZ	eP	16 13 24.5	0.1	100	6.48	219		4.5	4.3
	eS	14 38	-1.4	100					
MNG	eP	16 13 43.7	0.9	100	7.96	219		4.0	4.6
	eS	15 15.0	3.0	99					
	e	19.2							
WEL	eS	16 15 30	-1.1	100	8.81	219	4.7		
COB	eS	16 15 54.0	0.5	100	9.81	226			3.1*
MJZ	e	16 15 03.3			12.97	220		3.4*	3.3*
	eS	17 06	2.1						
AMPLITUDES:	ECZ	0.3 0.4	GNZ	1.6	WTZ	1.7 1.6			
	TUA	0.9 0.7	KRP	0.3	TRZ	0.2 0.3			
	MNG	0.3 1.6	WEL	0.2	COB	0.3			
	MJZ	0.3 0.3							

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MAY 02 04^h15^m05^s.1 34°.18s 178°.41w 254 km M = 5.3
 ± 1.2 0.08 0.15 18 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
ECZ	P	04 16	13.2			0.2	100	4.29	214		5.2	5.4
	S	17	06.0			0.1	100					
	i		13.0									
WIZ	P	04 16	19.8			-0.4	100	4.90	226			
	e		48									
	iS		17 19.0			0.0	100					
GNZ	P	04 16	24.7			-0.6	100	5.31	212		5.4	5.2
	S	17	27.7			-0.2	100					
WTZ	eP	04 16	23.3			-2.3	99	5.32	223		5.3	5.4
	i		25.3									
	S	17	26			-2.3	99					
GBZ	P	04 16	25.5			-0.9	100	5.40	246			
TUA	P	04 16	32.3			0.3	100	5.84	216		5.3	5.5
	S	17	42.1			2.2	99					
ONE	eP	04 16	37			1.2	100	6.15	253			
KRP	P	04 16	36.2			0.2	100	6.16	231		4.0*	
	eS	17	47			-0.1	100					
TRZ	S	04 17	57.7			1.0	100	6.59	214			5.1
NGZ	P	04 16	47.2			1.6	100	6.93	222			
	S	18	04			-0.2	100					
CNZ	eP	04 16	48.0			1.7	100	6.98	222			
	S	18	06			0.5	100					
MNG	eP	04 16	58.8			-1.0	100	8.06	215		4.7	5.4
	S	18	31.7			1.8	99					
WEL	S	04 18	46.3			-3.0	97	8.92	215	5.4		
COB	eP	04 17	24.2			1.7		9.85	223		3.8*	3.9*
	e	19	07.0									
	eS		12.0			1.6						
CIZ	e(P)	04 17	29.8			6.9		9.87	172			
	S	19	11.8			0.7						
KAI	eS	04 19	48			-1.0		11.55	221	3.9*		
CMZ	eS	04 19	52			-0.6		11.70	214			4.1*
RHP	P	04 18	10.8			4.8		13.34	219			
	S	20	28.8			-0.3						
AMPLITUDES:	ECZ	2.1 3.6	WIZ	0.3 2.4	GNZ	6.0 6.2						
	WTZ	4.5 5.8	GBZ	2.2	TUA	1.7 3.0						

KRP	2.6	TRZ	1.6	NGZ	0.8	1.7
CNZ	1.6	3.5	MNG	1.4	8.7	WEL 1.1
COB	0.4	1.9	CIZ	0.6	1.6	KAI 0.3
CMZ	1.5	RHP	0.7	2.2		

MAY 02 08^h18^m01^s.1 38°.77S 177°.73E 33 km M = 3.3
 ± 0.7 0.05 0.06 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	P*	08	18	06.5		-1.8	100	0.26	61			
TUA	P*	08	18	11.5		0.6	100	0.45	265		3.4	3.4
	S*			20.2		2.1	99					
WTZ	P*	08	18	16.9		-2.4	99	0.98	323		3.7	3.9
	S*			31.7		-1.0	100					
TRZ	eP*	08	18	20.8		0.2	100	1.05	222		2.9	3.1
	e			25.0								
ECZ	eP*	08	18	24.0		0.1	100	1.25	31		3.2	3.3
	eS*			43.3		2.5	99					
WIZ	Pn	08	18	22.3		-0.2	100	1.31	341			
NGZ	P*	08	18	32.0		0.5	100	1.70	255			
CNZ	eP*	08	18	35.0		2.6		1.75	255			
	i			37.8								
KRP	ePn	08	18	32.8		1.9		1.92	295		3.2	
	eP*			37.0		1.8						
	eS*			19 06.0		5.4						
MNG	ePn	08	18	38.5		-0.7	100	2.54	223		2.8	3.0
	eP*			53.2		7.6						
	e			19 04								
	e			12.0								
COB	eSn	08	19	57		2.1		4.49	237		3.8	
	e			20 03								
AMPLITUDES:		TUA	3.6	4.9	WTZ	5.2	7.5	TRZ	0.3	0.6		
		ECZ	0.2	0.3	WIZ	0.6		NGZ	0.4			
		CNZ	0.3		KRP	0.3		MNG	0.2	0.4		
		COB	0.2									

MAY 02 16^h42^m44^s.8 40°.84S 172°.98E 211 km M = 3.8
 ± 0.6 0.03 0.05 5 S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	P	16	43	13.1		0.3	100	0.31	217		3.6*	3.0*
	S			33.8		-0.5	100					
WEL	S	16	43	46		0.5	100	1.42	109	3.7		
KKY	eP	16	43	20.4		-0.8	100	1.66	162			
	eS			48.6		-0.7	100					
MNG	P	16	43	24.3		0.7	100	1.92	84		3.3	3.6
	S			54.3		0.7	100					
CNZ	P	16	43	31.0		0.6	100	2.56	51			
NGZ	P	16	43	31.2		0.2	100	2.62	52			
CMZ	e	16	44	05				2.75	185			2.9*
	eS			10		0.3	100					
TRZ	eP	16	43	34.5		-3.4		3.21	68		3.9	
	eS			44 21		1.9						
WTZ	eP	16	43	50		-0.3	100	4.22	49		3.7	3.9
	eS			44 37		-4.0						
GNZ	P	16	43	53.8		0.4	100	4.46	62		4.6	
	eS			44 45		-1.6	97					

		e		48.0							
AMPLITUDES:		COB	1.6	1.5	WEL	0.4	MNG	0.6	1.6		
		CNZ	2.1		NGZ	0.6	CMZ		0.3		
		TRZ	0.2		WTZ	0.2	0.3	GNZ	1.5		
MAY 02		21 ^h 12 ^m 23 ^s .6	34°.78s		178°.72w	242 km				80/ 236	
		± 1.3	0.12		0.16	19	S.E. of	RES.	1.2	M = 4.4	
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
ECZ	eP	21	13	24.0		0.6	100	3.65	217		4.3
GNZ	P	21	13	36.8		1.2	100	4.66	213		
	S		14	31.0		-0.5	100				
WTZ	P	21	13	35.0		-1.2	100	4.72	226		4.8 4.3
	e		14	28							
	S			32.5		-0.2	100				
TUA	eP	21	13	41		-1.4	99	5.21	218		4.7
KRP	P	21	13	47.0		-0.2	100	5.60	234		3.3*
	eS		14	53		0.7	100				
MNG	eP	21	14	11		0.8	100	7.42	217		3.9 4.1
	eS		15	35		1.4	99				
WEL	eS	21	15	52		-1.3	99	8.28	216	4.5	
AMPLITUDES:		ECZ	0.4		WTZ	1.8	0.7	TUA			0.5
		KRP	0.6		MNG	0.3	0.6	WEL	0.2		

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MAY 02		21 ^h 14 ^m 57 ^s .5	35°.63s		179°.86w	255 km				M = 4.1	
		± 1.7	0.17		0.21	16	S.E. of	RES.	1.4		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
ECZ	eP	21	15	44		-0.7	100	2.43	211		4.0
GNZ	eP	21	15	57.5		1.9	99	3.46	209		
	S		16	40		-0.9	100				
WTZ	P	21	15	54.4		-1.2	100	3.46	226		4.5 4.1
	eS		16	42		1.1	100				
KRP	eP	21	16	06		-0.2	100	4.35	237		3.0*
MNG	eP	21	16	29		0.3	100	6.19	215		4.2 4.0
	e			42							
	eS		17	43		3.0					
	e		18	06							
COB	eS	21	18	20		-0.2	100	7.97	225		2.9*
AMPLITUDES:		ECZ	0.3		WTZ	1.3	0.7	KRP			0.3
		MNG	0.7	0.6	COB	0.2					

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MAY 02		23 ^h 04 ^m 33 ^s .3	38°.78s		176°.06E	1 km				M = 2.7	
		± 1.1	0.05		0.10	R	S.E. of	RES.	2.0		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
WNZ	Pg	23	04	34.0		-2.3	99	0.15	13		
	i			35.0							
NGZ	ePg?	23	04	43		-1.0	100	0.53	221		
	eSg?			52		0.8	100				
KRP	ePg	23	04	52.0		-0.4	100	0.94	334		2.9
	eSg		05	06.0		0.9	100				
WTZ	ePg	23	04	57.0		1.9	99	1.08	43		2.6
MNG	ePg	23	05	15.2		3.7		1.89	193		2.8
AMPLITUDES:		KRP	0.6		WTZ	0.2		MNG			0.2

MAY 03 00^h14^m16^s.9 35°.35S 178°.66E 257 km 80/ 239
 ± 1.2 0.06 0.12 10 S.E. of RES. 1.2 M = 4.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	00	15	04.0		0.7	100	2.34	182		4.2	4.2
	e			35								
	eS			39.8		0.4	100					
GBZ	P	00	15	06.0		-1.3	100	2.73	251			
WTZ	P	00	15	09.5		-0.2	100	2.95	207		4.9	4.4
	S			50.5		-0.2	100					
GNZ	P	00	15	14.0		0.3	100	3.33	189		4.7	
	e			53								
	S			56.5		-1.5	99					
KRP	P	00	15	18.8		2.1	98	3.59	223		3.2*	
TRZ	eP	00	15	27		0.2	100	4.45	199		4.4	4.3
	eS		16	22.5		1.3	100					
	e			25.5								
MNG	eP	00	15	42.2		-1.5	99	5.83	205		4.0	4.3
	eS		16	51		-0.4	100					
WEL	eS	00	17	10		-0.3	100	6.67	206	4.4		
COB	eS	00	17	27		0.5	100	7.39	217			3.0*
AMPLITUDES:	ECZ	0.6	0.5	GBZ	0.6	WTZ	4.8	1.6				
	GNZ	2.7		KRP	0.6	TRZ	0.3	0.6				
	MNG	0.6	1.5	WEL	0.2	COB		0.3				

MAY 03 10^h48^m21^s.4 39°.50S 175°.74E 12 km 80/ 240
 ± 0.2 0.01 0.02 R S.E. of RES. 0.7 M = 3.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	P*	10	48	26.3		-0.5	100	0.25	332			
	S*			30.5		0.0	100					
NGZ	iP*	10	48	27.4		-0.8	100	0.32	343			
	S*			32.3		-0.6	100					
CNZ	iP*	10	48	27.4		-0.8	100	0.33	334			
	S*			32.8		-0.2	100					
TRZ	eP*	10	48	37.2		0.2	100	0.85	94		2.7	2.8
WNZ	eP*	10	48	38.0		-0.1	100	0.91	18			
	eS*			50		-0.4	100					
	e			54.0								
TNZ	P*	10	48	41.0		-0.3	100	1.10	286		3.6	3.3
	S*			57.0		1.1	99					
MNG	P*	10	48	41.2		-0.8	100	1.13	190		4.0	3.4
	S*			57.5		0.3	100					
KRP	ePn	10	48	48.2		-0.3	100	1.57	354		3.8	3.6
	iP*			51.8		2.3	81					
	eS*		49	11		0.6	100					
WTZ	eP*	10	48	54		0.7	100	1.80	33			
WEL	eS*	10	49	21		-0.0	100	1.93	202	3.4		
COB	ePn	10	49	05		-0.0		2.79	234			
	eS*			45		-1.8						
AMPLITUDES:	GSZ	15	37	NGZ	38	32	CNZ	56	34			
	TRZ	0.3	0.5	TNZ	1.0	0.8	MNG	14	4.2			
	KRP	1.1	0.5	WEL	0.2							

FELT: Moawhango (58) MM IV

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MAY 04 03^h58^m45^s.3 39°.99s 175°.62E 12 km M = 3.9
 ± 0.3 0.01 0.03 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
MNG	iPg	03	58	58.8		0.4	100	0.64	190					
	eSg		59	07.0		-0.1	100							
GSZ	Pg	03	59	00.5		0.6		0.71	358					
	Sg			10.4		0.8								
CNZ	Pg	03	59	01.8		0.4	100	0.79	356					
	Sg			12.3		0.1	100							
NGZ	Pg	03	59	01.9		0.2	100	0.81	360					
	Sg			13.0		0.3	100							
TRZ	Pg	03	59	06.0		-0.1	100	1.03	65			3.8		
CAZ	Pg	03	59	08.1		2.0	99	1.03	153					
	e			26.0										
TNZ	Pg	03	59	11.0		0.3	100	1.25	310				4.1	
	Sg			28.8		1.2	100							
WEL	ePg	03	59	13.0		-1.6	99	1.45	206	4.0				
	eSn			30.0		0.5	100							
	Sg			32.8		-1.4	100							
TUA	ePn	03	59	14.5		0.8	100	1.67	46			3.8		
	ePg			17.8		-1.4	100							
	i			20.2										
KRP	ePg	03	59	26.0		-1.1	100	2.06	358			4.5		
	i			28.7										
	S*			48.5		-0.3	100							
	eSg			53.5		-1.4	100							
WTZ	ePn	03	59	24.0		2.2	98	2.27	28			3.5		
	ePg			29.8		-1.4	100							
GNZ	ePg	03	59	35.2		3.4		2.29	55			3.7		
	eSn			52		2.1								
CMZ	eP*	04	00	02.2		3.5		4.23	211			3.9		
AMPLITUDES:	GSZ			48	40	NGZ		37	35	TRZ		2.7		
	CAZ			4.0	3.0	TNZ			3.4	WEL		1.7		
	TUA			0.7		KRP		3.5		WTZ		0.6		
	GNZ			0.8		CMZ		0.3						

FELT: Kimbolton (62) MM IV

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MAY 04 09^h05^m16^s.7 37°.43s 177°.67E 124 km M = 4.0
 ± 1.2 0.05 0.08 9 S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WIZ	P	09	05	33.2		-1.5	100	0.40	256					
	S			46.2		-2.3	99							
ECZ	P	09	05	36.7		-0.2	100	0.75	111			3.7	3.8	
	eS			53.0		0.6	100							
WTZ	P	09	05	37.0		-0.2	100	0.77	224			3.8		
GNZ	P	09	05	42.0		0.1	100	1.24	167					
	S			06 01.3		0.2	100							
TUA	P	09	05	44.8		0.7	100	1.44	196			4.0	3.8	
	S			06 06.0		1.0	100							
WNZ	eP	09	05	48.8		1.4	100	1.73	225			4.4		
KRP	P	09	05	49.0		1.1	100	1.76	253			3.4*		
GBZ	eP	09	05	53.0		0.4	100	2.13	304					
TRZ	P	09	05	53.2		-0.5	100	2.22	197			4.1	3.9	
	S			06 23.0		1.4	100							

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NGZ	P	09 05	57.5	1.6	100	2.38	222					
	eS	06	27.5	2.3	99							
CNZ	P	09 05	58.2	1.6	100	2.43	223					
TNZ	e(P)	09 06	09	3.3		3.13	235			3.4*		
MNG	P	09 06	10.0	-2.3	99	3.62	207			3.9	3.9	
	S		52.2	-2.3	99							
WEL	eS	09 07	12	-2.9	99	4.46	209	4.2				
AMPLITUDES:		WIZ	4.3	4.6	ECZ	1.2	1.7	WTZ	4.0			
		TUA	1.2	0.7	WNZ	0.3		KRP	2.2			
		GBZ	0.3		TRZ	0.7	1.0	NGZ	1.5	1.1		
		CNZ	1.2		TNZ	0.3		MNG	1.3	1.6		
		WEL	0.3									

MAY 04 12^h25^m39^s.4 34°.15S 178°.66W 251 km M = 4.3
 ± 1.2 0.08 0.18 17 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	12 26	57.0			-1.4	99	5.21	221		4.5	4.4
	S	27	59.8			-0.1	100					
GNZ	P	12 26	58.8			0.2	100	5.23	210		4.4	
	S	27	59.2			-1.1	100					
GBZ	eP	12 26	58			-0.6	100	5.23	245			
TUA	P	12 27	05.4			0.3	100	5.75	215		4.5	4.5
	eS	28	13.0			1.1	99					
	e		16									
KRP	eP	12 27	09.7			1.1	99	6.03	230		3.1*	
TRZ	e(P)	12 27	17			2.6		6.50	213			4.2
	eS	28	30			1.1	99					
MNG	eP	12 27	33			0.0	100	7.97	214		3.8	4.0
	eS	29	01.5			-0.6	100					
WEL	eS	12 29	21			-0.6	100	8.83	214	4.6		
AMPLITUDES:		WTZ	0.7	0.7	GNZ	0.6		GBZ	0.3			
		TUA	0.3	0.3	KRP	0.3		TRZ			0.2	
		MNG	0.2	0.4	WEL	0.2						

MAY 04 22^h15^m30^s.7 37°.32S 176°.98E 12 km M = 3.7
 ± 0.5 0.02 0.03 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	Pg	22 15	35.5			-1.0	100	0.27	141			
	i		46.2									
WTZ	Pg	22 15	45.0			0.7	100	0.67	179		3.5	
	i		45.6									
	eSg		54.2			0.8	100					
KRP	Pg	22 15	57.8			0.8	100	1.30	242		3.7	
	i		00.8									
	eSn		11.3			0.1	100					
ECZ	Pg	22 15	57.9			0.8	100	1.30	107		4.0	
	e		16 18									
TUA	Pg	22 15	59.8			-1.1	99	1.49	175		3.8	4.2
	Sg		16 20.0			-1.1	100					
GNZ	eP*	22 15	59			0.5	100	1.56	148		3.6	
	ePg		16 03			0.7	100					
GBZ	ePg	22 16	03.0			-0.7	100	1.63	312			
	e		10.5									
	eSg		26.5			0.7						
MNG	eP*	22 16	29.5			-2.0		3.50	199		3.3	

ePg	42	0.6			
AMPLITUDES:	WIZ 50 37	WTZ 4.2	KRP 1.6		
	ECZ 1.0	TUA 0.6 1.5	GNZ 1.0		
	GBZ 0.4	MNG 0.2			

MAY 05 23^h32^m32^s.4 41°.23S 172°.41E 12 km M = 4.4
 ± 0.5 0.03 0.04 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
COB	P*	23	32	37.8		-0.5	100	0.28	61		
KAI	P*	23	32	59.0		-0.1	100	1.50	210		
	S*		33	18.0		-1.0	100				
KKY	Pn	23	32	59.7		0.9	100	1.53	142		
	iP*		33	01.0		1.3	100				
	S*			21.2		1.2	100				
WEL	eP*	23	33	03.0		-0.9	100	1.78	93	4.6	
	S*			26		-1.4	100				
CMZ	ePn	23	33	09.0		-1.2	100	2.37	176		4.8 4.5
	eP*			13.8		-0.1	100				
	e			17.0							
	Sn			39.6		1.0	100				
MNG	ePn	23	33	12.0		1.2	100	2.41	76		4.9 4.7
	iP*			14.2		-0.4	100				
	S*			45.0		-1.2	100				
TNZ	eP*	23	33	16		-0.8	100	2.54	37		4.0 4.3
	(S*)			56		5.9					
MJZ	ePn	23	33	19.8		-0.6	100	3.11	207		4.3 4.2
	i			22.0							
	Sn			57		0.5	100				
CNZ	eP*	23	33	25		-2.2	99	3.14	51		
	e(S*)			34 14.5		6.2					
NGZ	P*	23	33	26.1		-1.9	99	3.19	51		
	S*			34 12		2.2	99				
KRP	Pn	23	33	36.0		2.3	99	4.09	37		4.3 4.2
	e(P*)			48.0		4.7					
	Sn			34 21.8		1.8	99				
WTZ	eP*	23	33	57		1.6		4.80	49		4.5
AMPLITUDES:	WEL 5.5	CMZ 8.3 7.1	MNG 28 22								
	TNZ 0.5 1.3	MJZ 2.7 2.7	CNZ 7.3 10								
	NGZ 3.1 3.8	KRP 1.6 1.6	WTZ 0.3								

FELT: Tadmor (75) MM IV

MAY 06 00^h43^m18^s.8 41°.26S 172°.37E 5 km M = 4.5
 ± 0.3 0.02 0.03 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
COB	P*	00	43	24.8		-1.4	99	0.32	57		
KAI	P*	00	43	44.0		-1.4	99	1.45	209		
	eS*			44 04.2		-0.7	100				
KKY	Pn	00	43	46.5		0.5	100	1.52	140		
	iP*			47.7		1.1	100				
	S*			44 07.7		0.7	100				
WEL	ePn	00	43	49.9		0.0	100	1.81	92	4.6	
	iP*			50.8		-0.7	100				
	eSn			44 12.7		-0.3	100				
	iS*			15.0		-0.6	100				

CMZ	Pn	00 43	56.0	-1.0	100	2.33	175	4.9	4.7
	eP*	44	00.2	-0.2	100				
	i		04.0						
MNG	Sn		26.2	0.6	100				
	ePn	00 43	58.8	0.2	100	2.45	76	4.9	4.7
	iP*	44	01.2	-1.1	100				
TNZ	(Sn)		30.5	2.1					
	eP*	00 44	04	-0.7	100	2.58	37	4.1	4.4
	e		11.0						
MJZ	e(S*)	44		5.2					
	Pn	00 44	06.8	-0.2	100	3.07	207	4.6	4.4
	i		08.4						
CNZ	Sn		43.8	0.5	100				
	ePn	00 44	11.2	2.5	94	3.19	51		
	eP*		14.8	-0.2	100				
RHP	i		20.0						
	(S*)		53	-4.0					
	i	45	01						
THP	Pn	00 44	11.0	0.7	100	3.30	210		
	Pn	00 44	15.0	-1.4		3.75	208		
	(P*)		21.0	-3.7					
KRP	ePn	00 44	23.2	1.5	99	4.14	37	4.1	4.2
	e(P*)		38.5	7.3					
	eSn	45	10.5	1.5					
WTZ	eS*		22	-3.4					
	ePn	00 44	32	0.7		4.84	49	4.3	
	eP*		46	2.7					

AMPLITUDES:	WEL	4.7	CMZ	10	10	MNG	23	20
	TNZ	0.6	1.7	MJZ	6.2	5.0	CNZ	9.0
	RHP	9.0	THP	3.4	KRP	1.1	1.6	
	WTZ	0.2						

FELT: Tadmor (75) MM IV

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MAY 06 01^h18^m20^s.7 41°.23s 172°.41E 5 km M = 3.8
 ± 0.5 0.03 0.04 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	Pg	01 18	26.8			0.3	100	0.28	59			
	eP*	01 18	49			1.0	100	1.49	210	4.0		
	S*		19 06			-2.1	99					
KKY	Pn	01 18	48.2			0.3	100	1.52	142			
	iP*		49.2			0.7	100					
	S*		19 09.3			0.3	100					
WEL	eP*	01 18	52			-0.9	100	1.78	92			
	S*		19 15.0			-1.6	99					
	iSg		19.2			-1.4						
MNG	P*	01 19	02.4			-1.2	100	2.40	76	3.5	4.1	
	i		04.7									
	(Sn)		33			3.6						
TNZ	eS*		37.5			2.0	99					
	ePg	01 19	12			-0.0	100	2.54	37	3.6	3.7	
	eSg		46			-0.3	100					
NGZ	e		50									
	P*	01 19	15.0			-2.1		3.19	51			
	e		20.0									
RHP	Pn	01 19	12.8			0.1	100	3.34	210			
	Sn		53.0			1.1	100					

KRP e(Pn) 01 19 26.0 3.0 4.09 37 3.5
e(Sn) 20 14 4.1

AMPLITUDES: KAI 1.8 WEL 1.8 1.5 MNG 1.1 4.8
TNZ 0.2 0.4 NGZ 0.7 1.1 RHP 1.2 2.3
KRP 0.3

MAY 06 01^h20^m33^s.4 41°.26S 172°.38E 12 km M = 4.0
± 0.6 0.04 0.04 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
COB	P*	01	20	38.4		-1.5	99	0.31	58		
KAI	eP*	01	20	59		-0.5	100	1.47	209	4.1	
	S*		21	18.3		-0.6	100				
KKY	Pn	01	21	00.0		0.4	100	1.52	140		
	iP*			00.5		0.0	100				
	S*			21.1		0.4	100				
WEL	P*	01	21	05		-0.3	100	1.80	92	3.9	
	S*			26.8		-2.2	98				
MNG	Pn	01	21	13.5		1.4	100	2.44	76		4.1 4.0
	iP*			16.2		0.1	100				
	(Sn)			46.7		5.4					
	eS*			50.0		1.9	99				
TNZ								2.57	37		3.6
RHP	Pn	01	21	24.1		0.1	100	3.31	210		
	eSn			22 03		0.7	100				
KRP	e(Sn)	01	22	27		5.1		4.13	37		

AMPLITUDES: KAI 2.7 WEL 0.8 MNG 4.0 4.0
TNZ 0.3 RHP 2.9 4.2

MAY 06 12^h21^m29^s.6 38°.44S 176°.14E 12 km M = 2.9
± 0.2 0.02 0.02 R S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
WNZ	Pg	12	21	34.2		0.1	100	0.19	189		
	e			41.8							
KRP	Pg	12	21	44.0		0.1	100	0.70	317		2.7 2.8
	Sg			53.6		0.1	100				
WTZ	Pg	12	21	45.5		-0.6	99	0.81	56		2.6 2.7
	e			52.0							
NGZ	ePg	12	21	46.5		-0.4	100	0.85	209		
	i			51.2							
	eS*			56		-0.7					
TRZ	ePg	12	21	54		-0.6		1.23	155		3.0
GNZ	ePg	12	22	00.5		0.7	99	1.49	98		3.1
	e			29.7							
MNG	eP*	12	22	08.5		-0.4		2.23	193		3.3
	ePg			11.7		-3.1					

AMPLITUDES: WNZ 2.2 2.6 KRP 0.8 1.1 WTZ 0.3 0.3
NGZ 0.4 TRZ 0.2 GNZ 0.3
MNG 0.4

MAY 07 01^h31^m31^s.8 36°.72S 178°.47E 12 km M = 3.9
± 1.3 0.05 0.11 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
ECZ	eP*	01	31	49.2		-0.3	100	0.97	176		3.5 3.9

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	ePg		50.9		-0.6	100						
	Sg	32	06.9		2.2	99						
	e		12.0									
WIZ	eSg	01 32	19.0		3.3		1.30	231				
	i		22.8									
	i		30.8									
WTZ	iP*	01 32	03.1		0.7	100	1.73	223		3.9		
GNZ	ePn	01 32	03		-0.9	100	1.95	190		3.4	3.6	
	e(Pg)		15		3.7							
	e		21									
	S*		30.0		-1.9	99						
GBZ	ePn	01 32	11.7		0.8	100	2.46	281				
	eP*		15.0		0.1	100						
KRP	P*	01 32	16.5		-1.3	100	2.63	242		4.1		
	eS*		54.0		1.8							
	eSg	33 03			2.7							
NGZ	ePn	01 32	25		2.2	99	3.34	222				
	eP*		32		2.1							
CNZ	eP*	01 32	30		-0.7	100	3.38	222				
TNZ	eP*	01 32	40		-2.3		4.06	231		4.6		
MNG	ePn	01 32	38		-1.3	100	4.54	210				
	eP*		51		0.6	100						
	eSn	33 31			0.7	100						
WEL	eSn	01 33	50		-0.8		5.39	211		4.2		
COB	eSn	01 34	15		3.7		6.25	224			3.8	
AMPLITUDES:		ECZ	0.7	2.2	WIZ	1.5	WTZ	2.8				
		GNZ	0.6	1.3	GBZ	0.3	KRP	0.6				
		NGZ	0.3		CNZ	0.2	TNZ	0.2				
		WEL	0.2		COB	0.3						

MAY 07 13^h26^m38^s.0 32°.78S 179°.89W 451 km M = 4.7
 ± 1.3 0.13 0.27 15 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	13	28	10.8		-0.2	100	5.79	205		5.1	4.5
	e		29	20								
	eS			24		-0.4	100					
GNZ	P	13	28	14.2		-0.0	100	6.09	196		4.9	4.6
	eS		29	29.6		-0.5	100					
KRP	eP	13	28	18		1.1	100	6.35	215		3.1*	
TRZ	eP	13	28	28		1.3	99	7.26	201		4.7	4.6
	eS		29	53		0.3	100					
MNG	eP	13	28	40.2		-1.9	98	8.67	204		4.8	4.5
	i			42.0								
	e		30	12								
	eS			21		0.7	100					
WEL	eS	13	30	38		0.8	100	9.50	205	4.7		
COB	eS	13	30	50		-0.7	100	10.18	213			3.0*
AMPLITUDES:		WTZ	1.8	0.6	GNZ	1.3	1.0	KRP	0.3			
		TRZ	0.2	0.4	MNG	1.5	1.0	WEL	0.2			
		COB	0.2									

MAY 08 06^h01^m33^s.2 37°.95S 177°.68E 33 km M = 3.3
 ± 0.4 0.03 0.03 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP*	06	01	44.2		-0.2	100	0.55	266			

WIZ	eS*		52.8		0.2	100						
	P*	06 01	43.3		-1.5	99	0.58	317				
ECZ	eS*		53.5		0.2	100						
	P*	06 01	46.2		-1.2	100	0.73	70		3.2	3.5	
	S*		59.5		1.8	99						
GNZ	P*	06 01	46.2		-1.4	100	0.75	159		3.2	3.3	
	S*		58.5		0.4	100						
KRP	Pn	06 02	00.8		0.9	100	1.69	270		3.5	3.3	
	Sn		20.8		0.9	100						
MNG	ePn	06 02	19.5		-0.5		3.17	212		3.2		
	e		35									
AMPLITUDES:	WIZ		0.7	0.9	ECZ		0.6	1.6	GNZ		2.2	5.0
	KRP		0.6	0.3	MNG		0.3					

MAY 08 10^h28^m58^s.4 40°.97s 172°.33E 33 km M = 3.7
 ± 0.6 0.03 0.05 R S.E. of RES. 1.3 80/ 253

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KAI	eP*	10	29	29.5		0.7	100	1.70	204	3.9		
	e			48								
	S*			49.8		-1.6	100					
KKY	Pn	10	29	26.4		0.2	100	1.77	145			
	eP*			29.4		-0.6	100					
	Sn			48.8		1.8	99					
WEL	ePn	10	29	28		0.5	100	1.87	101	3.7		
	eP*			30.8		-0.8	100					
	Sn			51.5		2.2	99					
TNZ	eP*	10	29	40		-0.2	100	2.38	42		3.5	3.6
	eS*			30 13		1.5	100					
MNG	ePn	10	29	34.9		-0.1	100	2.42	83		3.8	4.0
	eP*			39.5		-1.4	100					
	S*			30 10.0		-2.7	98					
CMZ	P*	10	29	44.2		-0.2	100	2.63	175		3.6	
	e			30 08								
	eS*			19		0.1	100					
MJZ	ePn	10	29	48		0.8	100	3.32	204			
	e			50.8								
	eSn			30 27.5		3.4						
	eS*			37.4		-2.1						
KRP	ePn	10	29	55		-0.6	100	3.93	40		3.3	
AMPLITUDES:	KAI		1.1		WEL		0.6		TNZ		0.2	0.3
	MNG		2.1	3.6	CMZ		0.4		KRP		0.2	

MAY 10 04^h21^m24^s.6 40°.99s 175°.53E 12 km M = 3.5
 ± 0.4 0.02 0.03 R S.E. of RES. 1.0 80/ 254

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iP*	04	21	31.7	U	-0.5	100	0.38	354		3.4	
	S*			37		-0.6	100					
CAZ	P*	04	21	34.2		-0.7	100	0.53	81			
	S*			43		0.7	100					
WEL	P*	04	21	36.3	U	-0.5	100	0.65	243	3.7		
	S*			46.5		0.8	100					
TNZ	ePn	04	21	59		1.4	99	2.01	334		3.1	3.4
	e			22 11								
	S*			27		0.4	100					
COB	Pn	04	21	57.7		-1.4	99	2.12	267		3.6	3.2

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	P*	22 01		-1.0						
	Sn	25		0.1	100					
	Sg	32.5		-3.6						
KRP	P*	04 22 21		2.8		3.07	0		3.9	3.9
	(S*)	58		-0.2						
	(Sg)	23 03		-5.0						
AMPLITUDES:	MNG	29	WEL	5.1	TNZ			0.1	0.3	
	COB	0.5 0.7	KRP	0.4	0.3					

MAY 11 00^h10^m44^s.6 45°.56S 169°.86E 12 km M = 3.8
 ± 0.2 0.01 0.02 R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ROX	iPg	00	10	52.3		-0.4	100	0.39	283			
	Sg			58		-0.1	100					
DNZ	Pg	00	10	55.8	D	-0.2	100	0.55	124			
	Sg			11 03.5		-0.1	100					
OMZ	P*	00	11	02		1.0	100	0.89	57		3.3	3.7
	Pg			03.5		0.7						
	S*			14		0.9	100					
	eSg			17		2.1						
THP	iPn	00	11	03.6	D	-0.4	100	1.02	1			
	Pg			05		-0.3						
	Sg			19		-0.1	100					
MJZ	P*	00	11	13		-0.6	100	1.64	16		4.1	3.9
	iPg			15.5	D	-2.2						
	Sg			38.5		-1.3	99					
MSZ	P*	00	11	14		0.3	100	1.64	302		3.8	4.0
	(Pg)			18		0.2						
	S*			35.5		0.1	100					
	Sg			38		-1.9						
BRZ	P*	00	11	14		0.2	100	1.64	262			
	Pg			18.5		0.7						
	S*			37		1.6	98					
	Sg			40.5		0.5						
OBZ	e(P*)	00	11	16.5		-0.1	100	1.81	221		3.6	3.5
	S*			39		-1.4	99					
CMZ	Pg	00	11	39		-2.3		2.81	46		4.1	4.2
	Sg			12 17.5		-1.6						
	e			19.5								
AMPLITUDES:	DNZ	6.0	10	OMZ	1.4	6.5	MJZ	7.5	5.3			
	MSZ	3.3	10	BRZ	0.6	0.5	1.7	OBZ	1.1	1.8		
	CMZ	1.1	2.6									

MAY 11 09^h58^m42^s.8 34°.53S 178°.13W 33 km M = 4.1
 ± 7.8 0.82 1.19 R S.E. of RES. 5.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	Pn	09	59	39		-4.0	100	4.15	219		4.5	4.3
	Sn	10	00	20.5		-8.0	98					
	(S*)			44		-4.8						
GNZ	Pn	09	59	58.8	U	2.2	100	5.15	216		4.1	4.0
	Sn	10	00	55		2.6	100					
WTZ	Pn	09	59	59.5		1.6	100	5.24	227		3.9	4.1
	Sn	10	00	56.5		1.8	100					
TRZ	Sn	10	01	27		3.5	100	6.44	217			4.2
MNG	Pn	10	00	33.5		-0.9		7.92	218		3.5	3.9

	e	01 58								
	Sn	02 01		1.9						
WEL	Sn	10 02 17		-2.7	8.77	218	4.3			
MJZ	Sn	10 03 54		-5.5	12.93	220		4.0		
AMPLITUDES:	ECZ	0.4	0.3	GNZ	0.4	0.5	WTZ	0.3	0.4	
	TRZ		0.2	MNG	0.1	0.3	WEL	0.1		
	MJZ		0.1							

MAY 11 23^h06^m33^s.3 45°.12S 167°.62E 142 km M = 4.3
 ± 0.5 0.02 0.03 3 S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
MSZ	iP	23	06	53.9	U	0.1	100	0.49	25		3.7 4.0
	e			07 03							
	e(S)			09.5		-0.0	100				
BRZ	iP	23	06	54.8	D	0.1	100	0.67	185		
	S			07 11		-0.2	100				
ROX	P	23	07	01.2		1.3	92	1.25	107		
	(S)			21		0.8	99				
THP	iP	23	07	04.8	D	-0.1	100	1.71	71		
	S			29		-0.0	100				
OBZ	P	23	07	06		-0.1	100	1.82	169	3.9	4.4
	S			31		-0.2	100				
DNZ	S	23	07	38		-0.5	100	2.17	111		
MJZ	iP	23	07	11.8	UNE	-0.6	99	2.33	62		4.3 4.5
	S			42		-0.1	100				
OMZ	P	23	07	13		0.6	100	2.33	90		4.0 4.1
	S			42		-0.2	100				
KAI	eS	23	08	15		-0.7		3.78	48	4.5	
COB	P	23	07	53		-1.2		5.50	45		4.7 4.5
	S			08 52		-4.9					
MNG	P	23	08	22		3.3		7.33	55		2.5* 2.4*
	(S)			09 36		-4.8					
AMPLITUDES:	MSZ			8.0	30	BRZ	3.2	6.0	OBZ		1.0 5.3
	DNZ				0.9	MJZ	3.0	3.9	OMZ		0.6 0.9
	KAI			0.2		COB	0.2	0.2	MNG		0.1 0.1

MAY 12 16^h57^m08^s.2 38°.58S 177°.56E 33 km M = 3.8
 ± 0.3 0.02 0.03 R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
GNZ	iPn	16	57	17.2	SNE	0.4	100	0.37	100		
TUA	iPn	16	57	17.0	D	-0.1	100	0.40	234		3.2 3.6
	Sn			23.5		-0.1	100				
WTZ	iPn	16	57	21.8	U	-0.1	100	0.75	323		3.4 3.8
	Sn			33		0.9	100				
WIZ	e(Pn)	16	57	27		0.4		1.09	344		
TRZ	iPn	16	57	26.1	D	-1.1	99	1.13	210		4.0 3.8
	Sn			43		1.7	97				
WNZ								1.14	267		3.8
ECZ	Pn	16	57	28		0.2	100	1.18	42		3.5 3.6
	Sn			42		-0.5	100				
NGZ	Pn	16	57	33.2		-0.9	100	1.64	248		
	(Sn)			53		-0.4	100				
CNZ	Pn	16	57	34.0		-0.8		1.69	248		
	(Sn)			46.5		-8.2					
KRP	e(Pn)	16	57	36		0.7		1.72	292		

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TNZ	Sn	55.5		-0.0	100				
	Pn	16 57 47.4	U	0.7		2.56	255		4.2 4.0
	S*	58 23		-3.6					
MNG	iPn	16 57 43.7	D	-3.5		2.59	218		4.0 4.1
	Sn	58 13		-3.5					
GBZ	Pn	16 57 51		-0.1		2.88	324		
WEL	Sn	16 58 33		-4.1		3.46	218	4.1	
COB	Pn	16 58 09		-3.9		4.48	234		4.5 3.6
	e(Sn)	59 01.5		-0.4					
CIZ	Sn	16 59 57		-4.4		6.97	142		
MJZ	Pn	16 58 51		-4.5		7.60	222		4.1 3.8
	Sn	17 00 11		-5.8					
AMPLITUDES:		TUA	3.3	10	WTZ	5.0	11	TRZ	3.0 3.0
		WNZ	0.3		ECZ	0.5	0.8	TNZ	0.3 0.2
		MNG	2.5	4.2	GBZ	0.1		WEL	0.4
		COB	0.9	0.4	CIZ		1.1	MJZ	0.3 0.2

MAY 13 07^h40^m59^s.4 40°.10s 174°.75E 12 km M = 3.5
 ± 0.3 0.02 0.03 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
MNG	iP*	07	41	13.4	D	-0.2	100	0.76	133				3.5	3.4
	Pg			14		-1.0								
	S*			24.5		0.6	100							
CNZ	P*	07	41	18.2		-0.8	100	1.09	35					
	(Pg)			19		-2.4								
	S*			33.5		-0.1	100							
WEL	P*	07	41	21		0.1	100	1.19	179	3.4				
	S*			35		-1.7	99							
	Sg			41		1.4								
TRZ	P*	07	41	29		-0.3	100	1.68	72			2.8	3.4	
	(Pg)			37		3.5								
	S*			53		1.5	99							
COB	Sg			56		-0.2								
	Pn	07	41	30.5		0.6	100	1.83	237			3.5	3.6	
KRP	Sn			54		1.3	99							
	Pn	07	41	35		-0.6	100	2.25	16			3.7	3.7	
WTZ	Sn			42 02.5		-0.4	100							
	Pn	07	41	42		-0.2		2.74	40			3.7	3.9	
GNZ	Sn			42 12.5		-2.0								
	ePn	07	41	44		-0.7		2.92	61			3.3	3.1	
KAI	Sn			42 15		-3.9								
	eSn	07	42	34		1.1		3.50	225	3.8				
MJZ	Sn	07	43	06		-3.7		5.03	218					
AMPLITUDES:		MNG	9.5	9.7	WEL	0.7			TRZ		0.1	0.5		
		COB	0.5	2.3	KRP	0.5	0.4	WTZ			0.3	0.3		
		GNZ	0.2	0.2	KAI	0.2								

MAY 13 07^h42^m57^s.1 40°.60s 174°.63E 12 km M = 3.7
 ± 0.3 0.02 0.03 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
MNG	iP*	07	43	08.9	U	-0.4	100	0.65	92				3.8	3.8
	S*			18		-0.2	100							
WEL	P*	07	43	10		-0.1	100	0.69	171	3.6				
	S*			20		0.5	100							
CAZ	ePg?	07	43	25.5		3.0		1.25	105					

	(Sn)		32		-4.5				
	(Sg)		41		1.6				
COB	Pn	07 43	22.4	U	-0.9	100	1.52	251	4.5 3.8
	iSn		43.5		0.5	100			
CNZ	Pn	07 43	23.1		-0.9	100	1.57	27	
	S*		47		1.2	99			
TRZ	P*	07 43	33		0.9	100	1.98	59	3.6 3.5
	(Pg)		35		-2.2				
	(Sn)		50		-4.1				
	S*		58		-0.1				
TUA	e(Sn)	07 44	10		-0.0		2.65	48	3.6
	e(Sg)		25		-1.2				
KRP	Pn	07 43	41		0.6		2.76	15	4.1 4.2
	Pg		51		-2.0				
	Sg		44 30		-0.3				
KAI	P*	07 43	51		0.0		3.09	230	3.7
	e(Sn)		44 23		2.3				
	S*		31		-0.4				
WTZ	P*	07 43	55.5		2.8		3.19	36	3.6 4.0
	(S*)		44 29		-5.4				
	(Sg)		44		-0.6	100			
GNZ	e(P*)	07 43	56		1.9		3.27	54	3.4 3.6
	Sn		44 21		-4.0				
MJZ	e(Pn)	07 44	06.5		1.3		4.58	221	3.6 3.4
	(P*)		11.5		-5.0				
	Sn		52.5		-4.1				
AMPLITUDES:	MNG		29 32	WEL	3.3				COB 8.0 5.0
	TRZ		0.4 0.5	TUA			0.2		KRP 0.7 0.7
	KAI	0.2		WTZ		0.2 0.4			GNZ 0.2 0.5
	MJZ		0.3 0.2						

FELT: Plimmerton (68) MM IV

MAY 13 11^h43^m49^s.5 40°.24S 173°.87E 131 km 80/ 261
 ± 0.8 0.03 0.03 7 S.E. of RES. 0.6 M = 3.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	iP	11	44	14.9	D	0.1	100	1.21	225		3.7*	3.9*
	e			27.5								
	S			34		0.0	100					
WEL	P	11	44	15.5		0.3	100	1.25	147	3.7		
	S			34		-0.8	99					
MNG	iP	11	44	15.8	U	0.2	100	1.29	108		3.8	4.0
	e			31								
	S			36		0.5	100					
NGZ	P	11	44	19.7		-0.7	99	1.71	52			
	e			39								
	S			44		0.1	100					
TRZ	S	11	45	00.5		2.1		2.38	74			3.5
KRP	P	11	44	30.5		-1.9		2.65	30		2.5*	2.8*
	S			45 03		-1.9						
	e			23								
WTZ	S	11	45	17.5		-2.9		3.31	48			3.2
GNZ	P	11	44	42		-2.9		3.59	65		3.9	4.1
	S			45 24		-3.0						
MJZ	P	11	44	55		-2.2		4.52	213		2.8*	2.4*
	S			45 43.5		-5.8						
AMPLITUDES:	COB		2.2	11	WEL	0.8				MNG	5.1	10

TRZ 0.3 KRP 0.2 0.4 WTZ 0.1
 GNZ 0.5 1.1 MJZ 0.2 0.1

MAY 13 13^h52^m03^s.3 37°.38S 177°.15E 12 km M = 4.0
 ± 0.4 0.02 0.02 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WIZ	iPg	13	52	06.2	U	-0.9	100	0.15	169					
	Sg			09		-0.6	100							
WTZ	P*	13	52	14.8		-0.3	100	0.62	192		3.5	3.9		
	e(Pg)			17		0.9								
	S*			24		0.4	100							
ECZ	P*	13	52	24		-0.2	100	1.15	106		4.2	3.9		
	(Pg)			29		2.3								
	Sg			44		1.7	99							
KRP	Pn	13	52	27.5		-0.4	100	1.39	246		3.9	3.9		
	(Pg)			33		1.4								
	e			41										
	(Sn)			46.5		0.3								
	(Sg)			58		7.5								
TUA	ePn	13	52	27.5		-0.8	100	1.43	180		4.5	4.1		
	(Pg)			29.5		-2.8								
	Sg			50.5		-1.1	100							
GNZ	Pn	13	52	27.5		-1.0	100	1.44	152		4.3			
	e(Pg)			30		-2.5								
	Sg			52.5		0.5	100							
GBZ	Pn	13	52	32		-1.0	100	1.77	310					
	Pg			39		-0.2								
	e(Sg)		53	03		-0.2								
	e			09										
AUC	P*	13	52	37.5		-0.6	100	1.97	284					
	Sg		53	11		1.3	99							
	e			21										
NGZ	P*	13	52	43		1.4	99	2.18	213					
	(S*)		53	13		2.8								
TRZ	Pn	13	52	39.5		0.8	100	2.19	187		4.2	3.8		
	P*			44.5		2.6								
	e(S*)		53	13.5		2.9								
CNZ	Sg	13	53	19		0.9	100	2.21	214					
ONE	ePn	13	52	47		0.5		2.76	305	3.9				
	Pg			58		-1.1								
	e(Sg)		53	45		8.7								
MNG	Pn	13	52	55.5		-1.0		3.49	201		4.0	3.6		
	P*		53	08		3.9								
	Sn			38		1.4								
WEL	Sn	13	53	58		1.4		4.32	205	3.8				
AMPLITUDES:		WTZ	6.0	13	ECZ	2.4	1.3	KRP	1.9	1.4				
	TUA	3.9	1.7	GNZ	6.5			GBZ	1.4	2.1				
	TRZ	1.0	0.5	ONE	0.2			MNG	1.1	0.6				
	WEL	0.1												

MAY 14 08^h46^m48^s.2 34°.84S 178°.61E 309 km M = 4.4
 ± 1.7 0.11 0.19 18 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	P	08	47	44		0.5	100	2.84	181		4.3	4.2		
	S		48	28		1.4	100							

GBZ	P?	08 47 43.5	-0.5	100	2.90	241			
WTZ	P	08 47 48	-0.9	100	3.40	202	4.6	4.2	
	e	48 26							
	e(S)	34	-2.4						
ONE	eP	08 47 51	0.0	100	3.60	254			
GNZ	P	08 47 52	-1.4	100	3.82	187	4.8	4.5	
	S	48 42	-2.4	98					
TUA	eP	08 47 57	0.2	100	4.13	196		4.5	
	e(S)	48 47.5	-2.9						
	e	52							
TRZ	(P)	08 48 06	0.4	100	4.91	196	4.3	4.4	
	S	49 07	0.7	100					
NGZ	eP	08 48 07	1.0	100	4.96	208			
	eS	49 13	5.9						
CNZ	e(P)	08 48 11	4.5		4.99	209			
	e(S)	49 14	6.1						
TNZ	eP?	08 48 13.5	1.0		5.51	217	3.5*		
	e	15							
MNG	P	08 48 19.5	-2.2		6.28	202	4.7	4.1	
	S	49 31	-4.1						
WEL	S	08 49 53	-0.2		7.12	204	4.1		
COB	eS	08 50 08	0.3		7.78	215		2.9*	
CIZ	(S)	08 51 02	8.8		9.84	159			
	e	12							
MJZ	eS	08 51 21	0.0		11.10	212		3.1*	
AMPLITUDES:	ECZ	0.5	0.4	WTZ	1.8	0.8	GNZ	2.7	2.2
	TUA		0.4	TRZ	0.2	0.6	TNZ		0.2
	MNG	2.1	0.7	WEL	0.1		COB		0.2
	CIZ		0.1	MJZ		0.2			

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MAY 15 03^h18^m55^s.4 37°.53s 176°.39E 193 km M = 3.7
 ± 1.5 0.14 0.13 11 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
WTZ	P	03	19	23		0.6	100	0.66	134		3.2	3.1
	S			43.5		0.1	100					
KRP	P	03	19	22.5		-0.6	100	0.78	239		2.5*	
TUA	S	03	19	53.5		0.6	100	1.41	155			3.4
GNZ	P	03	19	31		0.3	100	1.70	131		4.0	4.0
	S			57		-0.9	99					
NGZ	eS	03	20	00		1.1		1.76	200			
TRZ	e	03	19	58				2.05	171			3.8
	e(S)			20 01		-3.2						
MNG	iP	03	19	44.3	D	-2.9		3.17	193		3.9	3.8
	S			20 22		-5.2						
WEL	S	03	20	39		-5.7		3.96	198	3.6		
COB	S	03	20	52.5		-5.6		4.54	217			2.6*
MJZ	S	03	22	06		-9.5		7.87	213			2.6*
AMPLITUDES:	WTZ	0.5	0.4	KRP		0.3		TUA			0.2	
	GNZ	1.5	2.5	TRZ			0.7	MNG		1.5	1.5	
	WEL	0.1		COB			0.2	MJZ			0.1	

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MAY 15 09^h02^m26^s.6 32°.50s 179°.01W 395 km M = 4.8
 ± 2.1 0.31 0.42 69 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
ECZ	eP	09	03	57		2.1		5.56	200		4.6	5.1

WEL	e(P*)	16 40 37.5	4.4	4.72	53	3.7		
	Sn	41 15	0.1					
MNG	ePn	16 40 31.5	-1.6	5.56	52		4.1	3.9
	P*	44	-3.5					
	(S*)	41 56	-4.1					
TNZ	ePn	16 40 45.5	5.1	6.11	36		4.1	3.9
KRP	Pn	16 41 05.5	3.9	7.66	37		4.2	3.9
	P*	16	-7.2					
	Sn	42 29	3.5					
GNZ	e(Sn)	16 42 46	4.0	8.35	51			
AMPLITUDES:	MJZ	35 46	OMZ	15 20	MSZ	30		
	DNZ	7.5 14	KAI	2.2	BRZ	3.4	2.7	6.5
	OBZ	1.0 3.3	COB	1.2 2.5	WEL	0.1		
	MNG	0.7 0.6	TNZ	0.1 0.1	KRP		0.4	0.2

FELT: Lake Ohau (115) MM IV

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MAY 16 04^h15^m42^s.6 39°.82S 173°.90E 212 km M = 4.3
 ± 0.9 0.04 0.06 7 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	P	04	16	11.5		-0.7	100	0.74	31		3.2*	3.4*
	S			36		0.9	100					
MNG	iP	04	16	18.0	U	0.8	100	1.45	124		4.6	4.5
	S			43.5		-0.4	100					
NGZ	iP	04	16	18.0		0.6	100	1.47	65			
	S			43		-1.2	100					
COB	iP	04	16	19.3		1.3	99	1.55	215		4.2*	3.6*
	S			46		0.6	100					
WEL	P	04	16	19		0.5	100	1.61	156	3.9		
	S			46		-0.3	100					
CAZ	S	04	16	56		1.5		2.08	122			
TRZ	iP	04	16	26.0	U	0.9	100	2.27	84		4.3	4.4
	S			58		0.0	100					
KRP	P	04	16	24		-1.3	99	2.29	35		2.8*	2.8*
	e(S)			17 03		4.8						
WTZ	iP	04	16	32.0	U	-1.6		3.03	54		4.1	
	S			17 17		-1.7	99	3.29	214	3.5*		
KAI	S	04	17	17		-0.8		3.41	71		4.6	4.2
GNZ	P	04	16	37.4	U	-0.8						
	S			17 17		-4.3						
CMZ	P	04	16	41		-3.0		3.88	194		3.5*	4.6*
	e			17 24								
	S			30		-1.4						
MJZ	P	04	16	56.5		-0.1		4.90	210		2.8*	3.6*
	e			17 15.5								
	S			52		-2.0						
OMZ								5.70	202			3.1*
MSZ	P	04	17	16.6		-1.6		6.58	221		3.4*	3.2*
	S			18 31		-1.7						
BRZ	S	04	18	52		-3.9		7.58	216			
AMPLITUDES:	TNZ			0.3 0.7	MNG		17 18	COB			4.5	4.4
	WEL	0.6			TRZ		0.7 2.0	KRP			0.4	0.4
	WTZ			0.8	KAI	0.4		GNZ			2.5	1.6
	CMZ			0.6 11	MJZ		0.2 1.5	OMZ				0.3
	MSZ			0.6 0.6	BRZ	0.1	0.1					

MAY 16 20^h57^m04^s.2 31°.94s 179°.25w 33 km 80/ 268
 ± 2.8 0.19 0.57 R S.E. of RES. 2.1 M = 4.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	Pn	20	58	31.5		1.5	100	6.02	197			4.8	4.7	
	P*			45		-3.0								
	Sn		59	37.5		2.6	99							
ONE	eP*	20	58	56		-1.0		6.55	233					
WTZ	ePn	20	58	38.5		-1.8	100	6.78	206		4.6	4.4		
	Sn		59	52		-1.1	100							
GNZ	e(Pn)	20	58	42		-2.0		7.06	198		4.7	4.5		
	e			57										
	(P*)		59	11		5.4								
	Sn			58.5		-1.2	100							
CRZ	eP*	20	59	06		-2.3		7.21	248		5.0			
KRP	Pn	20	58	51		2.9	99	7.35	214		4.8			
	(P*)		59	19		8.4								
TUA	Pn	20	58	48.5		-1.1	100	7.46	202		4.9	4.7		
	(Sn)	21	00	15		5.5								
TRZ	Pn	20	58	58.5		-1.8	100	8.24	202		4.2	4.5		
	Sn	21	00	28		-0.3	100							
NGZ	P*	20	59	27		-0.7		8.35	209					
TNZ	e	20	59	27				8.90	214		5.0			
MNG	Pn	20	59	14.5		-5.0		9.66	205		4.2	4.5		
	Sn	21	00	56		-6.1								
	e(S*)		02	00		5.2								
WEL	Sn	21	01	17		-5.4		10.49	206	4.4				
COB	Sn	21	01	38		-0.8		11.18	213			4.1		
CIZ	e	21	01	42				12.19	171					
MJZ	ePn	21	00	22.5		-3.1		14.50	211		4.6	4.8		
	Sn		02	52		-6.6								
BRZ	Pn	21	01	04		1.4		17.21	213					
AMPLITUDES:		ECZ	0.4	0.4	WTZ	0.8	0.5	GNZ	0.8	0.9				
		CRZ	0.1		KRP	0.3		TUA	0.5	0.3				
		TRZ	0.1	0.3	TNZ	0.1		MNG	0.3	0.8				
		WEL	0.1		COB		0.2	CIZ		0.3				
		MJZ	0.3	0.5	BRZ	0.1								

MAY 17 02^h35^m33^s.5 45°.46s 167°.36E 107 km 80/ 269
 ± 0.9 0.04 0.06 6 S.E. of RES. 0.9 M = 4.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
BRZ	iP	02	35	48.7	U	-0.5	100	0.34	159					
	S		36	01		-0.3	100							
ROX	iP	02	36	00.0		0.9	100	1.38	91					
	S		20			1.5	98							
OBZ	P	02	36	01		0.0	100	1.54	160		4.5	4.5		
	S		22			0.1	100							
THP	iP	02	36	06.8	U	-0.2	100	2.02	64					
	S		32			0.2	100							
DNZ	iP	02	36	10.8	D	0.7	100	2.25	102					
	S		36.5			-0.9	100							
RHP	iP	02	36	10.7	D	-1.1		2.37	56					
	S		39.5			-0.9								
OMZ	iP	02	36	13.6	D	-0.6	100	2.54	82		4.9	4.8		
	S		43.5			-1.1	99							

MJZ	iP	02 36 13.7	ds	-2.0	2.66	57	4.7 5.1
	e	28					
	S	45.5		-2.0			
KAI	eP	02 36 37		1.1	4.14	46	4.6
	S	37 19.5		-4.1			
	e	24					
CMZ	P	02 36 33.5		-3.4	4.22	65	4.7 5.1
	e	37					
	S	37 17.5		-7.8			
	e	22.5					
COB	P	02 36 56		-3.4	5.88	44	4.7 4.9
	S	38 01		-5.1			
MNG	P	02 37 20		-4.0	7.67	54	3.2* 3.2*
	e	31					
	S	38 42		-8.0			
AMPLITUDES:	BRZ	19 33	OBZ	9.0 20	DNZ		28 28
	OMZ	7.3 7.3	MJZ	9.0 23	KAI	0.5	
	CMZ	1.8 4.4	COB	0.5 1.4	MNG		0.5 0.6

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MAY 17 03^h59^m18^s.0 37°.46S 177°.06E 12 km M = 3.7
 ± 0.6 0.03 0.05 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	iPg	03 59	20.1		D	-1.2	100	0.13	124			
	e(Sg)		24			0.5						
WTZ	Pg	03 59	28.5			-0.4	100	0.53	186		3.0	3.3
	e(Sg)		38.5			2.4						
ECZ	Pg	03 59	41.5			-0.9	100	1.21	102		3.9	
KRP	P*	03 59	41			-0.2	100	1.30	249		3.6	3.7
	(Pg)		45			0.7						
	(Sg)	04 00	07			5.3						
TUA	ePg	03 59	45.5			0.2	100	1.35	177		3.7	
GNZ	P*	03 59	44			0.8	100	1.40	148		4.0	
	Pg		48			1.5						
GBZ	P*	03 59	47.5			-1.9	100	1.77	314			
	Pg		54			0.1	100					
	S*	04 00	13			0.2	100					
AUC	Pg	03 59	58.5			1.6	100	1.92	287			
NGZ	Pg	04 00	01.5			1.7	100	2.06	213			
TRZ	Pg	04 00	03			2.5	99	2.10	185		3.6	
CNZ	Pg	04 00	01			0.4	100	2.11	214			
	(Sn)		15			-3.0						
	Sg		25.5			-3.5	97					
TNZ	Pg	04 00	12			-1.1		2.73	230		4.0	
ONE	(S*)	04 00	45			3.0		2.74	307	3.9		
MNG	e(P*)	04 00	18			1.0		3.38	201		3.4	
	(Pg)		27			0.5						
COB	Pn	04 00	37			6.0		4.94	221		3.8	
AMPLITUDES:	WTZ	3.0 4.4	ECZ	0.9	KRP		1.2 1.3					
	TUA	0.6	GNZ	3.7	GBZ		1.6 2.5					
	TRZ	0.3	TNZ	0.1	ONE	0.2						
	MNG	0.3	COB	0.1								

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MAY 17 04^h01^m00^s.7 37°.41S 177°.17E 12 km M = 3.2
 ± 0.6 0.03 0.03 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	iPg	04	01	02.8	D	-1.1	100	0.12	172			
	(Sg)			05		-1.1	100					
WTZ	P*	04	01	11		-0.9	100	0.59	194		2.8	2.9
	(Sg)			21		0.0	100					
ECZ	ePg	04	01	25		1.4	99	1.13	105		3.4	
KRP	eP*	04	01	26		0.4	100	1.39	248		3.5	
	Sg			49		1.2	100					
	e			58								
TUA	ePg	04	01	31.5		2.5		1.39	181		3.3	
GNZ	Pg	04	01	30		0.8	100	1.40	152		3.5	3.0
	e(Sg)			53		4.8						
GBZ	ePg	04	01	37		-0.1		1.80	311			
	S*			55.5		-0.8	100					
AMPLITUDES:		WTZ	1.5	1.5	ECZ	0.4	KRP	0.7				
		TUA	0.3		GNZ	1.1	0.6	GBZ	1.6			

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MAY 19 14^h07^m56^s.7 42°.84s 172°.38E 12 km M = 3.6
 ± 0.3 0.01 0.02 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CMZ	iPg	14	08	12.8	D	0.4	100	0.77	166		3.9	4.0
	Sg			23.5		0.6	100					
KAI	eP*	14	08	11.5		0.2	100	0.78	293	3.0		
	Sg			23		-0.3	100					
KKY	Pg	14	08	18.5		0.3	100	1.05	67			
	i			20	U							
COB	eP*	14	08	28		-0.1	100	1.77	9		3.8	3.7
	S*			53		1.5	98					
MJZ	ePn	14	08	27		0.1	100	1.81	230		3.8	3.4
	e(P*)			30		1.3						
	e(Sg)			58		0.3						
RHP	iPn	14	08	31.5	D	0.7		2.10	232			
	P*			37		3.4						
	S*		09	04		2.8						
WEL	e(P*)	14	08	41		2.8		2.37	50	3.1		
	Sg			09 15		-1.4	99					
OMZ	ePn	14	08	35		-0.9	100	2.47	205		3.9	3.2
	Pg			45		-1.7						
	eSg			09 20		0.0						
THP	Pn	14	08	35.7	U	-0.4	100	2.48	226			
	P*			43		2.7						
MNG	ePn	14	08	47		0.9		3.21	47		3.7	3.4
	P*			55		2.3						
	S*		09	39		4.3						
MSZ	ePn	14	08	50		-3.0		3.72	239		3.7	
	Pg			09 08		-3.9						
BRZ	P*	14	09	21		5.4		4.55	228			
KRP	Pn	14	09	23		6.1		5.47	27		3.8	
GNZ	S*	14	10	53		-5.2		5.99	48			
AMPLITUDES:		CMZ	9.0	19	KAI	0.7	COB	1.1	3.0			
		MJZ	3.1	1.5	WEL	0.1	OMZ	0.8	0.3			
		MNG	0.8	0.6	MSZ	0.5	KRP	0.3				

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MAY 19 22^h50^m19^s.3 37°.20s 177°.23E 182 km M = 4.2
 ± 1.1 0.08 0.06 8 S.E. of RES. 1.0

INSTRUMENTAL DATA

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GBZ	e(Pn)	00 17 07	4.4	6.78	239				
	eP*	24	0.8						
GNZ	Pn	00 17 05	1.2	100	6.86	212	4.9 4.7		
	e(P*)	27	2.3						
	Sn	18 19	1.6	100					
WTZ	Pn	00 17 02	-1.8	100	6.87	221	4.7 4.6		
	Sn	18 15	-2.5	99					
TUA	Pn	00 17 09.5	-1.6	100	7.40	215	5.1 4.7		
	Sn	18 31	0.7	100					
ONE	Pn	00 17 13	1.5		7.42	245			
KRP	Pn	00 17 15	0.2	100	7.67	227			
	(P*)	39	0.5						
TRZ	e(Sn)	00 17 32			8.14	214	5.1 4.7		
	e(Sn)	18 51	2.8						
CRZ	Pn	00 17 26.5	1.1	100	8.44	257	5.2		
MNG	Pn	00 17 36.5	-4.9		9.61	215	4.3 4.6		
	Sn	19 18	-5.6						
	e	43							
WEL	Sn	00 19 38	-6.2		10.48	215	4.6		
CIZ	Sn	00 20 03	4.3		11.07	177			
COB	Sn	00 19 57	-9.1		11.38	221	4.3		
CMZ					13.25	213	4.7		
AMPLITUDES:	ECZ	0.6	GBZ	1.0	GNZ	1.3	1.3		
	WTZ	1.1	0.7	TUA	0.8	0.3	TRZ	0.8	0.4
	CRZ	0.2	MNG	0.4	1.0	WEL	0.1		
	CIZ	0.5	COB	0.3	CMZ		0.3		

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MAY 21 02^h07^m29^s.3 37°.25S 179°.61E 12 km M = 3.5
 ± 1.0 0.06 0.06 R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P*	02	07	47		0.2	100	0.95	242		3.8	3.8
	e(S*)			58		-1.6						
	e(Sg)			08 04		2.3						
GNZ	P*	02	08	01.5		-1.0	99	1.87	222		3.5	3.4
	S*			27.5		0.3	100					
WTZ	Pn	02	08	04.6	D	-0.3	100	2.20	250		3.5	3.5
	Sn			32.5		0.8	100					
	Sg			43		-0.7	100					
TUA	e(Pn)	02	08	11		2.2		2.49	231		3.3	3.2
	e(Sn)			32		-6.5						
NGZ	P*	02	08	34		0.5	100	3.70	237			
MNG	ePn	02	08	37.5		-0.9		4.66	222		3.1	3.3
	eSn			09 26		-4.6						
WEL	Sn?	02	09	42		-9.1		5.52	221	3.9		

AMPLITUDES:	ECZ	1.4	1.8	GNZ	0.7	0.9	WTZ	0.7	0.6
	TUA	0.1	0.1	MNG	0.1	0.2	WEL	0.1	

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MAY 21 04^h17^m53^s.0 40°.35S 175°.93E 32 km M = 4.8
 ± 0.2 0.01 0.03 1 S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iP*	04	18	02.2	U	-0.2	100	0.43	231			
CAZ	iP*	04	18	05.6	D	0.6	99	0.60	158			
MTW	iPn	04	18	08.2	D	-0.4	100	0.87	202			
KIW	iPn	04	18	09.6	D	0.3	100	0.93	236			
CAW	iPn	04	18	10.3	D	-0.0	100	1.00	220			

TRZ	iPn	04 18 10.7	D	-0.3	100	1.05	41		
BLW	iPn	04 18 10.9	D	-0.4	100	1.08	198		
GSZ	iPn	04 18 12.0		0.3	100	1.10	346		
	S*	28		-0.2	100				
WDW	iPn	04 18 12.0	D	-0.5		1.16	217		
MOW	iPn	04 18 12.1	D	-0.8		1.19	205		
CNZ	iPn	04 18 13.2		0.4	100	1.19	346		
WEL	iPn	04 18 13.6	DNE	-0.6	99	1.29	223	4.7	
	i	23							
	Sn	30.5		0.5	100				
	i	45							
BHW	iPn	04 18 14.1	D	-0.7		1.33	217		
TCW	iPn	04 18 16.7	D	-0.7		1.52	235		
TNZ	iPn	04 18 20.6	U	1.2		1.66	314	4.9	4.9
WNZ						1.72	5	5.1	5.2
TUA	Pn	04 18 20		-1.3		1.81	32	4.6	4.7
	P*	28.5		3.4					
	Sn	41.5		-1.1					
	e(S*)	58.5		9.4					
GNZ	Pn	04 18 26.8	U	-2.0		2.35	44		
	e(Sn)	57		1.3					
KRP	Pn	04 18 29.0	U	-1.0		2.44	353	5.5	5.6
	iP*	32	D	-3.9					
	(S*)	19 09		1.0					
WTZ	ePn	04 18 29		-1.8		2.50	20	4.7	4.5
	eP*	35.5		-1.4					
	e	43							
	e(S*)	19 05.5		-4.3					
COB	Pn	04 18 31		-0.3		2.54	252		
	P*	34.5		-3.0					
ECZ	Pn	04 18 41		-1.4		3.35	38	4.8	4.6
	Sn	19 17		-2.6					
KAI	P*	04 19 07.5		4.5		4.03	236	4.7	
	e	18							
	eSn	36		-0.1					
	S*	53		-2.5					
CMZ	Pn	04 18 50.5		-1.6		4.06	216	4.7	5.0
	Sn	19 35		-1.7					
GBZ	Pn	04 18 53		-0.2		4.14	355		
	eP*	19 05		0.2					
	e	14.5							
OMZ						5.99	216	4.4	4.3
THP	Pn	04 19 17		-3.3		6.13	225		
	eSn	20 26.5		0.1					
CRZ	Sn	04 20 38		3.9		6.45	335	4.8	
CIZ	ePn	04 19 27.5		0.1		6.65	125		
	eSn	20 38		-0.8					
BRZ						8.20	226		
AMPLITUDES:	WEL	12				10	13	WNZ	2.7 4.6
	TUA	3.7 5.8				22	24	WTZ	8.5 5.0
	ECZ	1.2 1.0						CMZ	2.0 6.7
	GBZ	2.3				0.4	0.7	CRZ	0.5
	BRZ	0.3 0.2 0.5							

FELT: Southern Hawkes Bay, Manawatu and northern Wairarapa,
maximum intensity MM IV

MAY 21 05^h51^m29^s.8 37°.79s 178°.14E 84 km 80/ 278
 ± 0.6 0.02 0.03 7 S.E. of RES. 0.3 M = 4.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	iP	05	51	43.1	D	0.0	100	0.33	74					
	e(S)			51		-2.0								
WIZ	P	05	51	47		-0.1	100	0.80	289					
	e(S)			57		-3.1								
GNZ	iPn	05	51	47.5	E	-0.2	100	0.86	186					
WTZ	iP	05	51	48.5	D	-0.1	100	0.94	257					
TUA	iP	05	51	53.2	D	0.2	100	1.29	217			4.5	4.9	
	S			52 10.5		0.0	100							
WNZ								1.82	242			4.7	4.9	
TRZ	iP	05	52	03.1	D	0.1		2.04	210			4.9	4.7	
	e(S)			30.5		3.0								
KRP	P	05	52	03.8	US	0.6		2.07	265			4.1*	4.0*	
	S			28		0.0								
NGZ	P	05	52	09		0.7		2.43	234					
GSZ	P	05	52	10		0.7		2.50	233					
	S			40.5		1.8								
GBZ	iP	05	52	12.0	U	0.6		2.65	306					
AUC	P	05	52	15.7		1.6		2.83	288					
CAZ	P	05	52	20.3	U	-2.2		3.46	205					
	S			53 00		-2.5								
MNG	iP	05	52	20.1	D	-3.3		3.50	215			4.5	4.7	
	S			53 01		-2.8								
ONE	P	05	52	28		2.8		3.64	302					
WEL	P	05	52	31		-4.0		4.36	216	4.8				
	S			53 20		-5.2								
COB	P	05	52	45		-3.4		5.33	230			3.8*	4.1*	
	S			53 46		-3.1								
CRZ	P	05	52	53.9		2.5		5.55	305			3.8*		
KAI	S	05	54	23		-7.3		7.00	225	3.9*				
CMZ	P	05	53	07		-6.5		7.15	214			4.1*	4.3*	
	S			54 24		-9.9								
CIZ	P	05	53	17		0.5		7.35	149					
	S			54 32		-7.0								
OMZ								9.08	214					3.6*
THP	P	05	53	36		-5.3		9.19	220					
	S			55 14		-9.8								
MSZ								10.32	225					3.3* 3.5*
BRZ								11.24	221					
AMPLITUDES:	TUA			5.5	14	WNZ	0.6	0.9	TRZ			5.3	7.5	
	KRP			10	8.2	GBZ	7.5		MNG			5.0	10	
	WEL	1.3				COB	0.8	5.0	CRZ			0.6		
	KAI	0.5				CMZ	1.3	3.4	OMZ				0.5	
	MSZ			0.3	0.8	BRZ	0.1	0.2						

MAY 21 07^h06^m09^s.7 32°.88s 177°.51w 33 km 80/ 279
 ± 1.3 0.07 0.16 R S.E. of RES. 1.1 M = 4.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	ePn	07	07	33		0.7	100	5.79	213					4.7
WIZ	(P*)	07	07	50		-9.1		6.35	222					
GBZ	e(Pn)	07	07	51		6.6		6.68	238					
WTZ	Pn	07	07	44		-2.0	98	6.79	220			4.9	4.6	

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CMZ	S	12 04 00	-6.5	0	4.82	213			2.9*
AMPLITUDES:	TRZ	3.5 7.0	TUA	0.7 1.0	MNG	3.5 8.3			
	GNZ	0.5 0.9	WTZ	0.9 0.9	KRP	0.6			
	WEL	0.1	COB	0.2 0.6	CMZ	0.2			

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MAY 22 07^h27^m52^s.7 33°.73S 178°.99W 33 km M = 4.9
 ± 2.4 0.10 0.24 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	Pn	07	28	58		1.2	100	4.44	206		5.3	4.9
	eSn	29	50.5			5.2						
	e(S*)	30	11			3.7						
GBZ	Pn	07	29	06		-0.9	100	5.17	240			
WTZ	Pn	07	29	08		-1.4	100	5.36	216		4.9	4.8
	e		15									
	Sn	30	07			-0.4	100					
	e(S*)	40				5.1						
GNZ	Pn	07	29	10		-0.9	100	5.47	205		5.0	4.8
	eP*	26				-1.1						
	Sn	30	10.5			0.4	100					
	e		50									
ONE	Pn	07	29	15		-1.0	100	5.84	248			
TUA								5.96	210		4.9	4.8
AUC	Pn	07	29	21		3.1	97	5.98	237			
KRP	Pn	07	29	19.5		-0.1	100	6.11	225		5.2	
TRZ	Pn	07	29	27.5		-0.5		6.72	209		4.8	4.7
	eP*	42				-6.4						
	Sn	30	41			0.8						
	S*	31	16			0.4						
CRZ	Pn	07	29	30		-1.1		6.96	262		5.2	5.2
	(Sn)	30	41			-4.7						
CNZ	e(Pn)	07	29	36		4.0		7.02	217			
	e		41									
TNZ								7.63	223		5.4	
MNG	Pn	07	29	45.6	U	-2.2		8.17	211		4.8	4.6
	i	30	01.5									
	Sn	31	10			-5.0						
	e		44									
WEL	Sn	07	31	28.5		-7.1		9.03	211	4.5		
COB	e(Pn)	07	30	12		1.1		9.86	219		4.2	4.4
	Sn	31	49.5			-6.2						
CMZ								11.82	211			4.6
AMPLITUDES:	ECZ	2.1 1.1	GBZ	2.1	WTZ	2.9 1.8						
	GNZ	2.5 2.7	TUA	0.8 0.7	KRP	1.2						
	TRZ	0.6 0.7	CRZ	0.3 0.2	TNZ	0.3						
	MNG	1.8 1.5	WEL	0.1	COB	0.1 0.5						
	CMZ	0.3										

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MAY 22 22^h35^m03^s.3 39°.63S 177°.96E 12 km M = 4.1
 ± 0.6 0.03 0.04 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	P*	22	35	20		0.4	100	0.88	275			
	S*	31				-0.4	100					
GNZ	iP*	22	35	21.5		0.2	100	0.99	3			
TUA	iP*	22	35	21.8	U	-0.3	100	1.03	322		4.7	4.3
	Sg	38.5				0.2	100					

WNZ							1.75	304		4.4	4.3
WTZ	iPn	22	35	32.2	U	-1.3	99	1.81	335		4.2
	Pg			40		0.1					
	e			52							
CAZ	Pg	22	35	41		0.5	100	1.84	226		
	e			51							
	e(Sn)			56		-0.9					
	e			36							
				16							
NGZ	Pn	22	35	36		1.6	98	1.87	283		
	P*			41		4.6					
	Pg			44		2.8					
	Sn			58		0.3	100				
CNZ	Pn	22	35	36.4		1.4		1.92	282		
	(P*)			41		3.8					
	(Pg)			44		1.9					
	e			46							
	(Sg)			36		6.0					
ECZ	ePn	22	35	36.5		0.6		1.99	14	3.9	4.1
	Sn			36		0.6	100				
MNG	Pn	22	35	36.8		-1.2	99	2.14	242	4.1	3.8
	Pg			45		-1.6					
	e			53.5							
	(Sg)			36		3.4					
KRP	ePn	22	35	47		3.4		2.55	311		4.3
	P*			51		3.1					
	Pg			57		2.2					
	(Sg)			36		8.8					
WEL	Sn	22	36	21		-2.4		2.94	235	3.9	
	Sg			38		-4.5					
COB	Pn	22	36	06.5		-0.3		4.26	248	4.0	3.8
	Pg			28		-1.2					
	Sn			53.5		-1.4					
	e			56							
CMZ	Sn	22	37	24		-3.6		5.62	224	4.2	4.0
KAI	Sn	22	37	33		2.5		5.74	238	4.2	
MJZ	Sn	22	38	00		-3.1		7.09	230		4.0
RHP	Sn	22	38	08		-2.1		7.39	230		
THP	Sn	22	38	15		-4.1		7.76	228		
AMPLITUDES:	TUA			14	7.5	WNZ	0.6	0.6	WTZ		5.2
	ECZ			0.4	0.9	MNG	5.6	3.2	KRP		1.9
	WEL	0.3				COB	0.3	0.8	CMZ		0.4
	KAI	0.2				MJZ		0.4			

FELT: Mahia Beach (54)

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MAY 23 11^h40^m40^s.3 35°.33S 179°.12E 258 km M = 3.9
 ± 0.7 0.06 0.10 6 S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P	11	41	35.1		-0.2	100	3.16	212		4.0	3.8		
	eS			42		-0.1	100							
GNZ	eP	11	41	38.5		0.3	100	3.43	195		3.8	4.2		
	eS			42		-0.4	99							
	e			26										
MNG	eP	11	42	09		-0.4	99	6.01	207		3.9	3.8		
	eS			43		0.0	100							
AMPLITUDES:	WTZ			0.5	0.4	GNZ	0.3	1.3	MNG		0.4	0.4		

MAY 23 16^h37^m29^s.2 46°.55S 166°.21E 12 km 80/ 284
 ± 1.4 0.06 0.12 R S.E. of RES. 1.4 M = 5.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	iP*	16	37	49.9		-1.0	100	1.21	50			
OBZ	iPn	16	37	54.5	D	1.3	100	1.36	106		4.7	4.4
	eSn		38	11		-0.1	100					
MSZ	Pn	16	38	04.0		-1.1	100	2.23	33			
ROX	iPn	16	38	08.1	D	0.4	100	2.42	65			
DNZ	iPn	16	38	17.0	D	0.5	100	3.07	79			
	ePg		30			-1.2	100					
THP	iPn	16	38	18.0	U	-1.3	100	3.28	53			
OMZ	Pn	16	38	23.0		-0.9	100	3.61	67		5.5	5.6
	eP*		33			1.1	100					
	e(Sn)		39	12		6.8						
MJZ	Pn	16	38	27.8		-0.8	100	3.95	51			
CMZ	ePn	16	38	49		0.1	100	5.44	59		5.7	5.7
	e(P*)		39	09		5.9						
	eSn		48			-1.1	100					
KAI	ePn	16	38	52		2.5	99	5.48	45	5.7		
	ePg		39	21		1.1	100					
	eSn		53			2.8	98					
COB	ePn	16	39	12		-1.2	100	7.22	43		5.5	5.6
	e			13.2								
	eSn		40	31		-1.0	100					
MNG	ePn	16	39	35		-2.1		8.97	52		5.3	5.4
	e			37.3								
	eSn		41	17		2.9						
KRP	Pn	16	40	03.9		-1.5		11.05	42		5.0	5.0
	Sn		42	03.0		-1.0						
CRZ	ePn	16	40	32		-1.0		13.07	24		5.2	5.0
	e(Sn)		42	44		-8.6						
AMPLITUDES:	OBZ		21	27	DNZ			22	OMZ		13	31
	CMZ		12	21	KAI	6.6			COB		3.5	16
	MNG		4.3	7.0	KRP		1.3	1.4	CRZ		0.4	0.3

FELT: Lake Ohau (115) MM IV

MAY 24 00^h22^m39^s.9 37°.44S 177°.14E 12 km 80/ 285
 ± 0.7 0.04 0.03 R S.E. of RES. 1.5 M = 3.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP*	00	22	49.6	U	-1.0	100	0.56	192		3.3	3.7
	e(S*)			54.5		-3.8						
	eSg			58.5		-0.6	100					
ECZ	eP*	00	22	59		-1.6	100	1.15	103		4.2	3.9
	i(Pg)		23	06.1		3.0						
	eSg			19.5		0.8	100					
KRP	Pn	00	23	02.7		-1.2	100	1.36	248		3.6	4.0
	ePg			06		-1.5	100					
	e(Sn)			17		-4.9						
	eSg			26		0.1	100					
TUA	iPn	00	23	03.9	D	-0.2	100	1.37	180		4.5	4.0
	iP*			04.2		-0.2	100					
	eSg			24.5		-1.7	100					
GNZ	Pn	00	23	03.0		-1.4	100	1.39	150		4.4	4.0
	eSg			28		1.0	100					

AUC	eP**?	00 23 16		1.3 100	1.97 286		
TRZ	eP*	00 23 19		1.6 100	2.13 187	4.2 3.5	
	e	24 13					
MNG	e(Pn)	00 23 36		3.8	3.43 202	3.9 3.6	
	eP*	43		3.4 96			
	eSn	24 13		1.3 100			
AMPLITUDES:	WTZ	5.0 11	ECZ	2.4 1.3	KRP	1.0 2.0	
	TUA	3.9 1.6	GNZ	8.5 5.0	AUC	0.4	
	TRZ	1.2 0.3	MNG	1.1 0.6			

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MAY 24 12^h31^m21^s.7 32°.72S 179°.80W 422 km M = 4.6
 ± 1.5 0.09 0.24 15 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
ECZ	eS	12 33 55				1.2 100		5.15 195			4.6
ONE	eP	12 32 52				-0.8 100		5.71 236	3.5*		
WTZ	P	12 32 52.8				-1.6 99		5.88 206		4.5 4.4	
	e	54.5									
	eS	34 09				1.6 99					
GNZ	eP	12 32 58				0.4 100		6.17 196		4.3 4.6	
	eS	34 12				-1.2 100					
KRP	eP	12 33 02				1.4 100		6.44 215		3.0*	
TUA	eP	12 33 02				0.1 100		6.57 201			4.7
	eS	34 19.5				-1.4 100					
TRZ	e(S)	12 34 30				-6.7		7.35 201			4.7
MNG	P	12 33 27.2				0.7 100		8.75 204		4.5 4.6	
	eS	35 05				-0.1 100					
WEL	eS	12 35 23				0.5 100		9.59 205		4.8	
AMPLITUDES:	ECZ		0.3	ONE	0.3			WTZ		0.5 0.4	
	GNZ	0.3 1.1	KRP	0.2	TUA					0.3	
	TRZ	0.5	MNG	0.8 1.1	WEL	0.2					

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MAY 24 19^h16^m17^s.2 37°.66S 176°.75E 12 km M = 4.0
 ± 0.6 0.03 0.03 5 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
WIZ	iP*	19 16 23.6			U	-1.1 100		0.37 69			
	iS*	28.8				-1.2 100					
WTZ	iP*	19 16 22.2			U	-2.5 99		0.38 150			
KRP	eP*	19 16 34.5				-0.8 100		1.00 254		3.7 3.9	
	iPg	38.0				0.6 100					
	eS*	50				1.3 100					
	e(Sg)	56				5.1					
WNZ	eP*	19 16 38				1.0 100		1.10 208		4.0	
TUA	P*	19 16 37.5				-1.1 100		1.19 165		4.0 4.1	
	eS*	54				-0.5 100					
	eSg	57.5				0.1 100					
GNZ	ePn	19 16 41.5				-0.3 100		1.40 135		4.4 3.9	
	eSg	17 07				2.4 99					
	e	12									
ECZ	Pn	19 16 43.0				0.8 100		1.43 92		4.4 4.1	
	iP*	43.8				1.1 100					
	i(Pg)	50.1				4.0					
	e(Sg)	17 08				2.6					
AUC	ePg	19 16 52.5				-0.4 100		1.76 296			
	e	17 54									
CNZ	ePg	19 16 55				1.3 100		1.81 211			

	e(Sg)	17 22		3.9					
TRZ	ePn	19 16 48		-0.5	100	1.89	178		4.1 3.7
	ePg	53.5		-2.0	99				
	eSg	17 21		0.0	100				
TNZ	ePg*	19 17 05		-0.8	100	2.40	230		4.1
MNG	eP*	19 17 09		-2.5	99	3.11	198		3.8 3.6
	e(Sg)	18 06		3.8					
AMPLITUDES:									
	WIZ	16 45				3.5 4.8	WNZ		0.3
	TUA	1.7 1.9		GNZ		7.5 4.0	ECZ		1.8 1.1
	AUC	0.4 0.5		CNZ		0.5 0.4	TRZ		0.8 0.4
	TNZ	0.2		MNG		0.7 0.5			

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MAY 25 10^h56^m19^s.0 39°.13S 174°.76E 219 km M = 4.3
 ± 0.9 0.04 0.07 7 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
CNZ	iP	10 56	50.8		D	2.0	99	0.62	96		
	eS	57	12			-0.0	100				
KRP	iP	10 56	54.4		DSE	0.9	100	1.35	27		3.3* 2.6*
	eS	57	20			-0.1	100				
MNG	iP	10 56	56.9		U	1.4	100	1.58	160		4.5 4.4
	e	57	16								
TRZ	eS	23				-0.6	100				
	iP	10 56	58.0		U	2.0	99	1.66	105		4.1 4.3
TUA	e	57	21								
	eS	24				-0.7	100				
WTZ	eP	10 56	59			0.7	100	1.90	81		3.9 4.1
	eS	57	30			1.5	100				
CAZ	iP	10 56	59.7		D	-0.5	100	2.10	57		4.2 3.7
	eS	57	30			-2.1	99				
WEL	e(P)	10 57	05			4.7		2.10	148		
	eS	34				1.8	99				
COB	e	37									
	eS	10 57	33			-0.1	100	2.15	180	4.0	
GNZ	iP	10 57	04.7		U	0.3	100	2.49	218		4.0* 3.5*
	S	38.6				-0.9	100				
ECZ	iP	10 57	05.8		U	0.3	100	2.60	80		4.7 4.4
	eS	39				-2.5	99				
CMZ	eP	10 57	13			-0.7	100	3.31	65		4.7
	eS	10 57	31			-0.1	100	4.72	199		3.3* 4.0*
AMPLITUDES:		58	25			-2.1	99				
	CNZ	4.4	2.0		KRP	1.5	0.3	MNG		13	12
	TRZ	0.7	2.2		TUA	0.4	0.7	WTZ		1.7	0.6
	CAZ	0.5	1.9		WEL	0.6		COB		2.0	2.3
	GNZ	4.0	3.6		ECZ	1.2		CMZ		0.3	2.4

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MAY 25 14^h26^m24^s.1 38°.65S 175°.51E 176 km M = 3.6
 ± 1.4 0.06 0.07 10 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
CNZ	P	14 26	50.0			1.2	100	0.55	177		
	eS	27	09			1.2	100				
KRP	eP	14 26	50			0.3	100	0.72	2		2.4*
	eS	27	08			-1.4	100				
TUA	eP	14 26	54			0.0	100	1.30	98		3.5
	eS	27	18			0.9	100				
WTZ	e(S)	14 27	14			-3.8		1.34	61		

TRZ	eP	14 26 56			1.3 100	1.36 132		3.2
	eS	27 19			0.8 100			
MNG	iP	14 27 01.6	U		0.8 100	1.97 181		4.1 3.6
	eS	27			-2.2 99			
GNZ	P	14 27 01.0			0.2 100	1.97 91		3.7 3.4
	eS	26.5			-2.8 98			
COB	eS	14 27 55			-1.2 100	3.24 220		2.7*
AMPLITUDES:	CNZ	0.5 0.3	KRP		0.3	TUA		0.3
	TRZ	0.3	MNG		4.3 1.7	GNZ		0.8 0.6
	COB	0.3						

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MAY 25 17^h09^m10^s.6 34°.34s 178°.55w 267 km M = 4.3
 ± 2.0 0.11 0.16 27 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	17	10	19		2.2	99	4.09	214		4.3	4.4		
	eS	11	09			0.7	100							
	e			18.5										
GNZ	eP	17	10	28		-0.8	100	5.11	212		4.4	4.2		
	eS	11	30			0.1	100							
WTZ	eP	17	10	27		-2.0	99	5.13	223		4.5	4.4		
	eS	11	29			-1.3	100							
KRP	eP	17	10	40		0.6	100	5.98	232		3.1*	3.0*		
	e	11	21											
TRZ	e	17	10	46				6.39	214				4.3	
	eS	11	57			-1.1	100							
MNG	eS	17	12	33		1.8	99	7.87	215				4.1	
CIZ	e	17	11	37				9.73	171					
	eS	13	13			-0.2	100							
AMPLITUDES:	ECZ	0.3 0.4	GNZ		0.7 0.6	WTZ		0.7 0.6						
	KRP	0.3 0.3	TRZ		0.3	MNG		0.5						
	CIZ	0.2												

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MAY 25 18^h31^m56^s.9 44°.96s 167°.68E 12 km M = 3.5
 ± 0.6 0.03 0.05 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
BRZ	eP*	18	32	13.5		1.3	100	0.83	187					
	eSg			25		0.1	100							
ROX	Pg	18	32	23.8		1.1	100	1.27	115		3.7	3.8		
	e			25.2										
	Sn			37.1		0.3	100							
	Sg			40.8		1.0	100							
THP	iPn	18	32	24.7	D	0.1	100	1.63	76					
	Pg			31.0		1.1	100							
	eSn			46		0.6	100							
RHP	iPn	18	32	28.2	U	-0.4	100	1.93	64					
	eP*			32		1.1	100							
	eSn			53		0.5	100							
OBZ	ePn	18	32	28		-1.3	100	1.97	171		3.2	3.5		
	e(Sn)			49.5		-4.1								
DNZ	eSn	18	32	58		-1.0	100	2.20	115					
MJZ	Pn	18	32	31.8		-0.9	100	2.22	65		3.1	3.7		
	ePg			42		0.2	100							
	eSn			59		-0.6	100							
OMZ	eSn	18	32	59		-2.5	96	2.29	94				3.6	
CMZ	e(Sn)	18	33	34		-4.0		3.82	71				3.6	

OMZ	ePg	09 40 22	-1.9	99	5.54	83	4.2	4.2
	e	41 12						
MJZ	e(P*)	09 40 16	7.9		5.57	72	4.2	
AMPLITUDES:	OBZ	1.8 6.2	MSZ	2.5	3.8	ROX	1.3	2.3
	THP	2.2 3.0	DNZ	0.4	1.3	RHP	0.8	2.5
	OMZ	0.3 0.6	MJZ	0.8				

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MAY 29 09^h50^m03^s.0 44°.28S 169°.88E 12 km M = 3.7
 ± 0.7 0.03 0.06 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
RHP	iP*	09	50	06.2	D	-1.9	99	0.23	39			
THP	P*	09	50	07.6		-1.1	100	0.26	179			
	eS*			11.5		-1.1	100					
MJZ	iP*	09	50	11.7	DSE	-1.2	100	0.51	55		3.0	3.4
	eS*			18		-2.0	99					
OMZ	P*	09	50	22.4		-0.2	100	1.08	137		3.8	3.7
	iPg			23.9		-1.1	100					
	eS*			39		1.9	99					
ROX	eP*	09	50	25.5		-0.2	100	1.26	198		3.9	3.8
	eS*			43		0.5	100					
MSZ	Sn-Pn			18.3		-0.7	100	1.46	254		3.8	4.1
DNZ	ePn	09	50	33		2.0	99	1.65	164			
	eSg			57		-1.7	100					
CMZ	eP*	09	50	42		1.8	100	2.12	72		3.8	4.0
	Pg			44.7		-1.0	100					
	eS*			51 09		1.0	100					
COB	ePn	09	51	03		2.3	99	3.82	34		3.9	3.3
	eSn			45		0.7	100					
AMPLITUDES:	THP	40	60	MJZ	6.0	16	OMZ	3.0	4.6			
	ROX	3.0	5.6	MSZ	4.0	14	DNZ	6.0	1.9			
	CMZ	1.0	2.5	COB	0.3	0.3						

FELT: Lake Ohau (115) and Twizel (116) MM IV

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MAY 29 12^h23^m17^s.6 32°.84S 179°.49W 439 km M = 5.0
 ± 1.8 0.19 0.33 20 S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	12	24	46.0		2.7	99	5.10	198		4.9	4.9
	eS			25 51		0.4	100					
WTZ	eP	12	24	47.8		-3.4	99	5.89	208		5.4	4.7
	i			51.4								
	eS			26 03		-1.9	100					
GNZ	eP	12	24	53		-0.8	100	6.14	199		5.2	5.0
	e			55.5								
	eS			26 08		-1.7	100					
KRP	eP	12	24	56.5		-1.3	100	6.51	217		3.4*	3.8*
	e			59								
	eS			26 19		2.2	100					
TUA	eP	12	24	59		0.7	100	6.55	204		4.8	4.7
	eS			26 18		0.3	100					
TRZ	eP	12	25	08		1.2	100	7.33	203		5.1	4.9
	eS			26 36		2.9	99					
CNZ	eP	12	25	10.5		1.7	100	7.51	211			
	e(S)			26 41		4.3						
MNG	eP	12	25	21.7		-0.9	100	8.76	206		5.2	4.7

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	e			23.1									
	eS	26		59									
WEL	eS	12	27	19.5									
COB	eS	12	27	33									
													3.3*
AMPLITUDES:	ECZ			0.7	0.6	WTZ		3.5	0.9	GNZ		2.3	2.4
	KRP			0.6	1.4	TUA		0.4	0.3	TRZ		0.6	0.7
	CNZ			0.7	0.3	MNG		4.0	1.6	WEL		0.2	0.4
	COB				0.4								

MAY 29 21^h22^m22^s.0 37°.67S 176°.26E 309 km M = 4.0
 ± 0.3 0.01 0.02 2 S.E. of RES. 0.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS	
KRP	P	21	23	02.0		-0.1	100	0.62	246		3.0*		
TUA	P	21	23	05.3		0.0	100	1.33	148		4.0		
MNG	iP	21	23	18.6	U	-0.1	100	3.01	191		4.3	3.9	
	e			58.8									
	eS			24									
COB	eS	21	24	29		0.0	100	4.37	218			2.8*	
AMPLITUDES:	KRP			0.6		TUA		0.4		MNG		2.5	1.3
	COB				0.3								

MAY 31 07^h26^m57^s.4 34°.29S 179°.58E 373 km M = 4.3
 ± 1.4 0.12 0.26 17 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
WTZ	P	07	28	11.1		0.4	100	4.25	209		4.5	4.2
	eS			29		-0.8	100					
GNZ	eP	07	28	14		0.4	100	4.53	196		4.0	4.5
	eS			29		-0.5	100					
KRP	eP	07	28	18		0.5	100	4.89	221		3.0*	
TRZ	eS	07	29	37		0.9	100	5.71	202			4.3
MNG	eP	07	28	41		-1.4	99	7.11	206		4.6	4.3
	eS			30		-0.1	100					
AMPLITUDES:	WTZ			0.8	0.5	GNZ		0.3	1.3	KRP		0.3
	TRZ				0.3	MNG		1.5	0.8			

MAY 31 22^h10^m27^s.7 33°.57S 179°.91W 349 km M = 4.7
 ± 2.4 0.24 0.53 31 S.E. of RES. 2.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
ECZ	eS	22	12	37.5		0.3	100	4.30	197			4.5
WTZ	iP	22	11	47.7	U	-0.9	100	5.08	209		4.8	4.6
	e			12								
	eS			49.5		-2.6	99					
GNZ	iP	22	11	51.9	U	0.5	100	5.34	198		4.5	4.8
	eS			12		-2.3	100					
KRP	P	22	11	57.0		1.3	100	5.71	219		3.4*	
TUA	eP	22	11	58		1.9	100	5.74	204		4.6	4.7
	e			13								
	eS			09		3.4	99					
TRZ	eP	22	12	03		-2.2	100	6.52	203		4.8	4.6
	eS			13		3.2	99					
CNZ	P	22	12	08.2		0.8	100	6.70	212			
TNZ	e(P)	22	12	19.5		5.7		7.25	218			
MNG	eP	22	12	20.5		-1.4	100	7.94	206		4.8	4.6

	e	13 43							
	eS	50							
WEL	eS	22 14 10							
AMPLITUDES:	ECZ		0.4	WTZ	1.5	1.0	GNZ		0.7 2.0
	KRP	0.6		TUA	0.3	0.4	TRZ		0.4 0.5
	CNZ	0.5		MNG	2.0	1.3	WEL		0.2

JUN 01 02^h33^m25^s.7 46°.41s 165°.89E 12 km M = 3.7
 ± 1.7 0.06 0.14 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
OBZ	Pn	02	33	54.4		1.2	100	1.61	109		3.5	3.5		
	eSn			34 13		-0.8	100							
MSZ	ePn	02	34	00		-1.9	99	2.25	40		3.9	3.7		
	eP*			06		0.7	100							
	eSn			30		0.9	100							
THP	ePn	02	34	17		-0.3	100	3.37	58					
	eSn			55		-1.2	100							
RHP	ePn	02	34	23.5		1.0	100	3.75	54					
	eSn			35 07		1.7	100							
OMZ	ePg	02	34	43		1.2	100	3.76	71		3.9	3.6		
	e(S*)			35 25.5		5.3								
MJZ	eP*	02	34	34		-1.8	99	4.04	55		3.7	3.7		
	eSn			35 11		-1.2	100							
AMPLITUDES:	OBZ		0.9	2.3	MSZ	2.2	2.5	THP			2.0	1.2		
	RHP		1.6	0.8	OMZ	0.3	0.3	MJZ			0.4	0.6		

JUN 01 11^h29^m26^s.5 41°.35s 172°.84E 153 km M = 4.1
 ± 0.5 0.04 0.06 5 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
COB	iP!	11	29	48.5		1.0	100	0.28	343					
	eS			30 03		-0.7	100							
KKY	eS?	11	30	11.5		-3.5		1.24	150					
	e			56										
WEL	P	11	29	58.0		1.9	99	1.45	88	4.1				
	eS			30 19		0.2	100							
MNG	iP!	11	30	04.7		1.1	100	2.13	71		4.2	4.2		
	e			17										
	S			32.9		0.7	100							
CMZ	iP	11	30	05.7	U	0.7	100	2.24	184		4.0*	4.2*		
	eS			33.5		-1.0	100							
TNZ	e	11	30	20				2.47	29				3.5*	
	e			35										
	eS			40.3		0.8	100							
CNZ	eP	11	30	16.8		2.3	99	2.99	45					
	e			28										
	eS			51.5		0.3	100							
MJZ	eP	11	30	18		1.2	100	3.17	213		3.0*	3.4*		
	eS			54		-1.3	100							
RHP	eP	11	30	21.5		1.4	100	3.42	216					
	e			53										
	eS			31 00		-1.1	100							
TRZ	eS	11	31	03		-0.7	100	3.53	61				4.2	
OMZ	eP	11	30	29		1.6	100	3.98	200		3.5*	3.1*		
	eS			31 13		-1.1	100							
KRP	e	11	30	40				4.00	32		3.0*	3.1*		

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WTZ	eS	31 13	-1.9	99						
	eS	11 31 29	-0.8	100	4.64	45			4.0	
GNZ	P?	11 30 37.0	-1.3	100	4.81	57			4.1	4.3
	eS	31 32	-1.8	99						
MSZ	eP	11 30 39	-0.6	100	4.90	226			3.3*	3.4*
	e(S)	31 30	-6.0							
	e	46								
AMPLITUDES:	COB	6.5 9.0	WEL	1.4	MNG	5.5	7.0			
	CMZ	3.2 7.5	TNZ		0.6	CNZ	0.8	2.0		
	MJZ	0.5 1.4	RHP		0.7	2.6	TRZ	0.7		
	OMZ	0.5 0.4	KRP		0.4	0.5	WTZ	0.4		
	GNZ	0.4 1.0	MSZ		0.7	1.5				

JUN 01 17^h39^m32^s.3 38°.24s 179°.03E 12 km M = 3.8
 ± 1.2 0.03 0.08 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	iP*	17	39	45.6	D	0.7	100	0.67	325		4.2	4.1		
	iPg			46.0		0.0	100							
	eS*			52.5		-1.4	100							
GNZ	eP*	17	39	50		1.4	100	0.89	243		3.3	3.6		
	eS*			58		-2.5	99							
	eSg		40	03		0.6	100							
TUA	ePg	17	40	05		0.7	100	1.57	248				3.6	
	e			10										
WIZ	ePg	17	40	04		-1.1	100	1.62	296					
WTZ	iPn	17	40	00.0	U	-0.1	100	1.63	278		3.9	3.9		
	Pg			07.0		1.7	100							
	Sn			21.3		0.4	100							
TRZ	Pn	17	40	08.0		0.6	100	2.17	232		3.5	3.8		
	S*			41.0		2.1	99							
KRP	ePn	17	40	16		0.3	100	2.77	275		3.7			
	e			43										
NGZ	ePn	17	40	18		1.5	100	2.83	250					
	eSn			50		0.2	100							
MNG	Pn	17	40	25.3		-2.1	99	3.64	228		3.6	3.7		
	eSn			41 08		-1.0	100							
WEL	eSn	17	41	27		-2.3	99	4.48	226	4.1				
AMPLITUDES:	ECZ	7.0	7.0	GNZ	2.2	6.0	TUA						0.6	
	WIZ		0.4	WTZ	3.2	3.0	TRZ				0.3	0.7		
	KRP	0.4		NGZ	0.7	0.7	MNG				0.5	0.8		
	WEL	0.2												

JUN 01 23^h58^m21^s.3 36°.73s 177°.39E 253 km M = 3.8
 ± 1.4 0.07 0.10 10 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P	23	58	58.7		0.1	100	1.30	194		4.0	3.7		
	eS			59 25		-2.5	98							
ECZ	eP	23	58	58.5		-0.3	100	1.34	137		3.9	3.7		
	eS			59 30		1.9	99							
GBZ	iP	23	59	00.0	D	-0.9	100	1.62	288					
KRP	eS	23	59	38		2.0	99	1.90	230					
GNZ	P	23	59	04.5		0.4	100	1.98	165				4.1	
	eS			36		-1.1	100							
TUA	eS?	23	59	44		5.0		2.09	185				3.9	
TRZ	P	23	59	13.5		0.7	100	2.86	189				3.9	

	eS		53		0.2	100						
MNG	eP	23	59	27.3		-0.4	100	4.17	200		3.5	3.9
	eS	24	00	19		-0.2	100					
AMPLITUDES:	WTZ		1.2	0.7	ECZ		0.5	0.3	GBZ		0.9	
	GNZ			2.3	TUA			0.3	TRZ			0.4
	MNG		0.3	1.0								

JUN 02 20^h32^m57^s.9 39°.46S 175°.52E 2 km 80/ 307
 ± 0.7 0.02 0.03 5 S.E. of RES. 1.4 M = 3.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	iPg	20	33	02.4	U	0.6	100	0.19	16			
CNZ	iPg	20	33	03.3	D	0.0	100	0.26	5			
NGZ	iPg	20	33	03.7	D	-0.1	100	0.29	15			
TRZ	P?	20	33	13.3		-4.0		1.01	96		3.5	3.6
	P*			15.7		-1.6	100					
	eS*			32		0.7	100					
MNG	iP*	20	33	17.7	D	-2.0	99	1.15	181		4.0	3.8
	eS*			34		-1.5	100					
KRP	iPn	20	33	24.1	UN	-1.6	100	1.54	1		4.3	4.1
	iPg			27.9		-1.1	100					
	eSn			44		-2.3	99					
WTZ	ePn	20	33	30.5		0.2	100	1.87	38		3.6	3.7
	eS*			58		0.9	100					
WEL	ePn	20	33	31		0.2	100	1.91	197	3.7		
	eS*			59		0.8	100					
GNZ	eP*	20	33	37		0.9	100	2.12	68		3.5	
	eSg			34	10	0.8	100					
COB	ePn	20	33	42		0.7	100	2.68	232		4.0	3.6
	eSn			34	16.5	2.7	98					
	eS*			21		-0.3	100					
GBZ	P*	20	33	57.3		1.9	99	3.24	359			
AMPLITUDES:	TRZ		1.4	2.1	MNG		12	11	KRP		4.2	2.1
	WTZ		0.6	0.6	WEL	0.5			GNZ			0.6
	COB		0.9	1.2	GBZ		0.3					

JUN 05 02^h22^m03^s.1 34°.48S 179°.09W 293 km 80/ 308
 ± 4.1 0.40 0.81 35 S.E. of RES. 2.6 M = 4.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP?	02	23	07		0.6		3.73	210		4.4	4.7
	eS			57		0.9	100					
GNZ	eP	02	23	19.5		1.4	100	4.76	208			
	eS			24	13	-3.9	98					
TUA	eP?	02	23	25.2		1.1		5.27	214		4.6	4.9
	eS			24	30.5	2.9	99					
KRP	P	02	23	25.9		-1.4	100	5.54	230		3.2*	
MNG	eP	02	23	51.5		0.3	100	7.50	214		4.4	4.5
	eS			25	16	0.0	100					
WEL	eS	02	25	35		0.0	100	8.35	214	4.7		
AMPLITUDES:	ECZ		0.4	0.8	TUA		0.4	0.8	KRP		0.4	
	MNG		0.8	1.2	WEL	0.3						

JUN 05 11^h55^m36^s.4 33°.55S 179°.72E 340 km 80/ 309
 ± 2.1 0.10 0.24 25 S.E. of RES. 2.0 M = 4.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	11	56	49.5		1.7	100	4.24	193					4.7
	e			57 43.0										
	eS			46		2.2	100							
	e			59 07										
ONE	eP?	11	56	56		0.6	100	4.94	242	3.4*				
WTZ	P	11	56	53.0		-2.5	99	4.95	206		4.9	4.7		
	e			56.7										
	S			57 55.8		-1.8	100							
GNZ	eP	11	56	59		-0.1	100	5.26	195					
	eS			58 00		-3.9	98							
KRP	P	11	57	04.0		1.9	100	5.53	217		3.4*			
TUA	eP	11	57	02.5		-0.8	100	5.64	201		4.7	4.8		
	eS			58 12		0.4	100							
CRZ	eP?	11	57	06		-0.5	100	5.91	260		3.4*			
TRZ	e(P)	11	57	03		-9.5		6.43	200		4.5	5.0		
	eS			58 31		2.9	99							
CNZ	eP	11	57	15		0.9	100	6.57	210					
	e(S)			58 37.5		6.6								
MNG	eP	11	57	28		-1.1	100	7.83	204		4.9	5.0		
	eS			58 59		1.2	100							
WEL	eS	11	59	15		-1.0	100	8.67	206	5.1				

AMPLITUDES:

ECZ		0.7	ONE	0.3		WTZ	2.0	1.3
KRP	0.7		TUA	0.4	0.5	CRZ	0.2	
TRZ	0.2	1.3	CNZ	0.3	0.4	MNG	2.2	3.7
WEL	0.6							

JUN 06 17^h03^m59^s.6 37°.03s 176°.91E 200 km 80/ 310
 ± 2.0 0.06 0.11 21 S.E. of RES. 1.1 M = 3.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	eP	17	04	29.2		0.1	100	0.95	176		3.1	3.4		
KRP	P	17	04	33.5		0.7	100	1.41	230		2.9*			
GBZ	eP	17	04	31.9		-0.8	100	1.41	305					
ECZ	eP?	17	04	33.7		0.6	100	1.46	117		3.4			
TRZ	eP	17	04	42.9		-1.2	99	2.52	182		3.8	3.7		
	eS			05 18.2		-0.2	100							
TNZ	eP	17	04	49.8		0.9	100	2.93	222					
MNG	P	17	04	54.8	D	-4.1		3.75	197		4.6	4.2		
	(S)			05 43.0		-1.8								
COB	eP	17	05	13.5		-3.7		5.19	217		3.2*	3.0*		
	eS			06 14.3		-3.2								

AMPLITUDES:

WTZ	0.3	0.6	KRP	0.6	ECZ	0.2		
TRZ	0.2	0.4	MNG	5.0	2.5	COB	0.2	0.4

JUN 07 17^h33^m15^s.3 38°.57s 175°.99E 169 km 80/ 311
 ± 1.4 0.05 0.10 11 S.E. of RES. 1.5 M = 4.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
CNZ	iP	17	33	42.2		2.1	99	0.71	209					
KRP	iP	17	33	40.6	DSE	0.4	100	0.74	331		3.1*			
	e			54.0										
	iS			58.7	USE	-0.8	100							
TUA	e(P)	17	33	44.3		2.7		0.94	105				4.4	
	e			58.9										
	eS			34 03.1		1.3	100							

WTZ	P	17 33 42.3	D	0.4 100	0.98 53	3.4 3.9
	(S)	34 02.2		-0.3 100		
TRZ	P	17 33 41.2	U	-2.3 99	1.17 147	4.5 4.5
	e	34 01.1				
	(S)	04.8		-0.5 100		
MNG	iP	17 33 54.2	U	1.3 100	2.08 191	4.7 4.6
	S	34 20.8		-1.1 100		
GBZ	P	17 33 55.7	U	-0.8 100	2.38 350	
WEL					2.87 199	4.3
COB	S	17 34 52.0		-2.0	3.55 224	
AMPLITUDES:	CNZ	15	KRP	1.5	TUA	3.2
	WTZ	0.8 2.5	TRZ	3.5 7.0	MNG	19 17
	GBZ	0.8	WEL	0.8		

JUN 08 02^h00^m46^s.6 44°.84s 167°.60E 73 km M = 3.7
 ± 0.7 0.03 0.05 8 S.E. of RES. 0.7

STN	PHASE	H M S	DIR	RES	WT	DIST	AZ	W-A	W P W S
MSZ	iP	02 00 58.5		-0.0 100	0.29 53				
BRZ	iP	02 01 05.2	D	0.3 100	0.94 183				
	S	18.3		-0.3 100					
ROX	P	02 01 11.4		0.9 99	1.38 118			3.8 4.0	
	S	29.0		0.4 100					
THP	iP	02 01 14.7		0.4 100	1.66 80				
	S	35.3		0.1 100					
RHP	P	02 01 18.2	U	0.2 100	1.93 68				
	S	39.7		-1.5 94					
OBZ	eP	02 01 20.3		-0.0 100	2.10 170			3.3 3.7	
	S	44.5		-0.6 100					
MNG	(P)	02 02 33.3		2.2	7.18 57			3.4*	
AMPLITUDES:	BRZ	6.0 7.5	13 ROX	2.3 7.3	OBZ	0.5 3.3			
	MNG	0.8							

JUN 08 03^h08^m49^s.1 48°.73s 164°.52E 33 km M = 4.6
 ± R R R R S.E. of RES. 0.7

STN	PHASE	H M S	DIR	RES	WT	DIST	AZ	W-A	W P W S
OBZ	ePn	03 09 34.2		0.1 100	3.03 54			4.4 4.4	
	eSn	10 08.7		0.7 100					
BRZ	ePn	03 09 42.4		0.6 100	3.60 36				
	eP*	51.4		-0.3 100					
	eSn	10 21.9		0.4 100					
	e	26.0							
	e	31.4							
ROX	ePn	03 09 55.5		-0.2 100	4.63 47			4.9 4.9	
	P*	10 06.2		-2.9					
	eSn	45.5		-0.6 100					
MSZ	ePn?	03 09 57.4		0.8 100	4.69 31			4.8 4.4	
	i	58.6							
CBZ	Pn	03 09 59.3		0.7 100	4.83 144				
	Sn	10 50.9		-0.3 100					
THP	Pn	03 10 08		-0.9 99	5.59 43				
	e	11 14							
RHP	ePn	03 10 13.7		-1.1 99	6.02 42				
	e	11 08.8							
AMPLITUDES:	OBZ	2.0 5.5	BRZ	1.7 1.4 4.0	ROX	2.0 5.5			

		MSZ			3.8 3.0 THP			3.5 5.0			80/ 314		
JUN 08	04 ^h 03 ^m 38 ^s .8	48°.81s			164°.41E			33 km			M = 4.3		
	± 1.1	0.03			0.15			R			S.E. of RES. 1.1		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
OBZ	ePn	04	04	26		0.7	100	3.15	54		4.2	4.4	
	eSn		05	00		-0.3	100						
BRZ	ePn	04	04	33.3		0.3	100	3.72	36				
	eSn		05	15.6		1.7	99						
	e			18.8									
ROX	ePn	04	04	46.6		-0.3	100	4.73	47		4.6	4.5	
	Sn		05	40.9		2.4							
MSZ	ePn	04	04	48.4		0.6	100	4.80	31		4.5	4.3	
CBZ	Pn	04	04	49.2		1.2	100	4.81	143				
	eSn		05	40		-0.3	100						
THP	ePn	04	04	59		-1.1	100	5.70	43				
OMZ	ePn	04	05	00.8		-1.0	100	5.82	52		4.1	4.2	
RHP	ePn	04	05	04.6		-1.4	99	6.14	42				
AMPLITUDES:	OBZ	1.2 5.0			BRZ	1.0	0.7	1.3	ROX	1.0 2.0			
	MSZ	2.1 2.1			OMZ	0.2 0.5							

		MSZ			3.8 3.0 THP			3.5 5.0			80/ 315		
JUN 08	12 ^h 45 ^m 48 ^s .1	34°.21s			179°.25W			260 km			M = 4.4		
	± 1.6	0.08			0.18			25			S.E. of RES. 1.3		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
ECZ								3.91	207		4.6		
GBZ	eP	12	47	00.8		-1.1	100	4.76	244				
WTZ	eP	12	47	01.5		-1.5	99	4.85	218		4.6	4.4	
TUA	eP	12	47	10.5		0.4	100	5.44	211		4.5	4.5	
	e(S)		48	14.5		0.4	100						
KRP	eP	12	47	14.5		2.1	98	5.62	227		3.3*		
TRZ	eP	12	47	20.7		1.2	100	6.20	209		4.5	4.3	
	(S)		48	34.5		3.4							
CRZ	eP	12	47	25.8		0.1	100	6.69	266		3.9*		
	i			27.5									
MNG	eP	12	47	37.3		-0.5	100	7.66	212		4.2	4.2	
	eS		49	02.5		-1.3	100						
COB	eP	12	47	58.6		-0.8	100	9.36	220		3.5*	3.1*	
	eS		49	43.2		0.7	100						
AMPLITUDES:	ECZ	0.7			GBZ	1.1	0.7	WTZ	1.1 0.7				
	TUA	0.3 0.3			KRP	0.5			TRZ	0.2 0.3			
	CRZ	0.6			MNG	0.5 0.7			COB	0.2 0.3			

		MSZ			3.8 3.0 THP			3.5 5.0			80/ 316		
JUN 09	15 ^h 44 ^m 36 ^s .8	39°.96s			177°.30E			12 km			M = 3.5		
	± 0.2	0.01			0.02			R			S.E. of RES. 0.1		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
TRZ	iP*	15	44	47.2	U	-0.1	100	0.55	318		3.8	3.9	
	i			51.1									
TUA	eP*	15	44	57.8		0.1	100	1.16	354		3.6	3.3	
	i			45 04.0									
NGZ	ePn	15	45	03.0		-0.0	100	1.52	300				
MNG	ePn	15	45	03.2		-0.1	100	1.54	244		3.5	3.2	
	e			12.7									
	eSg			28.7		-0.1	100						

CNZ Pn 15 45 03.6 0.1 100 1.56 299
 AMPLITUDES: TRZ 8.0 15 TUA 1.0 0.5 MNG 2.2 1.7

JUN 10 16^h27^m51^s.9 32°.54s 178°.19W 373 km M = 4.9
 ± 1.7 0.17 0.34 23 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GBZ	eP	16	29	27.7		-0.7	100	6.39	233			
WIZ	eP	16	29	31.5		-0.7	100	6.71	215		5.3	4.6
	e			33.4								
	e			34.9								
	e			36.1								
	e(S)		30	52.3		1.1	100					
	e			54.9								
KRP	eP	16	29	40.7		0.1	100	7.43	222		3.7*	
	e			44.5								
MNG	e?	16	30	03.6				9.53	210		5.4	4.4
	eP			04.9		-0.2	100					
	e			07.0								
	e(S)		31	49.6		-0.9	100					
COB	eP	16	30	26.7		1.6	99	11.20	218		3.6*	3.0*
	eS		32	26.3		-0.1	100					
AMPLITUDES:	WTZ			2.5	0.6	KRP		0.9	MNG		5.0	0.7
	COB			0.2	0.2							

JUN 10 22^h29^m45^s.8 47°.48S 165°.72E 33 km M = 4.2
 ± 1.1 0.06 0.09 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	ePn	22	30	13.7		0.7	100	1.73	71		3.9	4.2
	e			31.7								
	eSn			33.9		0.5	100					
BRZ	ePn	22	30	17.5		-0.8	100	2.12	37			
	(Sn)			42.2		-0.4	100					
ROX	ePn	22	30	33.3		0.3	100	3.19	52		4.2	4.4
	Sn			31 07.7		-0.9	100					
MSZ	ePn	22	30	33.6		0.5	100	3.20	29		4.4	4.2
	i			34.9								
	i			38.2								
	(Sn)		31	09.9		1.1	99					
	i			13.8								
THP	ePn	22	30	44.8		-1.0	100	4.13	46			
AMPLITUDES:	OBZ			2.2	11	BRZ	1.8	1.0	ROX		1.0	4.0
	MSZ			3.4	3.9							

JUN 11 08^h23^m10^s.7 48°.81S 164°.47E 33 km M = 4.9
 ± 0.9 0.03 0.11 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	Pn	08	23	56.6		-0.1	100	3.11	54		4.7	4.9
	Sn			24 32.0		0.6	100					
BRZ	ePn	08	24	04.4		-0.2	100	3.68	36			
	(Sn)			45.6		0.4	100					
ROX	ePn	08	24	18.1		-0.3	100	4.70	47		5.2	5.1
	i			18.7								
	Sn		25	11.5		1.8	99					

INSTRUMENTAL DATA

MSZ	ePn?	08 24	19.1	-0.3	100	4.77	31	5.3	4.8	
	i		21.2							
	i		27.3							
	(Sn)	25	17.7	6.3						
CBZ	Pn	08 24	20.9	1.2	100	4.79	143			
	Sn	25	11.0	-0.8	100					
DNZ	ePn	08 24	28.5	5.2		5.06	57			
	(Sn)	25	18.2	-0.0	100					
THP	Sn-Pn	59		-2.3	98	5.67	43			
	Pn	24	30.3	-1.3	100					
	e		38.4							
	e		40.0							
OMZ	ePn?	08 24	32.4	-0.9	100	5.79	52	4.8	4.7	
	e		39.3							
	(Sn)	25	30.2	-5.6						
KAI						7.95	40	4.5		
COB	ePn	08 25	24.0	-2.6		9.69	40	4.9		
AMPLITUDES:	OBZ	4.0	18	BRZ	3.3	3.7	6.2	ROX	4.0	8.5
	MSZ	14	7.0	DNZ	2.2	4.0		OMZ	1.2	1.7
	KAI	0.2		COB	0.5					

JUN 11 23^h52^m09^s.9 45°.06s 167°.65E 94 km M = 3.7
 ± 0.9 0.03 0.05 6 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
MSZ	iP	23	52	25.2	U	0.4	100	0.43	26		3.8	3.7		
	S			36.1		0.0	100							
BRZ	eP	23	52	26.8		-0.3	100	0.73	186					
	eS			39.4		-0.8	100							
ROX	eP	23	52	34		0.8	100	1.25	110				4.0	
	S			52.3		1.6	98							
THP	iP	23	52	39.0		0.5	100	1.67	73					
	eS			53 00.3		0.3	100							
OBZ	eP?	23	52	41.3		0.2	100	1.87	170		3.1	3.7		
	e(S)			53 04		-0.1	100							
MJZ	S	23	53	12.9		-0.9	100	2.29	63		3.2	3.8		
OMZ	P	23	52	46.9		-0.1	100	2.31	91		3.9	3.8		
	S			53 13.2		-1.4	99							
AMPLITUDES:	MSZ	24	31	BRZ	0.6	0.4	2.0	ROX		6.8				
	THP	8.2	17	OBZ	0.3	2.5		MJZ		0.5	1.9			
	OMZ	1.0	1.2											

JUN 12 03^h20^m33^s.4 46°.92s 165°.70E 33 km M = 4.1
 ± 1.0 0.05 0.08 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
OBZ	ePn	03	21	00		0.4	100	1.66	90					
	(Sn)			18.6		-0.6	100							
	e			21.7										
BRZ	ePn	03	21	00.2		-0.1	100	1.71	49					
	Sn			20.2		-0.3	100							
MSZ								2.74	35		4.1	4.1		
ROX	ePn	03	21	17.2		0.6	100	2.90	61		4.1	4.5		
	i			35.5										
	eSn			49.9		0.8	99							
THP	ePn	03	21	27.8		-0.7	100	3.78	52					
OMZ	eP*?	03	21	42.5		-1.7		4.08	65		4.1	4.0		

MJZ 4.45 51 4.0
 AMPLITUDES: BRZ 3.0 2.5 3.4 MSZ 2.5 4.0 ROX 0.8 5.6
 THP 2.0 2.7 OMZ 0.4 0.7 MJZ 1.0

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JUN 12 07^h52^m03^s.6 33°.74s 179°.33w 219 km M = 4.8
 ± 1.5 0.08 0.17 24 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	e(P)	07	53	12.3		1.7	99	4.32	203		4.8	5.0		
	e			54 06.5										
	e			09.3										
WTZ	eP?	07	53	20.3		-1.3	100	5.19	214		4.8	4.9		
	e			21.5										
	eS			54 22.6		0.4	100							
	e			25.8										
TUA	eP	07	53	30.4		1.0	100	5.81	208		5.0	5.0		
KRP	eP?	07	53	29.5		-1.2	100	5.91	223		3.6*			
	e			32.8										
	e			54.5										
TRZ	eP	07	53	39.3		-0.1	100	6.59	207		4.8	4.8		
	eS			54 53.0		-1.1	100							
	e			55 01.8										
CRZ	eP	07	53	40.6		0.0	100	6.68	262		3.7*			
MNG	eP	07	53	55.9		-2.1	99	8.03	210		4.4	4.6		
	S			55 27.7		0.2	100							
COB	e(P)	07	54	20.8		1.5	100	9.68	218				3.2*	
	e(S)			56 06.2		0.5	100							
AMPLITUDES:	ECZ			1.0 1.7	WTZ	1.7 2.2	TUA	0.8 0.9						
	KRP			1.0	TRZ	0.4 0.9	CRZ	0.4						
	MNG			0.7 1.7	COB	0.4								

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JUN 13 21^h04^m47^s.9 38°.77s 174°.60E 5 km M = 3.5
 ± 0.6 0.03 0.04 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TNZ	Pg	21	04	56.6		-0.5	100	0.45	202					
	e			59.6										
CNZ	Pg	21	05	04.8		-0.4	100	0.85	121					
	Sg			17.0		0.3	100							
NGZ	Pg	21	05	05.7		-0.2	100	0.89	118					
	Sg			17.7		-0.3	100							
GSZ	Pg	21	05	06.0		-0.5		0.92	124					
	Sg			18.8		-0.2								
KRP	Pg	21	05	10.0		-0.5	100	1.12	41		3.6	3.6		
	Sg			26.7		1.1	100							
WEL	eSn	21	06	00		0.7	100	2.52	177	3.6				
COB	ePn	21	05	29		-2.6	98	2.73	211		3.6	3.4		
	eP*			36		-0.3	100							
	eSn			06 07		2.7	98							
AMPLITUDES:	CNZ			8.2 18	NGZ	5.3 21	GSZ	6.0 22						
	KRP			4.6 4.7	WEL	0.2	COB	0.3 0.7						

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JUN 14 12^h32^m27^s.3 32°.56s 179°.21w 309 km M = 4.4
 ± 1.5 0.19 0.37 23 S.E. of RES. 1.2

ECZ	eP	12 33 52.0	1.1	100	5.44	199	4.3
WTZ	P	12 34 00.0	-0.4	100	6.25	209	4.6 4.4
	e	35 07					
	eS	13	-0.6	100			
TUA	eP	12 34 09	0.6	100	6.91	204	4.5 4.7
	eS	35 27	-0.8	100			
TRZ	eS	12 35 46	1.1	100	7.69	204	4.5
MNG	eP	12 34 33.8	-1.5	99	9.12	206	3.9 4.2
	S	36 15	-1.1	100			
WEL	eS	12 36 35	-0.0	100	9.96	207	4.7
COB	eS	12 36 52	0.9	100	10.69	215	3.0*
AMPLITUDES:	ECZ	0.2	WTZ	0.6 0.5	TUA	0.2 0.3	
	TRZ	0.3	MNG	0.2 0.5	WEL	0.2	
	COB	0.2					

JUN 16 05^h07^m39^s.5 38°.07s 176°.41E 170 km M = 4.9
 ± 0.9 0.03 0.05 7 S.E. of RES. 1.3 80/ 325

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
WTZ	iP	05	08	02.6	U	-0.5	100	0.46	79			
WNZ								0.61	204		4.8	
KRP	iP	05	08	05.2	SE	0.8	100	0.71	282		4.0*	4.1*
	iS			23.2	SE	-0.4	100					
TUA	iP	05	08	06.5	U	0.6	100	0.94	142		4.9	5.0
	eS			27		0.8	100					
CNZ	P	05	08	10.9		1.8	99	1.31	211			
	eS			33		1.0	100					
TRZ	iP	05	08	12.8	U	1.7	99	1.51	168		5.0	4.7
ECZ	iP	05	08	13.4	D	0.1	100	1.73	78		4.5	4.9
	e			21								
	e			28								
	eS			38		-1.3	100					
AUC	iP	05	08	14.7	D	0.9	100	1.78	312			
GBZ	iP	05	08	16.2	D	-0.0	100	2.00	338			
	e			23.7								
	eS			43		-1.5	100					
MNG	iP	05	08	24.0		0.1	100	2.65	196		4.8	
	eS			56		-2.1	99					
WEL	iP	05	08	34.1	D	0.1	100	3.46	201	5.1		
	e			46								
	S		09	14.0		-2.1	99					
AMPLITUDES:	WNZ	1.3	KRP	12 16	TUA	11 13						
	CNZ	9.3 17	TRZ	7.5 9.0	ECZ	2.1 6.4						
	AUC	5.8	GBZ	8.3 4.2	MNG	17						
	WEL	4.1 3.7 9.0										

JUN 16 05^h51^m58^s.5 38°.00s 177°.10E 0 km M = 3.0
 ± R R R R S.E. of RES. 0.9 80/ 326

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
WTZ	iPg	05	51	59.7		-0.6	100	0.09	280			
	eSg			52 01		-0.5	100					
KRP	eP*?	05	52	23		1.0	99	1.24	273		3.0	
AMPLITUDES:	WTZ	6.0	KRP	0.4								
FELT:	Whakatane (27) MM IV											

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JUN 16 08^h14^m30^s.1 35°.17s 178°.66E 260 km M = 4.3
 ± 2.0 0.10 0.20 21 S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	08	15	16.8		-1.8	100	2.52	182		4.3	
WTZ	P	08	15	24.1		-0.7	100	3.11	205		4.7	4.3
	S			16 07.5		0.1	100					
ONE	eP	08	15	30		0.3	100	3.56	259			
KRP	P	08	15	33.5		1.9	100	3.73	222		2.9*	
TUA	eP	08	15	35		2.2	100	3.83	198		4.4	4.5
	S			16 23		1.3	100					
TRZ	eP	08	15	42		-0.2	100	4.62	198		4.2	4.4
	S			16 41		2.7	99					
NGZ	e(P)	08	15	47.0		4.0		4.69	210			
	S			16 36.0		-3.8	97					
MNG	eP	08	15	58		-1.0	100	5.99	204		4.0	4.1
	eS			17 08		-0.5	100					
WEL	eS	08	17	27		-0.3	100	6.84	205	4.5		
COB	eS	08	17	44		0.9	100	7.53	217			3.0*

AMPLITUDES: ECZ 0.6 WTZ 2.6 1.1 KRP 0.3
 TUA 0.4 0.6 TRZ 0.2 0.6 NGZ 0.6 0.8
 MNG 0.5 0.8 WEL 0.2 COB 0.3

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JUN 16 12^h26^m07^s.3 39°.48s 177°.08E 33 km M = 4.4
 ± 0.3 0.02 0.04 R S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	P*	12	26	14.6		0.6	100	0.22	250			
TUA	Pn	12	26	19.6	U	-0.4	100	0.67	5			4.6
	i			25.0								
	Sn			29.6		0.2	100					
WNZ								1.14	318		4.8	4.7
GSZ	Pn	12	26	28.0		1.1		1.18	279			
	i			28.8								
	S*			45.5		0.8						
NGZ	Pn	12	26	27.8		0.9	99	1.18	284			
	eSn			42.0		0.5						
CNZ	Pn	12	26	28.2	U	0.7	100	1.22	283			
	i			29.3								
WTZ	Pn	12	26	30.7	U	-0.6	100	1.49	357		4.3	
	eP*			35.8		1.6						
MNG	Pn	12	26	33.0	D	-0.7	100	1.67	227		4.4	
	eP*			40.6		3.4						
KRP	Pn	12	26	37.1	D	-0.6	100	1.97	322		4.6	
	eP*			43.2		1.0						
	eSn			27 00.3		-0.2	100					
ECZ	ePn	12	26	40.5		0.7	100	2.12	33		4.1	
	e			54								
WEL	ePn	12	26	45		-0.3	100	2.53	224	4.3		
	eP*			55		3.3						
	Sn			27 14.0		0.0	100					
COB	ePn	12	27	00.2		-1.1		3.69	243		4.7	4.1
	eP*			14.2		2.7						
	e			17.7								
	Sn			43.0		1.0						
KAI	eSn	12	28	19.0		-0.7		5.26	233	4.3		

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THP ePn 12 27 49 -2.5 7.37 224
 Sn 29 08.0 -2.4

AMPLITUDES: TUA 30 WNZ 3.5 4.0 GSZ 36 52
 WTZ 10 MNG 15 KRP 5.8
 ECZ 0.6 WEL 1.2 COB 2.1 2.0
 KAI 0.3 THP 0.4 1.5

FELT: Hastings (60) MM V, Clive (60) MM IV

JUN 16 13^h36^m42^s.3 36°.79S 176°.89E 261 km M = 3.8
 ± 1.9 0.11 0.19 14 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	13	37	19.9		0.1	100	1.20	176		3.6	3.5
	eS			48		-1.0	100					
KRP	eP	13	37	24.0		1.6	100	1.57	223		2.7*	
TUA	P	13	37	26		-0.2	100	2.02	174		3.9	3.9
	eS			59		-1.2	100					
TRZ	eP	13	37	33.2		-0.1	100	2.76	181		3.9	3.9
	eS			38 16.0		2.9	97					
MNG	P	13	37	45.7		-1.2	100	3.98	196		4.2	3.8
	eS			38 37		-0.1	100					
COB	eS	13	39	06.5		-0.7	100	5.38	216			2.9*
AMPLITUDES:	WTZ		0.5	0.5	KRP		0.3	TUA			0.3	0.3
	TRZ		0.2	0.4	MNG		1.8 0.9	COB				0.3

JUN 16 20^h30^m40^s.5 39°.49S 177°.28E 33 km M = 3.6
 ± 0.6 0.03 0.05 R S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	iP*	20	30	49.0		0.0	100	0.36	260			
	eS*			56		0.9	99					
TUA	Pn	20	30	54	U	0.5	100	0.69	352		3.6	3.9
	eSn			31 03		-0.1	100					
CNZ	iPn	20	31	02.4		-0.4	100	1.38	282			
	eSn			19		-0.5	100					
MNG	ePn	20	31	08		-0.4	100	1.78	230			3.3
AMPLITUDES:	TUA		2.9	5.7	CNZ		15 10	MNG				1.5

JUN 18 15^h50^m08^s.2 34°.22S 179°.69E 271 km M = 4.3
 ± 1.9 0.14 0.35 19 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	S	15	51	55.0		-0.9	100	3.59	195			
WTZ	eP	15	51	16.0		-1.4	100	4.35	209		4.3	4.2
	eS			52 11		-0.5	100					
KRP	P	15	51	26		0.8	100	4.99	221		3.1*	
TUA	eP	15	51	27		1.6	99	5.01	203		4.3	4.4
	eS			52 27		1.3	100					
TRZ	eS	15	52	44		1.3	100	5.80	203			4.2
MNG	eP	15	51	51.4		-1.0	100	7.21	206		4.0	4.2
	eS			53 13		-1.2	100					
WEL	eS	15	53	33		-0.2	100	8.06	207	4.5		
CMZ	eP	15	52	39.6		1.7		10.84	208			3.9*
AMPLITUDES:	WTZ		0.6	0.6	KRP		0.4	TUA			0.2	0.3
	TRZ			0.3	MNG		0.4 0.7	WEL		0.2		

		CMZ			0.6			80/ 332						
JUN 19		09 ^h 58 ^m 39 ^s .5			31°.53s			179°.47w			388 km		M = 5.3	
		± 3.2			0.15			0.43			39		S.E. of RES. 2.2	
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eS	10	01	32		-0.6	100	6.36	194		4.8	5.5		
WZ	eP	10	00	25		0.6	100	7.07	203		5.3	5.4		
	e		01	49										
CRZ	eP	10	00	25		-1.0	100	7.21	244		3.7*			
KRP	eP	10	00	33		2.6	99	7.60	211		3.8*			
NGZ	eP	10	00	43		0.6	100	8.63	206					
MNG	eP	10	00	54		-3.8	97	9.95	203				5.5	
	e		02	41										
	eS			47		-0.4	100							
WEL	eP?	10	01	09		1.2	100	10.79	204	5.3				
	eS		03	06		0.8	100							
AMPLITUDES:		ECZ	0.4	2.0	WZ	2.2	3.3	CRZ			0.3			
		KRP	1.1		NGZ	1.2	1.4	MNG			7.1			
		WEL	0.6	1.5										

		CMZ			0.6			80/ 333						
JUN 19		17 ^h 38 ^m 27 ^s .4			40°.44s			174°.28E			97 km		M = 3.8	
		± 0.4			0.01			0.02			5		S.E. of RES. 0.7	
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WEL	P	17	38	48.0		1.0	99	0.92	156	3.7				
	S		39	01.8		0.1	100							
MNG	iP	17	38	47.8		0.7	100	0.94	101		3.7	4.0		
	i			52.7										
	S		39	01.2		-0.8	100							
TNZ	eP	17	38	51.0		0.1	100	1.26	3		3.1*	3.3*		
	S		39	09.2		0.5	100							
COB	P	17	38	51.8		-0.1	100	1.34	241		4.1*	3.5*		
	eS		39	09		-1.6	96							
CAZ	iS	17	39	14.5		-0.6	100	1.55	108					
	i			17.1										
CNZ	P	17	38	55.3		0.4	100	1.58	39					
	iS		39	16.5		0.7	100							
	i			18.6										
NGZ	P	17	38	55.9		0.4	100	1.63	40					
	eS		39	17.0		0.3	100							
KKZ	P	17	39	00.8		0.2	100	2.02	192					
	S			26.0		0.7	100							
	i			28.9										
TRZ	eP	17	39	02		-0.3	100	2.14	66		3.5	3.6		
	e			24.5										
	eS			28		-0.1	100							
KRP	P	17	39	09.1		-0.9	100	2.70	22		3.2*	3.5*		
	S			41.8		0.0	100							
TUA	eS	17	39	42		-1.2	99	2.75	55				4.0	
WZ	eP	17	39	15.8		-1.6		3.23	41		3.5	3.8		
	S			52.8		-2.2								
CMZ	S	17	39	52.8		-5.6	0	3.37	201				3.9*	
ECZ	eP	17	39	14.0		-18.0		4.31	52		4.1			
AMPLITUDES:		WEL	1.6		MNG	8.5	22	TNZ			0.3	0.8		
		COB	5.0	5.3	CAZ	10		CNZ			4.5	5.5		
		NGZ	2.8	4.6	KKZ	0.8	2.2	TRZ			0.2	0.5		

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JUN 20 15^h57^m36^s.0 37°.30s 176°.52E 231 km M = 4.0
 ± 1.6 0.09 0.11 12 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	15	58	06.5	U	-1.5	99	0.78	152		3.6	3.7
	S			32		-0.8	100					
KRP	P	15	58	10		0.8	100	1.00	231		2.7*	
TUA	e(P)	15	58	16		2.5		1.58	162		3.7	4.1
	S			42		-0.5	100					
ECZ	e(P)	15	58	15		0.9		1.66	104			3.9
	e			36								
	S			45		1.4	99					
NGZ	P	15	58	18		0.7	100	2.02	201			
	S			50		0.7	100					
TRZ	P	15	58	19		-0.8	100	2.27	174		4.4	4.3
	e			49.5								
	S			54		0.2	100					
TNZ	P	15	58	25		2.5		2.53	221		2.9*	
MNG	P	15	58	30.9	U	-1.6		3.41	193		4.4	4.4
	S			59 17		0.7						
WEL	S	15	59	33		-0.4		4.21	198	3.9		
COB	P	15	58	47		-2.3		4.80	217		3.4*	3.3*
	S			59 47.5		1.2						
KKZ	P	15	58	57		-1.9		5.56	202			
	S	16	00	01		-2.4						
	e			07								
CMZ	S	16	00	34.5		-0.6		6.95	204		2.9*	3.1*
MJZ	P	15	59	29.4		-2.1		8.12	213		3.0*	3.1*
	S	16	01	00		-1.9						

AMPLITUDES:

WTZ	0.7	1.0	KRP	0.4	TUA	0.3	0.7
ECZ		0.4	TRZ	0.8	1.4	TNZ	0.1
MNG	3.8	4.7	WEL	0.1		COB	0.3
KKZ	0.1	0.4	CMZ	0.1	0.2	MJZ	0.2

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JUN 21 08^h09^m25^s.6 35°.81s 178°.91E 33 km M = 3.9
 ± 0.3 0.01 0.02 R S.E. of RES. 0.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	Pn	08	10	05.5		0.0	100	2.66	215		3.9	3.9
	Sn			35.5		-0.1	100					
TUA	Sn	08	10	51		-0.0	100	3.30	205			4.2
KRP	e(Pn)	08	10	18		2.0		3.43	231			
	e(Sn)			54		-0.0	100					
TRZ	e(Pn)	08	10	27		2.0		4.09	203		3.6	4.1
	Sn			11 10		0.1	100					
MNG	Pn	08	10	40		-4.4		5.51	208		3.8	3.9
	Sn			11 39.5		-4.5						
WEL	eSn	08	11	57		-7.4		6.36	209	4.0		
COB	ePn	08	11	00		-6.9		7.16	221		4.2	3.4
	eSn			12 18		-5.7						
CIZ	Sn	08	13	03		-1.2		8.86	158			
MJZ	Sn	08	13	31.5		-10.7		10.43	216			3.8

AMPLITUDES:

WTZ	1.2	1.0	TUA	0.5	TRZ	0.1	0.4
MNG	0.4	0.6	WEL	0.1		COB	0.2

		CIZ			0.2 MJZ			0.1			80/ 336		
JUN 21		10 ^h 48 ^m 37 ^s .1			38°.99s			178°.32E			33 km M = 3.9		
		± 1.5			0.04			0.11			R S.E. of RES. 1.4		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
GNZ	e(Sn)	10	48	55		1.9		0.41	326				
TUA	iPn	10	48	53.2	U	-0.2	100	0.94	281		4.1	4.0	
	Sn		49	04.5		-1.0	100						
TRZ	Pn	10	48	58.4	D	0.1	100	1.30	244		3.8	3.8	
	e		49	08									
	Sn			17		2.8	96						
ECZ	e(Sn)	10	49	16		1.5		1.30	8			3.8	
WTZ	iPn	10	49	01.6	U	1.1	100	1.45	313		4.0	3.9	
	Sn			17.5		-0.4	100						
NGZ	Pn	10	49	10		0.4	100	2.12	264				
	(P*)			20		5.5							
	Sn			33.5		-0.4	100						
KRP	e(P*)	10	49	22		2.2		2.43	295				
MNG	iPn	10	49	16.7	U	-1.2	100	2.73	232		4.3	3.9	
	Sn			49		0.4	100						
WEL	Sn	10	50	07		-1.7	99	3.56	229	3.5			
COB	Pn	10	49	43.7	U	-2.1		4.78	242		4.2	3.5	
	Sn			50 38		0.2							
KKZ	e(Pn)	10	49	45.5		-2.2		4.91	224				
	Sn			50 40		-1.1							
CIZ	Sn	10	51	17		3.2		6.27	144				
CMZ								6.28	221		4.3	4.0	
MJZ	Pn	10	50	24		-2.1		7.73	227		3.9	3.8	
	Sn			51 46		-2.8							
AMPLITUDES:		TUA	4.7	4.3	TRZ	1.5	2.3	ECZ				1.0	
		WTZ	4.5	3.7	MNG	4.5	2.4	WEL	0.1				
		COB	0.4	0.3	KKZ		0.2	CIZ				0.4	
		CMZ	0.4	0.3	MJZ	0.2	0.2						

		CIZ			0.2 MJZ			0.1			80/ 337		
JUN 22		04 ^h 28 ^m 16 ^s .4			36°.84s			176°.82E			322 km M = 4.0		
		± 2.5			0.18			0.25			23 S.E. of RES. 1.1		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
WTZ	eP	04	28	59.5		-0.6	100	1.15	173		3.7	3.7	
	S			29 34		-0.2	100						
KRP	P	04	29	02.5		0.6	100	1.48	223		2.7*		
TUA	S	04	29	44		0.5	100	1.98	172			4.1	
NGZ	P?	04	29	10		0.3		2.52	202				
	S			51		-0.4	100						
TRZ	e(S)	04	29	55		0.7		2.71	180			4.1	
MNG	P	04	29	17.7	U	-5.6		3.91	195		4.1	4.2	
	S			30 11.5		-4.2							
WEL	S	04	30	27		-4.5		4.72	199	3.9			
COB	P	04	29	32.5		-6.3		5.30	216		3.3*	2.7*	
	eS			30 37		-6.4							
KKZ	eP	04	29	42.5		-5.3		6.07	202				
	eS			30 54		-5.5							
AMPLITUDES:		WTZ	0.4	0.5	KRP	0.3		TUA				0.4	
		TRZ		0.6	MNG	1.3	1.7	WEL	0.1				
		COB	0.2	0.2	KKZ	0.1	0.1						

JUN 22 05^h11^m39^s.1 37°.94s 176°.41E 164 km 80/ 338
 ± 0.8 0.03 0.04 4 S.E. of RES. M = 3.7
 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	iP	05	12	01.6	D	-0.4	100	0.46	96		3.5		3.0	
	S			19.5		-0.2	100							
KRP	P	05	12	03.0		-0.2	100	0.69	271		2.5*		2.7*	
	S			22		0.3	100							
TUA	P	05	12	06.5		0.8	99	1.04	146		3.5		3.8	
	S			26.5		0.3	100							
NGZ	P	05	12	08.7		-0.2	100	1.39	206					
TRZ	S	05	12	36		-0.5	100	1.65	169					
MNG	iP	05	12	21.7		-3.1		2.77	195		4.5		3.8	
	S			55.5		-4.4								
WEL	S	05	13	13		-5.0		3.57	200	3.7				
COB	P	05	12	39		-4.6		4.24	221		2.8*		2.8*	
	S			13 27.5		-5.9								
KKZ								4.94	204					
CIZ	S	05	15	05		1.9		8.03	141					
AMPLITUDES:	WTZ			1.4	0.5	KRP		0.4	0.6	TUA			0.4	0.8
	MNG			7.0	2.0	WEL	0.1			COB			0.1	0.3
	KKZ				0.1									

JUN 22 13^h17^m57^s.5 32°.74s 179°.94w 392 km 80/ 339
 ± 2.0 0.15 0.25 57 S.E. of RES. M = 5.5
 2.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	P	13	19	23		2.3	100	5.09	194		5.4		5.7	
	e(S)			20 28		2.1								
WIZ	P	13	19	25		1.9	100	5.33	205					
	(S)			20 30		-0.3								
ONE	P	13	19	26		-0.1	100	5.61	236	3.8*				
	S			20 36		0.3	100							
WTZ	P	13	19	26.5		-1.8	100	5.80	205		5.4		5.6	
	e			20 17										
	S			37		-2.5	99							
AUC	P	13	19	32		1.8	100	5.98	225					
KRP	P	13	19	35		0.6	100	6.36	214		4.5*		3.6*	
	e			20 35.5										
	S			53		2.3	100							
CRZ	P	13	19	32		-2.8	99	6.39	253		3.5*			
TUA	eP	13	19	36		-0.0		6.50	201		5.1		5.8	
	S			20 51		-2.5	99							
	e			55										
WNZ								6.70	208		5.6		5.7	
TRZ	eP	13	19	43.5		-1.5	100	7.29	200		5.3		5.8	
	S			21 09		-0.7	100							
NGZ	P	13	19	46.4		0.4	100	7.37	208					
GSZ	S	13	21	16		2.7	99	7.46	208					
MNG	eP	13	19	57.5		-3.6		8.68	204		5.6		5.8	
	e			21 28										
	S			37		-1.7								
WEL	P	13	20	08.5		-2.4		9.52	205	5.5				
	(S)			21 53		-3.4								
	e			57										
COB	P	13	20	16		-2.7		10.19	213		4.3*		4.2*	

	S	22 09		-1.5								
KKZ	eP	13 20 26		-1.1	10.91	206						
	S	22 28		2.4								
CIZ	P	13 20 43		8.9	11.51	168						
	e	21 00										
	e	22 59										
KAI					11.93	213		4.0*				
CMZ	P	13 20 42		-1.2	12.30	206				4.3*		
	S	22 56.5		1.5								
RHP	P	13 20 59.7		0.1	13.77	212						
	S	23 26		0.8								
OMZ					14.22	207				4.1*	3.7*	
MSZ					15.21	215				4.7*	3.6*	
AMPLITUDES:	ECZ	2.2	4.0	ONE	0.6		WTZ			4.0	7.5	
	KRP	6.7	1.1	CRZ		0.2	TUA			0.7	3.7	
	WNZ	0.3	0.3	TRZ		0.9	6.0	MNG		10	17	
	WEL	1.2		COB		1.2	3.3	KKZ		1.5	1.9	
	CIZ	0.5		KAI	0.4			CMZ		1.4		
	OMZ	0.5	0.4	MSZ		5.3	0.8					

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JUN 23 04^h19^m16^s.4 41°.47s 173°.09E 110 km M = 4.1
 ± 1.0 0.03 0.06 9 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	iP	04	19	34.1		0.9	100	0.47	325		3.9*	3.8*
	e(S)			45.5		-0.6	100					
KKZ	P	04	19	39.6	U	1.2	100	1.05	155			
	e			48								
	S			57		1.9	99					
WEL	P	04	19	41.5		0.6	100	1.28	82	4.0		
	e			49								
	S			59.5		-0.1	100					
KAI	S	04	20	06		-1.2	100	1.64	229	3.6*		
MNG	P	04	19	49		-0.8	100	2.00	66		3.7	4.1
	(S)			20 12		-2.7	98					
	e			15.5								
CMZ	P	04	19	51		-0.7	100	2.14	189		3.4*	4.1*
	e			20 12								
	S			17.5		-0.5	100					
TNZ	P	04	19	57		0.6	100	2.48	24		3.3*	3.9*
	S			20 28		1.6	100					
CNZ	S	04	20	38		0.5		2.94	40			
NGZ	P	04	20	03		-0.3		2.99	41			
	e			32.5								
	(S)			40		1.4						
TRZ	S	04	20	52		2.8		3.43	57			4.5
OMZ	e	04	20	57				3.93	203			3.1*
	(S)			21 02		0.4						
KRP	P	04	20	15.5		-1.6		4.01	29		3.0*	3.2*
	S			21 01.5		-2.0						
MSZ	S	04	21	21.5		-5.1		4.96	228			3.4*
BRZ	P	04	20	42		-0.7		5.90	221			
	S			21 44.5		-5.1						
AMPLITUDES:	COB		5.8	16	KKZ		2.3	4.8	WEL	1.8		
	KAI	1.1			MNG		2.2	7.7	CMZ		0.9	8.0
	TNZ		0.3	1.5	TRZ			1.5	OMZ			0.4
	KRP		0.4	0.7	MSZ			1.4	BRZ	0.2		0.3

JUN 23 15^h45^m28^s.4 40°.69s 174°.08E 98 km 80/ 341
 ± 0.5 0.02 0.04 6 S.E. of RES. 1.0 M = 3.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WEL	e(P)	15	45	48		1.2		0.79	139	3.2		
	S			46 00.5		-0.2	100					
MNG	iP	15	45	49.9	U	0.1	100	1.07	87		3.4	3.6
	S			46 05		-0.9	100					
COB	iP	15	45	50.2	U	0.2	100	1.09	248		3.7*	3.8*
	eS			46 05.5		-0.8	100					
TNZ	P	15	45	56		0.7	100	1.52	9		3.6*	3.6*
	S			46 16		0.3	100					
KKZ	P	15	45	59.4	U	1.2	99	1.75	189			
	S			46 22		1.5	99					
NGZ	P	15	46	01		0.7	100	1.92	39			
	e(S)			26.5		2.5						
TRZ	e	15	46	18.5				2.39	63		3.6	3.3
	e(S)			34		-1.3						
KRP	P	15	46	14.3		-0.6	100	2.99	23		3.4*	3.0*
	S			49.5		-0.5	100					
	e			47 13								
CMZ	eP	15	46	15		-1.3	99	3.09	200		3.3*	3.4*
	S			51.5		-0.9	100					
WTZ	P	15	46	24		1.7		3.53	41		3.2	3.5
	e			36								
	S			47 01		-2.2						

AMPLITUDES: WEL 0.6 MNG 3.1 7.5 COB 2.8 11
 TNZ 0.8 1.3 KKZ 0.8 0.7 TRZ 0.2 0.2
 KRP 1.2 0.6 CMZ 0.5 1.1 WTZ 0.1 0.2

JUN 23 16^h45^m19^s.4 39°.90s 175°.62E 88 km 80/ 342
 ± 0.5 0.02 0.04 8 S.E. of RES. 0.6 M = 5.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	iP	16	45	34.7		-0.6	100	0.62	358			
CNZ	iP	16	45	35.8		-0.2	100	0.70	355			
NGZ	iP	16	45	36.1		0.0	100	0.72	360			
MNG	iP	16	45	36.4		0.2	100	0.73	188			
TRZ	iP	16	45	39.4	D	0.2	100	0.99	70			
CAZ	iP	16	45	41.4	U	0.9	99	1.11	155			
	i			44								
TNZ	iP	16	45	43.1	U	1.4	95	1.20	306			
WNZ	iP	16	45	43.0	U	-0.2	100	1.32	17			
WEL	iP	16	45	46.3	USE	0.4	100	1.53	205	5.5		
	S			46 05.5		-0.5	100					
TUA	iP	16	45	47.0	D	0.0	100	1.61	48			
	e			57								
KRP	iP	16	45	51.5	UW	-0.2	100	1.97	358			
	e(S)			46 16		0.4						
WTZ	iP	16	45	54.4	U	-0.3		2.20	30			
COB	iP	16	45	59.0	D	0.0	100	2.50	241			
KKZ	P	16	46	04.0	U	-0.8	99	2.91	209			
	e			14								
AUC	P	16	46	08.0	U	0.5		3.10	347			
	e			47 10.5								
ECZ	P	16	46	08.0	U	-0.5		3.18	47			

GBZ	P	16 46 17		1.6	3.68	358				
	e	33.5								
	e	47 27								
KAI	e	16 46 51			4.12	229	4.9*			
	S	47 07		-1.7						
ONE	P	16 46 24.5		1.5	4.24	346	4.7*			
	e	47.5								
	e	47 44								
CMZ	P	16 46 22		-2.0	4.31	210	4.9* 4.9*			
	e	33								
	e	50								
	S	47 08		-5.4						
CRZ	P	16 46 47.3	D	0.8	5.95	336	4.5* 4.2*			
	S	47 54		0.1						
OMZ	P	16 46 48		-2.4	6.23	212	4.3* 4.6*			
	e	59								
	e	47 21								
	S	54		-6.9						
DNZ	P	16 46 59		-2.8	7.05	210				
	S	48 12		-9.0						
CIZ	iP	16 47 02.1		-0.4	7.10	127				
MSZ	P	16 47 04	E	-3.1	7.44	228	4.7* 4.5*			
	e	11								
	(S)	48 39.5		8.8						
BRZ	eP	16 47 17.5		-2.2	8.35	223				
	e	34								
	e	50								
	S	48 47		-6.1						
OBZ					8.88	215	3.6* 3.8*			
AMPLITUDES:	WEL	47	KKZ	23	31	GBZ	17	15		
	KAI	9.5	ONE	7.7		CMZ	14	21		
	CRZ	2.7	1.7	OMZ	1.9	7.5	DNZ	4.0	11	
	MSZ	10	12	BRZ	2.4	1.3	2.6	OBZ	0.4	1.6

FELT: Widely throughout the central and lower North Is. and about Cook Strait. Maximum intensity MM V

JUN 23 17^h22^m09^s.5 39°.93s 175°.55E 12 km M = 3.4
 ± 0.3 0.02 0.03 R S.E. of RES. 1.3 80/ 343

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	P*	17	22	22.0		0.3	100	0.65	3			
	Sg			32.5		0.8	100					
MNG	iP*	17	22	23.1	D	0.7	100	0.69	184		3.4	3.5
	Sg			34.5		1.5	100					
CNZ	iP*	17	22	22.8		-0.2	100	0.73	0			
NGZ	iP*	17	22	23.0		-0.4	100	0.75	4			
	S*			33.5		0.0	100					
TRZ	P*	17	22	28		-0.6	100	1.05	70		3.0	3.2
	(Pg)			35		4.2						
	e(S*)			44.5		1.8						
	Sg			46		0.9	100					
TNZ	P*	17	22	30		-0.5	100	1.17	309		3.2	3.5
	S*			47		0.9	100					
	Sg			49		0.1						
WEL	Pn	17	22	34		-1.2	100	1.48	203	3.2		
	Sn			52.5		-1.9	99					
TUA	ePn	17	22	37		-0.8	100	1.67	49		3.4	3.5

INSTRUMENTAL DATA

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KRP	Sn	23 00	1.0	100					
	Pn	17 22 41	-1.3	100	2.00	360	3.6	3.7	
	(Pg)	47	-3.0						
	Sn	23 06.5	-0.4	100					
WTZ	S*	12.5	1.4						
	Pn	17 22 46	0.4	100	2.24	31	3.2	3.5	
	e(Sn)	23 09	-3.7						
	e(S*)	17.5	-0.9						
COB	Pn	17 22 46	-2.2	99	2.44	241	3.5	3.2	
	Sn	23 21	3.6	86					
	(Sg)	34	2.3						
	AMPLITUDES:	MNG	10 15	TRZ	0.4 0.9	TNZ	0.4 1.1		
	WEL	0.3	TUA	0.3 0.4	KRP	0.5 0.5			
	WTZ	0.3 0.5	COB	0.3 0.6					

FELT: Moawhango (58) MM IV

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JUN 23 17^h23^m54^s.6 39°.90S 175°.58E 12 km M = 3.0
 ± 0.4 0.02 0.04 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	P*	17 24	06.2			-0.2	100	0.63	0			
	S*		15.5			0.5	100					
	iP*	17 24	07.1			-0.6	100	0.70	358			
CNZ	S*		17			-0.3	100					
	iP*	17 24	07.4			-0.6	100	0.72	2			
	S*		17.5			-0.3	100					
NGZ	Sg		18.5			-0.6						
	P*	17 24	08			0.0	100	0.72	186		3.2	3.3
	Sg		19.5			0.5	100					
TRZ	P*	17 24	12.5			-0.6	100	1.02	70		2.7	2.9
	e(S*)		28			1.2						
	Sg		31			1.9	99					
TNZ	P*	17 24	14.5		U	-1.3	100	1.17	307		2.9	3.1
	S*		33.5			2.1	99					
	(Sg)		36.5			2.2						
WEL	Sn	17 24	37.5			-2.8	98	1.51	204	2.7		
KRP	Pn	17 24	28			0.9	100	1.98	359		3.4	
	e(Sn)		52.5			1.0						
	Sg		25 00			-1.3	100					
WTZ	e(Sn)	17 24	53			-4.0		2.21	30		3.1	
COB	e(Pn)	17 24	35			1.1		2.47	241		3.0	2.8
	Sn		25 05.5			2.1	99					
	e(Sg)		22			4.0						
AMPLITUDES:	MNG	5.5 9.0	TRZ	0.2 0.4	TNZ	0.2 0.4						
	WEL	0.1	KRP	0.3	WTZ	0.2						
	COB	0.1 0.2										

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JUN 23 21^h19^m36^s.6 39°.90S 175°.65E 33 km M = 3.8
 ± 0.2 0.01 0.03 R S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	Pn	21 19	48.8			0.1	100	0.62	356			
	e(S*)		59			0.9						
CNZ	iPn	21 19	49.7			-0.1	100	0.70	354			
	Sn		20 00			0.5	100					
NGZ	iPn	21 19	50.0			0.0	100	0.72	358			

MNG	Sn	20 00		0.2	100				
	iPn	21 19 50.4	U	0.3	100	0.73	190		3.8 3.7
	eS*	20 01.5		0.4	100				
TRZ	eP*	21 19 56.5		1.8		0.97	69		3.4 3.7
	e(S*)	20 10		2.0					
	e	13							
CAZ	ePn	21 19 55		-0.1		1.10	156		
	S*	20 11		-0.7					
	e	20							
TNZ	iPn	21 19 57.0	U	0.3	100	1.21	306		4.1 3.9
	S*	20 15		-0.1	100				
WEL	ePn	21 20 00.5		-0.7	99	1.54	206		3.7
	Sn	19.5		-0.1	100				
	e	40							
TUA	eP*	21 20 05		-0.2		1.59	47		3.7 3.8
	S*	27		0.5					
KRP	Pn	21 20 06		-1.1	95	1.98	357		4.2 4.2
	P*	10		-1.6					
	(Sn)	33		2.9					
WTZ	Pn	21 20 10		0.1		2.18	29		3.5 3.9
	Sn	34.5		-0.5					
COB	Pn	21 20 13		-1.6		2.52	241		4.0 3.6
	(P*)	27		6.1					
	S*	48.5		-5.4					
KKZ	eP*	21 20 26		-1.7		2.92	210		
	eSn	50		-2.8					
CMZ	Sn	21 21 24		-2.3		4.32	210		4.1
CRZ	ePn	21 21 03		1.6		5.96	336		
BRZ	Sn	21 23 02		-1.7		8.37	223		
AMPLITUDES:	MNG	21 20	TRZ	1.0	3.4	TNZ	2.5	2.5	
	WEL	0.9	TUA	0.7	1.0	KRP	1.8	1.4	
	WTZ	0.7	1.4	COB	1.0	1.4	KKZ	0.2	0.4
	CMZ	0.8	BRZ		0.1				

FELT: Moawhango (58) MM IV, Ohakune (49) MM III

JUN 23 22^h29^m56^s.1 42°.55S 174°.07E 22 km M = 3.8
 ± 0.6 0.02 0.04 3 S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KKZ	iP*	22	30	03.3		0.3	100	0.31	295			
	(S*)			07		-0.8	99					
WEL	Pn	22	30	20		0.6	100	1.37	23	3.7		
	Sn			36		-0.7	100					
	e			51								
CMZ	ePn	22	30	21		0.2	100	1.48	225		3.8	3.9
	(P*)			24		1.6						
	e			28								
	e			33.5								
	Sn			38.5		-0.8	100					
COB	Pn	22	30	25.6	U	0.7	100	1.77	325		4.2	3.6
	Sn			47		0.5	100					
	(S*)	22	31	01.5		4.7		1.97	270	3.5		
KAI	Pn	22	30	31.1	D	0.4	100	2.20	29		3.5	3.8
MNG	e(P*)			41		6.1						
	(Sn)			56		-0.8	100					
RHP	Pn	22	30	46		0.3	100	3.30	241			
	P*			52		-1.5						

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KRP	e(Sn)	23	14.5	-0.3						
	P*	05	22 48	-2.3	4.16	13	4.3	4.3		
	S*	23	47	2.5						
AMPLITUDES:		WEL	6.4	COB	3.7	3.5	MNG	3.4	3.9	
		CMZ	0.4	1.0	TNZ	0.1	0.3	MJZ	0.5	0.6
		KRP	0.5	0.4						

JUN 26 17^h03^m30^s.5 40°.84S 176°.12E 33 km M = 3.5
 ± 0.2 0.02 0.02 R S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	P*	17	03	35.8		-0.4	100	0.11	128			
	S*			41		0.6	99					
	iP*	17	03	41.7	U	0.3	100	0.53	294		3.4	3.5
MNG	S*			49.5		0.1	100					
	P*	17	03	50		-0.9	98	1.12	246	3.0		
WEL	S*		04	06.5		0.4	100					
	e			18								
TRZ	Pn	17	03	53		-0.1	100	1.39	23		3.2	3.5
	(P*)		04	00.5		4.8						
	e(Sn)			12		2.1						
CNZ	e(S*)			22		7.7						
	P*	17	04	00.7		-0.0	100	1.69	345			
NGZ	S*			24.5		1.3						
	P*	17	04	01		0.2		1.70	347			
TNZ	e(S*)			20.5		-2.8						
	eP*	17	04	08		0.0	100	2.12	320		4.0	3.6
COB	e			14								
	e(S*)			42		6.1						
WTZ	Pn	17	04	11		1.8		2.57	263		3.8	3.4
	P*			20.5		4.8						
KRP	S*			51.5		2.1						
	eP*	17	04	21.5		-0.4		2.93	14		2.9	
	S*		05	04.5		4.0		2.94	351		4.0	4.1
AMPLITUDES:		MNG	16	24	WEL	0.3				TRZ	0.3	0.9
		TNZ	0.7	0.4	COB	0.6	0.7	WTZ			0.1	
		KRP	0.5	0.5								

JUN 26 18^h46^m59^s.5 39°.89S 175°.54E 33 km M = 3.2
 ± 0.3 0.02 0.03 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	iPn	18	47	10.6		-0.8	100	0.61	3			
	Sn			21		0.8	100					
CNZ	iPn	18	47	11.5		-1.0	100	0.69	0			
	Sn			22.5		0.5	100					
NGZ	iPn	18	47	11.7		-1.0	100	0.71	5			
	Sn			22.5		0.0	100					
MNG	iPn	18	47	12.3	D	-0.7	100	0.73	183		3.2	3.4
	Sn			24		1.0	100					
TRZ	e	18	47	32				1.04	72			3.2
	S*			34		0.9	100					
TNZ	Pn	18	47	18.5		-0.1	100	1.14	308		3.1	3.1
	e			35								
WEL	S*			37		1.2	99					
	Sn	18	47	41.5		-0.3	100	1.51	203	2.7		

KRP	P*	18 47 32	-2.3	1.96	360	3.4	3.5
	S*	59	-1.2				
WTZ	Sn	18 47 58	-0.6	2.21	31		3.2
COB	ePn	18 47 36	-0.5	2.46	240	3.3	2.9
	e(P*)	49	6.4				
	Sn	48 09	4.6				
AMPLITUDES:	MNG	5.5	10	TRZ	0.8	TNZ	0.3 0.5
	WEL	0.1		KRP	0.3	0.3	WTZ
	COB	0.2	0.3				0.2

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JUN 27 08^h16^m49^s.1 40°.07S 175°.85E 33 km M = 4.0
 ± 0.3 0.02 0.03 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iPn	08 17	01.5		U	0.4	100	0.61	207			
	e(S*)		10			-0.4						
GSZ	Pn	08 17	04.6			0.8	100	0.82	346			
	S*		16.5			0.4	100					
CNZ	iPn	08 17	05.6			0.6	100	0.90	345			
	S*		19			0.5	100					
TRZ	Pn	08 17	04.8		D	-0.3	100	0.91	56		3.5	3.7
	S*		19.5			0.8	100					
TNZ	Pn	08 17	13.0		U	0.7	100	1.44	307		3.8	4.1
	S*		33.5			-0.8	100					
WNZ								1.45	8		4.2	4.3
WEL	ePn	08 17	12			-0.7	100	1.47	214	3.9		
	Sn		30.5			0.2	100					
KRP	Pn	08 17	22			-0.1	100	2.16	353		4.3	
	P*		24.5			-2.7						
	eSn		47			0.1						
WTZ	Pn	08 17	22			-1.6	98	2.27	23		3.7	4.0
	P*		34			5.0						
	Sn		49.5			0.0	100					
COB	Pn	08 17	26.8		D	-1.1	99	2.58	246		4.5	3.9
	P*		38.5			4.1						
	Sn		58.5			1.4	99					
KKZ	e	08 18	01					2.86	214			
	(Sn)		04.5			0.7						
CMZ	e(P*)	08 18	04			1.1		4.26	213		3.7	4.6
	Sn		35			-2.3						
OMZ								6.19	214			4.0
MSZ	Sn	08 19	50.5			-3.9		7.46	229			3.9
BRZ	Sn	08 20	14			-1.8		8.35	224			
AMPLITUDES:	TRZ	1.7	3.9	TNZ	0.9	2.5	WNZ	0.4	0.8			
	WEL	1.6		KRP	2.0		WTZ	1.1	1.9			
	COB	2.5	2.6	KKZ		1.3	CMZ	0.2	2.7			
	OMZ	0.3	MSZ	0.4	BRZ			0.1				

FELT: Ohakune (49), Palmerston North (62) MM IV, Waikawa Beach (65) MM III, Ohingaiti (58)

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JUN 28 18^h28^m35^s.2 37°.81S 176°.32E 242 km M = 4.6
 ± 1.8 0.09 0.15 11 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	18 29	07.0		U	-0.5	100	0.56	108		3.9	4.1
	S		30			-2.5	99					

KRP	iP	18 29 08.1	UW	0.4	100	0.63	259		3.5* 2.7*
	S	34		1.0	100				
TUA	iP	18 29 11.4	U	0.7	100	1.19	147		4.5 4.9
	S	39		0.6	100				
NGZ	P	18 29 13.1		0.3	100	1.48	202		
	e(S)	44		2.0					
TRZ	iP	18 29 16.2	U	0.9	100	1.78	167		4.7 4.9
	e	44							
	S	48.5		2.1	99				
MNG	iP	18 29 25.2	U	-1.0	100	2.88	193		4.8 4.9
	S	30 04		-2.0	99				
WEL	P	18 29 33.4	U	-1.8		3.67	199	4.6	
	S	30 20.5		-1.5					
COB	P	18 29 39		-3.8		4.29	219		3.7* 3.7*
	S	30 31		-4.2					
	e	32.5							
KKZ	P	18 29 50.0	D	-1.7		5.03	203		
	eS	30 50.5		-0.8					
CMZ	P	18 30 05.5		-3.5		6.42	205		3.6* 4.1*
	S	31 18		-4.5					
RHP	S	18 31 49		-6.4		7.87	215		
OMZ	S	18 32 05.5		-0.2		8.32	208		3.1*
MSZ						9.33	220		3.4*

AMPLITUDES:		WTZ	1.5	2.5	KRP	2.3	0.5	TUA	1.9	5.0
	TRZ	2.1	7.7	MNG	12	18	WEL	1.0		
	COB	0.7	2.6	KKZ	1.0	1.3	CMZ		0.5	2.3
	OMZ		0.2	MSZ		0.7				

JUN 29 15^h56^m28^s.9 39°.89S 175°.54E 33 km M = 3.8
 ± 0.4 0.02 0.04 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	iPn	15	56	40.3		-0.5	100	0.61	3			
	S*			50.5		0.4	100					
CNZ	iPn	15	56	41.7		-0.2	100	0.69	0			
	S*			52.5		0.3	100					
NGZ	iPn	15	56	41.8		-0.3		0.71	5			
MNG	iPn	15	56	42.3	U	-0.1	100	0.73	183		3.8	
	eS*			57.5		4.1						
TRZ	Pn	15	56	45		-1.7	99	1.04	72		3.4	3.9
	P*			48		-0.2						
	S*			57 03.5		1.0	100					
CAZ	Pn?	15	56	49.5		1.5		1.14	153			
	P*			52		2.2	99					
	(S*)			57 04		-1.3	100					
WEL	ePn	15	56	52.5		-0.6		1.51	203	3.8		
	(P*)			57 02.5		6.4						
	Sn			12		0.7	100					
TUA	Pn	15	56	53		-2.0	99	1.66	50		3.6	3.9
	(P*)			56		-2.4						
	Sn			57 12.5		-2.0						
	S*			18.5		-1.9						
	e			24.5								
KRP	Pn	15	56	59		-0.2	100	1.96	360		4.1	4.4
	(P*)			57 03		-0.7						
	S*			32		2.3						
WTZ	e(P*)	15	57	05		-2.9		2.21	31		3.5	3.9
	Sn			29.5		1.4	100					

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COB	Pn	15 57 06		0.1	100	2.46	240		4.1	3.9
	e(P*)	10		-2.0						
	P*	18		6.0						
	eSn	39		5.2						
	(S*)	45.5		1.3						
KKZ	e(P*)	15 57 17		-2.4		2.89	208			
CMZ	e(Sn)	15 58 16		-1.8		4.28	209			3.8
CIZ	Sn	15 59 27		0.2		7.15	127			
AMPLITUDES:	MNG	20		TRZ	1.0	4.0	WEL	1.0		
	TUA	0.5	1.1	KRP	1.5	2.1	WTZ		0.5	1.2
	COB	1.3	2.5	KKZ	0.2	0.4	CMZ			0.4
	CIZ	0.7								

FELT: Wanganui (57) MM IV

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JUN 30 06^h34^m11^s.9 39°.52S 177°.40E 33 km M = 4.3
 ± 0.6 0.04 0.07 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	iPn	06	34	21.3		-0.3	100	0.45	266			
TUA	iPn	06	34	25.8	D	0.3	100	0.74	345		4.1	
	Sn			36		0.4	100					
WNZ	Sn-Pn			16		-0.4		1.34	311		4.7	4.7
GSZ	Pn	06	34	35.5		0.6		1.42	279			
	e(S*)			57.5		0.8						
CNZ	iPn	06	34	36		0.4	100	1.48	282			
	e(S*)			58.5		0.5						
WTZ	iPn	06	34	36.6	U	-0.2	100	1.57	348			
	e(P*)			41		1.0						
MNG	ePn	06	34	39.9	U	-0.6	100	1.84	233		4.4	4.2
	(P*)			49		4.4						
	i			56.5								
	e(S*)			35 16		7.1						
WIZ	ePn	06	34	44.5		1.8		2.00	355			
	P*			49.5		2.2						
ECZ	Pn	06	34	45		1.8	97	2.03	27		4.0	4.2
	P*			53		5.1						
	S*			35 13.5		-1.2	99					
KRP	Pn	06	34	44.5		-0.4	100	2.16	317		4.4	4.5
	(P*)			51		1.0						
	e(S*)			35 19		0.5						
WEL	(P*)	06	35	07		8.2		2.67	228	3.9		
	Sn			22		-0.1	100					
	e(S*)			40		6.2						
COB	Pn	06	35	07.5		-1.2		3.90	245		4.6	4.2
	e			22.5								
	S*			36 14.5		4.1						
	e			27								
KKZ								4.04	223			
CMZ	Sn	06	36	25.5		-2.4		5.41	220			4.3
CIZ	Pn	06	35	45.5		3.7		6.33	136			
	Sn			36 53		3.1						
RHP	Sn	06	37	09		-0.2		7.13	228			
OMZ								7.34	219			4.0
MSZ								8.73	231			4.1
AMPLITUDES:	TUA	8.0		WNZ	1.8	2.9	MNG			13	11	
	ECZ	0.5	1.1	KRP	3.4	3.1	WEL	0.5				
	COB	1.4	2.4	KKZ	0.5	0.7	CMZ					0.8

		CIZ			0.4 0.7 OMZ		0.2 MSZ		0.4		
FELT: Patoka (52) MM IV											
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JUN 30		11 ^h 20 ^m 53 ^s .4			35°.32s		178°.61E		240 km		M = 5.5
		± 0.7			0.05		0.07		9		S.E. of RES. 0.7
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
ECZ	P	11	21	39.4	U	0.5	100	2.37	181		5.4 5.9
	e			22 05							
	e(S)			08.5		-5.7					
WIZ	P	11	21	40.0	D	0.0	100	2.48	207		
	eS			22 16		-0.2	100				
GBZ	iP	11	21	42.9	U	0.5	100	2.70	250		
	e			50							
WTZ	P	11	21	44.4	D	-0.8	100	2.96	206		
ONE	iP	11	21	51.0	w	-0.2	100	3.49	261	4.0*	
	eS			22 36		-0.2	100				
	e			23 00							
KRP	iP	11	21	53.7	U	1.4	96	3.58	223		4.2* 4.0*
	(S)			22 44		5.9					
TUA	P	11	21	52.2		-1.1	99	3.67	198		5.3 5.8
	e			22 00							
	eS			39.5		-0.3					
WNZ	(S-P)			50		1.6		3.86	211		5.5 5.5
TRZ	P	11	22	02.6	U	-0.2	100	4.45	198		5.4 5.6
	e			19							
	eS			57		0.2	100				
NGZ	P	11	22	04		0.3	100	4.54	211		
	e			23 14							
CRZ	iP	11	22	08.6	US	-0.3	100	4.96	279		4.5*
TNZ	P	11	22	13.5		2.5		5.12	220		4.1* 3.9*
	e			26							
MNG	P	11	22	17		-3.0		5.84	204		5.4 5.7
	e			34							
	e			51							
	S			23 24.5		-2.9					
CAZ	P	11	22	20		-0.5		5.89	198		
	S			23 29		0.6					
WEL	P	11	22	28		-2.6		6.68	206	5.4	
	e			50							
	S			23 43		-3.5					
COB	P	11	22	36.5		-3.0		7.39	217		4.1* 4.3*
	S			24 02		-0.7					
KKZ								8.06	207		
CIZ	P	11	23	09.5		4.3		9.40	158		
	S			24 52		3.5					
CMZ	eP	11	23	02.5		-3.5		9.46	207		4.1* 4.5*
	S			24 45.5		-4.4					
RHP	P	11	23	24		-1.0		10.95	214		
	S			25 21		-3.2					
OMZ								11.38	209		3.9* 3.9*
MSZ								12.42	218		3.9* 3.8*
BRZ								13.41	215		
AMPLITUDES:	ECZ	9.0	29	GBZ	16	ONE	1.7				
	KRP	6.0	4.0	TUA	3.6	11	WNZ	0.7	0.6		
	TRZ	3.2	12	CRZ	2.8		TNZ	0.9	0.8		
	MNG	13	35	WEL	2.0		COB	1.0	5.5		

KKZ 0.7 3.6 CMZ 1.1 4.0 OMZ 0.4 0.8
 MSZ 1.0 1.6 BRZ 0.3 0.3 0.4

FELT: Ormond (44) MM III

JUN 30 18^h22^m04^s.4 40°.06s 176°.54E 33 km M = 3.6
 ± 0.3 0.01 0.03 R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	iPn	18	22	15.4	U	-0.1	100	0.55	23		3.1	3.6
	S*			25		1.1	99					
CAZ	iPn	18	22	20.7	U	0.8	100	0.87	196			
	S*			34		0.9	100					
MNG	Pn	18	22	20.3		-1.1	99	0.98	235		3.6	3.4
	(P*)			23		0.3						
	eSn			33		-1.0	100					
GSZ	Pn	18	22	23		0.4	100	1.07	316			
	Sn			36.5		0.3	100					
NGZ	iPn	18	22	23.4		0.0	100	1.13	320			
	eSn			38		0.5	100					
TUA	eP*	18	22	27.5		-1.1		1.34	21		3.5	3.5
	Sn			42		-0.5	100					
WEL	eP*	18	22	40.5		3.7		1.82	227	3.3		
	Sn			54		-0.1	100					
	e			23 13								
TNZ	e(Pn)	18	22	37		3.3		1.88	297		3.5	3.5
	(P*)			38.5		0.7	100					
WTZ	Pn	18	22	35.5		-1.1	99	2.11	10		3.2	3.8
	eP*			46		4.4						
	Sn			23 00		-0.9	100					
KRP	Pn	18	22	38		-1.0	100	2.27	340		3.8	3.8
	P*			46		1.6						
	Sn			23 05		0.1	100					
COB	Pn	18	22	49		-0.9		3.08	249		3.8	3.3
	P*			23 01		2.9						
	eSn			25		0.7						
	e(S*)			39		0.6						
KKZ	Sn	18	23	27		-0.0		3.19	221			
CMZ	Sn	18	23	58		-2.3		4.57	218		4.0	
CIZ	Pn	18	23	37		1.1		6.44	129			
	Sn			24 44		-1.3						

AMPLITUDES: TRZ 1.9 7.0 MNG 7.5 6.5 TUA 0.6 0.6
 WEL 0.2 TNZ 0.3 0.4 WTZ 0.4 1.4
 KRP 0.6 0.5 COB 0.4 0.4 KKZ 0.5
 CMZ 0.5 CIZ 0.4 2.0

FELT: Makaretu (59) MM V

JUL 01 05^h23^m19^s.9 36°.64s 177°.42E 12 km M = 4.0
 ± 1.6 0.05 0.11 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	P*	05	23	36		-0.5	100	0.91	192			
	Pg			38		-0.3						
	S*			47		-1.7	100					
WTZ	Pn	05	23	43.5		-0.8	100	1.39	194		3.8	4.1
	i(Pg)			49.8		1.8						
	Sn			24 03		0.4	100					

GBZ	Pn	05 23	45.8	-1.7	100	1.62	284		
	(P*)		49	0.2					
	Pg		52	-0.8					
KRP	(Sn)	24	04	-4.3					
	Pn	05 23	51	-1.4	100	1.98	229	4.6	4.8
	Pg		58	-1.9					
	Sn	24	15.5	-1.3	100				
AUC	S*		21	0.1					
	P*	05 23	58	0.5	100	2.14	263		
	Pg		24	01.5					
TUA	eS*		27	-1.6					
	eP*	05 24	01	1.4					
	Pg		06	2.8	99	2.18	186	3.8	3.9
ONE	(Sn)		18	2.1					
	Sg		35	-3.5					
	ePn	05 24	01.5	1.7	100				
	Pg		12.5	0.3	100	2.63	288	4.2	
NGZ	S*		42	-0.4					
	Sg		50	1.8	100				
	eP*	05 24	12	1.7		2.92	209		
TRZ	Pg		17	1.2					
	Pg	05 24	20.5	-1.8					
TNZ	S*		49	1.0		2.95	189	3.5	3.7
	(P*)	05 24	17	-0.9					
MNG	(P*)	05 24	28	-3.8		3.50	223	4.4	
	Sn		25	-5.7		4.26	200	3.7	3.6
CRZ	Pn	05 24	27	0.5					
	COB			0.8		4.45	298	4.3	
						5.76	218	4.0	3.5

AMPLITUDES:	WTZ	2.3	3.0	GBZ	10	6.8	KRP	3.0	3.3
	TUA	0.3	0.3	ONE	0.5		TRZ	0.1	0.2
	TNZ	0.1		MNG	0.3	0.3	CRZ	0.2	
	COB	0.1	0.1						

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JUL 01 06^h51^m36^s.8 39°.93S 175°.66E 33 km M = 3.7

± 0.2 0.02 0.03 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	iPn	06 51	48.5			-0.7	100	0.65	355			
	(Sn)		58.5			0.1	100					
	S*		52	00.5		1.4						
MNG	iPn	06 51	50.1		U	0.2	100	0.70	191		3.9	3.9
	S*		52	01.5		1.0	100					
CNZ	iPn	06 51	49.3			-1.0		0.73	353			
	Sn		52	00		-0.3						
NGZ	iPn	06 51	49.6			-0.9	100	0.75	357			
	Sn		52	01		0.4	100					
TRZ	Pn	06 51	53.5			-0.1	100	0.97	68		3.3	3.4
	P*		56			1.1						
	S*		52	09		0.8	100					
TNZ	e		12									
	iPn	06 51	56.5		U	-0.7	100	1.23	306		3.6	3.7
	Sn		52	14		1.6	99					
WEL	Pn	06 52	00.2			-0.8	100	1.52	206	3.5		
	Sn		19			-0.2	100					
TUA	(S*)		25.5			1.2						
	ePn	06 52	01			-1.3	99	1.61	46		3.4	3.8
	P*		04			-1.5						
	S*		27.5			0.6	100					

KRP	Pn	06 52 06	-1.6	2.01	357	4.1	3.9
	P*	13	0.8				
	Sn	32	1.1				
WTZ	Pn	06 52 08	-2.3	2.20	29	3.3	3.8
	Sn	35	-0.6				
	(S*)	42.5	-2.1				
COB	Pn	06 52 13.5	-1.1	2.52	242	3.8	3.5
	P*	25	4.1				
	Sn	48.5	5.3				
KKZ	e	53 04					
	eP*	06 52 34	6.5	2.90	210		
	e(Sn)	51	-1.4				
AMPLITUDES:		MNG	29 35	TRZ	0.9 1.7	TNZ	0.8 1.6
		WEL	0.6	TUA	0.3 0.9	KRP	1.3 0.7
		WTZ	0.4 1.1	COB	0.6 1.0	KKZ	0.1 0.2

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JUL 01 15^h44^m28^s.2 41°.49S 174°.10E 12 km M = 3.7
 ± 0.2 0.01 0.01 R S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TCW	iP*	15 44	34.7		U	0.1	100	0.31	26			
MRW	P*	15 44	38.1			-0.2		0.53	61			
WEL	P*	15 44	38.5			-0.1	100	0.55	68	3.1		
	Sg		47.5			0.6	100					
	e		56									
BHW	P*	15 44	38.8			-0.6	100	0.58	82			
WDW	P*	15 44	41.2			-0.3		0.71	72			
CAW	P*	15 44	43.4			-0.0		0.83	63			
MOW	P*	15 44	44.1			-0.1	100	0.87	86			
KIW	iP*	15 44	44.5		U	0.1	100	0.88	45			
KKZ	P*	15 44	45.0			-1.0	98	0.97	198			
	(S*)		45 00			0.9						
	Sg		02			0.8	99					
COB	iP*	15 44	48.3		D	0.1	100	1.11	291		3.9	3.2
	Pg		49.3			-1.3						
	S*		45 03			0.1	100					
	Sg		05			-0.5						
MNG	P*	15 44	53.0		U	0.4		1.37	51		3.9	3.9
	eS*		45 12			1.3						
CAZ	ePg	15 45	04			1.2		1.71	71			
	e		11									
	Sg		35			9.1						
KAI	ePg	15 45	13			-0.8		2.26	242	3.6		
	eS*		39			1.6						
	e(Sg)		53			8.8						
TNZ	P*	15 45	11			2.2		2.31	5		3.5	3.7
	Sg		47			0.8						
CMZ	Pg	15 45	14			-1.8		2.36	207		3.5	3.5
	eS*		41			0.6						
NGZ	P*	15 45	15			1.6		2.58	27			
	Sg		54			-1.2						
TRZ	ePg	15 45	22			-3.6		2.84	48		3.3	3.4
	KRP	15 45	33			-0.1		3.73	18		4.3	4.4
	Sg		46 30.5			-3.5						
WTZ								4.16	33		3.8	
THP	ePn	15 45	32.5			-0.4		4.34	224			
	P*		42			-1.4						

		Pg	54			-1.9					
AMPLITUDES:		WEL	1.7			KKZ	3.7	4.8	COB	4.0	2.5
		MNG	7.0	10		KAI	0.3		TNZ	0.2	0.4
		CMZ	0.4	0.6		TRZ	0.1	0.2	KRP	0.6	0.6
		WTZ	0.2								
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JUL 01	20 ^h 47 ^m 17 ^s .6	37°.92S	176°.17E	194 km	M = 3.8						
	± 2.2	0.08	0.20	17	S.E. of RES. 1.6						
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
KRP	P	20	47	45.0	U	0.8	100	0.50	269		2.9*
WTZ	iP	20	47	44.4	D	-0.5	100	0.65	96		3.5 3.7
	S		48	04.5		-1.4	100				
TUA	P	20	47	48.4	D	0.2	100	1.18	139		3.6 3.6
	e(S)		48	14		2.1					
NGZ	P	20	47	51		1.4	100	1.33	199		
TRZ	P	20	47	53.3		0.2	100	1.71	163		4.0 3.5
	S		48	22.5		2.1	99				
	e			32							
ECZ	eP	20	47	54.5		-0.4		1.90	84		3.7 3.7
	S		48	24		0.3					
MNG	iP	20	48	03.4	U	-1.1	100	2.75	191		4.2 4.1
	eS			39		-1.6	100				
WEL	S	20	48	54.5		-3.1		3.54	197	3.8	
COB	S	20	49	09		-2.0		4.13	219		2.8*
KKZ	S	20	49	26		-2.0		4.89	202		
AMPLITUDES:		KRP	0.9			WTZ	0.9	1.5	TUA	0.4	0.4
		TRZ	0.6 0.4			ECZ	0.3	0.3	MNG	3.0	3.6
		WEL	0.1			COB		0.3	KKZ		0.3

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JUL 02	02 ^h 36 ^m 29 ^s .0	46°.51S	165°.57E	12 km	M = 4.3						
	± 0.7	0.05	0.07	R	S.E. of RES. 0.7						
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
BRZ	iPn	02	36	54.7	D	-0.9	99	1.55	63		
	Pg		37	01		0.6					
	Sn			15.5		-0.1	100				
MSZ	Pn	02	37	09		0.8	99	2.47	43		4.6 4.5
	P*			14.5		2.2					
	eS*			44.5		-0.1	100				
ROX	Pn	02	37	12.2	U	-0.6	100	2.81	70		3.8 4.9
	P*			19.5		1.4					
	Sn			46		0.1	100				
THP	Pn	02	37	23.0	D	-0.8	99	3.62	59		
	Sn			38 05		-0.2	100				
RHP	Pn	02	37	29.5		0.5	100	4.00	54		
OMZ	Pn	02	37	30		0.8	99	4.00	71		4.2 4.1
	P*			42.5		4.0					
	eSn			38 15		0.4	100				
	S*			29		-1.7					
KAI	eP*	02	38	10		1.4		5.77	48	4.2	
	e(Sn)			39 00		3.0					
	e			10							
CMZ	e(P*)	02	38	17		7.9		5.80	62		4.4 4.5
	e(S*)			39 26		1.5					
	e(Sg)			36		-8.3					
COB	ePn	02	38	19		2.2		7.50	46		4.5 3.9

WIZ	Pn	01 49 21.8	-0.1	100	2.91	4		
	eP*	28	-1.4					
	e	37						
	(Sn)	50.5	-4.0					
ECZ	Pn	01 49 24.9	1.6		3.01	25		5.6
	Sn	50 02.5	5.5					
	e	45.5						
KKZ	Pn	01 49 23	-2.0		3.14	230		
	e	42.5						
	e	54						
	(Sn)	50 04	4.0					
COB	Pn	01 49 26	-0.6		3.26	257		
	P*	37.5	2.2					
AUC	ePn	01 49 34	-2.0		3.95	334		
	(P*)	51	3.9					
GBZ	Pn	01 49 41.5	-0.2		4.36	344		
	e	50 02						
	e	51 10						
CMZ	Pn	01 49 43	-0.4		4.49	224		4.9 5.2
	Sn	50 32	-0.4					
KAI					4.64	241	5.1	
ONE	ePn	01 49 52	0.6		5.08	336	5.7	
	e	50 18						
	e(Sn)	49	2.5					
	e	51 22						
CIZ	Pn	01 50 07.5	3.8		5.98	128		
	Sn	51 15	6.9					
OMZ					6.41	222		4.9 4.7
THP	Pn	01 50 11	-1.6		6.63	229		
	Sn	51 24	0.1					
	e	52 11						
CRZ	e	01 50 30.5			6.88	329		5.1 5.1
	eSn	51 34	4.1					
ROX					7.51	225		4.8 4.7
MSZ	Pn	01 50 34	4.2		7.88	235		5.1 5.1
	P*	47	-7.1					
	Sn	51 54	-0.0					
BRZ					8.70	229		
AMPLITUDES:	WEL	15		WNZ	8.0	KRP	26	28
	ECZ		11	KKZ	2.5	9.0	GBZ	6.2
	CMZ	3.0	10	KAI	2.5		ONE	2.5
	OMZ	1.0	1.5	CRZ	0.5	0.4	ROX	0.7
	MSZ	3.0	5.5	BRZ	0.6	0.4	0.8	1.2

FELT: About Hastings from Mahia Beach (54) to Tinui (67) and Palmerston North (62). Maximum intensity MM V at Porangahau (64)

JUL 03 01^h52^m30^s.9 40°.50S 176°.91E 33 km M = 3.4
 ± 1.6 0.06 0.10 R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	e(S*)	01	52	58		4.6		0.66	232			
TRZ	e(S*)	01	53	01.5		-0.2	100	0.95	356			3.7
	e			15.5								
MNG	e(Pn)	01	52	49		-0.4	100	1.10	264			3.4 3.7
	e(S*)			53 06		0.0	100					
NGZ	e(P*)	01	52	59		-1.5		1.66	322			

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CNZ	Pn	01 52 58	0.7	99	1.67	321						
	e(S*)	53 24	0.9									
TUA					1.70	6						3.2
TNZ					2.36	303						3.4
WTZ	e(Sn)	01 53 37	-0.3		2.52	1						3.3
KKZ	(Sn)	01 53 52	0.9		3.09	231						
COB	e(S*)	01 54 10.5	1.1		3.23	258						3.0
AMPLITUDES:	TRZ		3.5	MNG	4.0	10	TUA					0.2
	TNZ		0.2	WTZ		0.3	KKZ					0.2
	COB		0.2									

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JUL 03 01^h55^m06^s.8 40°.44S 176°.91E 33 km M = 3.5
 ± 1.0 0.04 0.06 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	e(P*)	01 55 25				4.7		0.69	228			
	S*	38				7.7						
TRZ	ePn	01 55 21.5				-1.0	100	0.89	355		3.4	3.8
	S*	36				0.2	100					
MNG	Pn	01 55 25				-0.4	100	1.11	260		3.6	3.7
	S*	41.5				-0.6	100					
NGZ	Pn	01 55 34				1.8	99	1.61	321			
	S*	55				-1.9	99					
CNZ	Pn	01 55 34				1.5		1.63	319			
	eS*	56				-1.5						
TUA	Pn	01 55 33.2				0.5	100	1.65	7		3.8	3.3
	e(S*)	56 00				2.0						
WEL	eP*	01 55 44.5				5.2		1.84	242	3.2		
	eS*	56 06				2.4						
TNZ	P*	01 55 46.5				-1.1	100	2.32	302		3.5	3.5
	S*	56 20				1.9	99					
WTZ	e(Pn)	01 55 46				2.2		2.46	1		2.8	3.4
	Sn	56 12				0.3	100					
KRP	eP*	01 55 57				2.4		2.74	337		3.8	
COB	ePn	01 55 55				0.5		3.24	257		3.7	3.2
	e(P*)	56 05				1.8						
	eS*	46				0.4	100					

AMPLITUDES:	TRZ		1.4	4.3	MNG	6.0	9.5	TUA		0.8	0.3
	WEL	0.2			TNZ	0.2	0.3	WTZ		0.1	0.4
	KRP		0.4		COB	0.3	0.3				

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JUL 03 02^h00^m23^s.8 40°.44S 176°.88E 33 km M = 3.1
 ± 1.2 0.04 0.08 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	e(S*)	02 00 52				5.1		0.68	227			
	e	59.5										
TRZ	e(Pn)	02 00 39				-0.5	100	0.89	357		3.1	3.3
	S*	54.5				1.7	99					
MNG	Pn	02 00 42				-0.1	100	1.08	260		3.1	3.2
	Sn	56				0.2	100					
NGZ	Pn	02 00 49.8				0.7		1.59	322			
	(Sn)	01 09				0.9						
CNZ	Pn	02 00 49.8				0.4	100	1.61	320			
	S*	01 13				-1.1	100					
TUA	e	02 01 22						1.65	7			2.9
WEL	S*	02 01 21				0.9	100	1.82	242	2.9		

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TNZ	P*	02 01 02			-2.3	98	2.30	302		3.2	3.1
	S*		35.5			0.9	100				
COB	e(P*)	02 01 22			2.1		3.22	257		3.3	2.7
	e(S*)	02 02			0.0						
AMPLITUDES:		TRZ	0.7	1.4	MNG	1.9	3.2	TUA		0.1	
		WEL	0.1		TNZ	0.1	0.1	COB		0.1	0.1
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JUL 03	02 ^h 02 ^m 36 ^s .5	40°.43S		176°.95E	33 km	M = 4.9					
	± 0.4	0.03		0.05	R	S.E. of RES.	0.5				
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
CAZ	iP*	02 02	51.4		U	0.8	99	0.73	229		
TRZ	iPn	02 02	52.2		D	0.1	100	0.88	354		
MNG	iPn	02 02	55.1		U	-0.4	100	1.13	260		
GSZ	iPn	02 03	01.8		D	0.5	100	1.56	317		
NGZ	Pn	02 03	02.3			0.2		1.62	320		
TUA	Pn	02 03	02.3		D	0.0	100	1.63	6	4.6	5.1
	Sn		22			0.4	100				
	e		35								
CNZ	Pn	02 03	02.3			-0.1		1.64	318		
WEL	iPn	02 03	05.0		UW	-0.5	100	1.86	242	5.1	
	P*		10.5			0.9					
	Sn		27			-0.2	100				
	S*		35			0.7					
WNZ								1.92	340	5.5	5.4
GNZ	Pn	02 03	07			0.1	100	1.97	25	4.4	4.8
	e(P*)		13.5			2.1					
	e(Sn)		26			-3.7					
TNZ	ePn	02 03	12.5		D	0.5	100	2.34	301		
	eP*		16			-1.6					
WTZ	Pn	02 03	13.1		D	-0.3	100	2.45	1	4.7	
	e		24.5								
KRP	Pn	02 03	16.5		U	-0.8	99	2.74	336	5.3	5.3
	P*		24			-0.4					
	e(S*)		04 00			-0.2					
WIZ	Pn	02 03	20.5			0.8		2.91	4		
	eP*		25			-2.3					
	e		35								
ECZ	Pn	02 03	21.5			0.4		3.01	25	4.5	4.8
	Sn		51			-3.6					
	e		04 26								
KKZ	Pn	02 03	22			-1.1		3.16	230		
COB	Pn	02 03	23.5			-1.2		3.28	257	5.2	
	eP*		34			0.5					
AUC	e(P*)	02 03	49			3.9		3.95	334		
GBZ	Pn	02 03	39.5			-0.1		4.36	344		
	e		04 00								
CMZ	Pn	02 03	42			0.5		4.50	224	4.8	5.1
	P*		54			-0.5					
	Sn		04 30			-0.7					
KAI								4.66	241	5.0	
ONE	e	02 04	20					5.08	335	5.1	
	e(S*)		05 11			0.8					
CIZ	Pn	02 04	05.8		D	4.3		5.97	128		
	Sn		05 13			7.1					
OMZ								6.43	222	4.9	4.5
THP	Pn	02 04	09			-1.8		6.65	229		
	eP*		23			-8.0					

CRZ	Sn	05 23	0.8					
ROX	e(Pn)	02 04 19	4.9	6.88	329	4.7		
MSZ	ePn	02 04 28.5	0.6	7.53	225	4.6	4.6	
	e	42		7.90	235	4.9	5.0	
	Sn	05 51	-1.4					
BRZ				8.72	229			
AMPLITUDES:	TUA	5.3 16	WEL 14	WNZ	5.3 6.6			
	GNZ	5.5 23	WTZ	9.0	KRP	12 11		
	ECZ	0.7 2.0	KKZ	4.5 5.8	COB	9.0		
	GBZ	2.1	CMZ	2.1 7.5	KAI	1.7		
	ONE	0.7	OMZ	1.1 0.9	CRZ	0.2		
	ROX	0.4 1.0	MSZ	1.9 4.0	BRZ	0.6 0.3 0.6		

FELT: Hastings (52), Napier (60), Wanganui (57), Wellington (68)

JUL 03 02^h11^m09^s.9 40°.48s 176°.90E 33 km M = 3.5
 ± 0.7 0.03 0.04 R S.E. of RES. 0.7 80/ 370

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	P*	02	11	26.5		3.5		0.67	230			
	S*			40.5		7.9						
	e			42.5								
TRZ	ePn	02	11	26		-0.1	100	0.93	356		3.5	3.8
	Sn			39		0.8	99					
	e(S*)			42		1.9						
MNG	Pn	02	11	28.6	U	0.3	100	1.09	262		3.7	3.6
	e(P*)			33		3.0						
	S*			44.5		-0.3	100					
NGZ	Pn	02	11	36.5		0.8	100	1.63	322			
	S*			12 00.5		-0.3	100					
CNZ	Pn	02	11	37		1.0		1.65	320			
	e(S*)			12 00		-1.3						
TUA	e(P*)	02	11	41		1.1		1.68	7		2.9	3.7
	Sn			55.5		-0.8	100					
	e(S*)			12 12		9.7						
WEL	P*	02	11	47		4.9		1.81	243	3.3		
	e			53								
	e(Sn)			12 00.5		1.2						
	S*			15		9.0						
WNZ								1.94	341		3.8	4.2
GNZ	e(Sn)	02	12	07		2.4		2.03	26			3.4
	e			35.5								
TNZ	P*	02	11	50		-0.9	99	2.33	303		3.5	3.5
	S*			12 22		0.4	100					
WTZ	e(P*)	02	11	59.5		5.8		2.49	2		3.3	3.4
	e(Sn)			12 14.5		-1.3						
KRP	eP*	02	11	59		0.7		2.76	337		3.7	
	e(S*)			12 38		3.5						
COB	eP*	02	12	07		0.9		3.22	258		3.6	3.3
	e			19.5								
	S*			50		1.8						
CMZ	e	02	12	37				4.44	224		3.4	
AMPLITUDES:	TRZ			1.6 4.2	MNG	7.0 8.0	TUA	0.1 0.6				
	WEL	0.2			WNZ	0.1 0.4	GNZ	0.8				
	TNZ	0.2 0.3			WTZ	0.3 0.4	KRP	0.3				
	COB	0.2 0.4			CMZ	0.1						

FELT: Hastings (60) MM IV

JUL 03 02^h20^m37^s.5 40°.45S 176°.85E 33 km 80/ 371
 ± 0.6 0.03 0.04 R S.E. of RES. M = 3.6
 RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	P*	02	20	52.5		2.0		0.66	226			
	S*		21	05.5		5.5						
TRZ	Pn	02	20	53		-0.2	100	0.89	358		3.3	4.0
	Sn		21	05.5		0.6	100					
MNG	e(S*)			07.5		0.8						
	iPn	02	20	55.2	U	-0.3	100	1.06	260		3.8	4.1
NGZ	Sn		21	09		0.1	100					
	e(S*)			12		0.5						
CNZ	Pn	02	21	03.8		1.1		1.58	322			
	(Sn)			24		2.5						
TUA	Pn	02	21	03.8		0.9	100	1.60	321			
	e(S*)			29.5		2.0						
WEL	Pn	02	21	02.7		-0.9		1.66	8		3.8	3.5
	Sn			23		-0.2	100					
GNZ	e			41								
	ePn	02	21	05.5		0.0	100	1.79	241	3.3		
WZ	(P*)			14.5		5.1						
	Sn			27		0.5	100					
WZ	S*			36		2.9						
	e	02	21	27				1.91	342		3.8	
GNZ	(Sn)			34		2.1		2.02	27			3.3
	e			22 08								
TNZ	P*	02	21	16		-1.7	94	2.29	303		3.5	3.7
	S*			48		0.2	100					
WTZ	e(Sn)	02	21	42		-0.6		2.47	2			3.5
	eP*	02	21	24		-1.1		2.72	337		3.8	
KRP	e			31.5								
	e			22 13.5								
KKZ	e(Sn)	02	21	56.5		-1.2		3.09	229			
	ePn	02	21	24.5		-0.1		3.19	257		3.7	3.2
COB	P*			35		1.8						
	S*			22 15.5		0.5						

AMPLITUDES:

TRZ	1.0	7.0	MNG	10	23	TUA	0.7	0.4
WEL	0.2		WZ	0.1		GNZ		0.6
TNZ	0.2	0.4	WTZ		0.5	KRP	0.4	
KKZ	0.3		COB	0.3	0.3			

JUL 03 03^h16^m52^s.8 40°.55S 176°.99E 33 km 80/ 372
 ± 0.7 0.03 0.05 R S.E. of RES. M = 3.4
 RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	(Pn)	03	17	11		5.5		0.67	239			
	(P*)			14.5		8.5						
	(S*)			25.5		9.8						
TRZ	e(Pn)	03	17	10		-0.1	100	1.01	353		3.3	3.6
	Sn			22.5		-0.5	100					
MNG	Pn	03	17	12.5		0.5	100	1.15	266		3.3	3.4
	Sn			27		0.7	100					
NGZ	Pn	03	17	20.6		0.6		1.73	322			
	(Sn)			41		0.7	100					

TUA	Pn	04 44 46.0	D	0.1	100	1.66	5	4.1	4.4
	P*	51		1.7					
	Sn	45 05.6	U	0.1	100				
	e	22							
CNZ	Pn	04 44 46.8		0.7	99	1.66	318		
	S*	45 11.5		-0.2	100				
WEL	Pn	04 44 48		-0.8	99	1.87	243	4.1	
	P*	53.5		0.5					
	Sn	45 11		0.4	100				
	S*	18.5		0.8					
WNZ	P*	04 44 53.5		-0.7		1.94	339	4.8	4.7
GNZ	Pn	04 44 50.7		0.3	100	1.98	24	4.2	4.2
	e	45 53							
TNZ	ePn	04 44 56.5		0.8	99	2.37	302	4.3	4.4
	e(P*)	45 00		-1.4					
	S*	32.5		-0.0	100				
WTZ	Pn	04 44 56.5	D	-0.5	100	2.47	0	4.0	4.3
	P*	45 07		3.8					
	Sn	25		-0.1	100				
KRP	ePn	04 45 00		-1.1		2.76	336	4.5	
	(P*)	07		-1.2					
	S*	47		2.6					
ECZ	e(Sn)	04 45 42		3.7		3.02	24	4.0	
KKZ	ePn	04 45 05		-1.4		3.15	230		
	e	28							
COB	ePn	04 45 08		-0.1		3.28	258	4.3	4.1
	P*	19		2.0					
	S*	46 00		0.1					
CMZ	Sn	04 46 16		2.2		4.50	224	3.9	
KAI	e	04 45 51				4.66	242	4.0	
	Sn	46 17.5		-0.4					
	e	53							
CIZ	ePn	04 45 50		5.6		5.94	128		
	Sn	46 56		7.5					
RHP	Pn	04 45 49		-0.0		6.28	232		
	eP*	46 13		5.0					
	Sn	57		0.4					
THP	eP*	04 46 20		5.8		6.64	230		
MSZ						7.90	235	4.4	
BRZ	Sn	04 47 57		1.8		8.71	229		
AMPLITUDES:		TRZ	10 31	TUA	1.4 3.3	WEL	1.3		
		WNZ	1.1 1.1	GNZ	3.3 5.0	TNZ	1.1 2.2		
		WTZ	1.7 2.9	KRP	2.1	ECZ	0.3		
		KKZ	0.4 0.3	COB	1.2 2.2	CMZ	0.5		
		KAI	0.2	CIZ	0.4 0.7	MSZ	1.0		
		BRZ	0.1 0.1						

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JUL 03 04^h49^m12^s.4 40°.44S 176°.94E 33 km M = 3.6

± 1.0 0.04 0.06 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	(Pn)	04 49	28.4			2.6		0.71	229			
	(S*)		44			7.5						
TRZ	Pn	04 49	27			-1.1	100	0.89	354	3.6	4.1	
	(Sn)		38			-1.7						
	S*		41.5			0.1	100					
MNG	Pn	04 49	29.9			-1.4	100	1.13	260	3.6	3.9	
	Sn		46			0.6	100					

GSZ	Pn	04 49 36.5	-0.7	1.56	318			
	e(S*)	50 03	1.9					
NGZ	Pn	04 49 38	-0.0	1.62	320			
	e(S*)	50 05	2.1					
CNZ	iPn	04 49 38.8	0.5	100	1.64	319		
	e(S*)	50 03	-0.4					
TUA	P*	04 49 45	3.3	1.64	6	3.2	3.5	
	Sn	57	-0.7	100				
WEL	P*	04 49 45.5	0.1	1.85	242	3.4		
	e	54						
	Sn	50 04	1.1	100				
	e	18						
WNZ				1.92	340	4.1		
GNZ	e	04 49 55		1.98	25	3.6	3.4	
	Sn	50 08	2.0	99				
	e	31						
TNZ	P*	04 49 52	-1.5	99	2.33	302	3.7	3.8
	S*	50 25	0.8	100				
WTZ	(P*)	04 49 58.5	3.0	2.45	1	3.4	3.4	
	Sn	50 17	-0.3	100				
KRP	eP*	04 49 59	-1.4	2.74	336	3.9		
KKZ	e	04 50 18		3.15	230			
COB	e(P*)	04 50 11	1.7	3.26	257	3.7	3.4	
	e(S*)	54	2.2					
AMPLITUDES:	TRZ	2.2	10	MNG	6.0	14	TUA	0.2 0.4
	WEL	0.3		WNZ	0.2		GNZ	0.9 0.9
	TNZ	0.3	0.5	WTZ	0.4	0.4	KRP	0.5
	KKZ	0.1		COB	0.3	0.5		

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JUL 03 09^h26^m42^s.1 38°.90s 175°.97E 117 km M = 4.2
 ± 0.7 0.03 0.04 6 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	iP	09 26	57.8		D	-0.9	100	0.29	21			
NGZ	iP	09 26	58.5			-0.7	100	0.40	224			
	S	27	12.5			0.0	100					
CNZ	iP	09 26	58.8			-0.7		0.45	227			
GSZ	eP	09 27	00			0.3		0.49	218			
	S	13				-0.1	100					
TUA	iP	09 27	03.3		D	0.0	100	0.93	85	4.4	4.3	
	S	22				2.5	99					
TRZ	P	09 27	04.5			1.2	100	0.93	135	4.0	4.5	
	e	08.5										
	S	21				1.5	100					
KRP	P	09 27	03.8			-0.4	100	1.03	341	2.9*	3.1*	
	S	18.5				-2.6	99					
WTZ	iP	09 27	05.8		D	-0.4	100	1.21	42	3.8	4.3	
	(S)	23				-1.6	100					
TNZ	P	09 27	07.8		U	0.8	100	1.28	256	3.2*	3.4*	
	S	28				2.0	99					
	e	34										
GNZ	iP	09 27	11.6		U	0.4	100	1.62	82	4.3	4.2	
	e	16										
	S	31.5				-1.6	100					
	e	43										
MNG	iP	09 27	12.9		U	0.0	100	1.76	192	4.3	4.6	
	(S)	42				5.9						
CAZ	P	09 27	17.0		U	1.0		2.02	175			

ECZ	S		42.5		1.1						
	P	09 27	21		0.5	100	2.36	60		3.8	4.4
	S		49		-0.3	100					
WEL	e		28 04								
	P	09 27	22		-1.2	100	2.56	201		4.4	
	e		28								
GBZ	S		52.5		-1.8	100					
	e		28 02								
	P	09 27	25.3	U	0.1	100	2.70	352			
COB	S		28 00.5		2.8	98					
	eP	09 27	31.5		-1.9		3.31	228		3.9*	3.9*
KKZ	S		28 14.5		2.1						
	eP	09 27	40.5		-1.1		3.92	205			
	e		48								
KAI	(S)		28 21		-6.2						
	e		46.5								
	eS	09 28	53		-0.7		5.02	222		3.5*	
CMZ	S	09 28	55		-6.0		5.32	207		2.8*	4.0*
THP	eP	09 28	18		-8.8		7.25	217			
	e		38.5								
	e		29 33.5								
CIZ	(S)		40.5		-7.6						
	S	09 29	49		-6.4		7.55	134			
ROX							8.23	215			2.7*
MSZ	eS	09 30	09.5		-4.9		8.34	224		2.7*	2.9*
AMPLITUDES:		WNZ		1.1	0.6	TUA	6.2	4.2	TRZ	2.2	14
		KRP		1.0	1.9	WTZ	2.5	7.5	TNZ	0.4	0.8
		GNZ		5.0	6.5	MNG	11	25	ECZ	0.3	1.2
		WEL	1.3			GBZ	0.6	0.5	COB	1.5	5.3
		KKZ		0.1	0.7	KAI	0.3		CMZ	0.1	2.4
		ROX		0.1		MSZ	0.1	0.3			

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JUL 03 11^h17^m16^s.0 40°.45S 177°.11E 33 km M = 3.5
 ± 1.1 0.05 0.08 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	(Pn)	11	17	32.5		1.9		0.81	236			
	(Sn)			45		3.6						
	(S*)			48		5.3						
TRZ	Pn	11	17	33.3		1.1	100	0.93	346		3.7	3.8
	S*			48.5		2.4	99					
MNG	Pn	11	17	36.2	U	-0.4	100	1.25	262		3.9	3.8
	Sn			52.5		0.5	100					
TUA	e(P*)	11	17	54		8.6		1.65	1		3.2	3.2
	(Sn)			18 00		-1.5	100					
	e(S*)			17		9.7						
NGZ	Pn	11	17	44.6		1.7		1.72	317			
	(P*)			49		2.4						
	e(S*)			18 09		-0.3						
CNZ	Pn	11	17	45		1.8	99	1.74	316			
	(P*)			49		2.1						
	e(S*)			18 08		-2.0						
GNZ	e			11.5								
	e	11	18	06				1.94	22			3.2
	S*			15		-1.1	100					
WEL	e			45								
	Pn	11	17	46		-0.3	100	1.96	244	3.3		
	P*			53.5		2.8						

	Sn	18 09.5	0.4	100				
	(S*)	18	1.3					
WNZ					1.98	337		3.8
TNZ	eP*	11 17 57	-2.1	99	2.46	300		3.6 3.8
	e	18 01						
	S*	30	-1.3	100				
WTZ	(Pn)	11 17 54.5	1.3		2.47	358		3.1 3.1
	e(Sn)	18 24	2.7					
KRP	eP*	11 18 05.5	0.4	100	2.81	334		3.8 3.8
	e	12						
	e	55						
KKZ	Sn	11 18 40	0.3		3.24	231		
COB	Pn	11 18 05	-0.7		3.38	258		3.8 3.3
	P*	15.5	0.6					
	Sn	45	1.7					
	S*	19 00	0.9					
AMPLITUDES:	TRZ	2.4 4.1	MNG	9.0 10	TUA	0.2 0.2		
	GNZ	0.6	WEL	0.2	WNZ	0.1		
	TNZ	0.2 0.5	WTZ	0.2 0.2	KRP	0.4 0.3		
	KKZ	0.2	COB	0.3 0.4				

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JUL 03 17^h38^m24^s.8 40°.47S 176°.91E 33 km M = 3.7
 ± 0.3 0.01 0.02 R S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	Pn	17 38	40			2.4		0.67	230			
	(P*)		45			6.9						
	S*		56			8.3						
TRZ	Pn	17 38	41.1		D	0.1	100	0.93	356		3.6	3.9
	Sn		53			0.1						
	S*		55			0.2	100					
MNG	Pn	17 38	43.1		U	-0.2	100	1.10	262		3.7	3.8
	Sn		57			-0.2	100					
GSZ	Pn	17 38	51			1.2		1.57	319			
	Sn		39 11			2.5						
NGZ	Pn	17 38	51.6			1.0		1.63	322			
	Sn		39 12.5			2.5						
CNZ	Pn	17 38	51.7			0.8	99	1.65	320			
	(S*)		39 14.5			-1.7						
TUA	iPn	17 38	51.1		D	-0.1	100	1.67	6		4.1	3.7
	Sn		39 11.5			0.5	100					
	e		27									
WEL	(P*)	17 39	03			5.9		1.82	243	3.4		
	Sn		15			0.6	100					
	S*		24			2.8						
WNZ								1.94	341		4.1	4.1
GNZ	Pn	17 38	56			0.1	100	2.02	26		3.5	3.3
	e		39 11									
	Sn		22			2.7	0					
	e		52									
TNZ	eP*	17 39	05			-0.9	98	2.34	303		3.5	3.7
	S*		37			0.4	100					
WTZ	Pn	17 39	02			-0.3	100	2.49	1		3.4	3.6
	e		15									
	Sn		30			-0.6	100					
	e(S*)		46			4.8						
KRP	ePn	17 39	06.5			0.4		2.76	337		3.8	4.0
	P*		12			-1.1						

	e(S*)		55		5.6								
KKZ	Sn	17	39	45.5		0.1	100	3.10	230				
COB	ePn	17	39	12.5		0.0		3.23	258		3.7	3.4	
	P*			23		1.8							
	S*		40	03		-0.4	100						
CIZ	e(Sn)	17	40	59		4.9		5.97	128				
AMPLITUDES:	TRZ		2.0	6.0	MNG			8.0	13	TUA		1.5	0.6
	WEL	0.3			WNZ			0.2	0.3	GNZ		0.7	0.7
	TNZ		0.2	0.4	WTZ			0.4	0.6	KRP		0.4	0.5
	KKZ			0.2	COB			0.3	0.5				

FELT: Mt Vernon (60) MM IV

JUL 03 20^h36^m55^s.5 40°.56S 176°.95E 33 km M = 3.4
 ± 0.8 0.03 0.05 R S.E. of RES. 1.0 80/ 379

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	e(Sn)	20	37	24		7.0		0.65	237			
TRZ	ePn	20	37	12		-0.8	100	1.01	355		3.2	3.6
	eS*			27		-1.0	100					
MNG	iPn	20	37	13.4	U	-0.9	100	1.12	266		3.5	3.5
	Sn			27.5		-0.8	100					
GSZ	Pn	20	37	22		0.4		1.66	320			
	(Sn)			41.5		0.3						
NGZ	Pn	20	37	22.2		-0.3	100	1.72	323			
	Sn			43.5		0.8	100					
CNZ	Pn	20	37	23.0		0.3	100	1.74	321			
	e(Sn)			43		-0.1						
	(S*)			46		-3.4						
WEL	eSn	20	37	46		1.1	99	1.81	246	3.1		
	e(S*)			57		5.5						
GNZ	Sn	20	37	53		1.4	99	2.09	24			3.1
TNZ	e(P*)	20	37	35		-2.8		2.40	304		3.2	3.4
	e(S*)			38 10		0.6	100					
KRP	eP*	20	37	45		-0.3	100	2.85	337		3.7	
KKZ	eSn	20	38	16		0.6		3.08	232			
COB	P*	20	37	56		4.0		3.24	259		3.6	3.2
	S*			38 36		1.6						

AMPLITUDES: TRZ 0.7 2.5 MNG 4.2 6.2 WEL 0.1
 GNZ 0.4 TNZ 0.1 0.2 KRP 0.3
 KKZ 0.1 COB 0.2 0.3

JUL 03 20^h38^m12^s.8 40°.45S 176°.91E 33 km M = 3.7
 ± 1.0 0.04 0.05 R S.E. of RES. 1.4 80/ 380

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	(Pn)	20	38	29.5		3.7		0.69	229			
	(S*)			44.5		8.3						
TRZ	Pn	20	38	28		-0.6	100	0.90	356		3.7	4.0
	(P*)			32.5		2.9						
	S*			41		-1.0	100					
MNG	Pn	20	38	31		-0.4	100	1.11	261		3.7	4.0
	(P*)			36.5		3.4						
	S*			47.5		-0.6	100					
GSZ	P*	20	38	40		-0.6		1.55	318			
	S*			39 03		1.7						
NGZ	Pn	20	38	39.5		1.2	100	1.61	321			

CNZ	S*	39 04	1.0	100				
	Pn	20 38 39.8	1.2		1.63	319		
TUA	e(S*)	39 04	0.4					
	Pn	20 38 38.5	-0.3	100	1.65	7	3.5	3.6
WEL	Sn	58	-0.4	100				
	e	39 19.5						
GNZ	P*	20 38 49.5	4.2		1.83	242	3.6	
	(S*)	39 14	4.5					
TNZ	Sn	20 39 09	2.3	99	2.00	26		3.4
	e	31						
WTZ	eP*	20 38 51.5	-2.1		2.32	302	4.0	3.9
	e	53.5						
KRP	S*	39 26	1.8	99				
	e	31.5						
KKZ	P*	20 39 01	5.0		2.47	1	3.5	3.5
	e	39						
COB	P*	20 38 59.4	-1.3	100	2.74	337	4.0	4.1
	e	39 07						
CMZ	S*	35	-1.6	100				
	S*	20 39 44	-4.1		3.12	230		
AMPLITUDES:	e	20 39 27			3.24	257	3.7	3.8
	S*	53	1.4					
TRZ	e(Sn)	20 40 05	-1.1		4.47	224		3.2
	TRZ	2.5 6.5	MNG	8.3	20	TUA	0.4	0.6
WEL	0.5	GNZ	0.8	TNZ	0.6	0.7		
WTZ	0.5 0.5	KRP	0.7	0.6	KKZ	0.2		
COB	0.3 1.2	CMZ	0.1					

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JUL 03 21^h28^m48^s.7 40°.49s 176°.86E 33 km M = 4.5
 ± 0.4 0.02 0.03 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
CAZ	(P*)	21	29	03.1	D	1.8		0.64	229			
	i(Sn)			09.1		-0.8						
TRZ	iPn	21	29	05.4	D	0.3	100	0.94	358			
MNG	iPn	21	29	06.2	U	-0.5	100	1.06	263		4.3	
GSZ	Pn	21	29	15		1.5		1.56	321			
	Sn			33		0.9						
NGZ	Pn	21	29	14.8		0.4		1.62	323			
	(S*)			39		-0.2						
CNZ	Pn	21	29	15.0		0.4	100	1.64	321			
	S*			38		-1.8	99					
TUA	Pn	21	29	15.6	D	0.2	100	1.69	8	4.2	4.5	
	e(P*)			24		5.0						
	eSn			36		0.6	100					
	e			52								
WEL	Pn	21	29	16		-0.5	100	1.77	243	4.4		
	P*			22		1.7						
	e			31								
	Sn			38		0.7	100					
	S*			45		1.2						
WNZ	P*	21	29	22.5		-0.7		1.94	342		5.2	5.0
GNZ	Pn	21	29	20		-0.3	100	2.05	26		4.5	4.5
	e			37.5								
	S*			53.5		1.4						
TNZ	Pn	21	29	24.5		0.7	100	2.31	303		4.6	4.8
	P*			26.5		-2.9						
	S*			30 01		1.2	100					

WTZ	Pn	21 29 26	-0.4	100	2.50	2	4.3	4.4
	(P*)	37	4.3					
	Sn	54	-0.9					
KRP	ePn	21 29 31.5	1.5	99	2.76	338	4.9	5.0
	P*	36.5	-0.5					
	S*	30 13	-0.2	100				
WIZ	(P*)	21 29 47	6.4		2.97	5		
KKZ	e	21 29 53.5			3.07	230		
	e	30 33						
ECZ	Pn	21 29 35	0.6	100	3.09	26	4.3	4.4
	eSn	30 07	-1.8	99				
COB	Pn	21 29 35	-0.8	100	3.19	258	4.8	4.6
	P*	46.5	2.2					
	i	51.5						
	Sn	30 12	0.6	100				
	S*	24.5	-1.6	99				
GBZ	ePn	21 29 53	0.6		4.40	345		
	(P*)	30 12	7.0					
CMZ					4.41	224	3.7	4.1
KAI					4.57	242	4.6	
ONE	e	21 31 43			5.10	337	4.6	
CIZ	(Pn)	21 30 19.5	5.5		5.98	128		
	(Sn)	31 23	4.4					
THP	ePn	21 30 27	5.3		6.56	230		
	P*	49	7.4					
	S*	32 15	8.3					
MSZ					7.81	235	4.5	4.2
BRZ					8.63	229		
AMPLITUDES:	MNG	32	TUA	1.8	4.5	WEL	3.2	
	WNZ	2.8 2.2	GNZ	5.5	9.5	TNZ	2.5	5.7
	WTZ	3.0 3.5	KRP	5.1	4.5	KKZ	0.8	1.2
	ECZ	0.4 0.7	COB	3.7	8.6	GBZ	0.9	
	CMZ	0.2 0.8	KAI	0.8		ONE	0.2	
	CIZ	1.0 1.7	MSZ	0.7	0.7	BRZ	0.1	0.1

FELT: Mt Vernon (60) MM IV, Waipawa (60)

JUL 04 01^h31^m56^s.1 40°.41S 176°.89E 33 km M = 3.8
 ± 0.9 0.04 0.07 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	ePn	01	32	10		0.7	100	0.70	226			
	e			27								
	e			36								
TRZ	iPn	01	32	10.0	U	-1.4	100	0.86	357		3.7	3.9
	eSn			22		-0.8	100					
MNG	Pn	01	32	12.1		-2.5	99	1.09	259		3.9	4.0
	eSn			26		-2.3	99					
CNZ	iPn	01	32	21.1	D	-0.3	100	1.59	319			
	eSn			43		2.6	99					
TUA	Pn	01	32	20.8		-1.0	100	1.62	7		3.6	3.9
	e			28								
	eS*			47.5		0.9	100					
WEL	e	01	32	35				1.83	241	3.6		
	eS*			55		2.2	99					
GNZ	ePn	01	32	25		-1.6	100	1.97	27		3.9	3.8
	eP*			33		1.9	100					
	eSn			51		1.4	100					

TRZ	iPn	15 29 44.0	D	-0.4	100	0.94	352	4.5
MNG	iPn	15 29 46.4		-1.1	100	1.16	263	
TUA	Pn	15 29 54.3		-0.2	100	1.67	4	4.0 4.5
	e(P*)	30 02		5.1				
	e	30.5						
CNZ	ePn	15 29 54.9	U	0.1	100	1.70	318	
	eSn	30 16		0.4	100			
WEL	eP*	15 29 58		-2.3	98	1.87	244	4.6
	e	30 09						
	eS*	26		1.1	100			
WNZ	eP*	15 30 02		0.0	100	1.97	339	5.0 4.9
	e	39						
GNZ	Pn	15 29 59.7		0.7	100	2.00	24	4.5 4.5
	e	30 10						
	eS*	30		1.3	100			
	e	42						
TNZ	ePn	15 30 05.5		1.2	100	2.39	302	4.9 4.8
	eS*	41		0.4	100			
WTZ	Pn	15 30 04.3		-1.4	100	2.49	360	4.1 4.3
	e(P*)	16		5.2				
	e	56.5						
KRP	ePn	15 30 08.5		-1.3	100	2.79	336	4.7 4.8
	e	14						
	eS*	52		-0.5	100			
WIZ	e(P*)	15 30 24		5.3		2.95	3	
	e	38						
ECZ	ePn	15 30 14		0.9		3.03	24	4.4 4.5
	e	31 09						
COB	ePn	15 30 16		-0.6		3.29	258	4.8 4.7
	e(P*)	27.9		3.4				
	eS*	31 07		-0.5				
CMZ	eP*	15 30 42		-2.9		4.49	225	4.0 4.5
	eSn	31 21		-1.8				
ONE	e	15 31 02				5.14	335	4.7
	eS*	32 04		1.3				
AMPLITUDES:		CAZ	41	TRZ	14	TUA	1.3	4.6
	CNZ	38 56	WEL	4.1		WNZ	1.6	1.8
	GNZ	6.6 9.3	TNZ		4.1 4.8	WTZ	2.3	3.1
	KRP	3.2 3.0	ECZ		0.5 0.8	COB	3.0	9.0
	CMZ	0.4 1.8	ONE	0.3				

FELT: Taradale (64), Opapa (60).

JUL 04 17^h03^m51^s.3 39°.51S 174°.43E 227 km M = 5.1
 ± 0.8 0.04 0.07 7 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	iP	17	04	21.7	D	0.6	100	0.32	353			4.1*
	eS			44.5		0.4	100					
CNZ	iP	17	04	24.6	D	1.1	100	0.92	71			
	e			46								
	eS			51		2.5	99					
MNG	iP	17	04	27.6	U	1.0	100	1.38	144			
WEL	P	17	04	31.0	USE	0.7	100	1.80	172	5.7		
	eS			05 00		-0.3	100					
KRP	P	17	04	30.0		-0.3	100	1.80	29		3.9*	3.5*
	e			05 11								
TRZ	P	17	04	32.0		1.3	100	1.84	92		4.6	5.0

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	eSn	32		2.7	99							
	e	35	05									
TNZ	eP*	17	34	12		-2.1	99	2.15	302		3.9	3.8
	eS*			44.5		2.0	99					
WTZ	ePn	17	34	10		-1.9	99	2.36	5		3.3	3.8
	eSn			38.5		-0.3	100					
	e			58.5								
KRP	eP*	17	34	21		-0.5	100	2.58	338		4.0	3.9
	e			35	05							
COB	ePn	17	34	22		-0.5	100	3.14	255		4.0	3.5
	eP*			31.5		0.6	100					
	eS*	35	11			-0.9	100					
AMPLITUDES:	CAZ	4.0	21	TRZ		2.2	8.3	MNG		16	21	
	CNZ	5.0	20	TUA		1.0	1.6	WEL	0.5			
	GNZ		2.1	TNZ		0.5	0.6	WTZ		0.4	1.0	
	KRP	0.7	0.5	COB		0.6	0.7					

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JUL 04 18^h49^m14^s.7 40°.36S 176°.92E 33 km M = 3.7

± 0.8 0.04 0.06 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	iPn	18	49	29.7	U	1.1	100	0.76	224			
	e			35								
	eS*			41		1.0	100					
TRZ	ePn	18	49	27.5		-1.8	100	0.81	354		3.5	3.8
	eP*			31		0.9	100					
	eS*			44.5		3.1	99					
	e			57								
MNG	iPn	18	49	32.7	U	-0.9	100	1.13	256		3.9	3.9
	eSn			46		-1.8	100					
TUA	(P*)	18	49	46.7		4.0		1.56	7		3.7	3.5
	eS*			50	02	-1.5	100					
	e			18.5								
CNZ	Pn	18	49	41.2		1.5	100	1.57	317			
	eP*			46		3.2	99					
	eS*			50	03	-0.7	100					
WEL	eP*	18	49	48		-0.1	100	1.88	240	3.6		
	eS*			50	13	0.1	100					
GNZ	P*	18	49	47.0		-1.7	100	1.92	27			3.4
	eS*			50	13	-0.9	100					
TNZ	eP*	18	49	52.5		-2.4	99	2.29	300		3.7	3.7
	eS*			50	24	-1.0	100					
WTZ	eP*	18	49	57		0.5	100	2.38	1		3.3	3.5
	e(Sn)			50	21	3.3						
	e			49								
KRP	eP*	18	50	03		1.7	100	2.66	336		3.9	3.9
	e			46								
COB	ePn	18	50	02		-0.8		3.27	256		4.0	3.6
	eP*			12		0.4						
	eS*			56		1.7						
AMPLITUDES:	CAZ	5.0	12	TRZ		1.8	5.7	MNG		12	14	
	TUA	0.6	0.5	CNZ		5.0	12	WEL	0.4			
	GNZ		0.8	TNZ		0.3	0.4	WTZ		0.4	0.5	
	KRP	0.6	0.5	COB		0.5	0.7					

INSTRUMENTAL DATA

TNZ	ePn	05 16 52	1.2 100	2.30 300	4.0 4.0
	eS*	17 26	-0.7 100		
	e	46			
WTZ	ePn	05 16 50	-1.9 99	2.38 1	3.6 3.8
	eP*	58	0.3 100		
	eSn	17 19	0.0 100		
KRP	Pn	05 16 58.1	2.2 99	2.67 335	4.2 4.0
	eP*	17 04.5	1.8 99		
	eS*	38	0.2 100		
COB	ePn	05 17 04	-0.2	3.28 256	4.1 3.9
	eP*	13	-0.0		
	eS*	52	-3.9		

AMPLITUDES:

CAZ	13 23	TRZ	5.7 12	NGZ	12 23
TUA	0.8 0.9	WEL	0.6	GNZ	1.5 1.5
TNZ	0.6 0.8	WTZ	0.8 1.1	KRP	1.2 0.6
COB	0.7 1.5				

FELT: Taradale (64)

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JUL 05 15^h54^m44^s.1 44°.33s 167°.89E 12 km M = 3.8
 ± 1.0 0.04 0.07 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	iP*!	15	54	50.1		-1.0	100	0.34	177			
	eS*			55		-1.0	100					
THP	Pn	15	55	08.6		-0.8	100	1.45	99			
	eSn			27		-1.3	100					
BRZ	iPn	15	55	09.4	U	-0.3	100	1.47	190			
	eSn			30		1.2	100					
ROX	iPn	15	55	10.3	U	-0.2	100	1.53	139		4.4	3.9
	eSn			31		0.7	100					
RHP	iPn	15	55	09.3	D	-2.1	99	1.59	83			
	P*			10.9		-1.6	100					
	Sn			31		-0.8	100					
OMZ	Sn-Pn			30		2.4	99	2.29	110		3.9	3.6
DNZ	ePn	15	55	23		0.5	100	2.41	130			
	eSn			50		-1.4	100					
OBZ	ePn	15	55	26		1.2	100	2.58	177		3.4	3.4
	eSn			58		2.5	99					
KAI	eP*	15	55	41		2.2	99	3.13	56	4.2		
	eS*			56 21		1.2	100					
CMZ	e	15	55	51				3.51	79			3.6
	eS*			56 33		2.0	99					
COB	e(Pn)	15	55	52		-3.4		4.82	49		4.2	3.8
	e(Sn)			56 54		4.6						

AMPLITUDES:

THP	19 45	BRZ	4.1 5.7 7.0	ROX	6.4 4.4
RHP	25 46	OMZ	0.8 0.9	DNZ	0.4 0.8
OBZ	0.3 0.8	KAI	0.6	CMZ	0.4
COB	0.4 0.5				

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JUL 05 17^h56^m20^s.8 40°.40s 176°.74E 11 km M = 4.0
 ± 0.8 0.03 0.05 5 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	iP*	17	56	35.8	U	2.8	98	0.64	217			
	e			50								
TRZ	iP*	17	56	36.6	D	0.1	100	0.85	4			4.0

INSTRUMENTAL DATA

WEL	eS	19 41 46	-3.9	4.78	205	4.3		
COB	eS	19 42 02	-4.4	5.51	220		2.9*	
AMPLITUDES:	WTZ	4.6 4.5	ECZ	1.1 0.8	GNZ	9.8 9.5		
	KRP	1.3 0.5	TUA	0.5 0.9	AUC	0.3		
	TRZ	0.6 2.2	MNG	1.5 3.2	CAZ	0.8		
	WEL	0.3	COB	0.3				

JUL 05 22^h31^m07^s.1 49°.89S 164°.67E 33 km M = 4.4
 ± 1.7 0.12 0.28 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	ePn	22	32	01		-1.1	100	3.77	39		4.4	4.2
	eSn			43		-0.7	100					
BRZ	ePn	22	32	12		-0.7	100	4.55	26			
	eSn			33 02		-0.4	100					
ROX	ePn	22	32	24		-0.6	100	5.43	37		4.5	4.4
	eSn			33 23		-0.4	100					
	e			39								
DNZ	ePn	22	32	30		2.5	98	5.63	47			
	e?			33 13								
MSZ	ePn	22	32	28		-0.1	100	5.68	24		4.6	4.3
	eSn			33 31		1.5	99					
THP	ePn	22	32	39		0.7		6.43	36			
	eSn			33 42		-5.5						
RHP	ePn	22	32	46		1.5		6.88	35			
	e			54								
	e(Sn)			34 04		5.6						
COB	ePn	22	33	31		-2.5		10.47	36		4.8	
AMPLITUDES:	OBZ			1.3 2.3	BRZ	0.5	0.4 0.8	ROX			0.6	1.2
	DNZ			0.4 0.6	MSZ		2.0 1.6	THP			1.4	1.5
	RHP			1.1 1.3	COB		0.3					

JUL 05 22^h51^m06^s.1 31°.98S 177°.74W 224 km M = 5.1
 ± 1.9 0.10 0.13 90 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	22	52	42.5		2.0	99	6.47	207		5.1	5.3
	e			54 07								
	e			32								
WTZ	eP	22	52	50		-2.2	99	7.40	214		5.1	5.1
	eS			54 14		-1.3	100					
	e			44								
ONE	e(P)	22	52	59		4.3		7.59	238	3.7*		
TUA	eP?	22	53	00		-0.0	100	7.99	210		5.1	5.2
	eS			54 30		0.7	100					
KRP	eP	22	53	02		0.4	100	8.11	221		3.6*	
CRZ	eP	22	53	05		-0.3	100	8.40	250		4.0*	
	eS?			54 39		0.4	100					
TRZ	eS	22	54	47		0.1	100	8.76	209			4.9
MNG	eP	22	53	27		-1.6		10.21	210		4.5	5.2
	eS			55 16		-4.3						
	e			56 14								
WEL	eS	22	55	36		-4.0		11.07	211	5.0		
CIZ	e	22	54	04				12.00	176			
	eS			56 03		1.6						
AMPLITUDES:	ECZ			0.9 1.5	WTZ	1.6	1.7	ONE	0.4			

TUA 0.6 0.8 KRP 0.7 CRZ 0.6
 TRZ 0.7 MNG 0.6 3.6 WEL 0.3
 CIZ 0.8

JUL 06 12^h13^m39^s.6 37°.40S 177°.44E 149 km M = 4.5
 ± 0.7 0.03 0.04 6 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	iP	12	14	01.1	U	-1.0	100	0.68	211					
	e(S)			14		-5.3								
ECZ	eP	12	14	03	D	-0.8	100	0.93	109		4.5	4.3		
	S			23.9		1.5	99							
GNZ	iP	12	14	07.7	D	0.2	100	1.32	160		4.5	4.5		
	e(S)			24		-5.0								
TUA	eP	12	14	08		-0.6	100	1.42	189		4.2	4.5		
	e			25										
	eS			30		-0.8	100							
KRP	P	12	14	10.8	UW	0.3	100	1.60	250		3.9*	3.2*		
	eS			34		-0.2	100							
	e			39										
GBZ	iP	12	14	13.0	D	-1.6	99	1.97	306					
	e			20										
AUC	P	12	14	17.3		-0.1	100	2.20	283					
	eS			47		0.7	100							
TRZ	iP	12	14	17.8	D	0.3	100	2.20	193		4.2	4.7		
	eS			46		-0.5	100							
CNZ	P	12	14	20.0		0.8	100	2.34	219					
	e(S)			53		3.6								
ONE	eP	12	14	27		-0.1	100	2.96	302	3.4*				
TNZ	eP	12	14	29		1.4	99	3.00	233		3.4*	3.3*		
	e?			15 30										
MNG	P	12	14	36.7		1.8		3.56	205		4.4	4.7		
	eS			15 18		0.7								
WEL	eS	12	15	33.5		-3.6		4.40	207	4.8				
COB	P	12	14	53.8		-2.6		5.19	223		4.0*	3.5*		
	eS			15 52		-3.9								
AMPLITUDES:	ECZ			5.2	3.6	GNZ		9.0	13	TUA		1.6	3.3	
	KRP			6.0	1.6	GBZ		7.2		AUC		2.0	0.4	
	TRZ			0.8	6.0	CNZ		2.3	2.6	ONE		0.5		
	TNZ			0.3	0.3	MNG		3.6	9.0	WEL		1.3		
	COB			1.2	1.5									

JUL 06 13^h56^m37^s.2 35°.04S 179°.06E 247 km M = 4.8
 ± 1.3 0.08 0.12 18 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	13	57	28		1.5	100	2.68	189		4.3	4.6		
	eS			58 05		0.3	100							
GBZ	iP	13	57	30.0	U	-1.5	99	3.15	247					
WTZ	iP	13	57	34.6	U	0.5	100	3.38	209		5.1	4.9		
	e			58 06.5										
	eS			18		-0.5	100							
GNZ	P	13	57	38.3		0.5	100	3.70	193		4.8	5.1		
	e			58 15										
	eS			23		-1.8	99							
ONE	eP	13	57	39.5		-0.8	100	3.91	258	3.5*				
KRP	P	13	57	43.2	D	1.3	100	4.05	224		3.5*	2.9*		

TUA	eS	58 34		1.7	99			
	e?	13 57 50				4.07	202	4.3 4.9
	e	58 28						
	eS	33		0.4	100			
TRZ	eP	13 57 50		-1.6	99	4.85	201	4.5 4.9
	eS	58 49		-0.6	100			
CNZ	eP	13 57 54.5		0.9	100	5.01	213	
	e	58 53						
MNG	eP	13 58 11		2.0		6.25	206	4.9 5.0
	e	59 16						
	eS	21.5		0.6				
WEL	eS	13 59 36		-4.1		7.10	207	4.9
COB	eP	13 58 27		-2.1		7.84	218	3.6* 3.6*
	eS	59 54		-2.9				

AMPLITUDES:	ECZ	0.6	1.3	GBZ	1.6	WTZ	6.2	4.7
	GNZ	2.8	10	ONE	0.5	KRP	1.2	0.3
	TUA	0.3	1.2	TRZ	0.3	1.8	CNZ	0.3
	MNG	3.7	5.7	WEL	0.6		COB	0.3
								1.0

JUL 07 08^h13^m44^s.8 39°.88S 175°.67E 12 km M = 3.7
 ± 0.3 0.02 0.03 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CNZ	iP*	08 13	58.7		D	1.0	100	0.69	352			
	eS*	14	09			1.9	100					
MNG	iP*	08 14	00.0		D	1.3	100	0.75	191		3.5	3.9
	eS*	10				1.1	100					
TRZ	P*	08 14	03.0			0.9	100	0.94	70		3.2	3.9
	Pg		04.2			0.2	100					
	eSg		19			2.2	99					
CAZ	Pg	08 14	08.7			1.5	100	1.11	158			
	eS*		21			1.5	100					
TNZ	Pn	08 14	06.3			-0.6	100	1.21	304		3.7	4.0
	P*		07.3			0.6	100					
	eSn		23			-0.4	100					
WEL	ePn	08 14	10			-1.6	100	1.57	206	3.5		
	eSn		29			-2.6	99					
TUA	ePn	08 14	10			-1.7	100	1.57	47		3.6	3.6
	eSg		37			-0.8	100					
KRP	ePn	08 14	16			-1.0	100	1.96	357		3.9	4.1
	eSn		43			1.8	100					
	eSg		52			1.2	100					
WTZ	ePn	08 14	18			-1.7	100	2.16	29		3.3	3.8
	eSn		45			-0.9	100					
	e		15	10								
GNZ	ePn	08 14	18.5			-1.9	100	2.20	57		3.6	3.7
	eSn		45			-2.1	99					
COB	ePn	08 14	24.5			-0.5	100	2.55	241		4.3	3.9
	ePg		35			-1.2	100					
	eSn		57			1.7	100					

AMPLITUDES:	CNZ	27	37	MNG	10	30	TRZ	0.8	4.7
	CAZ	0.5	3.0	TNZ	1.2	3.0	WEL	0.5	
	TUA	0.5	0.6	KRP	0.9	1.3	WTZ		0.4
	GNZ	0.6	1.4	COB	1.7	2.5			1.1

											80/ 398		
JUL 07		10 ^h 25 ^m 42 ^s .2			46°.39s		165°.95E		12 km		M = 4.2		
		± 0.8			0.04		0.06		R		S.E. of RES. 0.8		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W S
BRZ	P*	10	26	03.8		-1.1	99	1.26	62				
	e(S*)			19		-2.7							
	eS*			22		0.3	100						
OBZ	Pn	10	26	09.2		-0.1	100	1.58	110		3.8	4.1	
	eSn			29		-0.6	100						
ROX	Pn	10	26	22.7		0.5	100	2.52	70		4.4	4.3	
	eP*			28		1.5	98						
	eSn			51.5		-0.7	100						
DNZ	ePn	10	26	32		0.3	100	3.22	82				
	eS*			27 21		0.6	100						
THP	Pn	10	26	33.0		-0.2	100	3.33	58				
	eSn			27 11		-0.6	100						
RHP	Pn	10	26	38.1		-0.3		3.71	53				
	eSn			27 19		-1.7							
CMZ	eSn	10	28	04		-0.1		5.51	62				4.1
COB	ePn	10	27	26		-0.3		7.23	45		4.4	4.0	
	eSn			28 42		-3.2							
AMPLITUDES:		BRZ	6.8	3.6	10	OBZ	2.3	10	ROX	2.3	4.8		
		DNZ	0.7	1.1	THP	5.0	7.8	RHP	5.8	12			
		CMZ		0.5	COB	0.3	0.4						

											80/ 399		
JUL 07		16 ^h 38 ^m 39 ^s .8			31°.98s		178°.11w		337 km		M = 5.2		
		± 1.7			0.15		0.26		57		S.E. of RES. 1.6		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W S
WIZ	eS	16	41	39		0.8	100	6.76	214				
WTZ	P	16	40	25.1		-0.1	100	7.22	212		5.1	5.2	
	eS			41 45		-3.1	97						
ONE	eP	16	40	26		-0.4	100	7.32	237	3.7*			
GNZ	eP	16	40	28		1.0	100	7.37	204		5.2	5.4	
	e			32									
	e			41 44									
	eS			51		-0.2	100						
TUA	e	16	40	54				7.84	208		4.8	5.5	
	eS			42 03		1.6	100						
KRP	eP	16	40	35		1.7	100	7.90	220		3.6*		
	eS			42 03		0.3	100						
TRZ	eP	16	40	40		-1.8	99	8.61	207		5.1	5.4	
	e			42 16									
	e(S)			21		3.0							
NGZ	eP	16	40	44		-0.4	100	8.82	214				
	e			42 17									
	eS			23		0.3	100						
TNZ	eP	16	40	53		1.1		9.44	218		3.9*	3.6*	
	eS			42 35		-1.2							
CAZ	eS	16	42	49		0.3		10.01	205				
MNG	eP	16	40	56		-3.3		10.05	209		5.1	5.4	
	e			42 36									
	eS			45		-4.7							
WEL	eS	16	43	00		-8.2		10.91	210	5.1			
AMPLITUDES:		WIZ			0.7	WTZ	1.6	2.2	ONE	0.4			
		GNZ	2.0	5.3	TUA	0.3	1.6	KRP	0.8				

	eS		27.5		-0.8	100						
TRZ	eS	01 22 33			1.0	100	2.94	65				4.0
AMPLITUDES:	COB		6.0	4.7	WEL	2.0			KKZ		0.8	6.8
	MNG		7.0	8.5	TNZ		0.8		CMZ		0.8	
	TRZ			0.7								

JUL 09 15^h39^m05^s.0 39°.22s 175°.10E 142 km M = 3.7
 ± 0.9 0.03 0.05 8 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CNZ	iP	15	39	25.9	D	1.0	100	0.35	86			
	eS			41		0.9	100					
TNZ	eP	15	39	27		1.1	100	0.56	273			2.8*
	e			38								
	e(S)			45		3.2						
KRP	P	15	39	32.9		0.4	100	1.34	15		3.2*	2.7*
	eS			53		-0.6	100					
TRZ	P	15	39	34.9		2.0	99	1.38	104		3.8	3.4
	e(S)			59		4.8						
MNG	eP	15	39	35.0		1.6	99	1.42	168		3.8	3.7
	e			49								
	eS			55		-0.1	100					
TUA	eP	15	39	36.5		0.6	100	1.65	76			3.5
	eS			58		-1.5	100					
CAZ	eS	15	40	05		0.7	100	1.89	153			
WTZ	eS	15	40	04		-1.2	100	1.93	51			3.4
WEL	eS	15	40	07		-1.3	100	2.08	187	3.6		
GNZ	P	15	39	45.0		0.6	100	2.35	77		4.5	4.0
	eS			40		-1.8	99					
COB	P	15	39	46.3		-1.3	100	2.60	223		3.6*	3.2*
	eS			40		-1.5	100					
AMPLITUDES:	CNZ			4.7	1.0	TNZ		0.3	KRP		1.6	0.5
	TRZ			0.6	0.6	MNG		4.3	4.2	TUA		0.3
	CAZ				0.3	WTZ		0.4	WEL	0.3		
	GNZ			4.1	2.0	COB		1.0	1.2			

JUL 10 12^h14^m01^s.5 38°.51s 179°.40W 12 km M = 4.1
 ± 2.1 0.10 0.14 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	ePn	12	14	30		-1.7	99	1.81	296		4.3	4.3
	eSn			55		0.6	100					
GNZ	eP*	12	14	38		0.8	100	2.02	265		3.9	4.1
	eSn			58.5		-0.9	100					
TUA	eP*	12	14	48		-1.0	100	2.72	263		4.0	4.0
	eSn			15		0.9	100					
WIZ	ePn	12	14	48		1.9	99	2.86	289			
	ePg			58.5		-0.9	100					
WTZ	Pn	12	14	46.7		0.3	100	2.89	279		4.2	4.3
	e			15								
TRZ	eP*	12	14	55.5		-0.4		3.12	249		3.9	3.9
	eS*			15		-3.7						
NGZ	ePn	12	15	04		3.1		3.95	259			
	eSn			46		0.2						
KRP	ePn	12	15	01.5		-0.5		4.03	277		4.0	
	e?			36								
MNG	ePn	12	15	13.5		5.3		4.48	240		3.9	3.8

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WEL	eSn	16 03	4.4	5.27 236 4.2
AMPLITUDES:	ECZ	1.3 1.6	GNZ	1.6 3.8 TUA 0.4 0.5
	WIZ	0.7	WTZ	1.8 2.2 TRZ 0.3 0.5
	NGZ	0.4 0.5	KRP	0.4 MNG 0.7 0.8
	WEL	0.2		

JUL 11 18^h07^m19^s.5 37°.20S 176°.78E 236 km M = 4.1
 ± 1.4 0.10 0.09 11 S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	iP	18	07	50.9	D	-1.2	100	0.80	168		4.1	3.8		
	eS		08	16		-1.4	100							
KRP	iP	18	07	54.7	D	0.0	100	1.23	233		3.0*			
	eS		08	24		2.0	99							
GBZ	iP	18	07	54.2	D	-2.0	99	1.43	313					
ECZ	eP	18	07	59		2.4	99	1.48	110		3.9	4.1		
	eS		08	27		1.7	100							
TUA	e	18	08	00.5				1.64	170		3.9	4.0		
	eS			27		-0.4	100							
GNZ	iP	18	07	57.9	U	-0.9	100	1.75	146		4.5	4.3		
	e		08	02.5										
	e			26.5										
CNZ	eS			28		-1.1	100							
	eP	18	08	03		-0.2	100	2.22	206					
TRZ	e			30										
	eP	18	08	04		-0.6	100	2.36	179		4.2	4.1		
TNZ	e			43										
	e			54.5										
MNG	eP	18	08	10.5		1.8	100	2.74	223		3.7*	3.1*		
	e			56										
MNG	P	18	08	15.7		-2.3		3.56	196		4.5	4.4		
	eS		09	03		-0.4								
COB	eP	18	08	33		-2.5		5.00	218		3.5*	3.3*		
	eS		09	33		-1.7								
AMPLITUDES:	WTZ	2.1	1.2	KRP	0.8	GBZ	3.1							
	ECZ	0.5	0.7	TUA	0.4	0.6	GNZ	3.7	4.1					
	CNZ	0.6	1.0	TRZ	0.5	1.0	TNZ	0.5	0.2					
	MNG	4.0	4.0	COB	0.4	0.9								

JUL 12 06^h19^m21^s.4 40°.58S 177°.14E 33 km M = 4.2
 ± 0.8 0.04 0.06 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
CAZ	iPn	06	19	37.9	D	2.5	98	0.76	244					
	e(S*)			50		3.1								
TRZ	iPn	06	19	39.1	U	-0.2	100	1.05	347		4.4	4.6		
	eSn			52		-0.6	100							
MNG	iPn	06	19	41.0	U	-1.2	100	1.26	268					
TUA	ePn	06	19	49		-0.1	100	1.76	0		3.8	4.2		
	eSn		20	10		0.2	100							
CNZ	e			37										
	iPn	06	19	50	U	-0.1	100	1.84	318					
WEL	eP*			55		0.9	100							
	eSn		20	12		0.4	100							
WEL	ePn	06	19	51		-0.3	100	1.93	248	4.4				
	eSn		20	13		-0.7	100							

GNZ	eS*	20		-1.1	100						
	Pn	06 19 54.7		1.8	99	2.05	20		3.6	4.1	
	eSn	20 14		-2.6	98						
WTZ	e	40									
	iPn	06 19 59.8	D	-0.5	100	2.59	357		3.5	4.1	
	e	20 14									
KRP	ePn	06 20 04		-0.9	100	2.92	334		4.5	4.6	
	P*	15.0		2.5	99						
	e(Sn)	42		4.3							
KKZ	eS*	51		0.1	100						
	e	06 20 26				3.18	233				
	eSn	44		0.3							
COB	ePn	06 20 11		-0.1		3.38	260		4.7	4.3	
	eP*	22		1.7							
	eS*	21 02		-2.4							
CMZ	eSn	06 21 15		-0.5		4.50	227			4.7	
MSZ	eSn	06 22 34		-4.1		7.94	236			4.1	
AMPLITUDES:		CAZ	11 30	TRZ	9.2 23	TUA			0.7	1.7	
		CNZ	38 45	WEL	2.5	GNZ			0.7	3.5	
		WTZ	0.5 1.6	KRP	2.0 1.8	KKZ				1.2	
		COB	2.5 3.5	CMZ		MSZ				0.5	

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JUL 13 01^h22^m25^s.6 49°.76S 165°.56E 235 km M = 4.8
 ± 0.7 0.02 0.16 13 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	iP	01 23	21.1		U	-0.2	100	3.33	32		4.8	4.9
	eS		24 05			0.5	100					
CBZ	iP	01 23	24.8			0.4	100	3.60	142			
	iS		24 09.7			-0.5	100					
BRZ	P	01 23	30.7			-1.0	99	4.20	19			
	eS		24 23			0.0	100					
ROX	P	01 23	43.1			1.8	95	4.99	32		4.9	4.8
	e(S)		24 47			6.7						
DNZ	S-P		1 00			-0.4	100	5.13	42			
MSZ	eP	01 23	45			-0.8	100	5.34	18		5.0	4.7
	e(S)		24 55			6.8						
OMZ	(S-P)		1 07			-1.3		5.93	40		4.5	4.5
RHP	eP	01 24	00			0.2	100	6.45	30			
CAN	eS		25 13			-0.4	100					
	eP	01 26	32.8			2.8		18.85	314			
AMPLITUDES:		OBZ	5.1 14	BRZ	2.5 2.0 2.5	ROX					2.0	3.3
		DNZ	2.0 2.2	MSZ	4.6 4.5	OMZ					0.5	1.1
		RHP	5.2 5.5									

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JUL 13 03^h06^m48^s.3 40°.89S 177°.21E 12 km M = 3.7
 ± 1.6 0.08 0.08 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iP*	03 07	12.4		U	0.0	100	1.34	281		4.0	3.9
	e		18.3									
TRZ	eS*		28.5			-1.7	100					
	eP*	03 07	13			0.1	100	1.37	347			
WEL	eSn	03 07	43			-0.1	100	1.89	257	3.4		
CNZ	Pn?	03 07	21.0			-1.7	100	2.12	322			
	P*		26.0			0.3	100					
	e(Sn)		43			-5.6						

INSTRUMENTAL DATA

GNZ	eSn	03 07 53	-0.7	100	2.33	16	3.5	3.5
	e(Sg)	08 14	7.1					
TNZ	ePn	03 07 34.5	3.0	97	2.76	307	3.8	3.8
	eS*	08 14	1.2	100				
WTZ	eP*	03 07 40	0.9	100	2.91	357	3.4	
	ePg	46	-1.1	100				
KRP	eP*	03 07 45	0.3		3.24	336	4.1	
COB	eP*	03 07 52	4.5		3.40	265	3.8	3.4
	eS*	08 35	3.2					
AMPLITUDES:		MNG	9.5	11	WEL	0.3	CNZ	6.7 7.0
		GNZ	0.5	0.8	TNZ	0.3 0.4	WTZ	0.3
		KRP	0.6		COB	0.3 0.5		

JUL 13 07^h40^m14^s.8 44°.92S 167°.64E 50 km M = 3.4
 ± 0.9 0.04 0.07 15 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
BRZ	iP	07	40	30.9	D	-0.2	100	0.86	185					
	e			36										
	eS			43		-0.3	100							
ROX	iP	07	40	37.8	D	0.6	100	1.31	116			3.8	3.5	
	eS			54.5		0.4	100							
THP	P	07	40	42.0	D	0.1	100	1.65	78					
RHP	P	07	40	45.7	D	-0.2	100	1.93	66					
OBZ	eP	07	40	46		-1.1	99	2.02	171			3.1	3.3	
	eS			41 12		0.8	100							
OMZ	S-P			26		-1.5	98	2.33	95			3.6	3.1	
AMPLITUDES:		BRZ	3.7	2.3	4.5	ROX	3.0	3.5	THP	12				
		RHP	7.0			OBZ	0.5	1.9	OMZ	0.8	0.5			

JUL 13 19^h39^m39^s.9 32°.60S 179°.84E 650 km M = 5.6
 ± 1.7 0.25 0.29 42 S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	19	41	19.5		1.9	99	5.19	191			5.4	5.8	
	e			42 25										
	eS			35.5		0.2	100							
WIZ	eP	19	41	19		0.0	100	5.38	203					
	e			42 20										
	eS			38		0.2	100							
ONE	eP	19	41	19.5		-0.6	100	5.53	234	4.0*				
	eS			42 41		1.0	100							
WTZ	eP	19	41	21.5		-1.1	100	5.86	203			5.9	5.8	
	e			24.6										
	e			42 19										
	eS			43		-1.5	100							
GNZ	eP	19	41	24.5		-1.0	100	6.22	193			5.7	5.8	
	e			27										
	e			42 41										
	eS			48		-1.8	100							
CRZ	eP	19	41	24.5		-1.4	100	6.25	251			3.8*		
KRP	eP	19	41	29.5		2.5	99	6.37	212			3.9*		
	e			32.5										
	e			43 03										
TUA	(P)	19	41	33.7		5.1		6.57	199			5.3	5.8	
	eS			42 57		1.8	100							
TRZ	eS	19	43	13		5.5		7.36	199					

	e		24.7					
	e		34.5					
	e		41.5					
KAI	eS		51	2.1	99			
	eP	09 34	16	1.9	99	3.08	238	4.4*
	e		33.5					
	eS		49	-1.0	100			
	e		59					
CMZ	P	09 34	12.4	-2.7		3.15	212	4.4* 4.6*
	e		27					
	eS		48	-3.8				
GNZ	eP	09 34	13	-4.2		3.30	47	4.4 4.5
	e		36					
	eS		51	-4.6				
WTZ	P	09 34	13.8	-4.1		3.35	29	4.7 4.6
	e		25					
	e		49					
ECZ	eP	09 34	36	5.0		4.28	42	4.4 4.4
	e		59.5					
	e		35 54.5					
MSZ	P	09 35	02.0	1.6		6.37	232	4.0* 4.3*
	e		11					
	e		36 04					
	eS		14.5	1.7				
CRZ	eP	09 35	05	-0.4		6.73	344	3.7* 3.8*
	e		12					
	eS		36 16	-5.7				

AMPLITUDES:	WEL	68	CAZ	16	47	KKZ	12	
	KRP	13	25	KAI	4.0	CMZ	7.0 15	
	GNZ	1.7	4.0	WTZ	3.0	3.0	ECZ	0.5 0.5
	MSZ	2.5	9.0	CRZ	0.4	0.5		

FELT: From Inglewood(47) to Collingwood (72) and Blenheim (77).
Maximum Intensity MM V at Eastbourne, Epuni and Seatoun
(68). See also Wellington Network solution.

JUL 15 16^h21^m19^s.4 37°.99S 176°.25E 209 km 80/ 412
± 1.0 0.04 0.06 7 S.E. of RES. 0.8 M = 4.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
KRP	iP	16	21	47.8	U	-0.1	100	0.57	277		3.0*	
WTZ	P	16	21	47.2		-0.8	100	0.58	89		3.9	3.5
	eS			22 10		-0.1	100					
GNZ	iP	16	21	55.0	us	0.5	100	1.54	115		4.4	4.4
	e			22 15								
	eS			22		0.4	100					
TRZ	eP	16	21	56		0.7	100	1.62	164			
	e(S)			22 28		5.1						
TNZ	eP	16	21	59		1.2	99	1.89	230		3.3*	
MNG	iP	16	22	05.7	U	-0.7	100	2.69	193		4.2	3.9
	eS			42		-0.7	100					
WEL	eP	16	22	15		-0.7	100	3.48	199			
	eS			23 00		0.7	100					

AMPLITUDES:	KRP	0.9	WTZ	2.2	1.0	GNZ	4.0	6.6
	TNZ	0.3	MNG	3.0	2.2	WEL	0.3	0.2

		80/ 413											
JUL 16	04 ^h 30 ^m 04 ^s .3	38°.48s	177°.82E	12 km	M = 3.6								
		± 0.7	0.03	0.04	R S.E. of RES. 1.2								
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS	
GNZ	iP*!	04	30	09.0		-0.3	100	0.22	136				
TUA	P*	04	30	14.2		-1.9	99	0.62	238				
	eS*			23		-1.6	99						
WTZ	iP*	04	30	19.9	U	0.3	100	0.83	307		3.8	3.7	
	eSg			33		0.6	100						
TRZ	ePg	04	30	33		1.8	99	1.32	216				
	eSg			49		-0.1	100						
KRP	P*	04	30	37.8		0.1	100	1.89	286		3.7	3.6	
	eSn			58		-1.0	100						
CNZ	ePn	04	30	36		-0.0	100	1.92	247				
	eSg			31		1.0	100						
MNG	ePn?	04	30	42		-6.0		2.80	220		3.5	3.5	
	ePg			31		1.0	100						
	e			13									
AMPLITUDES:		WTZ		9.0	7.5	KRP		0.8	0.6	CNZ		1.6	2.0
		MNG		0.8	0.9								

		80/ 414											
JUL 16	09 ^h 32 ^m 32 ^s .0	41°.62s	171°.96E	0 km	M = 3.8								
		± 0.6	0.03	0.04	R S.E. of RES. 1.1								
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS	
COB	Sg-P*			10		-0.7	100	0.79	48				
KAI	eP*	09	32	51		-0.3	100	1.00	204	3.9			
	eS*			33		-2.2	97						
KKZ	Pn	09	33	00.3		0.4	100	1.52	122				
	Pg			03.3		0.5	100						
	eS*			21.5		0.5	100						
CMZ	ePn	09	33	07		0.1	100	2.03	166		3.8	3.6	
	eSn			34		1.2	99						
WEL	eS*	09	33	38		-1.4	99	2.14	82	3.6			
MNG	ePn	09	33	18		0.1	100	2.84	71		4.0	3.9	
	e(Pg)			33		3.5							
	eS*			34		-0.6	100						
RHP	Pn	09	33	18.7		0.8	100	2.84	208				
TNZ	ePg	09	33	34.5		0.8	100	3.05	38		3.8	4.0	
	e(Sg)			34		4.7							
	e			36.5									
CNZ	eP*	09	33	40		3.3		3.65	50				
	e(S*)			34		2.1							
MSZ	ePn	09	33	36		-1.1		4.26	223		3.7	3.5	
	e(Sn)			34		-1.1							
KRP	ePn	09	33	43.5		1.5		4.61	38		3.6	3.8	
	e(S*)			34		3.6							
AMPLITUDES:		KAI		3.6		KKZ		1.7	1.6	CMZ		1.0	1.2
		WEL		0.4		MNG		2.5	2.5	RHP		2.3	
		TNZ		0.2	0.5	CNZ		0.9	1.7	MSZ		0.4	0.5
		KRP		0.3	0.5								

		80/ 415			
JUL 16	10 ^h 29 ^m 15 ^s .2	37°.45s	177°.27E	145 km	M = 3.7
		± 0.8	0.04	0.05	6 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	eP	10	29	34		-0.7	100	0.10	221			
WTZ	iP	10	29	35.9	U	-0.6	100	0.58	203		3.5	3.5
	eS			52		-0.7	100					
ECZ	eP	10	29	39		-0.8	100	1.04	104		3.9	
GNZ	iP	10	29	44.1	U	1.2	100	1.33	154		3.9	4.0
	eS			30 05		1.0	100					
KRP	iP	10	29	44.8	D	0.6	100	1.46	250		3.2*	2.5*
	eS			30 07.5		1.1	100					
GBZ	P	10	29	49.0		0.0	100	1.89	310			
TRZ	eP	10	29	53		1.0	100	2.13	189			
	eS			30 20		0.0	100					
MNG	eP	10	30	08.6		-0.4	100	3.46	203		3.3	3.5
	eS			48.5		-1.8	99					
e				31 04								
AMPLITUDES:		WIZ	0.5		WTZ	1.7	2.0	ECZ			1.2	
		GNZ	2.5	4.7	KRP	1.6	0.3	GBZ			0.8	
		MNG	0.3	0.6								

JUL 16 19^h37^m30^s.5 38°.13S 176°.49E 153 km M = 4.4
 ± 1.1 0.06 0.05 8 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	19	37	51.7	U	-0.2	100	0.41	69		3.8	4.3
	eS			38 07		-1.4	100					
KRP	iP	19	37	53.8	DW	-0.1	100	0.78	285		4.0*	3.0*
	eS			38 12.5		0.5	100					
CNZ	P	19	37	59.5		1.1	100	1.30	215			
	e(S)			38 29		9.1						
GNZ	P	19	38	00.2		1.7	99	1.30	113		4.2	4.5
	eS			20		0.0	100					
TRZ	(P)	19	38	12.2		12.3		1.44	170			
	e(S)			40		17.5						
ECZ	iP	19	38	01.2	U	-1.3	100	1.68	75		4.7	4.5
	eS			28		1.0	100					
TNZ	eP	19	38	06		0.4	100	1.96	237		3.3*	3.2*
	e(S)			38		5.4						
MNG	iP	19	38	11.7	U	-1.9	99	2.60	197		4.6	4.5
	S			46.6		0.1	100					
WEL	eP	19	38	23		-1.1		3.42	202	4.4		
	eS			39 04		-1.2						
COB	S-P			48		-0.5		4.14	223		3.5*	3.8*
KKZ	eP	19	38	39.5		-2.5		4.79	206			
	eS			39 36		-1.3						
MSZ	P	19	39	36.7		-3.8		9.18	222		3.4*	3.3*
	eS			41 11.5		-10.6						
AMPLITUDES:		WTZ	3.5	11	KRP	13	1.5	CNZ			3.7	2.0
		GNZ	4.3	13	ECZ	4.5	2.7	TNZ			0.3	0.4
		MNG	11	9.4	WEL	0.7		COB			0.5	3.0
		KKZ	0.3	0.8	MSZ	0.4	0.6					

JUL 18 03^h02^m40^s.5 34°.68S 178°.36W 33 km M = 4.3
 ± 1.8 0.16 0.19 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	03	03	38.0		0.5	100	3.91	219		4.3	

CNZ	iSg		55.8	-1.5	99						
	e(Pg)	04 05	51	3.1		0.79	211				
	e		54								
TUA	eSg		57.5	-1.1							
WTZ	e(Pg)	04 05	52	2.1		0.89	109				
	ePg	04 05	49.5	-0.5	100	0.90	54			2.7	
AMPLITUDES:		WNZ	1.8	KRP	0.8	NGZ	0.3	0.6			
		CNZ	0.2	0.3	WTZ	0.3					

JUL 19 09^h07^m01^s.5 39°.77S 176°.99E 33 km M = 3.5
 ± 0.9 0.05 0.08 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TRZ	P	09	07	08.6		0.1	100	0.24	329					
TUA	P	09	07	17.9		-0.3	100	0.96	8		3.5	3.8		
	S			30.6		-0.0	100							
NGZ	P	09	07	21.8		0.2	100	1.21	298					
	i			25.3										
CNZ	P	09	07	23.8		1.7	100	1.25	296					
	i			27.0										
GNZ	P	09	07	24		0.1	100	1.38	36		3.0	3.3		
	S			42.8		2.2	99							
MNG								1.43	233		3.4	3.5		
WTZ	P	09	07	27.5		-1.8	99	1.78	0		3.2	3.8		
	S			47.5		-2.7	98							
TNZ	e(P)	09	07	41.5		7.8		2.10	285		3.6			
KRP	eP	09	07	34.2		-0.3	100	2.16	328		3.7			
	e			40.5										
WEL	iS	08	01	0		1.6	100							
	eS	09	08	01.5		-0.6	100	2.28	227	3.6				
COB								3.51	246				3.3	
AMPLITUDES:		TUA	1.1	2.3	NGZ	5.2	CNZ	8.0						
		GNZ	0.4	1.3	MNG	2.5	3.6	WTZ	0.5	2.0				
		TNZ	0.3		KRP	0.6	WEL	0.3						
		COB	0.3											

JUL 19 09^h51^m02^s.8 44°.58S 169°.72E 4 km M = 4.4
 ± 0.2 0.02 0.02 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
THP	iPg	09	51	06.4		1.0	100	0.13	74					
DMP	iPg	09	51	07.2		0.6	100	0.18	25					
TMP	iPg	09	51	10.9		0.2	100	0.39	47					
HHP	iPg	09	51	13.4		0.2	100	0.51	61					
RHP	iPg	09	51	13.9		0.0	100	0.55	29					
MMP	iPg	09	51	14.7		-0.1	100	0.59	43					
BSP	iPg	09	51	17.5		-0.7	100	0.76	21					
MJP	iPg	09	51	18.3		-0.5	100	0.79	42					
ROX	Pg	09	51	23.0		1.2	99	0.94	197					
OMZ	Pg	09	51	22.1		-0.6	100	0.98	120					
MSZ	Pg	09	51	29.0		0.1	100	1.30	265		4.6	4.5		
	eSg			46		-0.3	100							
DNZ	Pg	09	51	30.8		-0.4	100	1.40	157					
BRZ	P*	09	51	39.2		1.1	100	1.95	231					
	ePg			42.0		-0.3	100							
	e			52	06.0									
	Sg			08.3		-0.3	100							

	S		37.2		2.5	99			
	i		51.8						
GNZ	eP	13 54	57.8		-2.0	99	3.30	43	4.0 4.4
	e	55	07.0						
	i		22.0						
	i		22.0						
WTZ	S		36.5		-1.5	100			
	P	13 54	57.2		-4.1		3.41	25	4.6
	e	55	08.8						
RHP	P	13 55	20.3		-0.1	100	4.80	229	
	i		30.3						
AMPLITUDES:	WEL		69	63	KKZ		5.0	TNZ	2.8 20
	WNZ		0.6		CMZ		2.0 4.6	KAI	3.0
	KRP		6.5		GNZ		0.8 3.2	WTZ	2.3
	RHP		7.5						

FELT: Wanganui (57) to Blenheim (77) Max MM V from Levin (65) to Lower Hutt (68).

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JUL 19 15^h35^m13^s.3 38°.87s 175°.22E 221 km M = 3.9
 ± 1.0 0.04 0.07 7 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TNZ	eP	15	35	45		1.1	100	0.73	244					3.0*
KRP	P	15	35	45.0		-0.3	100	0.98	15					3.0*
	S		36	10.0		0.0	100							
TRZ	P	15	35	50.0		1.6	99	1.42	119					3.9 3.8
	S		36	18.2		2.6	96							
TUA	eS	15	36	16		-1.0	100	1.51	88					3.8
	e			22										
MNG	S-P			30.0		0.5	100	1.75	173					4.5 4.1
GNZ	P	15	35	56.0		0.3	100	2.20	85					3.9 3.8
	S		36	27.0		-1.5	99							
WEL	eP	15	35	58.2		-0.1	100	2.44	188	3.8				
	eS		36	31.8		-1.1	100							
COB	S-P			38.0		-1.0	100	2.92	220					3.3* 3.0*
KKZ	eP	15	36	13.0		-0.1	100	3.73	198					
	S			59.3		-0.2	100							
AMPLITUDES:	TNZ			0.2		KRP		0.8	TRZ					0.5 0.8
	TUA				0.4	MNG		11 5.5	GNZ					0.8 1.0
	WEL		0.3			COB		0.4 0.7	KKZ					0.3 0.3

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JUL 20 06^h28^m27^s.9 33°.13s 178°.62W 291 km M = 4.6
 ± 2.0 0.12 0.26 43 S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	P	06	29	47.5		0.6	100	5.11	206					4.5
WTZ	P	06	29	55.9		-1.9	100	6.03	215					4.7 4.6
	eS		31	07		-1.4	100							
GNZ	eP	06	29	57.0		-2.3	99	6.15	205					4.6 4.6
	i			59.2										
	S		31	11		0.0	100							
TUA	eP	06	30	06		0.8	100	6.62	210					4.7 4.8
	eS		31	25		3.4	98							
KRP	eP	06	30	08		1.2	100	6.76	223					3.1*
CRZ	P	06	30	14.3		0.0	100	7.36	257					3.7*
TRZ	eP	06	30	17		2.3	99	7.40	209					4.8 4.7

ECZ	P	11 10 39.9	-0.8	100	1.88	83	3.9	4.0
	S	11 13.0		2.2	98			
TNZ	P	11 10 42	1.3	100	1.89	228	3.3*	
MNG	P	11 10 49.3	-0.2	100	2.73	191	4.2	4.3
	S	11 26.2		-0.5	100			
WEL	eS	11 11 42	-1.0	100	3.52	198	4.2	
COB	S-P	50	0.0	100	4.12	219	3.3*	3.5*
KKZ	eP	11 11 13.5	-1.8	99	4.87	202		
	e	12 08.0						
	S	14.2	1.5	99				
AMPLITUDES:	KRP	2.3	WTZ	1.3	1.6	TUA	0.8	1.0
	NGZ	0.3	CNZ	0.2		GNZ	6.8	12
	TRZ	0.6	3.0	ECZ	0.4	0.5	TNZ	0.3
	MNG	3.3	5.0	WEL	0.4		COB	0.3
	KKZ	0.3	1.1					1.6

JUL 22 13^h38^m23^s.2 36°.50s 177°.80E 271 km M = 3.8
 ± 1.1 0.07 0.11 8 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	13	39	02.0		-0.6	100	1.33	154		3.6	3.8		
	eS			34.8		1.6	98							
WTZ	P	13	39	03.9		-0.7	100	1.62	203		3.8	3.5		
	eS			36.0		-0.8	100							
	e			39.5										
GNZ	P	13	39	09.0		0.0	100	2.15	175		4.3	3.9		
	S			43.3		-1.2	99							
KRP	eP	13	39	11		0.7	100	2.30	231		2.6*			
TRZ	eS	13	40	03		0.7	100	3.15	194			4.0		
	e			09.0										
MNG	eP	13	39	34.2		-0.1	100	4.50	203		3.4	3.8		
	eS			40 29.5		-0.2	100							
WEL	eS	13	40	48		0.4	100	5.34	205	4.2				
AMPLITUDES:	ECZ	0.2	0.3	WTZ	0.7	0.4	GNZ	1.6	1.2					
	KRP	0.2		TRZ		0.4	MNG	0.2	0.6					
	WEL	0.2												

JUL 23 23^h37^m23^s.2 37°.75s 177°.48E 33 km M = 3.3
 ± 0.5 0.03 0.04 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WIZ	P*	23	37	31.0		-0.1	100	0.32	314					
	S*			38.4		1.4	99							
WTZ	P*	23	37	33.3		0.3	100	0.46	240		3.0			
	e			43.5										
ECZ	P*	23	37	39.4		0.2	100	0.85	86		3.6	3.4		
	(S*)			54.9		4.0								
	e			58.0										
GNZ	eP*	23	37	39.8		-1.7	99	0.98	155		3.0	3.4		
	S*			56		1.0	100							
TUA	P*	23	37	42.5		-0.6	100	1.09	194		3.3	3.3		
	S*			59		1.1	100							
KRP	Pn	23	37	46.7		-1.2	100	1.55	263		3.9			
	Sn			38 06.0		-0.4	100							
GBZ	iP*	23	38	00.3		-2.0		2.22	313					
AMPLITUDES:	WIZ	0.7	4.3	WTZ	4.8		ECZ	1.1	1.0					

		GNZ			0.8 3.4 TUA		0.5 0.6 KRP			1.6			
JUL 24		13 ^h 41 ^m 28 ^s .8			32°.45s		179°.70E			443 km			80/ 430
		± 1.6			0.19		0.43			26			S.E. of RES. 1.7
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
ECZ	eP	13	42	58.2		1.5	100	5.32	190		4.6	4.6	
	eS		44	07.3		1.4	100						
WTZ	P	13	43	02.3		-0.9	100	5.95	201		5.1	4.7	
	S		44	14.9		-2.7	99						
GNZ	eP	13	43	07.0		-0.2	100	6.33	192		4.9	5.0	
	e		44	17.7									
	S			24.8		-0.1	100						
KRP	eP	13	43	11		2.6	99	6.43	211		3.0*		
TUA	eP	13	43	10		-0.9	100	6.68	197		4.7	5.0	
	eS		44	30.5		-1.1	100						
TRZ	eP	13	43	18		-1.4	100	7.46	197		4.9	5.2	
	eS		44	48		1.0	100						
WEL	eS	13	45	31		0.0	100	9.67	203	4.7			
COB	S-P		1	54		1.3	100	10.27	211		3.5*	3.2*	
AMPLITUDES:		ECZ	0.3		0.3	WTZ	1.8		0.8	GNZ	1.2		2.3
		KRP	0.2			TUA	0.3		0.5	TRZ	0.3		1.6
		WEL	0.2			COB	0.2		0.3				

		GNZ			0.8 3.4 TUA		0.5 0.6 KRP			1.6			
JUL 24		20 ^h 14 ^m 19 ^s .5			45°.19s		167°.30E			46 km			80/ 431
		± 1.0			0.03		0.08			9			S.E. of RES. 1.3
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
BRZ	P	20	14	32.4		0.2	100	0.61	164				
	eS			42.2		0.5	100						
MSZ	P	20	14	33.8		0.6	100	0.68	40		3.7		
	eS			41.3		-1.9	99						
ROX	P	20	14	45.0		1.2	100	1.46	102		4.2		
	eS		15	04.2		2.0	99						
OBZ	eP	20	14	48.0		-0.8	100	1.81	162		4.1	4.1	
	i			49.6									
	S		15	09.8		-1.0	100						
THP	P	20	14	52.0		1.2	100	1.95	72				
RHP	P	20	14	56.0		0.7	100	2.27	62				
DNZ	P	20	14	56.8		0.2	100	2.36	108				
	S		15	23.2		-1.4	100						
OMZ	eP	20	14	58.8		-0.7	100	2.56	89		3.7	3.6	
	S		15	29.0		-0.7	100						
CMZ	eS	20	16	12		2.0		4.15	69			3.6	
AMPLITUDES:		MSZ	19			ROX	6.0			OBZ	5.1		13
		DNZ	1.6		3.8	OMZ	1.0		1.7	CMZ			0.8

FELT: Manapouri (139) MM IV

		GNZ			0.8 3.4 TUA		0.5 0.6 KRP			1.6			
JUL 25		15 ^h 28 ^m 56 ^s .5			32°.54s		179°.92W			472 km			80/ 432
		± 1.0			0.07		0.17			12			S.E. of RES. 1.1
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
ECZ	S	15	31	37		1.0	100	5.30	193				
ONE	P	15	30	31		1.0	100	5.74	234				
WTZ	P	15	30	31		-1.6	99	5.99	204		4.7	4.6	
	S		31	47		-1.4	99						

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AUC	P	15 30 35	1.0	100	6.14	224			
GNZ	P	15 30 36	0.1	100	6.32	195	4.7	4.7	
	S	31 55	0.5	100					
KRP	P	15 30 38	-0.1	100	6.53	213	3.5*		
TUA	P	15 30 40	0.3	100	6.70	200		4.9	
	S	32 01	-0.5	100					
TRZ	e	15 30 39			7.49	200		4.8	
	P	48	0.0	100					
	S	32 17	0.6	100					
TNZ	P	15 30 53	-1.5	99	8.09	213			
WEL	S	15 33 01	1.1	100	9.71	204			
COB	S-P	1 53	-0.6	100	10.37	213			3.6*
AMPLITUDES:	WTZ	0.7	0.7	GNZ	4.0	0.8	1.2	KRP	0.7
	TUA		0.4	TRZ			0.6	COB	0.8

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JUL 25 21^h46^m00^s.3 39°.19S 173°.98E 33 km M = 2.9
 ± 1.0 0.04 0.06 R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TNZ	P*	21	46	07.5		-0.6	100	0.31	89					2.6
	S*			13.3		-0.4	100							
CNZ	P*	21	46	23		0.5	100	1.22	91					
	S*			40		1.0	99							
NGZ	P*	21	46	23.0		-0.4	100	1.27	90					
	S*			40.0		-0.5	100							
KRP	P*	21	46	32.5		0.9	99	1.76	44					3.1
	S*			54.5		-0.4	100							
AMPLITUDES:	TNZ				1.8	CNZ		2.2	NGZ					3.2
	KRP				0.7									

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JUL 27 18^h29^m54^s.8 40°.45S 176°.85E 12 km M = 3.6
 ± 1.2 0.05 0.06 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TRZ	P*	18	30	13.0		1.7	99	0.90	359					3.2 3.7
	S*			24.5		1.2	100							
MNG	P*	18	30	13.3		-0.7	100	1.05	260					3.5 3.6
	e			14.3										
	S*			27		-1.1	100							
NGZ	P*	18	30	23.0		0.0	100	1.58	323					
	S*			43		-0.9	100							
CNZ	P*	18	30	23.0		-0.3	100	1.60	321					
	S*			43		-1.5	100							
	e			49										
WEL	e(P*)	18	30	32		5.5		1.79	241					
	(S*)			58		8.0								
GNZ	S*	18	30	55		-2.0	99	2.02	27					3.6
TNZ	P*	18	30	37		2.1	99	2.29	303					
	S*			31 06		1.1	100							
KRP	eP*	18	30	43		0.6	100	2.72	338					3.9
AMPLITUDES:	TRZ				0.8	3.5	MNG	5.0	8.0	NGZ				3.0 4.0
	CNZ				4.5	4.0	GNZ		1.3	KRP				0.5

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JUL 28 11^h31^m46^s.3 35°.86S 177°.94E 249 km M = 4.5
 ± 1.1 0.06 0.11 8 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eS	11	33	00		-0.3	100	1.89	165			4.3
GBZ	P	11	32	28.4		-0.8	100	2.02	259			
WTZ	P	11	32	31.3		-0.0	100	2.25	200		4.0	4.0
	e			33 04								
	eS			06.2		-0.0	100					
GNZ	P	11	32	36.8		0.1	100	2.78	179		4.4	5.0
	i			33 11.0								
	S			16		0.1	100					
KRP	eP	11	32	38		0.8	100	2.82	222		3.0*	
TRZ	P	11	32	47.5		-0.6	100	3.79	193		4.1	4.5
	eS			33 37		0.8	100					
NGZ	eP	11	32	50		1.9	97	3.80	208			
MNG	P	11	33	03.4		-0.9	100	5.13	201		3.9	6.1
	S			34 04.0		-1.0	100					
AMPLITUDES:		ECZ			0.8	GBZ		0.7	WTZ		0.9	1.0
		GNZ	1.6	11	KRP		0.5	TRZ		0.2	1.1	
		NGZ	0.2	MNG		0.6	106					

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JUL 28 16^h12^m08^s.1 33°.84s 179°.28W 278 km M = 5.1
 ± 1.3 0.07 0.15 19 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	16	13	16		-0.4	100	4.23	204		4.8	5.4
	eS			14 10		0.3	100					
WIZ	P	16	13	20		-1.4	100	4.67	217			
GBZ	iP	16	13	24	D	-0.3	100	4.91	240			
WTZ	P	16	13	26		-0.8	100	5.13	215		5.1	4.9
	S			14 28		-0.5	100					
GNZ	P	16	13	28		-0.5	100	5.26	204		5.2	5.1
	S			14 31		-0.5	100					
ONE	P	16	13	32		-0.4	100	5.58	248			
AUC	eP	16	13	37		3.0	93	5.72	237			
TUA	P	16	13	35		0.7	100	5.73	209		5.0	5.1
	S			14 43		1.4	100					
KRP	P	16	13	37.2		1.4	100	5.86	224		3.8*	
TRZ	P	16	13	45		1.4	100	6.51	208			
CRZ	P	16	13	45		-1.1	100	6.70	263		4.0*	
CNZ	eP	16	13	53		5.8	0	6.79	216			
MNG	eP	16	14	01		-0.7	100	7.96	210			
	eS			15 30		-0.9	100					
AMPLITUDES:		ECZ	1.0	3.5	WIZ	2.0	GBZ	3.5				
		WTZ	3.0	2.0	GNZ	4.0	5.0	ONE	1.0			
		AUC	0.5	TUA	0.9	1.1	KRP	1.7				
		CRZ	0.7	CNZ	0.8							

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JUL 28 21^h50^m44^s.7 38°.48s 178°.33E 12 km M = 3.0
 ± 0.3 0.01 0.02 R S.E. of RES. 0.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	P*	21	50	50.7		-0.1	100	0.29	236			
	eS*			55.2		0.1	100					
TUA	eP*	21	51	02.5		-0.1	100	0.98	250		2.9	2.9
	e			08.5								
	e			23								
WTZ	P*	21	51	05.5		-0.2	100	1.17	295		3.2	3.0

	i			08.8									
	eS*			21.3		-0.0	100						
WIZ	eP*	21	51	08.5		0.3	99	1.31	316				
	e			15									
TRZ	e(S*)	21	51	38		4.0		1.59	227				
AMPLITUDES:		TUA		0.3	0.3	WTZ		1.3	0.7	WIZ		0.5	
FELT: Gisborne (45) MM III													

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JUL 29 21^h28^m08^s.2 37°.69S 176°.44E 206 km M = 4.3

M = 4.3

± 1.2 0.06 0.08 9 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	P	21	28	37		-0.2	100	0.76	251		3.1*	
	S			59		-0.7	100					
TUA	P	21	28	41		0.5	100	1.25	154		4.0	
GNZ	P	21	28	44		0.7	100	1.57	128		4.0	4.3
	S			29 10		-0.5	100					
NGZ	P	21	28	45		1.2	100	1.63	203			
	S			29 13		1.7	99					
GBZ	P	21	28	43.2		-0.9	100	1.66	332			
CNZ	P	21	28	44		-0.1	100	1.66	205			
TNZ	P	21	28	51		1.4	100	2.20	227			
MNG	iP	21	28	57.9	U	-0.9	100	3.02	194		4.7	4.6
	S			29 36		-2.1	99					
AMPLITUDES:		KRP		1.3	1.2	TUA		0.8	GNZ		1.5	5.0
		NGZ		1.9	0.8	GBZ		1.0	CNZ		1.4	
		MNG		8.0	8.0							

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JUL 30 23^h14^m17^s.9 32°.16S 179°.62W 463 km M = 4.9

M = 4.9

± 1.5 0.11 0.30 15 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GBZ	eP	23	15	50.2		-0.8	100	5.74	224			
WIZ	P	23	15	54.0		0.7	100	5.97	205			
WTZ	P	23	15	58.2		-0.1	100	6.45	205		5.3	4.5
	eS			17 17		-0.6	100					
KRP	eP	23	16	05.5		1.5	99	6.99	213		3.2*	
TUA	eS	23	17	31		0.2	100	7.15	201			4.9
CNZ	e(S)	23	17	55		6.5		8.05	208			
MNG	eP	23	16	28.0		-1.3	99	9.32	204		5.1	4.6
	S			18 14		0.5	100					
COB	eS	23	18	43.5		0.0	100	10.83	212			3.0*
AMPLITUDES:		GBZ		0.3		WIZ		0.3	WTZ		2.3	0.5
		KRP		0.3		TUA		0.4	CNZ		0.2	
		MNG		2.3	1.1	COB		0.2				

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JUL 31 10^h15^m07^s.7 38°.26S 176°.03E 170 km M = 3.7

M = 3.7

± 1.1 0.04 0.07 8 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	P	10	15	32.1		0.5	100	0.51	311		2.8*	2.3*
	S			50.0		0.1	100					
WTZ	P	10	15	32.9		-0.2	100	0.80	70		3.4	3.3
	eS			52.0		-0.8	100					
NGZ	P	10	15	36.0		1.7		0.97	199			

KRP	iS	29.0	-0.2	100				2.25	297		3.7
AMPLITUDES:	GNZ	22	TUA	2.8	3.7	WTZ	1.5	3.0			
	KRP	0.5									
80/ 444											
AUG 03	04 ^h 08 ^m 33 ^s .6	36°.72s	178°.60E	177 km	M = 3.8						
	± ND	ND	ND	ND	S.E. of RES.	ND					
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
WTZ	eP	04	09	08.5		-0.1	100	1.80	225		4.1 4.0
	eS			35.5		-0.2	100				
GNZ	eS?	04	09	38.8		-0.2	100	1.98	193		3.8
MNG	eP?	04	09	42.9		-0.1	100	4.60	211		3.5 3.5
AMPLITUDES:	WTZ	1.7	1.5	GNZ	1.4	MNG	0.3	0.4			
80/ 445											
AUG 03	10 ^h 34 ^m 05 ^s .0	38°.81s	177°.94E	43 km	M = 3.9						
	± 0.1	0.01	0.01	1	S.E. of RES.	0.1					
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
GNZ	iP	10	34	13.0	U	-0.0	100	0.18	21		
TUA	iP	10	34	17.7	U	0.1	100	0.61	270		3.8 4.1
	S			26.9		-0.0	100				
WTZ	iP	10	34	24.5	U	-0.0	100	1.12	318		4.0 3.9
	iS			39.3		0.1	100				
TRZ	eP?	10	34	25.1		0.1	100	1.14	229		3.6
NGZ	P	10	34	35.0		0.1	100	1.85	258		
CNZ	P	10	34	35.5		-0.1	100	1.91	258		
AMPLITUDES:	GNZ	20	TUA	5.9	10	WTZ	6.5	5.0			
	TRZ	2.0	CNZ	2.1							
80/ 446											
AUG 03	15 ^h 36 ^m 33 ^s .1	37°.43s	177°.65E	94 km	M = 3.8						
	± 1.0	0.05	0.05	7	S.E. of RES.	1.0					
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
WIZ	P	15	36	47.5		-0.2	100	0.38	255		
	S			58.0		-0.8	100				
ECZ	S?	15	37	05.0		0.9	100	0.76	111		3.6
WTZ	iP	15	36	50.8	D	0.0	100	0.76	223		
GNZ	iP	15	36	55.4	U	-0.9	100	1.25	167		4.2 3.8
	S			37 13.4		-0.4	100				
TUA	P	15	36	58.2		-0.4	100	1.43	196		3.8 3.6
	eS			37 19.2		1.2	99				
KRP	iP	15	37	03.7	DW	1.0	100	1.75	253		3.3* 2.9*
TRZ	P	15	37	07.7		-1.2	99	2.22	197		4.1
CNZ	P	15	37	12.3		0.6	100	2.42	223		
MNG								3.61	207		3.5 3.8
AMPLITUDES:	ECZ	1.5	GNZ	6.5	4.0	TUA	0.9	0.6			
	KRP	1.9	0.8	TRZ	0.7	MNG	0.5	1.2			
80/ 447											
AUG 04	14 ^h 55 ^m 12 ^s .8	35°.07s	179°.20E	377 km	M = 4.9						
	± 1.3	0.10	0.22	15	S.E. of RES.	0.8					
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
WTZ	P	14	56	17.1		-1.3	98	3.42	211		4.9 4.8
GNZ	iP	14	56	21.5		0.5	100	3.70	194		4.8 4.9

	eS	57	14.5		0.0	100							
TUA	eP	14	56	24.7		0.0	100	4.09	203		4.7	4.8	
KRP	P	14	56	25.5		0.6	100	4.11	225		3.8*		
TRZ	eP	14	56	33.5		0.6	100	4.87	202				
CNZ	eP	14	56	35.3		0.4	100	5.06	214				
MNG	iP	14	56	47.5	U	-0.9	99	6.28	207		5.4	4.8	
	i			48.2									
WEL	S	14	58	21.0		0.0	100	7.13	208				
AMPLITUDES:	WTZ			2.5	2.5	GNZ		2.2	4.0	TUA		0.6	0.7
	KRP			1.9		MNG		10	3.5				

80/ 448

AUG 04 20^h18^m02^s.2 42°.80s 174°.41E 12 km M = 4.1
 ± 0.5 0.03 0.06 R S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
KKZ	iP*	20	18	14.3	U	-0.2	100	0.65	306				
CMZ	ePn	20	18	28.6		0.3	100	1.51	238				
WEL	Pn	20	18	29.2		0.5	99	1.54	10				
	Sn			48.7		0.2	100						
KAI								2.23	276	4.4			
MNG	iPn	20	18	38.8	D	-0.6	99	2.33	21		3.9	4.0	
	e			43.0									
RHP	ePn	20	18	54.0		-0.2	100	3.41	246				
TNZ								3.62	360			4.1	
CNZ	ePn?	20	19	01.8		3.6		3.71	14				
AMPLITUDES:	KKZ			2.5	8.0	KAI	2.0			MNG		3.0	4.2
	TNZ			0.4									

80/ 449

AUG 05 14^h26^m35^s.0 33°.99s 178°.75W 280 km M = 4.8
 ± 2.7 0.26 0.47 43 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
ECZ	eP	14	27	44.5		0.4	100	4.30	210		5.0	4.8	
WTZ	eP	14	27	53.5		-2.1	99	5.27	220		5.0	4.6	
GNZ	P	14	27	56.1		-0.1	100	5.33	208		5.1	4.7	
	S			28		-0.2	100						
TUA	P	14	28	02.5		0.1	100	5.84	213		5.2	4.8	
KRP	eP?	14	28	04.9		-0.4	100	6.07	228		3.3*		
TRZ	P	14	28	12.1		0.4	100	6.60	211				
NGZ	eP	14	28	16.0		0.7	100	6.88	220				
CNZ	eP	14	28	18.0		2.1	99	6.94	220				
MNG	eP	14	28	28.0		-1.9	99	8.05	213		4.2	4.4	
AMPLITUDES:	ECZ			1.3	0.8	WTZ		2.3	1.0	GNZ		2.9	2.0
	TUA			1.2	0.5	KRP		0.5		MNG		0.5	1.0

80/ 450

AUG 05 18^h02^m52^s.4 37°.71s 176°.14E 204 km M = 3.7
 ± ND ND ND ND S.E. of RES. ND

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
WTZ	P	18	03	21.0		0.0	100	0.73	112		3.2		
GNZ	P	18	03	29.0		0.0	100	1.75	123		4.2	3.7	
	S			57.3		0.0	100						
MNG	P	18	03	42.1		0.0	100	2.95	190		3.8	3.8	
AMPLITUDES:	WTZ			0.4		GNZ		2.2	1.2	MNG		1.1	1.5

KKZ						6.79	59			
COB	eP	22 18 06.3		0.7	99	7.15	47	5.6	5.5	
WEL	eP	22 18 25.0		6.1		8.13	56			
MNG	eP	22 18 29.0		-1.4		8.97	55	5.5	5.5	
CNZ	eP	22 18 43.8		-0.7		10.01	49			
KRP	eP	22 18 58.7		1.0		10.97	45	5.3	5.4	
TUA						11.15	53			5.2
GNZ						11.75	54			5.3
AMPLITUDES:	OMZ	10 34	CMZ	12 23	KKZ	1.1	3.5			
	COB	4.2 14	MNG	7.0 10	KRP	2.3	3.2			
	TUA	0.5	GNZ	2.0						

FELT: Puysegur Point (146) MM IV and West Arm Manapouri (138),
Manapouri (139)

AUG 06 22^h24^m48^s.9 46°.09S 166°.08E 33 km M = 4.3
± 1.1 0.04 0.10 R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	P	22 25	06.0			-0.9	99	1.06	74			
	S		20.0			-0.4	100					
OBZ	P	22 25	14.0			-0.6	100	1.63	121	4.3	4.3	
	S		34.5			0.6	100					
MSZ	P	22 25	18.5			-0.1	100	1.92	43	4.3	4.5	
THP	P	22 25	35.3			0.6	100	3.10	62			
RHP	P	22 25	40.5			0.8	100	3.46	56			
AMPLITUDES:	BRZ	7.0 14	13	OBZ	6.0 14	MSZ	7.5	20				

80/ 454

AUG 06 22^h44^m23^s.5 46°.16S 165°.93E 33 km M = 3.5
± 2.6 0.09 0.26 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	P	22 44	42.0			-1.2	99	1.19	72			
OBZ	eP	22 44	50.0			-0.1	100	1.68	117	3.3	3.4	
	eS		45 10.0			0.0	100					
MSZ								2.04	44			3.7
THP	P	22 45	11.5			0.4	100	3.23	61			
RHP	P	22 45	16.5			0.4	100	3.59	57			
AMPLITUDES:	BRZ	1.7 2.5	3.0	OBZ	0.6 1.8	MSZ	3.0					

80/ 456

AUG 06 23^h20^m01^s.2 46°.18S 165°.83E 33 km M = 3.7
± 2.5 0.09 0.25 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	P	23 20	20.5			-1.4	98	1.25	72			
OBZ	eP	23 20	28.5			0.1	100	1.74	116	3.5	3.5	
	eS		49.0			0.1	100					
MSZ	P	23 20	33.5			0.0	100	2.11	45	3.8	3.8	
THP	P	23 20	50.5			0.8	100	3.29	62			
RHP	P	23 20	55.0			0.3	100	3.65	57			
AMPLITUDES:	BRZ	1.7 2.2	3.5	OBZ	0.9 2.1	MSZ	2.2	3.8				

80/ 457

AUG 07 01^h40^m11^s.2 46°.13S 165°.94E 33 km M = 4.0
± 0.9 0.04 0.08 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S						
BRZ	P	01	40	29.5		-1.1	98	1.17	73											
	S			45.0		-0.2	100													
OBZ	eP	01	40	37.5		-0.3	100	1.69	118		3.9	4.0								
	eS			58.0		0.3	100													
MSZ	P	01	40	42.5		0.2	100	2.02	44		4.0	4.0								
THP	P	01	40	58.9		0.4	100	3.20	62											
RHP	P	01	41	03.8		0.4	100	3.56	57											
AMPLITUDES:											BRZ	5.0	5.8	9.0	OBZ	2.2	6.8	MSZ	3.5	7.0

80/ 458

AUG 07 05^h16^m13^s.8 46°.17S 165°.85E 33 km M = 3.5
 ± 2.2 0.08 0.22 R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S						
BRZ	P	05	16	33.0		-1.3	98	1.24	72											
OBZ	eP	05	16	41.0		0.0	100	1.73	116		3.3	3.4								
	eS			17 01.5		0.2	100													
MSZ	P	05	16	46.0		0.1	100	2.09	45		3.7	3.5								
THP	P	05	17	02.5		0.4	100	3.28	62											
RHP	P	05	17	07.5		0.4	100	3.64	57											
AMPLITUDES:											BRZ	1.0	1.9	1.9	OBZ	0.5	1.7	MSZ	1.5	2.0

80/ 459

AUG 07 09^h33^m39^s.9 46°.14S 165°.95E 33 km M = 3.5
 ± 2.5 0.08 0.25 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S						
BRZ	P	09	33	58.0		-1.4	98	1.17	73											
OBZ	eP	09	34	06.5		0.1	100	1.68	118		3.3	3.3								
	eS			26.5		0.3	100													
MSZ	P	09	34	11.0		-0.0	100	2.02	44		3.7	3.6								
THP	eP	09	34	28.0		0.8	100	3.20	62											
RHP	P	09	34	32.5		0.3	100	3.57	57											
AMPLITUDES:											BRZ	2.0	2.1	2.4	OBZ	0.6	1.3	MSZ	1.9	2.5

80/ 460

AUG 07 09^h43^m14^s.8 46°.10S 165°.94E 33 km M = 4.2
 ± 0.8 0.03 0.08 R S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S						
BRZ	P	09	43	33.0		-1.2	96	1.16	75											
	S			48.5		-0.2	100													
OBZ	eP	09	43	41.5		-0.1	100	1.71	119		4.2	4.3								
	eS			44 01.9		0.1	100													
MSZ	P	09	43	45.8		0.2	100	2.00	45		4.3	4.2								
THP	P	09	44	02.1		0.2	100	3.19	62											
RHP	P	09	44	07.2		0.3	100	3.55	57											
AMPLITUDES:											BRZ	4.0	6.0	9.5	OBZ	4.0	15	MSZ	6.5	9.3

80/ 461

AUG 08 16^h10^m18^s.4 33°.45S 179°.85E 289 km M = 4.7
 ± 1.2 0.11 0.20 19 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	eP	16	11	36.3		-0.8	100	5.09	206		4.6	4.8		
	eS			12 39.0		0.2	100							
GNZ	eP	16	11	41.5		0.7	100	5.40	195		4.5	4.8		
	eS			12 44.2		-1.1	99							
KRP	eP	16	11	44.0		-0.2	100	5.69	217		3.1*			

TUA	eP	16 11 46.8	1.4 99	5.79 201	4.9
	eS	12 53.8	0.3 100		
MNG	eP	16 12 11.0	-1.2 99	7.96 205	4.2 4.9
	eS	13 42.0	0.3 100		
COB	eS	16 14 16.0	-0.0 100	9.50 215	3.3*
AMPLITUDES:	WTZ	1.0 1.6	GNZ	0.7 2.5	KRP 0.3
	TUA	0.6	MNG	0.5 3.3	COB 0.5

80/ 462

AUG 09 07^h31^m31^s.1 39°.57s 177°.41E 12 km M = 4.1
 ± 0.6 0.02 0.05 R S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
TRZ	iPg	07 31	41.3		D	0.7 99		0.46	272			
TUA	Pg	07 31	47.3		D	0.2 100		0.78	345		3.9	3.6
	Sg		58			0.2 100						
GNZ	e(Pg)	07 31	53.5			1.3		1.03	28		3.8	4.3
	e		55.5									
	e(S*)	32 01				-2.9						
	i		20									
WNZ	Pn	07 31	55.5			0.0 100		1.39	312		4.8	
	Pg		58.5			-0.6						
NGZ	iPn	07 31	56.4			0.0		1.45	285			
	Sn	32 14.5				-0.7						
CNZ	iPn	07 31	56.9			-0.1 100		1.49	284			
	Sn	32 16				-0.3 100						
WTZ	Pn	07 31	59.0		U	0.3 100		1.62	348		4.0	4.3
	(P*)	32 01.5				1.6						
	e(Sg)		27			1.4						
MNG	Pn	07 32	01.5			0.1 100		1.82	234		4.0	4.2
	Pg		10			2.1						
	e		20									
	Sg		31.5			-0.9						
WIZ	Pn	07 32	05			0.5		2.04	355			
	ePg		15			2.5						
ECZ	e(Pg)	07 32	16			2.9		2.07	26		4.0	4.0
	e		25.5									
	e(Sg)		40			-1.0						
	e	33 00										
KRP	Pn	07 32	05.5			-1.1 96		2.20	318		4.1	4.2
	P*		12			2.2						
	e(Sn)		35			1.6						
TNZ	ePn	07 32	09			-0.1		2.38	278		4.3	4.5
	P*		13.5			0.6						
	S*		46			1.8						
	e		54.5									
WEL	e(P*)	07 32	16.5			-1.0		2.65	229	3.9		
	(Pg)		20.5			-4.2						
	Sn		44			-0.2						
COB	Pn	07 32	28			-1.7		3.89	245		4.4	4.0
	P*		38			-0.6						
	e		46									
	eS*	33 28				-1.3						
KKZ	Sn	07 33	17			0.2		4.00	223			
CMZ	Sn	07 33	48			-1.8		5.38	220		3.6	4.5
KAI								5.42	235	3.9		
RHP	Sn	07 34	29			-2.3		7.11	228			
OMZ								7.31	219			4.1

AMPLITUDES:	TUA	4.5	2.4	GNZ	5.0	24	WNZ	2.1
	WTZ	4.3	6.3	MNG	5.0	10	ECZ	0.5 0.6
	KRP	1.6	1.7	TNZ	0.6	1.0	WEL	0.5
	COB	0.9	1.3	KKZ	0.3	1.0	CMZ	0.1 1.3
	KAI	0.1		OMZ		0.3		

FELT: Patoka (52) and Mt Vernon (60)

AUG 09 16^h29^m14^s.1 40°.95s 175°.02E 33 km 80/ 463
 ± 0.3 0.02 0.03 R S.E. of RES. 1.2 M = 3.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KIW	iP*	16	29	19.7	D	-0.2	100	0.12	316			
CAW	iP*	16	29	21.0	U	0.7	100	0.16	167			
WDW	iP*	16	29	22.5	U	0.5		0.31	184			
MRW	iP*	16	29	22.5	D	-0.2		0.37	220			
WEL	iP*	16	29	22.7	DNW	-0.2	100	0.39	209	4.0		
	S*			30.5			1.2	100				
MTW	iPn	16	29	23.8	U	0.4	100	0.42	120			
BHW	iPn	16	29	24.1	D	0.0	100	0.47	194			
MNG	iPn	16	29	23.1	D	-1.1	100	0.49	47			
	e(Sn)			29.5		-2.1						
MOW	iPn	16	29	24.9	U	0.4		0.50	160			
BLW	iPn	16	29	25.4		0.3	100	0.54	141			
TCW	iPn	16	29	25.1	D	-1.0	100	0.62	245			
CAZ	ePn?	16	29	31.5		1.3		0.92	88			
	eP*			35		3.7						
	iSn			43.8	U	1.7	99					
	S*			51.5		7.6						
COB	Pn	16	29	39.8		-1.5	99	1.74	265	4.1	4.1	
	Sn			30 03		1.2	100					
KKZ	Pn	16	29	41		-0.9	100	1.77	214			
	P*			48		2.3						
CNZ	iPn	16	29	41.6		-0.6	100	1.80	13			
	e(Sn)			30 05		1.8						
NGZ	Pn	16	29	42.0		-0.5		1.83	15			
	S*			30 09.5		-1.2						
TNZ	Pn	16	29	43		0.4	100	1.83	344	3.8	4.3	
	P*			49		2.4						
	Sn			30 06		2.0	99					
TRZ	Pn	16	29	42		-2.4	98	1.96	45	4.1	3.9	
	P*			49.5		0.6						
	S*			30 15		0.2	100					
WNZ								2.47	20		4.3	
TUA	Pn	16	29	51.5		-3.0		2.70	38		3.8	
	P*			30 02		0.6						
KRP	Pn	16	29	57.5		-1.8		3.05	8	4.6	4.7	
	P*			30 09		1.7						
	eSn			38		4.7						
	S*			51		3.8						
KAI								3.13	239	3.9		
CMZ	e(P*)	16	30	11		1.5		3.18	213		3.1	3.9
	e(Sn)			35		-1.3						
GNZ	ePn	16	29	57.5		-4.7		3.27	46	3.8	3.6	
	e			30 22.5								
	Sn			37.5		-1.0						
WTZ	Pn	16	30	01		-2.1		3.33	28	3.7		
	P*			13		0.8						
RHP	ePn	16	30	22		-1.4		4.82	228			

P*	32	-5.5			
Sn	31 15	-0.9			
OMZ			5.10	215	3.4
MSZ	e(Sn) 16 31 51	-3.2	6.42	232	3.8 4.0
AMPLITUDES:	WEL 29	COB	2.5 9.0	KKZ	1.4 1.0
	TNZ 0.6 2.6	TRZ	1.2 1.1	WNZ	0.2
	TUA 0.3	KRP	1.8 1.9	KAI	0.3
	CMZ 0.1 1.0	GNZ	0.5 0.5	WTZ	0.5
	OMZ 0.1	MSZ	0.2 0.6		

FELT: Whitby (68), Tararua (65) MM V and Levin, Eastbourne,
Lower Hutt and Pukerua Bay (68) MM IV

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AUG 09 16^h49^m52^s.0 32°.29S 179°.18W 33 km M = 4.5
± 3.8 0.29 0.66 R S.E. of RES. 2.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	Pn	16	51	11		-2.4	100	5.71	198					4.8
WTZ	ePn	16	51	23.5		-0.7	100	6.50	208					4.7 4.4
	e			26.5										
	Sn			52 32		-2.0	100							
GNZ	Pn	16	51	28.5		0.9	100	6.74	199					4.5 4.6
	Sn			52 42		2.0	100							
KRP	Pn	16	51	34.5		2.1	100	7.10	216					4.6
TRZ	Pn	16	51	44		0.0		7.95	203					4.5 4.8
	e			53 03										
	Sn			09		0.2								
NGZ	e(Pn)	16	51	45.5		-0.3		8.08	210					
MNG	ePn	16	51	56.5		-6.8		9.36	206					4.5 4.4
	e			58.5										
	Sn			53 33.5		-9.4								
WEL	Sn	16	53	52		-11.3		10.21	207	4.4				
COB	eSn	16	54	06		-14.3		10.92	214					3.8
KKZ	Sn	16	54	26		-10.6		11.59	207					
AMPLITUDES:	ECZ			0.4		WTZ		1.3 0.5	GNZ					0.6 1.1
	KRP			0.2		TRZ		0.2 0.6	MNG					0.6 0.7
	WEL			0.1		COB		0.1	KKZ					0.1

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AUG 10 10^h08^m45^s.2 36°.56S 177°.57E 165 km M = 3.7
± 0.3 0.05 0.04 5 S.E. of RES. 0.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	e	10	09	19.5				1.38	146					3.3 3.6
	(S)			39		1.2								
	e			48										
WTZ	P	10	09	16.3	U	0.1	100	1.50	198					3.5 3.4
	S			40		0.0	100							
GNZ	P	10	09	22.8		-0.1	100	2.12	170					4.1 4.0
	S			52		0.0	100							
KRP	P	10	09	23		0.0	100	2.12	229					2.7*
TUA	eS?	10	09	51		-4.2		2.28	188					3.6
TRZ	e(S)	10	10	06		-6.3		3.05	191					4.1
MNG	P	10	09	44		-7.5		4.37	201					3.7 3.5
	eS			10 31		-11.7								
COB	eS	10	11	03		-15.6		5.89	218					2.4*
AMPLITUDES:	ECZ			0.2 0.4		WTZ		0.7 0.5	GNZ					1.7 2.2
	KRP			0.3		TUA		0.2	TRZ					0.7

		MNG	0.5	0.4	COB	0.1								
AUG 10		17 ^h 40 ^m 54 ^s .3	39°.14s	174°.87E	222 km	M = 3.8	80/ 466							
		± 0.9	0.04	0.05	6	S.E. of RES. 1.1								
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TNZ	P	17	41	24		0.3	100	0.39	262		2.7*	2.5*		
	S			47		0.6	100							
CNZ	P	17	41	25.8		1.7		0.53	97					
	S			48		0.8	100							
NGZ	iP	17	41	26.1		1.8	99	0.58	95					
	(S)			46		-1.5								
KRP	P	17	41	28		-0.6	100	1.31	23		2.9*			
	S			55		-0.3	100							
MNG	iP	17	41	32.1		1.4	99	1.56	163		4.2	4.2		
	S			58.5		-0.2	100							
TRZ	P?	17	41	33		2.2		1.57	106		3.6	3.8		
	e(S)			42 03		4.1								
WTZ	P	17	41	35		-0.0	100	2.02	56		3.3	3.4		
	S			42 05		-1.3	99							
WEL	S	17	42	08		-0.7	100	2.15	182	4.1				
GNZ	P	17	41	41		1.0	100	2.51	80		4.0	4.1		
	S			42 14.5		-0.9	100							
COB	iP	17	41	40.0	U	-0.4	100	2.55	219		4.1*	3.2*		
	S			42 15		-1.2	99							
KAI								4.29	217	3.0*				
AMPLITUDES:		TNZ	0.1	0.1	KRP	0.6	MNG	5.5	8.0					
		TRZ	0.2	0.7	WTZ	0.2	0.3	WEL	0.6					
		GNZ	0.8	1.9	COB	2.5	1.2	KAI	0.1					

		0.1	0.4	COB	0.1									
AUG 11		12 ^h 08 ^m 27 ^s .0	37°.71s	179°.35W	12 km	M = 4.0	80/ 467							
		± 1.6	0.11	0.11	R	S.E. of RES. 1.4								
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	ePn	12	08	55.5		0.2	100	1.66	270		4.1	4.5		
	P*			58		1.4								
	e(Pg)		09	06		5.2								
	Sn			18		1.5	100							
	e(Sg)			25		1.7								
GNZ	Pn	12	09	03		-0.5	100	2.27	245		3.9	4.1		
	P*			08		1.1								
	Sn			32		1.0	100							
WIZ	ePn	12	09	11		0.9	100	2.75	273					
	ePg			23		0.3								
	e			28										
	Sn			42		-0.5	100							
WTZ	ePn	12	09	10.7		-1.5	100	2.92	263		4.1	4.3		
	e			21										
	ePg			29		3.1								
	Sn			44		-2.3	99							
TUA	eP*	12	09	21		2.2		2.97	247		3.7	4.1		
	Sn			48		0.4	100							
	(S*)			53		-4.6								
TRZ	eP*	12	09	26		-2.2		3.52	237		4.0	4.3		
	e(Sn)			10 06		5.0								
KRP	ePn	12	09	29.5		1.6	99	4.06	265		3.9			
	(Sn)			10 10		-3.8								

CNZ	Pn	12 09 30	-0.8	100	4.27	248					
MNG	Pn	12 09 38	-2.2		4.96	233			3.8	4.1	
	eP*	46	-6.8								
	Sn	10 36.5	0.9								
WEL	eSn	12 10 57.5	2.1		5.79	230	3.9				
COB	ePn	12 10 06	-2.0		7.00	239			3.9	3.7	
	Sn	11 28	3.4								
KKZ	Sn	12 11 26	-1.4		7.12	226					
AMPLITUDES:	ECZ	1.0 2.7	GNZ	1.2 3.0	WTZ	1.6 2.0					
	TUA	0.2 0.5	TRZ	0.3 1.0	KRP	0.3					
	MNG	0.5 1.3	WEL	0.1	COB	0.1 0.2					
	KKZ	0.1									

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AUG 11 13^h15^m33^s.1 37°.55s 179°.28w 12 km M = 3.8
 ± 1.9 0.11 0.12 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	ePn	13	16	04		1.7	99	1.74	265		3.6	4.1
	e(Pg)			13		4.8						
	Sn			26		1.9	99					
	S*			32		5.3						
GNZ	Pn	13	16	11		-0.3	100	2.39	242		3.8	3.9
	Pg			21		-0.5						
	Sn			40		0.0	100					
WIZ	Sn	13	16	50		0.0	100	2.81	269			
WTZ	ePn	13	16	18.5		-0.9	100	2.99	261		3.9	4.0
	Sn			52		-2.3	99					
TUA	ePn	13	16	20		-0.7	100	3.09	245			3.7
	P*			28		1.1						
	Sn			56		-0.5	100					
	S*			17 01		-6.2						
TRZ	Sn	13	17	11.5		1.2	100	3.65	236			4.2
MNG	Pn	13	16	45		-3.2		5.10	231		3.6	3.7
	Sn			17 42		-3.1						
WEL	Sn	13	18	02		-3.0		5.93	229	3.9		
COB	eSn	13	18	30		-3.8		7.14	238			3.4
KKZ	eSn	13	18	34		-3.1		7.27	226			
AMPLITUDES:	ECZ	0.3 1.0	GNZ	1.0 1.9	WTZ	1.0 1.0						
	TUA	0.2	TRZ	0.7	MNG	0.3 0.4						
	WEL	0.1	COB	0.1	KKZ	0.1						

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AUG 11 14^h27^m58^s.8 33°.17s 178°.42w 33 km M = 4.3
 ± 2.4 0.21 0.45 R S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	e(P*)	14	29	26		-1.8		5.16	208		4.6	
WIZ	ePn	14	29	20		0.6	100	5.64	218			
WTZ	Pn	14	29	24.5		-1.0	100	6.10	217		4.3	4.2
	e			30 27								
	Sn			29		-2.3	99					
GNZ	Pn	14	29	26		-0.8	100	6.18	207		4.4	4.3
	Sn			30 33		-0.4	100					
TUA	Pn	14	29	33.5		-0.0	100	6.69	211		4.4	4.4
	Sn			30 48		2.7	99					
KRP	ePn	14	29	37		1.2	100	6.85	224		4.6	
TRZ	eSn	14	31	06.5		2.8		7.44	210			4.5
MNG	ePn	14	30	01.5		-2.3		8.90	212		3.9	4.2

AMPLITUDES: ECZ 2.3 4.8 GNZ 1.8 2.5 WTZ 3.7
 KRP 0.6 GBZ 1.2 MNG 0.2

AUG 15 21^h30^m41^s.4 36°.03s 179°.46E 195 km 80/ 472
 M = 4.3
 ± 1.2 0.09 0.15 13 S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	P	21	31	18.0		0.0	100	1.82	203					4.1
WIZ	iP	21	31	21.2		-2.6		2.37	230					
WTZ	P	21	31	28.0		-0.7	99	2.78	225					4.6
GNZ	P	21	31	29.5		-0.1	100	2.85	203					4.7 4.0
	S		32	06.8		0.0	100							
TUA	P	21	31	36.2		0.8	99	3.33	213					4.6
KRP	P	21	31	39.8		0.3	100	3.67	238					3.1*
	eS		32	22		-2.4								
MNG	eP	21	32	03.2		-0.4	100	5.55	213					3.7
	e		33	07.8										

AMPLITUDES: ECZ 0.8 WTZ 3.0 GNZ 4.1 1.3
 TUA 0.9 KRP 0.5 MNG 0.3

AUG 16 10^h52^m35^s.1 37°.94s 177°.03E 33 km 80/ 473
 M = 4.0
 ± 0.5 0.03 0.06 R S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P*	10	52	43.8		3.2	98	0.05	216					
	eS*			50.2		5.6								
WIZ	P*	10	52	44.3		-0.2	100	0.43	17					
	S*			51.8		0.4	100							
TUA	P*	10	52	49.7		-1.8	100	0.87	174					3.6 3.9
	S*		53	05.8		2.1	100							
GNZ	Pn	10	52	51.3		-1.7	100	1.05	132					3.9 4.2
	iP*			55.0		0.5								
	Sn		53	06.5		0.2	100							
KRP	Pn	10	52	55.2		0.4	100	1.18	270					3.8
ECZ	Pn	10	52	55.8		0.4	100	1.22	79					3.9 4.3
	S*		53	17.8		3.8								
TRZ	eP*	10	53	03.8		-0.3	100	1.62	186					3.6 4.1
	eSn			23.2		3.2								
	S*			33.2		7.5								
CNZ	Pn	10	53	03.2		1.1	100	1.71	222					
GBZ	iPn	10	53	05.3		-2.3	99	2.12	324					
TNZ	ePn	10	53	13.5		1.8	100	2.42	238					4.6
MNG	ePn	10	53	16.8		-1.9	100	2.93	204					4.0 4.1
	iP*			23.0		-3.4								
	eSn			50.2		-1.4								
	iS*		54	04.8		0.0								
WEL	eSn	10	54	10		-1.7	100	3.77	207					3.8

AMPLITUDES: WIZ 3.2 5.6 TUA 1.8 4.1 GNZ 6.2 19
 KRP 2.7 ECZ 1.2 3.6 TRZ 0.6 2.8
 CNZ 0.6 GBZ 0.6 TNZ 0.6
 MNG 2.1 3.2 WEL 0.2

AUG 17 15^h02^m22^s.4 39°.73s 176°.22E 43 km 80/ 474
 M = 3.0
 ± 0.6 0.03 0.03 7 S.E. of RES. 1.0

KAI	S*		42.7		-0.3	100						
RHP	S*-P*		13.8		0.4	100	0.98	351	3.6			
	P*	19 15	39.6		-1.1	99	1.26	241				
	i		41.3									
THP	S*		57		-0.6	100						
	Pn	19 15	43.7		0.2	100	1.63	229				
	iP*		47.0		0.1	100						
	i		48.2									
OMZ	S*	16	08.8		0.3	100						
	Pn	19 15	43.5		-0.4	100	1.66	197	4.2	4.1		
	iP*		47.2		-0.1	100						
	S*	16	10.0		0.7	100						
KKZ	Pn	19 15	47.0		0.2	100	1.87	56				
	e		56.5									
	eSn	16	12.0		3.3							
	iS*		16.6		0.9							
DNZ	P*	19 16	03.0		1.4	99	2.50	198				
	eS*		38.2		3.7							
	i		41.0									
ROX	eP*	19 16	06		3.1		2.57	219	4.2	4.1		
	eS*		35.6		-1.0							
	i		40.2									
WEL	eSn	19 16	42		0.9	100	3.22	48	3.8			
AMPLITUDES:	CMZ	17 20	KAI	1.6			RHP	42	61			
	THP	22 44	OMZ	3.3	5.0	KKZ	0.7	1.1				
	DNZ	1.7	4.9	ROX	1.5	3.0	WEL	0.2				

FELT: Lake Coleridge (100) MM IV

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AUG 20 08^h15^m19^s.8 35°.79s 177°.83E 219 km M = 3.9
 ± 4.1 0.31 0.68 73 S.E. of RES. 2.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	08	16	02.2		2.2	100	1.99	163			
WTZ	eP	08	16	02		-1.0	100	2.29	197		3.6	3.6
	eS			40		3.5						
GNZ	P	08	16	08.1		-1.1	100	2.85	177		4.2	4.3
	e			40								
	S			45.2		-2.4	99					
TRZ	eS	08	17	11.2		2.9	99	3.84	192			3.9
MNG	eP	08	16	37		-0.4	100	5.17	200		3.6	3.7
	eS			17 37		-0.8	100					

AMPLITUDES: WTZ 0.4 0.4 GNZ 1.1 2.6 TRZ 0.3
 MNG 0.3 0.4

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AUG 20 15^h48^m51^s.0 38°.35s 176°.01E 168 km M = 3.7
 ± 1.4 0.06 0.07 10 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	eP	15	49	14		-0.8	100	0.57	318		2.8*	
	eS			34.7		1.5	100					
WTZ	P	15	49	15.3		-1.2	100	0.85	65		3.4	3.5
	eS			34		-2.2	99					
TUA	P	15	49	18.2		0.6	100	1.01	118		3.7	3.7
	S			39.2		1.0	100					
TRZ	P	15	49	22.9		2.0	99	1.36	153		4.1	3.6
	(S)			48.5		4.7						

INSTRUMENTAL DATA

GNZ	P	15 49 24.0	0.7	100	1.60	101	3.5	3.8
	e	41						
	eS	47	-1.2	100				
ECZ	eP	15 49 28	-0.8	100	2.11	73	3.6	3.7
	eS	59.5	1.6	100				
MNG	iP	15 49 30.7	-0.5	100	2.30	190	4.2	3.9
	S	50 01.2	-0.8	100				
WEL	S	15 50 17.0	-2.2		3.09	198	4.0	
AMPLITUDES:	KRP	0.7	WTZ	0.8	1.1	TUA	0.6	0.7
	TRZ	1.0	0.8	GNZ	0.7	2.0	ECZ	0.2
	MNG	5.2	2.7	WEL	0.3			

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AUG 20 21^h30^m51^s.0 37°.11s 177°.54E 197 km M = 4.1
 ± 1.0 0.04 0.06 7 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	P	21 31	16.5			-1.4	99	0.50	214			
WTZ	P	21 31	20.1			-0.2	100	0.97	207		4.3	4.0
	i		39.0									
	S		41.9			-1.2	100					
ECZ	eP	21 31	21			0.6	100	0.99	126		3.6	4.0
	S		43.5			0.2	100					
GNZ	P	21 31	26.2			0.8	100	1.57	166		4.4	4.5
	e		45.0									
	S		52.0			0.1	100					
TUA	eS	21 31	55			0.6	100	1.72	190		3.8	4.0
	e		59.5									
KRP	P	21 31	28.9			1.5	99	1.79	242		3.2*	
	S		57.0			1.4	99					
GBZ	iP	21 31	26.6			-1.8	99	1.88	298			
AUC	P	21 31	33.0			1.0	100	2.23	276			
MNG	P	21 31	51.7			0.2	100	3.85	204		4.0	3.9
	S		32 38			-0.2	100					
WEL	eS	21 32	56			-1.2	100	4.69	206	4.2		
AMPLITUDES:	WIZ	0.6	WTZ	4.5	2.7	ECZ	0.4	1.1				
	GNZ	4.8	8.1	TUA	0.4	0.7	KRP	1.0				
	GBZ	4.7	AUC	0.6	MNG	1.1	1.1					
	WEL	0.2										

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AUG 22 08^h26^m09^s.6 39°.57s 174°.37E 229 km M = 3.8
 ± 1.9 0.09 0.14 14 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	eP	08 26	43.8			1.4	100	0.99	73			
	eS		27 09			1.0	100					
MNG	i(P)	08 26	48.3			3.4		1.35	141		3.8	4.3
	S		27 11.5			-0.8	100					
WEL	S	08 27	17			-0.9	100	1.74	170	3.7		
KRP	eP	08 26	49			-0.5	100	1.88	29		2.5*	
TRZ	eS	08 27	22			1.5	100	1.90	90			3.6
COB	S-P		28			-3.4		1.96	219		3.6*	3.0*
TUA	eS	08 27	28			0.5	100	2.29	71			3.9
WTZ	eS	08 27	30.8			-2.3	99	2.59	53		3.6	
GNZ	eP	08 27	02			0.9	100	2.99	73		3.6	4.1
	S		40.3			-0.8	100					
AMPLITUDES:	GSZ	1.0	2.1	MNG	2.5	10	WEL	0.3				

KRP	0.2	TRZ	0.4	COB	1.0	0.8
TUA	0.3	WTZ	0.3	GNZ	0.3	1.5

Small shock near CAZ obscures MNG P.

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AUG 22 10^h57^m35^s.0 33°.16S 179°.78E 570 km M = 4.7
 ± 2.0 0.26 0.54 29 S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	10	59	03		-0.6	100	4.63	192					4.6
WTZ	P	10	59	07		-2.3	99	5.33	204					4.9 4.4
	eS	11	00	25		0.9	100							
GNZ	P	10	59	11.5		-0.7	100	5.66	194					4.9 4.9
	S	11	00	30		0.6	100							
KRP	eP	10	59	14.7		0.5	100	5.88	215					3.2*
TRZ	eP	10	59	24.3		1.7	99	6.81	200					4.7 4.6
	e(S)	11	00	55		6.6								
MNG	P	10	59	37.2		1.3	100	8.21	204					4.5 4.6
	S	11	01	11		-1.5	100							
WEL	e(S)	11	01	37		9.5		9.05	205	4.7				
COB								9.71	213					3.2*
AMPLITUDES:	ECZ	0.3			WTZ	1.2	0.4	GNZ	1.1	1.7				
	KRP	0.3			TRZ	0.2	0.4	MNG	0.8	1.2				
	WEL	0.2			COB	0.3								

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AUG 22 13^h04^m55^s.6 33°.55S 178°.05W 230 km M = 4.4
 ± 1.6 0.18 0.35 30 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P	13	06	23.4		-0.5	100	5.99	221					4.6 4.3
	eS	07	32			-0.8	100							
GNZ	eP	13	06	25		1.0	100	6.00	211					4.4 4.3
	S	07	32			-1.0	100							
TUA	P	13	06	31.8		1.0	100	6.53	215					4.8 4.6
	eS	07	46			0.8	100							
KRP	eP	13	06	35		0.7	100	6.80	228					3.1*
TRZ	e(P)	13	06	45		4.7		7.28	213					4.6 4.2
	eS	08	03			0.7	100							
CRZ	e(P)	13	06	50		3.5		7.76	261					3.5*
MNG	eP	13	06	57		-2.3	98	8.76	214					3.9 4.0
	eS	08	35			-1.1	100							
WEL	eS	13	08	57		1.2	100	9.61	214	4.7				
COB								10.51	222					3.0*
AMPLITUDES:	WTZ	0.8	0.4		GNZ	0.5	0.6	TUA	0.5	0.3				
	KRP	0.3			TRZ	0.2	0.2	CRZ	0.2					
	MNG	0.2	0.3		WEL	0.2		COB						0.2

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AUG 22 16^h32^m49^s.8 33°.15S 178°.24W 33 km M = 4.2
 ± 1.3 0.12 0.26 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	ePn	16	34	17.4		-0.6	100	6.20	218					4.0 4.1
	eSn	35	25			0.2	100							
GNZ	ePn	16	34	19		0.0	100	6.27	208					4.2 4.2
	Sn	35	26.8			0.3	100							
TUA	ePn	16	34	25		-0.9	100	6.78	212					4.5 4.4
	eSn	35	39			0.4	100							

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KRP	ePn	16 34 29	0.6	100	6.97	225	4.6			
TRZ	eSn	16 35 58	1.1	100	7.54	211	4.3			
MNG	ePn	16 34 57	0.8	100	9.00	212	4.0			
	eSn	36 30	-2.0	97						
AMPLITUDES:		WTZ	0.3	0.3	GNZ	0.3	0.5	TUA	0.2	0.2
		KRP	0.2		TRZ		0.2	MNG		0.3

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AUG 22 17^h44^m19^s.1 43°.53s 168°.43E 5 km M = 3.6
 ± 1.5 0.06 0.08 R S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	Pg	17	44	40.5		-2.7	99	1.20	198		3.4	3.6
	i			47.0								
	Sg			59.4		0.0	100					
RHP	ePg	17	44	47.1		1.2	100	1.33	116			
	i			48.6								
	Sg			45 03.3		-0.5	100					
THP	Pg	17	44	50.9		2.3	100	1.47	134			
	i			57.8								
	Sg			45 05.3		-3.0	99					
ROX	ePg	17	45	02.8		2.4	99	2.04	162		3.6	3.6
	eSg			29.5		1.5	100					
	Sn-Pn			28		-0.6		2.33	195			
OMZ	S*-P*			33		1.8		2.36	132		3.6	3.8
KAI	e(Pg)	17	45	17.5		9.8		2.41	66	3.9		
	(Sg)			48		7.8						
	P*	17	45	07.8		-0.4	100	2.77	148			
DNZ	ePg			14.8		-0.2	100					
	e			24								
	eSn	17	45	44.5		0.9		3.07	92			3.4
OBZ	e(Pn)	17	45	16		4.3		3.38	184			3.3
	e(Sn)			56		4.8						
								4.02	54			3.6
COB								6.01	63		4.0	
MNG	ePn	17	45	47		-0.5	100					
	e			53								
	eSn			46 57		2.7						
AMPLITUDES:		MSZ		2.5	6.8	RHP		11	30	THP	5.8	11
		ROX		0.6	1.3	BRZ		0.4	0.9	OMZ	0.4	1.4
		KAI	0.6			CMZ			0.3	OBZ		0.4
		COB		0.5		MNG		0.5				

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AUG 23 13^h35^m05^s.5 33°.79s 175°.90w 33 km M = 4.6
 ± 3.9 0.20 0.41 R S.E. of RES. 2.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	e	13	36	43				5.97	228		4.7	
GNZ	eP	13	36	45		1.7	100	6.90	224		4.5	4.3
	e			52								
	eS			38 01.5		4.1	99					
WTZ	eP	13	36	45.8		-0.7	100	7.14	232		4.4	4.3
	e			54.8								
	eS			38 01		-2.0	100					
GBZ	e(P)	13	36	59		7.8		7.48	249			
TUA	eP	13	36	49		-2.8	100	7.52	226		4.7	4.7
	e			59								
	eS			38 15		2.7	100					

	i	47 09.8										
OMZ								6.05	213		4.4	4.3
CRZ	Pn	16 46	56.0			0.7	100	6.14	337		4.7	4.7
	Sn	48	01			-0.4						
MSZ	Pn	16 47	15.0			4.0	82	7.30	229		5.1	4.8
	i		25.8									
	Sn	48	25.5			-3.7	90					
AMPLITUDES:	WEL	30				TUA	7.5	20	GNZ		5.0	20
	WTZ	7.0	26			KKZ	3.6	6.5	AUC		2.1	3.6
	ECZ	1.6	5.7			GBZ	2.6		KAI	1.6		
	CMZ	0.8	6.0			OMZ	0.4	0.6	CRZ		0.5	0.5
	MSZ	3.7	3.0									

FELT: Widely. Max MM V at Waitotara (56), Okoia (57), Feilding (62).

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AUG 24 17^h38^m03^s.1 40°.86S 172°.87E 221 km M = 4.0
 ± 0.6 0.04 0.07 7 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
COB								0.25	204					
WEL	eP	17 38	39			0.1	100	1.49	107	3.9				
	eS		39	07.0		0.3	100							
KKZ	eP	17 38	41			0.5	100	1.68	159					
	e		39	06.0										
	eS			10.0		0.6	100							
MNG	eP	17 38	44.9			1.4	99	2.00	84		3.8	4.2		
	e		39	09.3										
	eS			14.5		-0.2	100							
KAI	S	17 39	13.6			-1.0	100	2.00	213	3.8*				
TNZ	eP	17 38	44.5			0.7	100	2.03	35		3.2*	3.4*		
	eS		39	15		-0.3	100							
CMZ	S	17 39	27.0			-1.6	99	2.74	184				3.2*	
TRZ	eP	17 38	59			1.3	100	3.29	68		4.0	4.0		
	eS		39	41		0.9	100							
KRP	e(P)	17 39	10			8.9		3.58	36		2.9*			
	eS		46			-0.1	100							
	e		58											
RHP	P	17 39	05.5			1.2	100	3.84	212					
	S		51.4			-0.3	100							
WTZ	eP	17 39	09			-0.8	100	4.29	49		3.8	3.7		
	e		56											
	eS		40	01		-0.6								
GNZ	P	17 39	13.5			0.5	100	4.54	63		4.3	4.0		
	eS		40	04.5		-2.8	92							
ECZ	eP	17 39	23			-1.1	100	5.43	56		4.3			
AMPLITUDES:	COB		3.6	1.4		WEL	0.7			KKZ		0.4	0.8	
	MNG		1.7	6.5		KAI	1.2			TNZ		0.2	0.5	
	CMZ			0.7		TRZ		0.2	0.5	KRP		0.3		
	RHP		5.7	1.4		WTZ		0.2	0.2	GNZ		0.7	0.6	
	ECZ		0.2											

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AUG 24 20^h04^m00^s.7 40°.38S 176°.34E 33 km M = 3.9
 ± 0.5 0.03 0.05 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
CAZ	Pn	20 04	13.0			1.6	100	0.53	189					

	i		14.8									
	Sn		23.8	4.5								
MNG	Pn	20 04	12.0	-1.7	99	0.69	250					
TRZ	Pn	20 04	15.7	-0.9	100	0.91	24					
GSZ	Pn	20 04	21.0	-0.2	100	1.25	332					
	Sn		36.5	-0.1	100							
NGZ	Pn	20 04	22.0	-0.3	100	1.32	335					
	Sn		38.8	0.4	100							
WEL	Pn	20 04	27	2.4	99	1.49	232	4.0				
	Sn		41.4	-1.1	100							
TUA	ePn	20 04	27	-0.4	100	1.69	22		3.8	3.7		
	eP*		35	4.1								
	eSn		46.8	-0.6	100							
TNZ	ePn	20 04	32.8	2.3	99	1.93	308		3.5	3.9		
	eSn		53	0.1	100							
GNZ	Pn	20 04	32.8	-1.1	100	2.17	37		3.5	3.8		
	Sn		59.8	0.9	100							
WTZ	eP*	20 04	44.5	0.8		2.45	12		3.8			
	e		48.0									
KRP	eP*	20 04	44.0	-1.1		2.54	346		4.2	4.2		
	S*		05 15	-3.4								
COB						2.83	254		4.3	3.8		
KKZ	eP*	20 04	52	1.5		2.84	224					
	e		54.5									
	Sn		05 14.0	-1.1	100							
CMZ	eP*	20 05	13.5	-0.4		4.23	220		3.7	4.0		
	Sn		47.2	-1.0								
KAI	Sn	20 05	47	-2.5		4.28	238	4.0				
AMPLITUDES:												
	CAZ		10	29	GSZ	11	NGZ		12	33		
	WEL	1.7			TUA	0.7	0.6	TNZ	0.3	0.9		
	GNZ		0.6	1.6	WTZ	1.2		KRP	1.0	0.7		
	COB		1.5	1.6	KKZ	0.6	0.9	CMZ	0.2	0.6		
	KAI	0.2										

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AUG 24 22^h53^m38^s.2 40°.08S 175°.57E 33 km M = 3.8
 ± 0.3 0.02 0.03 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	Pn	22 53	48.7			-0.5	100	0.54	187			
	eSn		57.8			0.6	100					
GSZ	Pn	22 53	51.8			-0.9	100	0.80	1			
	Sn		54 04.0			0.6	100					
CNZ	Pn	22 53	53.0			-0.8		0.88	359			
	Sn		54 04.3			-1.0						
NGZ	Pn	22 53	53.2			-0.8	100	0.90	2			
	Sn		54 07.2			1.5	99					
CAZ	ePn	22 53	56.3			1.3	99	0.96	149			
	i		57.8									
	eSn		54 08.2			0.8	100					
	i		16.5									
TRZ	ePn	22 54	00.3			3.5		1.10	62			
	eSn		12.8			2.1						
	e		17									
TNZ	ePn	22 53	58.2			-1.0	100	1.28	314		4.0	3.9
	Sn		54 16.0			1.1	100					
WEL	ePn	22 53	59.5			-0.7	100	1.35	206			
	Sn		54 16.2			-0.4	100					
TUA	ePn	22 54	05.4			-0.5	100	1.76	45		3.6	3.7

KRP	eS*	33.5	0.4	100				
	Pn	22 54 10.8	-0.4		2.15	359	4.0	4.3
	eP*	16.0	-0.2					
	eSn	35.8	-0.1					
WTZ	e	42.0						
	ePn	22 54 14.2	0.1		2.37	28	3.4	3.7
	eP*	19.0	-0.9					
	eSn	43	1.9					
GNZ	Sn	22 54 40.3	-1.2	100	2.38	54		
KKZ	ePn	22 54 21	1.9		2.74	211		
	eP*	28	1.9					
KAI					3.98	231	3.9	
AMPLITUDES:		GSZ	23 36	CNZ	29	NGZ	29 34	
		TNZ	2.0 2.2	WEL	1.4 2.1	TUA	0.4 0.6	
		KRP	1.1 1.6	WTZ	0.4 0.8	KAI	0.2	

AUG 25 02^h20^m58^s.5 36°.27S 177°.52E 244 km M = 4.1
 ± 1.2 0.05 0.10 9 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	02 21	36.8			-0.8	100	1.64	150		4.0	4.2
	eS		22 08.3			0.4	100					
GBZ	iP	02 21	38.6			0.9	100	1.65	271			
WTZ	P	02 21	39.4			0.8	100	1.76	194		4.1	3.8
	eS		22 09.5			-0.2	100					
KRP	eP	02 21	41			-2.5	87	2.29	223		2.9*	
TUA	eP	02 21	46.7			0.5	100	2.55	186		4.1	4.2
	eS		22 23			-0.2	100					
CNZ	e(P)	02 21	59			4.4		3.32	208			
MNG	eP	02 22	10.5			0.4	100	4.63	200		4.2	4.0
	eS		23 06.5			0.6	100					
WEL	eS	02 23	24			-0.1	100	5.45	202	4.2		
AMPLITUDES:		ECZ	0.5 0.9	GBZ	1.7	WTZ	1.3 0.8					
		KRP	0.4	TUA	0.4 0.5	MNG	1.2 1.1					
		WEL	0.2									

AUG 25 09^h14^m17^s.2 40°.07S 175°.51E 33 km M = 3.6
 ± 0.3 0.02 0.04 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	Pn	09 14	27.6			-0.5	100	0.54	182			
	eSn		37.0			0.8	100					
GSZ	Pn	09 14	30.9			-0.7	100	0.80	4			
	Sn		42.2			-0.1	100					
CNZ	Pn	09 14	31.8			-0.8		0.87	2			
	Sn		43.6			-0.5						
NGZ	Pn	09 14	32.2			-0.7	100	0.89	5			
	Sn		45.0			0.4	100					
CAZ	Pn	09 14	36.0			1.8	99	0.99	147			
	iSn		48.0			1.0						
TRZ	i		59.0									
	Pn	09 14	36.2			0.0	100	1.13	63		3.1	3.7
TNZ	S*		54.0			0.6	100					
	Pn	09 14	37.2			-0.5	100	1.24	315		3.6	3.9
WEL	e		54.7									
	Sn		56.0			3.0	85					
	Pn	09 14	38.2			-0.7	100	1.34	205	3.8		

TUA	Sn		54.3		-0.9	100							
KRP	ePn	09 14	49.0		-1.0	100	2.15	46			3.6		
	eP*		55.0		-0.1								
	eSn	15	14.5		-0.2	100							
	S*		20		-3.4								
COB							2.35	244			4.0	3.6	
WTZ	ePn	09 14	52.8		-0.4		2.38	29			3.1	3.6	
	Sn		15 20.0		-0.4	100							
GNZ	Sn	09 15	15.5		-5.7		2.41	55				3.1	
KKZ	eP*	09 15	07		2.3		2.72	210					
AMPLITUDES:		GSZ	15 24	NGZ	12 15	CAZ					1.4	2.1	
		TRZ	0.4 2.5	TNZ	0.8 2.2	WEL	1.3						
		TUA		KRP	0.7 0.9	COB					1.0	1.5	
		WTZ	0.2 0.5	GNZ		KKZ						0.3	

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AUG 25 12^h51^m51^s.2 33°.64s 177°.64w 255 km M = 4.6
 ± 1.3 0.16 0.29 20 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	12	53	09		0.1	100	5.10	216		4.4	4.6		
	eS		54	10		0.4	100							
	e			15.5										
WIZ	eP	12	53	16		-0.7	100	5.73	226					
GNZ	eP	12	53	21		-0.4	100	6.11	214		4.5	4.6		
	S		54	32		0.1	100							
WTZ	P	12	53	20.8		-1.2	100	6.16	224		4.7	4.6		
	eS		54	31.5		-1.5	99							
GBZ	e(P)	12	53	26		3.3		6.21	244					
TUA	eP	12	53	29		0.7	100	6.66	218		4.9	4.8		
	eS		54	46		1.6	99							
KRP	eP	12	53	35.0		2.3	98	7.00	230		3.1*			
	eS		54	54		1.9								
MNG	eP	12	53	56		-0.3	100	8.87	216		3.9	4.4		
	S		55	35		0.6	100							
WEL	eS	12	55	53		-0.9	100	9.73	216	4.9				
AMPLITUDES:		ECZ	0.3 0.4	WIZ	0.3	GNZ					0.7	1.2		
		WTZ	0.8 0.8	GBZ	0.3	TUA					0.5	0.4		
		KRP	0.3	MNG	0.2 0.8	WEL	0.3							

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AUG 26 15^h13^m45^s.0 45°.61s 166°.91E 33 km M = 4.0
 ± 0.8 0.03 0.07 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
BRZ	Sn-Pn			09.0		1.7	99	0.48	111					
MSZ	ePn	15 14	04.3			-0.4	100	1.18	38		3.9	4.1		
	e		06.5											
	Sn		20.3			0.9	100							
	i		25.7											
OBZ	Pn	15 14	10.0			0.4	100	1.54	147		4.5	4.0		
	i		11.0											
	Sn		28.8			0.8	100							
THP	Pn	15 14	20.8			-0.1	100	2.37	64					
	eSn		47			-0.9	100							
DNZ	Pn	15 14	23.3			0.1	100	2.54	97					
	Sn		50.5			-1.5	99							
RHP	Pn	15 14	25.9			0.2	100	2.72	57					

KRP	eS*		41.2	-0.2					
	Pn	17 21	19.2	-0.4	100	2.17	359		
	eP*		26.4	1.7					
WTZ	Sn		45.5	1.0	100				
	Pn	17 21	21.5	-0.9	100	2.38	28	4.2	4.7
	e		24.3						
GNZ	eSn		52	2.5					
	Pn	17 21	21.5	-1.0	100	2.38	53	4.9	4.8
KKZ	e		36.5						
	ePn	17 21	26.5	-0.6	100	2.73	211		
WIZ	eP*		36	1.9					
	Pn	17 21	29.2	0.3	100	2.86	27		
AUC	eSn		22 06	5.0					
	ePn	17 21	35.5	0.6	100	3.29	349		
	iP*		42.4	-1.4					
ECZ	i		49.0						
	ePn	17 21	33.5	-1.9	99	3.34	45	4.6	
	Pn	17 21	43.8	0.9	100	3.88	359		
KAI	ePn	17 21	42	-2.1	98	3.97	231	4.8	
	Sn		22 28.0	0.2	100				
CMZ	ePn	17 21	46	-0.2	100	4.12	211	4.2	5.0
	eP*		59.0	1.1					
ONE	Sn		22 30.2	-1.2					
	ePn	17 21	52	1.7		4.43	347		
RHP	Pn	17 22	07.0	-1.0		5.72	224		
	eSn		23 07.5	-2.3					
MSZ	ePn	17 22	25	-4.4		7.29	229	4.8	4.7
	eSn		23 44	-3.5					

AMPLITUDES:	WEL	24		WNZ	1.8	0.8	TUA	4.0	9.0
	WTZ	3.0	8.0	GNZ	12	15	KKZ	2.2	
	WIZ	2.8	3.7	ECZ	0.8		GBZ	1.8	
	KAI	1.7		CMZ	0.7	6.8	RHP	7.0	20
	MSZ	1.6	2.7						

FELT: Widely. MM IV Ohakune (49) to Eastbourne (68)

AUG 26 17^h22^m27^s.1 40°.01S 175°.33E 33 km M = 4.0
 ± 0.8 0.03 0.06 R S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	P*	17	22	39.8		-1.9	100	0.76	15			
	S*			50.5		-1.9	100					
NGZ	P*	17	22	42.2		-1.1	100	0.85	15			
	S*			55.0		-0.1	100					
TNZ	eS*	17	23	04		1.6	100	1.11	318			4.0
CAZ	iS*	17	23	05		2.0	100	1.13	143			
TRZ	eSn	17	23	03.7		0.9	100	1.23	69			4.1
WEL	Sn	17	23	03.3		-2.0	100	1.34	198	4.1		
TUA	eS*	17	23	23		-1.5	100	1.85	50			3.6
KRP	Sn	17	23	26		2.7	99	2.09	4			4.7
WTZ	eSn	17	23	32		1.2	100	2.40	33			3.8

AMPLITUDES:	NGZ	21	28	TNZ	3.7	CAZ	11
	TRZ		5.0	WEL	2.7	TUA	0.4
	KRP		4.0	WTZ	0.6		

AUG 26 17^h38^m41^s.5 40°.13S 175°.56E 33 km M = 3.8
 ± 0.3 0.02 0.04 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	P*	17	38	52.5		0.6	100	0.49	187			
CAZ	Pn	17	39	00.2		2.5	98	0.93	147			
	e			02.0								
	e			19.8								
NGZ	Pn	17	38	57.5		-0.5	100	0.94	3			
	Sn		39	11.2		1.0	100					
TRZ	ePn	17	39	00.3		-0.2	100	1.13	60		3.4	3.9
	i			02.0								
	eS*			18.4		0.9	100					
WEL	ePn	17	39	02.7		-0.1	100	1.30	207	3.8		
	Sn			19.8		1.0	100					
TNZ	Pn	17	39	02.1		-0.8	100	1.31	316		4.0	4.1
	Sn			20.2		1.3	100					
TUA	ePn	17	39	08.2		-1.5	100	1.81	44		3.8	3.7
	eP*			13.0		-0.6						
	i			16.6								
	eS*			36.5		-1.0						
KRP	Pn	17	39	14.2		-0.9	100	2.20	360		3.9	4.5
	eP*			21		0.7						
	Sn			40.7		0.3	100					
	iS*			49		-0.3						
COB								2.36	245		4.2	3.9
WIZ	ePn	17	39	17		-1.0	100	2.41	28		3.4	3.8
	eP*			24		0.1						
	eSn			46		0.6	100					
GNZ	ePn	17	39	16.2		-1.8	99	2.42	53		3.6	3.7
	e			30.0								
	eSn			45.0		-0.5	100					
KKZ	ePn	17	39	23		1.3	100	2.68	211			
	eP*			30		1.4						
CMZ	eSn	17	40	23		-2.6	98	4.09	211			3.6
AMPLITUDES:	CAZ			5.0	6.9	NGZ		26	22	TRZ	0.8	3.7
	WEL	1.5				TNZ		1.8	3.2	TUA	0.6	0.6
	KRP			0.8	2.1	COB		1.8	2.7	WIZ	0.4	1.0
	GNZ			0.5	1.0	KKZ		0.3	CMZ			0.3

FELT: Fielding (62) and Okoia (57) MM IV, Marton (61).

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AUG 27 06^h33^m28^s.4 37°.59S 177°.98E 12 km M = 3.6
 ± 1.0 0.07 0.05 R S.E. of RES. 2.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P*	06	33	36.3		-1.1	100	0.46	103		3.9	3.6
	S*			46.8		2.9	99					
WIZ	P*	06	33	40.0		-0.3	100	0.63	276			
	S*			53.0		4.1	98					
WTZ	P*	06	33	44.4		-0.1	100	0.87	243		3.7	3.5
	e			34 03								
GNZ	P*	06	33	46.0		-1.5	100	1.05	178		3.7	3.6
	S*			34 03.2		1.6	100					
TUA	e	06	33	58				1.38	208		3.4	3.5
	S*			34 12.5		1.1	100					
KRP	Pn	06	33	58.5		-2.2	100	1.96	259		3.9	
	e			34 21								
TRZ	ePn	06	34	02		-1.3	100	2.16	204		3.5	
GSZ	eP*	06	34	12		-0.6	100	2.52	227			
MNG	ePn	06	34	20.5		-2.4	100	3.59	212		3.3	3.4

e	55											
eSn	35 07			2.9								
AMPLITUDES:	ECZ	6.8	4.5	WIZ	5.5	4.8	WTZ	7.2	4.0			
	GNZ	3.5	4.8	TUA	0.4	0.6	KRP	1.0				
	TRZ	0.3		MNG	0.3	0.5						

AUG 27 08^h09^m41^s.2 31°.79s 177°.98w 303 km M = 4.5
 ± 2.8 0.26 0.49 30 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	eP	08	11	28		-0.7	100	7.44	212		4.4	4.5		
	e			12 46										
	eS			52		-1.1	100							
GNZ	eP	08	11	31		0.5	100	7.59	204		4.4	4.6		
	e			12 53										
	eS			57.5		1.2	100							
CRZ	e(P)	08	11	48		9.1		8.27	249		3.5*			
MNG	e	08	12	23.3				10.28	209		4.3	4.4		
	S			13 55		-0.9	100							
WEL	eS	08	14	15		0.2	100	11.13	210	4.8				
COB	eS	08	14	34		1.7	99	11.92	216				3.0*	
KKZ	eS	08	14	44		-1.6	99	12.52	210					
AMPLITUDES:	WTZ	0.3	0.4	GNZ	0.3	0.8	CRZ	0.2						
	MNG	0.4	0.6	WEL	0.2		COB							
	KKZ	0.2												

AUG 27 14^h13^m02^s.2 38°.92s 175°.84E 103 km M = 4.6
 ± 0.5 0.03 0.04 5 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
NGZ	P	14	13	17.0		-0.4	100	0.31	214					
	S			29.0		-0.1	100							
GSZ	P	14	13	18.3		0.4	100	0.40	209					
	S			29.8		-0.1	100							
TRZ	P	14	13	24.0		1.1	100	0.99	130					
KRP	P	14	13	23.4		0.1	100	1.03	346		3.3*	3.5*		
	S			38.5		-0.8	100							
TUA	P	14	13	23.1		-0.2	100	1.03	84					
	S			41.2		1.8	99							
TNZ	P	14	13	26.1		1.1	100	1.17	256		4.0*	4.0*		
	eS			44		1.8								
WTZ	P	14	13	25.8		-0.7	100	1.30	44		4.5			
	S			43		-2.0	99							
MNG	iP	14	13	32.0		0.2	100	1.72	189					
	eS			57		3.1								
GNZ	P	14	13	31.2		-0.7	100	1.73	82					
WIZ	P	14	13	34.8		2.7	97	1.75	38					
	eS			59.5		5.0								
CAZ	P	14	13	36.0		0.6	100	2.01	172					
	S			14 00.0		-0.0	100							
AUC	P	14	13	39.2		0.8	100	2.22	337					
ECZ	P	14	13	41.2		-0.4	100	2.46	61		4.7	4.6		
	e			14 14		3.0								
	e			23										
WEL	P	14	13	40.8		-1.5	100	2.50	199	4.7				
	e			55.3										
	eS			14 11.0		-1.2	100							

COB	e	19							
	P	14 13	50.0	-2.1	99	3.22	227	4.6*	4.2*
KKZ	i		53.0						
	S	14	31.8	2.0	99				
KAI	eP	14 13	58	-2.8		3.86	204		
	S	14	43.6	-1.7					
CMZ	e(P)	14 14	20	4.6		4.93	222	3.9*	
	eS		15 08.0	-3.7					
RHP	S	14 15	12.5	-7.0		5.26	206		4.5*
MSZ	eP	14 14	36	-4.2		6.75	218		
	S		15 48	-8.1					
	eP	14 14	59	-1.8		8.25	223	3.4*	3.2*
	S		16 25	-7.9					

AMPLITUDES:	NGZ	28	35	GSZ	41	32	KRP	2.5	5.3
	TNZ	2.8	3.6	WTZ	10		WIZ	6.0	
	AUC	0.7		ECZ	2.6	2.2	WEL	3.0	
	COB	8.2	10	KKZ	0.5	2.6	KAI	0.8	
	CMZ		7.8	RHP	0.5	4.5	MSZ		0.5 0.6

AUG 27 17^h44^m07^s.3 40°.93s 175°.58E 12 km M = 3.0
 ± 0.5 0.03 0.04 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iP*	17	44	13.1		-0.8	100	0.31	346		2.7	
	S*			18.0		-0.5	100					
CAZ	P*	17	44	15.9		-0.9	100	0.49	87			
	S*			24.5		0.9	100					
WEL	eP*	17	44	20.2		-0.5	100	0.71	240	3.1		
	S*			31.3		0.9	100					
GSZ	eP*	17	44	35.8		-0.8	100	1.65	0			
	S*			45 00.2		1.8	99					
COB	ePn	17	44	40		-2.4		2.16	265		3.2	2.8
	eP*			46		0.6						
	Sn			45 08.2		-0.5						

AMPLITUDES:	MNG	9.0		CAZ	4.8	9.2	WEL	0.9
	GSZ	0.3	0.6	COB	0.2	0.3		

AUG 27 20^h16^m06^s.3 39°.96s 176°.80E 33 km M = 3.6
 ± 0.6 0.03 0.05 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	Pn	20	16	15.3		-0.0	100	0.40	2			
CAZ	Pn	20	16	26.0		1.9	99	1.04	205			
	i(Sn)			34.0		-3.3						
GSZ	i			41.9								
	Pn	20	16	26.5		0.9	100	1.16	306			
TUA	Sn			40.2		0.2	100					
	ePn	20	16	25.0		-0.9	100	1.18	13		3.3	3.7
NGZ	Sn			39.8		-0.8	100					
	Pn	20	16	26.8		0.6	100	1.20	310			
MNG	Sn			42.2		1.1	100					
	Pn	20	16	26.0		-0.3	100	1.21	236		3.5	3.7
GNZ	i			31.8								
	Sn			38.2		-3.0	95					
WTZ	e	20	16	43				1.62	36		3.7	
	eSn			52		0.9	100					
	ePn	20	16	35.7		-1.1	100	1.98	4		3.2	3.6

TNZ	eSn	57.0	-2.7									
	eP*	20 16 41.8	-0.2		2.02	292						
WEL	e	20 16 59			2.04	229	3.7					
	eSn	17 02.0	0.8	100								
KRP	ePn	20 16 40	-0.6	100	2.26	334				3.6		
	eP*	47	1.0									
KKZ	eSn	20 17 36.2	2.2		3.40	223						
CMZ	eSn	20 18 06.0	-1.1		4.78	219					4.0	
AMPLITUDES:	CAZ	3.0	GSZ	4.9	10	TUA	0.5	1.2				
	NGZ	10 13	MNG	3.8	8.2	GNZ	1.5					
	WTZ	0.4 0.9	WEL	0.4		KRP	0.4					
	KKZ	0.6	CMZ	0.5								

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AUG 28 01^h23^m06^s.7 46°.90s 165°.21E 33 km M = 3.8
 ± 0.8 0.04 0.07 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
BRZ	Sn-Pn			23.5		0.6	100	1.97	56					
OBZ	Pn	01 23	38.2			0.7	100	2.00	91		3.5	3.7		
	Sn		24 00.2			-0.4	100							
MSZ	ePn	01 23	50.2			-0.1	100	2.93	41		3.9	4.1		
	e		52.9											
	Sn		24 22.8			-0.3	100							
	i		26.8											
THP	Pn	01 24	05.3			-0.1	100	4.04	56					
	Sn		48.8			-1.0	99							
RHP	Pn	01 24	11.0			0.2	100	4.43	52					
	Sn		25 00.2			1.0	99							
COB	eSn	01 26	21			-2.8		7.96	46				3.8	
AMPLITUDES:	BRZ	0.8	2.5	OBZ	0.7	2.8	MSZ	1.2	3.7					
	THP	2.7	2.3	RHP	1.3	0.8	COB	0.2						

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AUG 28 12^h39^m23^s.3 33°.42s 178°.87w 298 km M = 4.5
 ± 1.2 0.06 0.13 16 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	12 40	39.5			1.1	100	4.76	206					
	e		45											
WTZ	P	12 40	47.5			-1.6	99	5.67	215		4.9			
	eS		41 55			-1.4	99							
GNZ	P	12 40	50.5			-0.1	100	5.80	205		4.5	4.4		
	S		41 59.5			0.4	100							
ONE	eP	12 40	54			0.2	100	6.06	245					
TUA	eP	12 40	56			-0.4	100	6.27	210		4.9			
	eS		42 11			1.5	99							
TRZ	eS	12 42	29			2.7		7.04	208				4.2	
CRZ	eP	12 41	07			0.5	100	7.10	259		3.5*			
MNG	eP	12 41	24			0.4	100	8.49	210		4.4	4.1		
	eS		42 59			0.8	100							
WEL	eS	12 43	16			-1.3	99	9.34	211	4.7				
COB	eS	12 43	36			0.4	100	10.17	219				3.0*	
AMPLITUDES:	WTZ	1.6		GNZ	0.6	0.8	TUA	0.6			0.6			
	TRZ	0.2	0.2	CRZ	0.2		MNG	0.6	0.4					
	WEL	0.2		COB	0.2			0.2						

COB	Sn	48.5	1.3	99				
	Pn	19 53 23.8	-1.1	100	2.37	244		
WTZ	e	26.0						
	Pn	19 53 25.9	0.7	100	2.39	28	4.1	4.5
	eP*	31.8	0.7					
KKZ	i	35.8						
	Sn	51.8	-0.6	100				
	ePn	19 53 33.3	3.7		2.71	211		
WIZ	iP*	38.4	1.9					
	eP*	19 53 36	-3.2		2.87	27		
	eSn	54 05	1.1					
KAI	eS*	14	-2.7					
	ePn	19 53 51	4.4		3.96	231	4.3	
	eP*	54 00	2.3					
CMZ	e(Pn)	19 53 55	6.3		4.11	211	3.8	4.1
	e(P*)	54 05	4.7					
	Sn	37	3.2					
ONE	ePn	19 53 54	1.1		4.42	347	4.3	
	e(Sn)	54 47	5.8					
	ePn	19 54 10	-0.5		5.71	224		
RHP	Sn	55 09.8	-2.4					
	ePn	19 54 33.6	1.8		7.27	229	4.5	4.5
	Sn	55 44.0	-5.7					
AMPLITUDES:	CAZ		38	TNZ	3.5	WEL	9.6	11
	TUA	2.3	2.8	KRP	5.1	WTZ	2.2	4.6
	KKZ	2.7	2.3	KAI	0.5	CMZ	0.3	0.8
	ONE	0.3		MSZ	0.8	1.5		

FELT: Okoia (57) Feilding (62) MM IV, Makakaho (56) MM III.

AUG 29 20^h00^m47^s.0 38°.19s 175°.96E 197 km M = 4.0
 ± 1.4 0.06 0.08 9 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	eP	20	01	13.2		-0.5	100	0.42	309		2.9*	
	eS			35		0.8	100					
WTZ	P	20	01	14.9		-0.7	100	0.84	76		3.4	3.6
	eS			36		-1.6	100					
NGZ	P	20	01	18.7		1.9	99	1.03	195			
	e(S)			44.5		4.7						
TUA	eS	20	01	41.5		0.5	100	1.12	124			3.9
	e			49								
TRZ	P	20	01	21.9		1.1	100	1.52	154			
	S			49.6		2.6	98					
GNZ	P	20	01	22.0		-0.4	100	1.68	106		4.0	4.2
	S			48.8		-1.0	100					
MNG	iP	20	01	30.8	D	0.2	100	2.46	189		4.0	4.5
	S			02 03.2		-1.0	100					
WEL	eS	20	02	19		-1.4	100	3.22	196	4.3		
COB	S-P			45		-1.5	100	3.82	220		3.1*	3.3*
AMPLITUDES:	KRP			0.9		WTZ	0.7	1.2	NGZ		0.6	0.4
	TUA				0.7	GNZ	1.6	3.9	MNG		2.7	8.9
	WEL	0.6				COB	0.2	1.2				

AUG 30 05^h55^m58^s.1 45°.12s 167°.78E 33 km M = 4.8
 ± 0.8 0.04 0.09 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
MSZ	iPn!	05	56	09.1		1.2	100	0.46	12				
ROX	Pn	05	56	19.0		1.7	99	1.14	109				
THP	iPn	05	56	23.0	U	-0.6	100	1.61	70				
OBZ	Pn	05	56	24.8		-1.4	100	1.80	173		4.8	4.4	
	eSn			48			0.6	100					
RHP	iPn	05	56	26.5	D	-1.6	99	1.93	59				
DNZ	ePn	05	56	30.5		0.7	100	2.06	112				
	eSn			53		-0.7	100						
OMZ	Sn-Pn			26		0.5	100	2.22	90		4.9	4.8	
KAI	ePn	05	56	51		-1.0		3.69	47	4.9			
	eSn			57 35		2.2							
CMZ	ePn	05	56	52		-1.6		3.81	68		4.6	5.2	
	e			57 14									
	eSn			33		-2.6							
KKZ	ePn	05	57	08		-2.8		5.07	60				
	eSn			58 07		1.2							
COB	Sn-Pn			58		-0.7		5.43	44		5.0	4.9	
MNG	Pn	05	57	39.1		-1.2		7.24	54		4.9	4.9	
	e			44									
	e			53									
	e			58 11									
	e?			47									
	eSn			56		-1.8							
KRP	ePn	05	58	05		-2.9		9.25	42		4.6	4.6	
	e			15									
	eP*			38		1.1							
	eSn			59 45		-1.3							
CRZ	ePn	05	58	33		-3.2		11.32	21		5.0	5.0	
	eSn	06	00	35		-1.2							
AMPLITUDES:	OBZ			16	15	DNZ		21	34	OMZ		9.5	14
	KAI	2.2				CMZ		2.0	12	KKZ		0.4	2.2
	COB			1.9	6.1	MNG		3.0	3.5	KRP		0.7	0.8
	CRZ			0.4	0.4								

FELT: Queenstown (132) and Manapouri (139)

AUG 30 12^b45^m32^s.3 35^s.32s 178^s.58E 235 km 80/ 509
 ± 1.5 0.13 0.15 21 S.E. of RES. 1.0 M = 4.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
ECZ	eS	12	46	53		0.3	100	2.38	181		4.1		
WTZ	iP	12	46	24.3	U	0.4	100	2.96	205		4.1	4.0	
	eS			47 04		0.1	100						
GNZ	P	12	46	28.0		-0.3	100	3.36	188		4.2	4.4	
	e			47 08									
	eS			11		-0.8	100						
ONE	eP	12	46	29		-0.7	100	3.47	261	3.3*			
KRP	eP	12	46	32		1.0	99	3.57	222		2.9*		
TUA	eS	12	47	22		3.5		3.67	198			4.2	
CRZ	eP	12	46	47		-0.4		4.93	279		3.5*		
MNG	eP	12	46	56.5		-2.2		5.83	204		4.0	4.0	
	eS			48 03		-3.2							
AMPLITUDES:	ECZ			0.5		WTZ		0.8	0.7	GNZ		0.8	2.2
	ONE	0.3				KRP		0.3		TUA			0.3
	CRZ			0.3		MNG		0.5	0.7				

80/ 510

AUG 31 12^h13^m23^s.2 41°.12S 175°.69E 12 km M = 3.4
 ± 0.9 0.04 0.06 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	iP*	12	13	32.7	U	0.4	100	0.47	62			
	S*			38.9		0.1	100					
MNG	P*	12	13	35.6		2.2	99	0.53	343			3.0
	eS*			42		1.3	100					
NGZ	ePn?	12	13	55		-0.2	100	1.94	358			
	eSn		14	16.5		-2.7	99					
KKZ	eSn	12	14	20		0.0	100	1.97	228			
COB	S*-Pn			32		-0.6	100	2.23	270			3.2 3.0
KRP	ePg	12	14	25.5		-2.3	99	3.20	358			4.2
	eSg		15	12		1.0	100					
AMPLITUDES:		CAZ		8.5	19	MNG		9.0	COB		0.2	0.4
		KRP		0.7								

80/ 511

AUG 31 17^h37^m19^s.5 39°.97S 173°.76E 136 km M = 5.4
 ± 1.3 0.06 0.10 20 S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	iP!	17	37	44.0		1.7	100	0.92	32			
MNG	iP!	17	37	49.2		1.2	100	1.47	117			
WEL	iP	17	37	50.6	USE	2.0	99	1.52	150	5.3		
GSZ	iP	17	37	49.8	U	0.7	100	1.57	64			
	eS		38	11		-0.8	100					
CAZ	iP	17	37	56.7	U	1.3	100	2.10	117			
	eS		38	21		-1.7	100					
KKZ	iP!	17	38	00.8		0.9	100	2.46	181			
	e(S)			21.5		-9.2						
KRP	iP	17	37	59.0	W	-1.2	100	2.47	35			
TUA	iP	17	38	03.7	D	-1.7	100	2.87	67			5.4 5.5
	e(S)			32		-8.3						
KAI	eP	17	38	08.5		-0.1	100	3.11	214	4.8*		
	e		12									
	eS			44		-2.0	99					
GNZ	iP	17	38	12.0	UN	-2.6		3.56	70			
CMZ	iP	17	38	14.8	U	-1.8		3.72	193			4.9*
	e(S)			50.5		-9.6						
CRZ	eP	17	38	41.5		-0.2		5.60	351			4.3*
	e			49								
OBZ	eP	17	39	11		-3.9		8.06	209			3.7* 3.7*
	eS		40	38		-6.8						
CIZ	S-P		1	23		-8.8		8.23	122			
AMPLITUDES:		WEL	28		CAZ	25		KKZ	11			
		TUA	9.8	11	KAI	8.0		CMZ	17			
		CRZ	1.9		OBZ	0.6	1.5	CIZ	1.1	2.0		

FELT: From Ohakune (49) to Little River (110), maximum intensity MM IV at these and several other places

80/ 512

AUG 31 22^h21^m06^s.6 40°.09S 175°.46E 33 km M = 3.7
 ± 0.3 0.02 0.04 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iPn	22	21	16.2	U	-1.1	100	0.52	178			

FELT: From Ohakune (49) to Okawa Beach (65)

									80/ 514				
SEP 01	04 ^h 36 ^m 36 ^s .5	39°.85s	174°.02E	220 km	M = 4.2								
		± 1.2	0.05	0.09	9	S.E. of RES. 1.6							
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
TNZ	eP	04	37	06.5		-0.3	100	0.72	23		3.5*	3.2*	
	eS			33		2.6	99						
GSZ	iP	04	37	11.0	U	0.1	100	1.34	65				
	eS			36		-1.5	100						
MNG	P	04	37	11.9		0.9	100	1.36	125		4.2	4.1	
	e			30									
	eS			36		-1.6	100						
WEL	eS	04	37	39		-1.4	100	1.54	158	4.2			
COB	iP	04	37	13.9	U	1.1	100	1.57	218		3.5*	3.6*	
	e			35.5									
	eS			40		-0.8	100						
CAZ	iP	04	37	18.0	U	1.3	100	1.99	123				
	eS			50		2.3	99						
KRP	eP	04	37	18.5		-0.8	100	2.26	32		2.8*		
	e			46									
	e			38 11									
KKZ	eP	04	37	23.5		0.7	100	2.57	185				
	e			51									
	eS			58		-0.6	100						
WTZ	eP	04	37	25.5		-1.8	100	2.97	52		3.7	3.9	
	e?			52									
GNZ	P	04	37	31.2		-0.2		3.34	70		4.8	4.7	
	eS			38 09		-5.2							
CMZ	eS	04	38	21.5		-4.0		3.87	195			3.7*	
AMPLITUDES:		TNZ		0.6	0.4	GSZ		3.5	5.6	MNG		7.5	7.0
		WEL	1.3			COB		0.8	3.5	CAZ		0.9	2.5
		KRP		0.4		KKZ		0.4	1.6	WTZ		0.3	0.6
		GNZ		4.1	4.7	CMZ			1.7				

									80/ 515			
SEP 01	05 ^h 15 ^m 44 ^s .1	40°.28s	173°.65E	169 km	M = 4.2							
		± 0.9	0.03	0.06	8	S.E. of RES. 1.3						
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	iP	05	16	12.6	U	1.2	100	1.07	221		4.2*	3.7*
	eS			33		0.6	100					
TNZ	P	05	16	13.0		0.2	100	1.23	27		3.4*	3.6*
	eS			35		0.1	100					
WEL	P	05	16	14.2		0.6	100	1.31	140	4.6		
	eS			36		-0.3	100					
MNG	P	05	16	15.3		0.5	100	1.44	104		4.2	4.4
	e			34								
	eS			37.5		-0.9	100					
GSZ	P	05	16	18.3		-0.2	100	1.80	57			
	eS			45.5		0.5	100					
CAZ	iP	05	16	22.0	D	0.6	100	2.06	108			
	e			43								
	eS			51		0.8	100					
KKZ	iP	05	16	21.8	U	-0.6	100	2.14	179			
	e			44								
	eS			50		-1.8	99					
KRP	eP	05	16	31		1.0	100	2.77	33		2.9*	3.1*

TUA	eS	17 02	-3.3	90					
	P	05 16 32.3	-1.5	100	3.08	63	4.2	4.2	
	eS	17 14	1.9	99					
CMZ	P	05 16 34.5	-3.3		3.39	193	3.5*	4.4*	
	eS	17 11	-8.1						
WTZ	eP	05 16 36	-2.7		3.46	50	3.9	4.1	
	e	41.5							
	e	55							
	e	17 12							
	eS	17	-3.8						
THP	eP	05 16 56	-3.9		5.09	212			
	eS	17 50	-8.6						
AMPLITUDES:		COB	5.7	6.5	TNZ	0.5	1.2	WEL	4.5
		MNG	8.5	17	GSZ	7.2	10	CAZ	1.8
		KKZ	3.1	3.6	KRP	0.4	0.8	TUA	0.5
		CMZ	0.7	8.7	WTZ	0.4	0.8	THP	0.8

80/ 516

SEP 01 12^h36^m48^s.6 33°.43s 178°.94w 282 km M = 4.9
 ± 3.1 0.45 0.61 93 S.E. of RES. 2.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	12 38	02.5			-0.2	100	4.72	205		4.5	4.8
	eS		39 03			2.2	100					
WTZ	P	12 38	13.0			-0.6	100	5.63	215		4.9	5.1
	eS		39 17			-3.1	99					
GNZ	P	12 38	13.7			-1.5	100	5.76	204		4.9	5.0
	eS		39 21			-2.0	100					
TUA	eP	12 38	21.5			0.6	100	6.24	209		4.7	5.3
	e		26									
	eS		39 36			2.7	99					
KRP	eP	12 38	24			1.7	100	6.35	223		3.2*	
CAZ	eS	12 40	24			2.5		8.41	206			
MNG	eP	12 38	47			-1.5		8.45	210		4.4	5.1
	e		40 05									
	eS		22.5			0.0						
WEL	eS	12 40	42			0.2		9.31	211	5.2		
AMPLITUDES:		ECZ	0.4	0.7	WTZ	1.5	2.5	GNZ			1.7	3.6
		TUA	0.4	1.5	KRP	0.4		CAZ				1.6
		MNG	0.7	4.6	WEL	0.6						

80/ 517

SEP 01 21^h18^m30^s.2 36°.94s 177°.00E 274 km M = 4.0
 ± 2.1 0.14 0.20 15 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	21 19	07.8			-0.4	100	1.04	181		3.8	3.9
	e		32									
	eS		35.5			-2.4	99					
KRP	P	21 19	11.7			0.4	100	1.53	229		2.8*	
TUA	P	21 19	14.8			0.9	100	1.87	176		3.9	4.0
	eS		49.5			1.6	100					
GNZ	P	21 19	14.8			0.8	100	1.89	155		3.9	4.0
	eS		48			-0.1	100					
GSZ	eS	21 20	02			2.4	99	2.59	205			
MNG	iP	21 19	32.9		D	-1.2	100	3.87	197		4.2	4.0
	eS		20 22			-1.8	100					
AMPLITUDES:		WTZ	0.8	1.2	KRP	0.4		TUA			0.3	0.4

		GNZ	0.8 1.7	MNG	1.8 1.3	80/ 518								
SEP 02	16 ^h 07 ^m 14 ^s .6	34°.60S	179°.53E	321 km	M = 4.0									
	± 1.1	0.09	0.18	13	S.E. of RES.	0.8								
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	eP	16	08	22		0.1	100	3.96	211		3.8	4.1		
	eS		09	14		-0.6	100							
GNZ	eP	16	08	25		0.2	100	4.22	196		3.8	4.1		
	eS		09	20		0.2	100							
KRP	eP	16	08	30		0.7	100	4.63	223		2.8*			
MNG	iP	16	08	53.9	U	-0.9	99	6.81	207		4.3	4.0		
	eS		10	14		0.4	100							
AMPLITUDES:		WTZ	0.2	0.5	GNZ	0.2	0.6	KRP	0.2					
		MNG	0.7	0.5										

		GNZ	0.8 1.7	MNG	1.8 1.3	80/ 519								
SEP 03	04 ^h 12 ^m 41 ^s .3	37°.29S	177°.66E	33 km	M = 3.6									
	± 0.7	0.05	0.04	R	S.E. of RES.	1.1								
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WIZ	Pn	04	12	51.8		0.8	100	0.45	237					
ECZ	iPn	04	12	54.1	D	-1.8	98	0.81	120		3.7	3.8		
	eSn		13	08		1.3	99							
WTZ	iPn!	04	12	55.8		-1.0	100	0.88	217					
	eSn		13	07.5		-0.8	100							
GNZ	Sn-Pn			16.8		0.0	100	1.39	168		3.9	3.7		
TUA	ePn	04	13	07		0.7	100	1.57	195		3.6	3.7		
	eS*			30.5		0.1	100							
KRP	iPn	04	13	09.8	D	0.3	100	1.81	249		3.7	3.6		
	eSn			31		0.4	100							
MNG	ePn	04	13	33		-2.8		3.73	206		3.4	3.7		
	(Sn)			14 18.8		1.7								
	eS*			30.8		-4.2								
AMPLITUDES:		WIZ	7.5	ECZ	1.7	2.7	WTZ	2.5						
		GNZ	3.6	3.4	TUA	0.5	0.7	KRP	0.6	0.4				
		MNG	0.3	0.8										

		GNZ	0.8 1.7	MNG	1.8 1.3	80/ 520								
SEP 03	05 ^h 25 ^m 04 ^s .9	38°.77S	175°.63E	161 km	M = 4.1									
	± 1.0	0.04	0.06	7	S.E. of RES.	1.5								
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
NGZ	eP	05	25	29		1.7	100	0.41	181					
	eS			42		-2.5	99							
KRP	iP	05	25	28.8	D	-0.8	100	0.85	355		4.1*	2.7*		
	eS			48		-0.7	100							
TNZ	P	05	25	31.7		0.4	100	1.06	246		3.6*	3.0*		
	eS			54		2.3	99							
TUA	iP	05	25	33.5	U	1.0	100	1.20	92		4.1	4.2		
	eS			56.5		2.7	98							
WTZ	iP	05	25	32.9	U	-0.9	100	1.32	54		3.6	3.6		
	eS			55.0		-1.1	100							
MNG	iP	05	25	39.9	U	0.5	100	1.85	183		4.4	4.2		
	e			57.7										
	eS			26 05		-0.9	100							
GNZ	S-P			26.2		-0.5	100	1.88	87		4.4	4.2		
ECZ	eP	05	25	47		-0.5	100	2.54	66		4.2	4.2		

	eS	26 21		0.7 100					
WEL	eP	05 25 48		-0.3 100	2.60	194	4.3		
	eS	26 20.5		-1.2 100					
COB	S-P	40.5		1.1 100	3.21	223		3.7*	3.4*
AMPLITUDES:	NGZ	1.7 3.8	KRP	13 0.7	TNZ			1.0	0.3
	TUA	1.5 1.8	WTZ	0.9 1.0	MNG				10 9.0
	GNZ	3.9 4.5	ECZ	0.7 0.7	WEL	1.0			
	COB	1.0 1.6							

SEP 05 09^h38^m52^s.4 38°.80S 175°.73E 196 km 80/ 521
 ± 1.5 0.08 0.13 11 S.E. of RES. 1.4 M = 3.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
CNZ	P	09 39		19.8		0.8	100	0.42	200		
	eS			40		0.6	100				
KRP	iP	09 39		20.0	D	-1.1	100	0.89	350		3.3*
TUA	eS	09 39		47		0.9	100	1.11	91		3.6
WTZ	iP	09 39		23.4	U	-0.6	100	1.28	51		3.4
GNZ	S-P			27		-1.1	100	1.80	86		3.9 3.6
MNG	iP	09 39		30.1	U	1.0	100	1.83	186		3.7 3.6
	eS			56		-1.5	99				

AMPLITUDES:	CNZ	0.6 0.8	KRP	1.7	TUA	0.4
	WTZ	0.5	GNZ	1.3 0.9	MNG	2.0 2.0

SEP 06 02^h07^m26^s.5 38°.96S 175°.48E 142 km 80/ 522
 ± 1.0 0.04 0.07 8 S.E. of RES. 1.3 M = 3.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
CNZ	iP	02 07		46.8	D	0.8	100	0.24	168		
	eS			08 02		1.0	100				
TNZ	P	02 07		50.8		1.2	100	0.89	255		3.3* 2.7*
	e(S)			08 12		4.6					
KRP	iP	02 07		51.4	DW	0.5	100	1.03	2		3.3* 2.6*
	S			08 07.8		-1.8	99				
TUA	eS	02 08		14		-0.5	100	1.31	84		3.6
	e			19							
WTZ	eS	02 08		19		0.3	100	1.53	51		3.1
MNG	iP!	02 07		59.0		1.6	99	1.66	180		3.8 3.5
	eS			08 20		-1.1	100				
WEL	eP	02 08		05		-1.4	99	2.38	193	3.6	
COB	eP	02 08		14.5		0.2	100	3.00	224		3.2* 2.9*
	eS			50		-0.7	100				
KKZ	eS	02 09		06		-1.6		3.72	201		

AMPLITUDES:	CNZ	1.2 0.6	TNZ	0.5 0.2	KRP	2.5 0.5
	TUA	0.5	WTZ	0.3	MNG	3.3 2.3
	WEL	0.2	COB	0.3 0.6	KKZ	0.3

SEP 06 03^h24^m28^s.9 40°.94S 173°.95E 12 km 80/ 523
 ± 0.3 0.02 0.02 R S.E. of RES. 0.9 M = 3.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
WEL	eP	03 24		42		-0.1	100	0.70	119	3.4	
	eS			52.5		0.8	100				
COB	iP	03 24		46.3	D	0.3	100	0.94	261		3.3 3.3
	eS			59.5		0.9	100				
MNG	P	03 24		48.9		-1.8	98	1.21	75		3.8 3.8

	Pn		50.7		-0.2	100						
	eS		25 08			1.2	99					
KKZ	eP	03 24	53.5		-1.3	99	1.49	187				
	eS		25 14			-0.1	100					
	e		44									
CAZ	eS	03 25	20		0.3	100	1.73	89				
TNZ	eSg	03 25	29		-0.1	100	1.78	11			3.3	
CMZ	eS	03 25	46		0.0	100	2.82	200			3.3	
KRP	eP*	03 25	28			2.3	3.26	23			3.3	3.3
	eS*		26 05			-3.2						
GNZ	S-P		44.5			0.3	3.89	55				
AMPLITUDES:		WEL	1.8		COB		1.2	5.0	MNG	8.3	10	
		KKZ	0.4	0.8	CAZ			0.4	TNZ		0.3	
		CMZ		0.3	KRP		0.3	0.3				

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SEP 06 07^h20^m07^s.0 42°.25S 173°.33E 65 km M = 3.5
 ± 0.5 0.02 0.03 6 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KKZ	iP	07 20	18.3		U	-0.1	100	0.31	122			
	eS		27			0.1	100					
COB	iP	07 20	29.6		U	0.7	100	1.25	339		3.8*	3.6*
	eS		44.5			-1.0	100					
TCW	iP	07 20	30.0		U	0.9	100	1.26	34			
CMZ	eP	07 20	31			-0.4	100	1.43	201		3.0*	3.7*
	eS		49			-0.8	100					
WEL	e(S)	07 20	46			-4.2		1.45	48	3.4		
KAI	eS	07 20	51			0.5	100	1.46	259	3.5*		
MOW	P	07 20	35.1			0.6	100	1.66	61			
MNG	eP	07 20	44			0.6	100	2.29	45		3.6	3.5
	e		55									
	eS		21 09			-1.4	99					
RHP	eP	07 20	54			0.5		3.01	231			
	eS		21 28			-0.5						
THP	eP	07 20	58			-1.0		3.40	226			
	eS		21 36			-2.3						
MSZ	eS	07 22	05			-4.0		4.63	237			2.8*
KRP	eP	07 21	19.5			3.2		4.64	22		2.9*	3.0*
	eS		22 12			2.5						
AMPLITUDES:		KKZ	16	11	COB		3.3	7.5	CMZ	0.5	4.0	
		WEL	0.4		KAI	1.0			MNG	1.7	1.5	
		RHP	1.2	1.5	THP		0.3	1.0	MSZ		0.4	
		KRP	0.3	0.4								

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SEP 06 12^h27^m39^s.4 38°.55S 176°.04E 132 km M = 3.6
 ± 1.3 0.05 0.06 9 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	P	12 28	00.3			-0.1	100	0.74	328			2.5*
	eS		15			-1.5	100					
CNZ	eP	12 28	01			0.5	100	0.75	210			
	eS		17			0.4	100					
TUA	e(P)	12 28	05			3.2		0.91	107		3.2	3.6
	eS		21			2.1	99					
WTZ	P	12 28	01.7			-0.3	100	0.94	53		3.0	3.2
	eS		19			-0.4	100					
TNZ	P	12 28	07.8			0.5	100	1.44	243		3.2*	3.0*

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	eS		30		1.5	100							
GNZ	S-P		21		-1.3	100	1.56	94		4.1	4.0		
MNG	iP!	12	28	14.8	-0.4	100	2.11	192			3.7		
	eS		40		-2.3	99							
WEL	e(S)	12	28	56	-4.6		2.90	199	3.8				
COB	P	12	28	32.0	-2.7		3.59	224		3.4*	3.0*		
	eS		29	15	-1.9								
AMPLITUDES:													
	KRP			0.5	CNZ		1.1	0.7	TUA		0.3	0.8	
	WTZ		0.4	0.7	TNZ		0.3	0.3	GNZ		3.0	3.7	
	MNG			2.5	WEL	0.2			COB		0.4	0.6	

SEP 07 00^h26^m57^s.9 38°.57S 175°.73E 155 km M = 4.2
 ± 0.9 0.03 0.06 7 S.E. of RES. 1.4 80/ 526

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
CNZ	iP	00	27	23.0	D	2.3	99	0.64	192				
	e(S)			45		6.7							
KRP	P	00	27	20.7		-0.1	100	0.67	347		3.7*	2.9*	
	eS			38		-0.5	100						
TUA	P	00	27	25.3		0.8	100	1.14	102		3.9	4.0	
	eS			45		-0.1	100						
WTZ	P	00	27	23.3		-1.4	100	1.15	60		3.5	4.0	
	eS			46		0.7	100						
TNZ	P	00	27	27.3		2.0	99	1.21	239		3.3*	3.0*	
	e(S)			51		4.7							
GNZ	S-P			24		-1.7	99	1.80	93		4.3	4.3	
MNG	iP!	00	27	35.0		0.8	100	2.05	185		4.8	4.2	
	e			56									
	eS			28		-0.7	100						
GBZ	iP	00	27	35.9	D	-2.1	99	2.36	355				
CAZ	eS	00	28	08		-0.8	100	2.37	171				
ECZ	P	00	27	37.8		-0.7	100	2.39	69		4.5	4.4	
	eS			28		1.5	100						
WEL	eP	00	27	43.5		-0.2	100	2.81	195				
	eS			28		-0.8	100						
COB	eP	00	27	50		-1.5		3.41	222		3.7*	3.6*	
	eS			28		-0.5							
RHP	eS	00	29	51		-5.8		6.97	216				
AMPLITUDES:													
	CNZ			2.2	2.6	KRP		7.0	1.2	TUA		1.1	1.2
	WTZ			1.0	3.3	TNZ		0.4	0.3	GNZ		3.5	6.5
	MNG			22	8.0	GBZ		4.2		CAZ		4.0	
	ECZ			1.6	1.1	WEL		0.8	1.0	COB		0.8	2.3
	RHP				1.1								

SEP 07 03^h25^m43^s.7 39°.49S 174°.95E 131 km M = 4.2
 ± 0.7 0.03 0.04 6 S.E. of RES. 1.1 80/ 527

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	P	03	26	04.2		1.0	100	0.54	304		3.6*	3.7*
	eS			17.8		-0.4	100					
CNZ	iP	03	26	04.6	D	1.3	100	0.55	58			
	eS			20		1.7	99					
MNG	iP!	03	26	09.8		0.9	100	1.20	160		4.0	
TRZ	iP	03	26	12.5	D	0.9	100	1.45	93		4.3	4.0
	e			14.0								
	eS			33		0.1	100					
KRP	P	03	26	14.3		0.6	100	1.63	16		3.1*	3.3*

CAZ	eS		36		-0.5	100							
	e	03 26	29.5					1.72	146				
	e		34.5										
	eS		38.5		0.2	100							
WEL	P	03 26	16.0		0.3	100		1.80	184	4.2			
	eS		39		-1.0	100							
TUA	P	03 26	16.7		0.6	100		1.84	69		4.1	4.3	
	eS		39.5		-1.3	100							
WTZ	P	03 26	19.9		-0.6	100		2.19	47		3.8	4.2	
	eS		47		-1.4	99							
COB	iP	03 26	22.0	U	-0.3	100		2.33	226		4.1*		
	eS		50		-1.6	99							
GNZ	S-P		29.5		-1.8	99		2.54	71		4.6	4.6	
ECZ	eP	03 26	35		-0.7			3.34	59		4.2	4.6	
	e		27 10										
	eS		15		-0.3								
MSZ	eS	03 28	44.0		-8.3			7.36	223				3.3*
AMPLITUDES:													
	TNZ		1.3	2.5	CNZ		42	21	MNG		9.0		
	TRZ		1.8	2.3	KRP		1.2	1.8	CAZ			18	
	WEL	1.6			TUA		1.0	1.5	WTZ		0.8	2.5	
	COB		3.0		GNZ		4.5	7.0	ECZ		0.4	1.0	
	MSZ			0.8									

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SEP 07 04^h32^m03^s.6 37°.04S 177°.04E 236 km M = 4.2
 ± 1.0 0.06 0.10 9 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	04 32	36.5		U	-0.3	100	0.94	183		3.8	3.7
	eS		33 02			-0.8	100					
ECZ	eP	04 32	41			1.3	99	1.36	119		4.4	
KRP	P	04 32	42.9			2.2	97	1.48	233		2.8*	
GBZ	iP	04 32	40.1		U	-0.7	100	1.50	303			
TUA	P	04 32	42.8			-0.3	100	1.76	177		4.5	4.1
	eS		33 13			-0.5	100					
GNZ	S-P		31			0.5	100	1.77	154		4.7	4.0
GSZ	eP	04 32	49.5			-0.7	100	2.51	207			
	eS		33 27			0.6	100					
TRZ	P	04 32	49.2			-1.1	100	2.51	184		4.3	4.1
	e		33 20									
	eS		27			0.5	100					
MNG	iP	04 33	01.3		D	-3.2		3.77	198		4.5	4.5
	e		05									
	e		40									
	eS		47			-4.9						
WEL	eS	04 34	06			-3.7		4.59	202	4.2		
COB	eS	04 34	18			-6.3		5.26	218			3.2*
AMPLITUDES:												
	WTZ		1.2	1.0	ECZ		1.5		KRP		0.4	
	GBZ		0.7		TUA		1.6	0.6	GNZ		6.6	2.1
	GSZ		0.3	0.3	TRZ		0.6	0.9	MNG		3.5	4.6
	WEL	0.2			COB			0.6				

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SEP 08 03^h05^m36^s.0 40°.07S 175°.46E 33 km M = 4.4
 ± 0.3 0.02 0.04 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iPn!	03 05	46.7			-0.4	100	0.55	178			
GSZ	iPn	03 05	50.2		D	-0.2	100	0.80	7			

CAZ	eSn	06 01		-0.1	100							
	iPn	03 05 55.1	U	1.6	99	1.02	145					
	eSn	06 05		-1.5	99							
TRZ	ePn	03 05 57		1.5	99	1.17	64			3.6	4.0	
	eSn	06 12		1.9	99							
WEL	Pn	03 05 57.7		0.0	100	1.32	203			4.8		
	eSn	06 14		0.2	100							
TUA	Pn	03 06 03.2		-1.2	100	1.82	47			5.7	4.1	
	eP*	06.9		-1.4	99							
	eSn	25		-0.6	100							
KRP	Pn	03 06 09.1		0.3	100	2.14	2			4.6	4.8	
	eP*	15		1.1	100							
	e(S*)	39		-3.1								
COB	iPn	03 06 10.9	D	-0.2	100	2.31	243			4.3	4.2	
	e(S*)	44		-3.1								
WTZ	Pn	03 06 11.8		-0.5	100	2.40	30			4.0	4.2	
	eSn	39		-0.6	100							
GNZ	eP*	03 06 20		1.0	100	2.45	55			4.1		
	eSn	40		-0.7	100							
RHP	ePn	03 06 56		-1.1		5.68	223					
	eSn	07 58		-0.5								
AMPLITUDES:	GSZ	45 49	CAZ	15 12	TRZ	1.2 4.5						
	WEL	13	TUA	45 1.3	KRP	3.6 5.2						
	COB	2.3 6.2	WTZ	1.5 2.0	GNZ	1.8						
	RHP	2.3 2.6										

FELT: Moawhango, Ohingaiti (58)

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SEP 08 12^h03^m38^s.0 35°.15S 179°.50E 285 km M = 4.5
 ± 1.9 0.16 0.28 19 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	12	04	37.7		-0.4	100	3.48	215		4.7	4.2
	e			42.0								
	eS		05	24		-1.1	100					
GNZ	P	12	04	40.3		-0.1	100	3.69	198		4.3	4.7
	eS		05	27		-2.1	99					
TUA	eP	12	04	44.5		-0.7	100	4.11	207		4.4	4.7
	eS		05	40		2.4	99					
KRP	eP	12	04	47		0.5	100	4.23	228		3.1*	
TRZ	eS	12	05	56		2.2	99	4.90	205			4.5
GSZ	eP	12	05	00		2.5	99	5.17	216			
MNG	eP	12	05	10		-1.4	100	6.33	209		4.4	4.4
	eS		06	24		-0.7	100					
WEL	eS	12	06	44		0.5	100	7.17	210	4.6		
COB	eS	12	07	00		-1.5	100	7.98	220			3.2*
AMPLITUDES:	WTZ	2.3 0.8	GNZ	0.8 3.5	TUA	0.4 0.7						
	KRP	0.4	TRZ	0.7	GSZ	0.3						
	MNG	1.2 1.5	WEL	0.3	COB	0.4						

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SEP 08 14^h07^m11^s.4 38°.33S 175°.85E 208 km M = 4.2
 ± 1.7 0.06 0.10 11 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	P	14	07	39.7		0.2	100	0.48	328		3.7*	2.9*
	eS		08	01		-0.1	100					
CNZ	iP	14	07	41.9	U	0.4	100	0.90	195			

	e(S)	08 10		5.3					
WTZ	iP	14 07 41.9	D	0.1 100	0.96	69		3.6	3.9
	e(S)	08 02		-3.4					
TUA	eP	14 07 43		0.1 100	1.13	115		3.8	4.3
	e	08 03							
	eS	07.5		0.1 100					
TRZ	P	14 07 46.3		0.8 100	1.43	149		4.1	4.4
	eS	08 14		2.3 99					
GNZ	iP	14 07 49.0	U	0.8 100	1.73	101		4.5	4.4
	eS	08 14		-2.5 99					
MNG	iP	14 07 52.9	U	-1.0 100	2.30	187		4.6	4.5
	eS	08 24.2		-2.7 98					
CAZ	e	14 08 30			2.58	174			
	eS	34		1.4 100					
WEL	eP	14 08 01		-1.7	3.07	195	4.3		
	eS	40		-2.4					
COB	eP	14 08 06		-3.8	3.65	220		3.5*	3.3*
	eS	51		-4.0					
AMPLITUDES:		KRP		4.7 0.8	CNZ	2.5 2.2	WTZ	0.9 2.1	
		TUA		0.5 1.6	TRZ	0.8 3.5	GNZ	4.7 6.5	
		MNG		9.5 9.5	CAZ	2.8	WEL	0.6	
		COB		0.5 1.2					

SEP 09 08^h45^m03^s.1 41°.44S 172°.30E 12 km M = 3.7
 ± 0.6 0.03 0.06 R S.E. of RES. 1.4

STN	PHASE	H	M	s	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	iP*	08 45	11.2		U	-1.3	100	0.49	43		3.4	
	eS*		18			-1.3	100					
KAI	ePn	08 45	26.5			0.6	100	1.27	211	3.6		
	eS*		43			0.3	100					
KKZ	iPn	08 45	28.1		D	-0.0	100	1.43	134			
	eP*		29			0.3	100					
	ePg		31			-1.1	100					
	eSn		48			1.2	100					
WEL	ePn	08 45	33			-1.1	100	1.87	86	3.6		
	eSn		59			1.6	100					
CMZ	eP*	08 45	43			1.9	99	2.16	173		4.1	3.6
	ePg		45.4			-1.3	100					
	eSn		46 02.5			-1.8	99					
MNG								2.55	72		4.0	4.0
TNZ	ePg	08 46	01			2.1	99	2.76	36		3.7	3.7
	eSg		36			-0.1	100					
RHP	ePn	08 45	53			1.9		3.11	211			
	eSn		46 32			4.7						
CNZ	ePn	08 45	56.5			2.2		3.35	49			
	eP*		46 04			2.6						
	eSg		52			-3.9						
TRZ	ePn	08 45	57			-5.3		3.93	63		3.9	
KRP	ePn	08 46	08			0.5		4.32	36		3.7	3.7
	eSg		47 25			-3.4						
AMPLITUDES:		COB		5.7	KAI	1.0		KKZ		3.4 3.8		
		WEL	0.4		CMZ		1.9 0.9	MNG		3.0 3.6		
		TNZ	0.2 0.3		RHP		1.1 1.3	CNZ		0.5 1.3		
		TRZ	0.2		KRP		0.4 0.4					

	TRZ	1.7	CNZ	1.0	0.7	MNG	3.0	2.3				
	CAZ	1.1	0.8	WEL	0.5	COB		0.5				
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SEP 11	21 ^h 57 ^m 57 ^s .3	38°.66S	176°.31E	12 km	M = 2.7							
	± 0.8	0.05	0.04	R	S.E. of RES. 1.2							
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	iPg	21	58	00.3	U	-1.0	100	0.16	280			
TUA	eSg	21	58	21		0.6	100	0.67	103			2.7
WTZ	eS*	21	58	24		-0.8	100	0.86	39			2.5
KRP	Pg	21	58	17.0		0.3	100	0.95	320		2.8	3.0
	eSg			30.5		0.9	100					
AMPLITUDES:	TUA			0.3	WTZ			0.3	KRP		0.5	0.6
FELT:	Wairakei (41)											

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SEP 12	13 ^h 49 ^m 58 ^s .4	34°.85S	179°.09E	248 km	M = 4.3							
	± 1.5	0.13	0.19	40	S.E. of RES. 1.3							
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	13	50	51		1.3	99	2.87	189		4.0	4.3
	eS			51 33		3.3						
GBZ	P	13	50	53		-0.7	100	3.25	244			
WTZ	iP	13	50	57.5	D	0.1	100	3.56	208		4.5	4.4
	S			51 43		-0.2	100					
GNZ	eP	13	50	59.5		-1.6	99	3.89	192		4.4	4.6
	S			51 50		-0.1	100					
ONE	P	13	51	02		-0.2	100	3.98	255			
KRP	P	13	51	07		2.0	98	4.20	222		2.9*	
TUA	P	13	51	05		-0.6	100	4.25	201		4.1	4.4
	S			58		0.2	100					
	e			52 15								
TRZ	eP	13	51	16		0.9		5.04	200		4.3	4.4
	S			52 16.5		1.6						
MNG	eS-P			1 14		0.4		6.43	205		4.3	4.4
WEL	S	13	53	03.5		-1.8		7.28	207	4.1		
COB	e(P)	13	51	57		4.5		8.00	217		3.1*	3.0*
	e(S)			53 24		2.1						
	e			28								
AMPLITUDES:	ECZ			0.3	0.6	GBZ		0.6	WTZ		1.3	1.3
	GNZ			1.0	2.5	KRP		0.3	TUA		0.2	0.4
	TRZ			0.2	0.6	MNG		0.9	1.6	WEL	0.1	
	COB			0.1	0.3							

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SEP 12	20 ^h 00 ^m 24 ^s .8	32°.15S	177°.14W	33 km	M = 5.1							
	± 2.6	0.18	0.31	R	S.E. of RES. 2.3							
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	Pn	20	02	01		3.0	99	6.57	211		5.3	5.3
	eP*			13		-5.0						
	e(Sn)			03 19		10.3						
	e(S*)			56		12.8						
GBZ	Pn	20	02	10		1.4	100	7.34	234			
WTZ	ePn	20	02	09		-2.5	100	7.56	218		4.9	5.0
	Sn			03 32.5		0.1	100					
GNZ	Pn	20	02	11		-0.9	100	7.60	210		5.1	5.1
	Sn			03 36		2.8	99					

ONE	ePn	20 02 19	2.3	100	7.94	241		
TUA	Pn	20 02 18	-1.1	100	8.12	213	5.2	5.1
	e	29						
	Sn	03 45	-0.8	100				
KRP	ePn	20 02 19.5	-2.5	100	8.32	224	5.5	5.7
	eSn	03 49	-1.8	100				
	e	58						
CRZ					8.83	252		5.7
TRZ	ePn	20 02 27.5	-1.9		8.86	212	5.0	5.0
	Sn	04 04	0.1					
MNG					10.34	213		
WEL	Sn	20 04 54	-5.8		11.20	213	5.0	5.1
COB					12.07	220		4.4
KKZ	Sn	20 05 28	-5.1		12.58	213		
CMZ					13.98	212		4.7
AMPLITUDES:	ECZ	1.0 1.2	GBZ	1.8	WTZ	1.3 1.8		
	GNZ	1.9 2.7	TUA	0.8 0.7	KRP	1.1 1.1		
	CRZ	0.5	TRZ	0.5 0.8	MNG	0.5 2.8		
	WEL	0.3	COB	0.1	KKZ	0.1 0.4		
	CMZ	0.3						

SEP 12 20^h16^m46^s.6 31°.80s 177°.62W 33 km 80/ 541
 ± 1.7 0.18 0.38 R S.E. of RES. 1.3 M = 5.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
ECZ	Pn	20	18	23.5		2.2	98	6.68	207		5.2	5.4
	e(P*)			52.5		10.9						
	Sn	19	34.5			1.5						
	e			43								
GBZ	e(Pn)	20	18	34		5.2		7.24	231			
WTZ	Pn	20	18	32		-1.8	99	7.60	214	4.6	5.1	
	Sn	19	55			-0.2	100					
GNZ	ePn	20	18	34.5		-0.8	100	7.71	206	4.9	5.2	
	Sn	19	57.5			-0.2	100					
ONE	e(P*)	20	18	55		-5.1		7.77	237			
TUA	Pn	20	18	41.5		-0.5	100	8.20	210	5.1	5.2	
	Sn	20	10			0.4	100					
KRP	ePn	20	18	44.5		1.0	100	8.31	221	5.3	5.3	
	e	20	18									
CRZ								8.56	250		5.5	
TRZ	eSn	20	20	28		0.0	100	8.96	209			5.2
MNG								10.42	210		4.4	5.2
WEL	Sn	20	21	15.5		-8.0		11.28	211	5.2		
COB	e	20	21	37.5				12.10	217			4.6
	Sn			40		-3.1						
KKZ	Sn	20	21	49.5		-7.4		12.67	211			
CMZ								14.07	210			4.5
AMPLITUDES:	ECZ	0.7 1.4	GBZ	1.0	WTZ	0.7 2.0						
	GNZ	1.2 3.2	TUA	0.6 0.8	KRP	0.7 0.5						
	CRZ	0.3	TRZ		MNG	0.4 3.2						
	WEL	0.5	COB		KKZ	0.1 0.2						
	CMZ	0.2										

SEP 13 01^h32^m55^s.1 41°.62S 174°.24E 12 km 80/ 542
 ± 0.2 0.02 0.02 R S.E. of RES. 0.9 M = 3.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TCW	iP*	01	33	03.0	U	-0.1	100	0.40	4					
BHW	iP*	01	33	04.8	U	-0.3	100	0.52	67					
WEL	iP*	01	33	05.0	UNE	-0.1	100	0.52	51	3.6				
	Sg			13.5		0.6	100							
MRW	iP*	01	33	05.0	U	-0.2		0.52	43					
WDW	iP*	01	33	07.3	U	-0.3		0.67	59					
MOW	iP*	01	33	09.6	U	-0.1	100	0.78	76					
CAW	iP*	01	33	09.8		-0.2	100	0.81	51					
KKZ	iP*	01	33	10.4	U	-1.2	99	0.90	207					
	Sg			25		-0.6	100							
KIW	iP*	01	33	11.7	U	-0.1	100	0.91	34					
COB	iP*	01	33	17.2	D	-0.4	100	1.25	295		4.1		3.8	
	Sg			37		-0.3	100							
MNG	e(Sn-Pn)			19		0.9		1.37	44					
CAZ	Pg	01	33	28		-0.7		1.66	65					
	Sg			56		4.8								
CMZ	eP*	01	33	37		1.5	98	2.29	210		3.7		3.4	
	(S*)			34		-1.1								
KAI	eP*	01	33	37		1.6	98	2.29	246	4.0				
	Sn			34		3.4								
	e(S*)			06.5		0.9								
TNZ	eP*	01	33	39		1.3		2.43	3		3.7		4.0	
	eSg			34		-0.0								
CNZ	P*	01	33	42		1.1		2.61	23					
	eS*			34		3.9								
TUA	P*	01	34	02		4.5		3.58	39		4.1			
KRP	Pn	01	33	57		4.2		3.82	16		4.6		4.6	
	P*			34		3.5								
	S*			54.5		3.1								
RHP	eP*	01	34	01		-2.5		3.94	229					
	S*			55		0.2								
WTZ	P*	01	34	13.5		5.5		4.20	31		3.8			
AMPLITUDES:		WEL	5.6		KKZ			12	9.5	COB	4.8	7.5		
		CMZ	0.7	0.6	KAI	0.7				TNZ	0.3	0.7		
		TUA	0.3		KRP			1.3	1.1	WTZ	0.3			

SEP 13 07^h38^m50^s.6 41°.45S 174°.63E 12 km M = 3.8
 ± 0.2 0.02 0.02 R S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
BHW	iP*	07	38	55.3	D	0.4	100	0.19	77					
WEL	iP*	07	38	55.1	U	0.0	100	0.20	33					
	Sg			58.5		0.4	100							
MRW	iP*	07	38	55.3	U	-0.3	100	0.22	15					
WDW	iP*	07	38	57.2	U	-0.2	100	0.32	57					
TCW	iP*	07	38	57.6	D	-0.2	100	0.36	311					
MOW	iP*	07	39	00.3	D	0.5	100	0.47	87					
CAW	iP*	07	38	59.3	U	-0.6	100	0.48	44					
KIW	iP*	07	39	01.6	U	-0.8	99	0.62	20					
MNG	(S*-P*)			13		-1.1		1.05	38					
KKZ	P*	07	39	11.9	U	-0.3	100	1.20	216					
	Sg			36.5		5.4								
CAZ	ePg	07	39	17.5		0.1		1.32	66					
	eSg			39		3.7								
COB	iPn	07	39	16.0	D	-0.2	100	1.48	284		4.5		3.7	
	Sn			36.5		1.1	98							

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TNZ	eP*	07 39 30	-0.5	2.27	355	3.7	3.9
	e	31.5					
	(Sg)	40 04.5	-2.6				
NGZ	P*	07 39 31.5	-1.0	2.38	19		
	i	32.5					
	e(S*)	40 06	2.2				
TRZ	Pg	07 39 41.5	-0.2	2.53	42	3.8	3.5
	(Sg)	40 18	2.2				
CMZ	(Sn)	07 39 59	-3.3	2.59	214	3.0	3.4
KAI	e(S*)	07 40 11	-0.2	2.64	245	3.2	
TUA	e(Pg)	07 39 55.5	-1.2	3.28	37		3.8
KRP	P*	07 39 52.5	-0.6	3.59	12	4.3	4.5
	S*	40 38	-1.9				
	Sg	46	-5.6				
WTZ	e(P*)	07 40 04	5.5	3.91	28		3.5
RHP	eP*	07 40 09	4.4	4.27	230		
AMPLITUDES:		WEL 26		KKZ 1.5	1.9	COB 8.0	4.8
		TNZ 0.3	0.7	TRZ 0.4	0.3	CMZ 0.1	0.4
		KAI 0.1		TUA 0.2		KRP 0.7	1.0
		WTZ 0.2					

SEP 13 09^h08^m44^s.1 39°.12s 175°.18E 12 km M = 3.8
 ± 0.2 0.01 0.01 R S.E. of RES. 0.6 80/ 544

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
CNZ	iP*	09 08	50.7			0.4	100	0.30	106			
	(S*)		56.5			1.9						
NGZ	iP*	09 08	51.3			0.2	100	0.34	101			
	e(S*)		57			1.0						
GSZ	iP*	09 08	51.2			-0.1	100	0.35	117			
	S*		56.8			0.4	100					
TNZ	P*	09 08	55.5			-0.4	100	0.62	264		3.2	3.6
	S*	09 09	05.5			1.0	99					
KRP	iP*	09 09	05.1		U	-1.1	99	1.22	13		3.8	4.2
	S*		23			0.5	100					
TRZ	Pg	09 09	11			-0.4	100	1.35	109		3.6	3.7
	e		23									
	Sg		35.5			5.9						
MNG	e(Sn-Pn)		19			-0.6		1.51	171		4.0	4.0
CAZ	ePg	09 09	22.5			-1.2		1.95	156			
	Sg		55.5			5.4						
WEL	P*	09 09	23.2		D	0.6	100	2.19	188	3.9		
	S*		51			-0.3	100					
COB	Pn	09 09	26			-0.7	100	2.72	223		4.0	3.6
	eS*		10 07			-0.2	100					
KKZ								3.48	198			
AMPLITUDES:		TNZ 1.1	4.0	KKZ 2.5	4.5	TRZ 0.5	0.8					
		MNG 7.0	9.0	WEL 0.1	0.2	COB 0.7	0.8					
		KKZ 0.1	0.2									

SEP 14 04^h55^m58^s.3 38°.71s 176°.41E 33 km M = 3.8
 ± 0.3 0.02 0.02 R S.E. of RES. 1.0 80/ 545

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
WNZ	P*	04 56	06.5			1.1	100	0.25	288			
	e		08.5									
	(S*)		16.5			6.0						

TUA	Pn	04 56 09.2	U	-0.6	100	0.58	100	3.6	3.6
	S*	21		2.3	95				
NGZ	iPn	04 56 11.7		-0.8	100	0.78	233		
	e	18							
	Sn	24		1.0	100				
CNZ	Pn	04 56 12.1		-1.1		0.84	234		
	e	17							
	e	20							
	Sn	28		3.7					
WTZ	iPn	04 56 12.6	D	-0.9	100	0.85	32	3.7	3.7
	iP*	14.3	U	-0.2	100				
	Sn	25.5		0.7	100				
GSZ	Pn	04 56 12.7		-0.8		0.85	228		
	Sn	25		0.1					
TRZ	Pn	04 56 13.7		-0.4	100	0.90	159		
	e(Sn)	27		1.1					
KRP	iPn	04 56 15.8	DE	-0.3	100	1.04	318	4.1	3.5
	Sn	30		0.6	100				
GNZ	Pn	04 56 18	U	-1.1	100	1.26	87	3.7	3.7
	e	29							
	Sn	34.5		-0.1	100				
TNZ	Pn	04 56 24		-0.4	100	1.66	253	3.6	3.8
	e(Sn)	49		5.0					
ECZ	Pn	04 56 28		-0.7	100	1.96	60	3.8	4.0
	e(S*)	57 08.5		9.4					
MNG	S*-Pn	35		3.4		2.03	200	4.0	4.3
CAZ	Sn	04 56 54.5		-2.5		2.20	184		
	(S*)	57 16		10.0					
GBZ	Pn	04 56 37.0	D	-0.3		2.60	343		
WEL	ePn	04 56 44.5		3.5		2.87	206	4.0	
	(P*)	50.5		2.1					
	(S*)	57 20.5		-5.5					
COB	Pn	04 56 51.5		-0.8		3.70	229	4.4	4.0
	e(Sn)	57 37.5		4.4					
	e	40.5							
KKZ						4.25	208		
KAI						5.39	223	3.9	
CMZ						5.64	209		3.5
AMPLITUDES:		WNZ	0.8 0.9	TUA	3.5 3.8	WTZ	6.7 5.3		
		KRP	7.5 1.7	GNZ	2.2 3.6	TNZ	0.2 0.3		
		ECZ	0.3 0.6	MNG	3.5 10	GBZ	0.5		
		WEL	0.4	COB	1.0 1.3	KKZ	0.1 0.2		
		KAI	0.1	CMZ	0.1				

SEP 14 05^h47^m10^s.0 31°.90S 177°.77W 33 km M = 4.7
 ± 1.4 0.12 0.20 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	e(Pn)	05	48	44		1.3	99	6.53	207		4.8	4.9
	e			49.5								
	eSn		49	54.5		1.6	99					
GBZ	e(Pn)	05	49	00.5		10.5		7.07	231			
WTZ	Pn	05	48	55		-0.2	100	7.44	214		4.4	4.8
	Sn		50	15		0.1	100					
GNZ	e(Pn)	05	48	56		-0.7	100	7.56	206		4.6	4.9
	Sn		50	17.5		-0.2	100					
TUA	Pn	05	49	03		-0.4	100	8.05	210		4.9	5.0
	Sn		50	29.5		0.1	100					

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KRP	ePn	05 49 05	0.2	8.15	221	4.9
	e(P*)	28	-2.0			
	e(Sn)	50 32	0.2	100		
TRZ	e	05 49 25		8.82	208	4.8 4.7
	Sn	50 46	-1.8	99		
MNG				10.27	210	4.1 4.9
WEL	Sn	05 51 36	-7.3	11.12	210	4.7
COB	Sn	05 51 57	-5.8	11.93	217	4.3
KKZ	e	05 52 00		12.52	211	
	Sn	09	-7.7			
KAI				13.67	216	4.7
CMZ	Sn	05 52 40	-10.3	13.91	210	4.2
AMPLITUDES:	ECZ	0.3 0.5	GBZ	0.6	WTZ	0.5 1.0
	GNZ	0.6 1.9	TUA	0.4 0.6	KRP	0.3
	TRZ	0.3 0.4	MNG	0.2 1.7	WEL	0.1
	COB	0.3	KKZ	0.2	KAI	0.1
	CMZ	0.1				

SEP 14 06^h25^m49^s.3 31°.97s 177°.27w 33 km M = 4.5
 ± 2.7 0.27 0.50 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
ECZ	e(Pn)	06 27	30.5			6.6		6.67	210		4.6	4.8
	(Sn)	28	49.5			14.0						
WTZ	Pn	06 27	36			-1.0	100	7.63	217		4.1	4.4
	e(P*)	28	05			4.4						
	Sn		58			-0.7	100					
GNZ	Sn	06 29	00			-0.1	100	7.69	209		4.6	4.5
TUA	Pn	06 27	46			1.1	100	8.21	212		4.6	4.6
	e(Sn)		29 11			-1.5	100					
KRP	e(P*)	06 28	08.5			-4.8		8.38	223		4.4	
	eSn		29 17			0.4						
TRZ	Sn	06 29	32			1.3	100	8.96	211			4.6
NGZ	Sn	06 29	39			1.6	99	9.24	217			
MNG								10.43	212			4.5
WEL	Sn	06 30	22			-4.5		11.29	212	4.5		
COB	Sn	06 30	41			-6.0		12.14	219			4.2
KKZ	e	06 30	49					12.68	212			
	Sn		52.5			-7.4						
CMZ	Sn	06 31	29			-4.4		14.08	212			4.5
AMPLITUDES:	ECZ	0.2 0.4	WTZ	0.2 0.4	GNZ	0.5 0.7						
	TUA	0.2 0.2	KRP	0.1	TRZ	0.3						
	MNG	0.7	WEL	0.1	COB	0.2						
	KKZ	0.1	CMZ	0.2								

SEP 14 12^h09^m46^s.9 32°.82s 179°.40E 33 km M = 4.7
 ± 5.0 0.29 1.18 R S.E. of RES. 3.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
ECZ	Pn	12 10	58.5			0.9	100	4.92	188		4.9	4.7
	Sn		11 55			3.9	99					
WTZ	Pn	12 11	07			1.2	100	5.53	200		4.9	4.6
	e		12 01.5									
	e(Sn)		07			1.4						
GNZ	ePn	12 11	07.5			-3.8	99	5.93	190		4.9	4.7
	Sn		12 11.5			-3.8	99					
KRP	e(Pn)	12 11	21			8.7		6.00	211		5.0	

	S		10		-2.0							
WEL	P	18 07	34		-3.7	3.93	199	4.5				
	S		08 20		-5.3							
COB	P	18 07	42		-3.6	4.55	219		3.5*	3.6*		
	S		08 34.5		-4.8							
KAI	S	18 09	13		-6.4	6.29	217	3.5*				
CMZ						6.68	205				3.8*	
MSZ						9.59	220				3.0*	
AMPLITUDES:	WTZ			4.5	KRP	7.3		WNZ	0.3			
	TUA	1.7	4.4	GNZ	9.5	18		TNZ	0.7			
	MNG		13 16	WEL	0.7			COB	0.4	2.0		
	KAI	0.2		CMZ			1.1	MSZ		0.3		

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SEP 16 10^h02^m40^s.1 41°.63S 174°.22E 12 km M = 4.0
 ± 0.2 0.02 0.02 R S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TCW	iP*	10 02	48.6		U	0.1	100	0.42	6			
MRW	P*	10 02	50.5		U	0.0	100	0.54	43			
WEL	iP*	10 02	50.5		UE	0.0	100	0.54	50	3.6		
	S*		59			1.1	96					
BHW	P*	10 02	50.3		U	-0.1	100	0.54	66			
WDW	P*	10 02	52.9		U	-0.1	100	0.68	58			
CAW	P*	10 02	55.4			0.0	100	0.83	51			
KKZ	iP*	10 02	56.2		U	-0.1	100	0.88	206			
	e(Sg)		03 11			1.0						
KIW	P*	10 02	57.3			0.2	100	0.93	34			
COB	P*	10 03	02.5		D	-0.0	100	1.24	295	3.8	3.6	
	e(Sg)		22.5			0.3						
MNG	iPn	10 03	04.6		D	0.0	100	1.39	44	4.1	4.2	
	Sg		26			-1.1	96					
CAZ	eP*	10 03	13.5			3.6		1.68	65			
	Pg		17			2.9						
	Sg		41.5			4.7						
KAI	e(Pg)	10 03	25			-1.2		2.28	246	3.8		
	e(Sg)		04 00			3.1						
CMZ	e(Pn)	10 03	17			0.3		2.28	210		3.6	
	ePg		27			0.8						
CNZ	P*	10 03	26.5			0.3		2.64	23			
	S*		04 04.5			3.8						
KRP	ePn	10 03	42			4.0		3.84	16		4.5	4.6
	P*		48			1.2						
	i		50.5									
	S*		04 39			2.1						
RHP	P*	10 03	47			-1.1		3.91	230			
	S*		04 40			0.8						

AMPLITUDES:	WEL	5.5		KKZ	7.5	5.0	COB	2.5	5.0
	MNG		12 18	KAI	0.5		CMZ	0.5	
	KRP	1.1	0.9						

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SEP 19 22^h55^m36^s.6 37°.52S 176°.52E 228 km M = 4.0
 ± 0.9 0.05 0.06 8 S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	22 56	06.7		D	-0.7	100	0.59	141	3.6	3.5	
	e		28									
	(S)		34			2.7						

INSTRUMENTAL DATA

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KRP	iP	22 56 09.2	D	0.4	100	0.88	243	3.1*
TUA	eP?	22 56 12		-0.1		1.38	159	3.9 4.1
	S	39		-0.6	100			
	e	41.5						
ECZ	P	22 56 14		-0.1	100	1.62	97	3.7 4.0
	e	37.5						
	S	44		0.8	99			
GNZ	iP	22 56 14.2		0.0	100	1.63	134	4.6 4.3
	S	43		-0.3	100			
NGZ	e(P)	22 56 19		3.2		1.81	203	
	e(S)	49		3.0				
MNG	P	22 56 30.0	U	-0.5	100	3.19	194	4.2 4.2
	S	57 13		0.8	99			
WEL	S	22 57 30		0.8		4.00	199	3.7
COB	S	22 57 43		0.3		4.62	218	3.2*
AMPLITUDES:		WTZ	0.9 0.7	KRP	1.1	TUA	0.5 0.8	
		ECZ	0.3 0.6	GNZ	5.5 4.0	MNG	2.2 3.0	
		WEL	0.1	COB	0.7			

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SEP 20 03^h04^m08^s.5 38°.66s 178°.21E 33 km M = 3.4
 ± 0.7 0.04 0.04 R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	iP*	03 04		14.7		0.1	100	0.15	277			
TUA	P*	03 04		24.3		-0.2	100	0.85	260		3.6	3.5
	S*			35.5		-0.7	100					
ECZ	e(Pn)	03 04		29		3.3		1.00	15		2.7	3.4
	Sn			38		-0.6	100					
	e			47								
WTZ	Pn	03 04		28.5		0.3	100	1.18	305		3.8	3.9
	S*			46		0.0	100					
TRZ	(P*)	03 04		40		6.2		1.40	230		3.4	3.2
	(S*)			51.5		-1.1						
KRP	P*	03 04		49		1.1	99	2.23	288		3.4	
MNG								2.88	226			3.0
AMPLITUDES:		TUA	2.0 1.6	ECZ	0.1 0.7	WTZ	4.9 5.0					
		TRZ	0.5 0.5	KRP	0.3	MNG	0.3					

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SEP 20 05^h33^m40^s.5 45°.52s 167°.15E 83 km M = 3.6
 ± 0.5 0.02 0.04 4 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	S-P			10.5		0.3	100	0.38	134			
MSZ	P	05 34		00.3		0.1	100	1.01	33		3.5	3.5
	e			05								
	S			14.5		-0.5	100					
ROX	P	05 34		06.5		-0.3	100	1.53	89		4.0	3.8
	S			27		0.3	100					
OBZ	eP	05 34		07.5		0.5	100	1.54	155		3.5	3.5
	S			26.5		-0.5	100					
	e			28								
THP	P	05 34		15.7	U	0.2	100	2.18	64			
	S			42		0.7	99					
DNZ	P	05 34		19		0.6	100	2.38	100			
RHP	P	05 34		20		-0.4	100	2.53	57			
	S			50.5		0.3	100					
OMZ	P	05 34		22.5		-0.2	100	2.70	82		3.4	3.4

COB	S		53.5		-1.0	98								
	e(S)	05	36	12		-4.9		6.02	45					3.3
AMPLITUDES:	BRZ	5.0	3.0	9.0	MSZ		4.6	9.5	ROX		2.5	3.5		
	OBZ		1.1	2.7	DNZ		0.8		OMZ		0.3	0.5		
	COB			0.1										

SEP 20 06^h58^m42^s.6 45°.10S 167°.47E 67 km M = 3.0
 ± 0.8 0.03 0.05 4 S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	P	06	58	55.7		-0.3	100	0.53	37		3.0	3.0
	S			59 06		-0.0	100					
BRZ	S-P			11		-0.2	100	0.68	176			
ROX	eP?	06	59	05		-1.1		1.36	107		3.5	3.3
	e			14								
	(S)			24.5		0.6	99					
THP	P	06	59	12.4	U	0.2	100	1.81	73			
	S			34		-0.2	100					
OBZ	e(S)	06	59	33		-2.4		1.86	166			2.1
RHP	P	06	59	16.5		-0.0	100	2.12	63			
	S			42		0.4	100					
OMZ	e	06	59	47				2.44	91			3.3
	S			49		-0.8	98					
COB								5.56	46			3.0
AMPLITUDES:	MSZ		4.4	8.5	BRZ	0.5	0.4	0.7	ROX		1.0	1.8
	OBZ			0.1	OMZ			0.6	COB			0.1

SEP 20 09^h26^m47^s.6 45°.66S 167°.03E 83 km M = 3.9
 ± 0.5 0.02 0.05 5 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	S-P			10.3		0.1	100	0.38	109			
MSZ	P	09	27	09.0		-0.3	100	1.17	33		3.9	4.1
	S			25.5		-0.2	100					
OBZ	P	09	27	13.4		0.3	100	1.46	149		4.1	4.2
	S			32		-0.2	100					
ROX	P	09	27	15		-0.1	100	1.62	84		4.3	4.0
	S			36		0.1	100					
THP	iP	09	27	24.8	U	0.2	100	2.31	62			
	S			53		1.1	98					
DNZ	P	09	27	27.0	D	0.6	100	2.45	96			
	e(S)			53.5		-1.9						
	e			28 15								
RHP	P	09	27	29.5	D	-0.0	100	2.67	55			
	e			39								
	(S)			57		-3.9						
	e			28 00								
OMZ	P	09	27	31		-0.4	100	2.80	79		3.8	3.6
	S			28 03		-1.2	97					
KAI	eS	09	28	46		0.9		4.45	47	3.7		
CMZ	e	09	28	25				4.51	65			3.2
	e(S)			42		-4.6						
KKZ	e(P)	09	28	10		-2.6		5.80	58			
	e(S)			29 13		-5.5						
COB	S	09	29	26		-1.9		6.18	44			3.7
AMPLITUDES:	BRZ	13	15	22	MSZ		9.0	27	OBZ		5.2	14

ROX 4.5 5.0 DNZ 2.6 1.4 OMZ 0.6 0.7
 KAI 0.1 CMZ 0.1 KKZ 0.1
 COB 0.2

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SEP 20 11^h28^m20^s.3 45°.10s 166°.97E 0 km M = 3.2
 ± 2.4 0.08 0.12 9 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	Sg-P*			10		-0.7	100	0.78	150			
MSZ	P*	11	28	36		-0.3	100	0.80	58		3.3	3.2
	e			40								
	Sg			49		1.8	99					
ROX	e(Pg)	11	28	56.5		1.9		1.70	103		3.8	3.4
	e(S*)			29		-0.1						
	e			21								
OBZ	eP*	11	28	57		0.8		1.97	157		2.7	2.3
	e(S*)			29		-0.7						
THP	P*	11	28	59.0	D	-0.3	100	2.15	76			
	S*			29		-0.1	100					
RHP	P*	11	29	03		-1.2	100	2.44	67			
	e			08.5								
	S*			35		-1.8	99					
DNZ	e(Pg)	11	29	11		-2.0		2.61	108			
OMZ	ePn	11	29	07		1.5	100	2.80	91		3.4	3.1
	eSn			41		1.6	99					
COB	eSn	11	30	52		-0.2		5.83	48			3.2
AMPLITUDES:	BRZ	1.4	1.1	1.8	MSZ	4.2	6.7	ROX	1.2	1.4		
	OBZ	0.1	0.1	DNZ	0.3	OMZ	0.2	0.2				
	COB	0.1										

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SEP 21 04^h47^m48^s.3 35°.15s 179°.68W 12 km M = 4.2
 ± 1.4 0.07 0.12 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	ePn	04	48	35		1.4	99	2.92	209		4.2	4.2
	(Pg)			44.5		-2.8						
	e(Sn)			49		1.2						
	S*			17		-0.4	100					
WTZ	Pn	04	48	46.5		-0.6	100	3.91	222		4.0	4.1
	e(Pg)			49		0.8						
	Sn			33.5		2.0	98					
GNZ	Pn	04	48	47.5		-0.2	100	3.95	207		4.1	4.1
	e(P*)			54		-2.9						
	Sn			49		-1.1	100					
GBZ	ePg	04	49	10		-0.8	100	4.09	253			
TUA	Pn	04	48	54		-0.6	100	4.45	214		4.4	4.0
	e(Sn)			49		1.4						
KRP	Pn	04	48	59		0.4	100	4.74	233		4.6	
	e			49								
CRZ	(Pn)	04	49	26		5.8		6.33	274		4.8	
MNG	P*	04	49	45		1.7		6.67	214		3.9	4.1
	e(Sn)			50		4.0						
AMPLITUDES:	ECZ	0.4	0.5	WTZ	0.7	0.8	GNZ	0.6	1.0			
	GBZ	0.7	TUA	0.4	0.2	KRP	0.5					
	CRZ	0.2	MNG	0.3	0.6							

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SEP 21 06^h19^m39^s.2 35°.59S 179°.22E 321 km M = 4.2
 ± 1.9 0.17 0.24 19 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	06	20	30.5		1.1	100	2.17	194		3.8		4.0	
	S			21 08		-0.6	100							
WTZ	P	06	20	35.7	D	-1.0	100	2.99	216		4.3		4.1	
	S			21 23		1.4	99							
GNZ	P	06	20	39.6	D	0.9	100	3.19	197		4.4		4.4	
	S			21 24		-1.2	100							
TUA								3.61	207				4.1	
KRP	P	06	20	43.5		-0.9	100	3.76	231				3.2*	
TRZ	S	06	21	48		0.3	100	4.39	205				4.1	
MNG	P	06	21	07		-0.6		5.82	209		4.4		4.0	
COB	e(S)	06	22	55		2.3		7.49	221				2.8*	
AMPLITUDES:		ECZ		0.2	0.3	WTZ		1.0	0.6	GNZ		1.2	1.9	
		TUA		0.2		KRP		0.5		TRZ			0.3	
		MNG		1.2	0.6	COB			0.2					

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SEP 21 13^h23^m52^s.9 40°.09S 175°.63E 33 km M = 4.1
 ± 0.3 0.02 0.03 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
MNG	iPn	13	24	03.5	U	-0.3	100	0.54	192					
GSZ	iPn	13	24	07.5		0.1	100	0.81	358					
	S*			19		-0.5	100							
CNZ	iPn	13	24	08.4		-0.1		0.89	356					
	S*			22		0.1								
NGZ	iPn	13	24	08.9		0.2	100	0.90	359					
	S*			22.5		0.2	100							
CAZ	P*	13	24	11.5		1.1	100	0.94	151					
TRZ	Pn	13	24	11		0.1	100	1.06	60		3.7		3.9	
	e(S*)			30		3.1								
TNZ	Pn	13	24	13.7	U	-0.7	100	1.31	313		4.1		4.4	
	Sn			31		0.5	100							
WEL	Pn	13	24	13.5		-1.6	99	1.37	208	4.3				
	P*			16		-1.6								
	e			28.5										
	(Sn)			31		-0.7								
TUA	Pn	13	24	19.5		-0.6	100	1.74	43		4.2		4.2	
	P*			24		0.2								
	e			28										
	e(S*)			49		2.1								
KRP	Pn	13	24	25.5		-0.4	100	2.16	358		4.4		4.6	
	P*			30		-1.0								
	Sn			52		1.3	100							
WTZ	Pn	13	24	27.5		-1.0	100	2.35	27		3.7		4.3	
	P*			35		0.8								
	eSn			57		1.7								
GNZ	Pn	13	24	27		-1.5	99	2.35	53		4.0		3.9	
	P*			42		7.8								
	Sn			57		1.7	99							
COB	Pn	13	24	28		-1.5	99	2.42	245		4.6		4.3	
	e			30										
	Sn			58.5		1.4	99							
KKZ	ePn	13	24	35.5		1.5	99	2.75	211					

	P*	42		0.9				
	e	57						
	e	25	27					
ECZ						3.30	45	4.0 4.1
GBZ	e(Pn)	13	24 52		2.8	3.87	358	
	e(P*)		25 03		3.0			
KAI						4.00	231	4.1
CMZ						4.15	212	
ONE	ePn	13	24 58		1.2	4.42	346	3.8
	e(P*)		25 04		-5.4			
	e(S*)		26 02		-5.0			
THP	e(P*)	13	25 32		-7.1	6.16	222	
	e(Sn)		26 23		-4.0			
AMPLITUDES:	TRZ	1.7	4.0	TNZ	2.2	6.0	WEL	4.2
	TUA	1.7	1.8	KRP	2.7	3.0	WTZ	1.0 3.2
	GNZ	1.5	2.0	COB	4.0	7.0	KKZ	1.0 1.0
	ECZ	0.2	0.3	GBZ	0.4	0.3	KAI	0.3
	CMZ		0.4	ONE	0.1			

FELT: Wanganui (57) MM IV and Ohakea, Marton (61)

SEP 22 09^h44^m13^s.5 38°.48S 175°.80E 179 km 80/ 561
 ± 0.4 0.02 0.02 2 S.E. of RES. 0.4 M = 4.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
WNZ	eP	09	44	38		0.3	100	0.28	122		
KRP	iP	09	44	38.7	DE	-0.0	100	0.59	340		4.0*
	S			58		-0.1	100				
NGZ	P	09	44	40.0		0.6	99	0.72	192		
	e			57.5							
	e(S)			59		-0.3					
WTZ	iP	09	44	42.0	D	0.3	100	1.06	63		4.0 3.7
	S			45 03.5		0.1	100				
TUA	P	09	44	41.6		-0.5	99	1.11	108		4.2 4.1
	(S)			45 04.5		0.3	100				
TRZ	e(S)	09	45	07		-0.6	99	1.33	144		3.8 4.3
GNZ	P	09	44	48.2	U	-0.0	100	1.75	96		4.4 4.3
	S			45 15		0.1	100				
GBZ	P	09	44	53.5		-0.4	100	2.28	354		
ECZ	e(P)	09	44	54.5		0.1	100	2.30	71		3.9 4.2
	e(S)			45 28		2.1					
	e			31							
CAZ	S	09	45	26.5		-2.1		2.45	172		
WEL	P	09	44	58.0	U	-3.6		2.92	195	4.0	
	S			45 34		-4.7					
COB	eP	09	45	03.5		-5.6		3.52	221		3.5* 3.0*
	S			46		-6.0					
KKZ	P	09	45	14		-4.5		4.26	202		
CMZ	eP	09	45	31		-5.5		5.63	204		3.3*
THP	P	09	45	55		-6.3		7.51	214		
AMPLITUDES:	WNZ	0.3		KRP	12			2.5	1.6		
	TUA	1.7	1.3	TRZ	0.5	3.5	GNZ	4.5	5.3		
	GBZ	0.7		ECZ	0.4	0.7	WEL	0.3			
	COB	0.6	0.6	KKZ	1.6		CMZ	0.3			

SEP 23 16^h05^m52^s.2 37°.23S 177°.66E 112 km 80/ 562
 ± 0.8 0.05 0.04 9 S.E. of RES. 0.9 M = 4.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	16	06	11.5		-0.6	100	0.85	123		4.2		4.2	
	i			21.5										
	S			28.5		1.0	99							
WTZ	iP	16	06	12.3	D	-0.6	100	0.92	215		4.0		4.3	
	S			27.5		-1.1	99							
GNZ	P	16	06	18.5		-0.2	100	1.44	168		4.1		4.1	
	e			30										
	S			39		0.0	100							
TUA	P	16	06	21.5		0.5	100	1.62	194		3.7		3.9	
	e			36.5										
	e(S)			41		-1.8								
	e			46.5										
KRP	iP	16	06	23.9	D	0.4	100	1.82	247		3.5*		2.7*	
	eS			48		1.1	99							
GBZ	iP	16	06	25.6	D	-0.3	100	2.02	299					
	i			33.2	D									
TRZ	e(P)	16	06	31		-0.1		2.41	196		3.8		3.8	
	e			40.5										
	e(S)		07	00		-0.3								
	e			03										
NGZ	e(S)	16	07	07		3.7		2.53	219					
CNZ	(P)	16	06	35.3		1.9		2.57	220					
	e		07	17.5										
TNZ	e(P)	16	06	47		4.6		3.24	232		3.0*			
MNG	P	16	06	48		-1.8		3.79	206		3.8		3.9	
	e		07	02										
	e(S)			32		-1.6								
	e			37										
WEL	S	16	07	51		-3.1		4.63	208	3.7				
COB	S	16	08	12.5		-1.2		5.43	223				2.9*	
AMPLITUDES:		ECZ		4.2	4.5	WTZ		5.0	12	GNZ		4.0	7.0	
		TUA		0.5	0.9	KRP		2.4	0.5	GBZ		5.0		
		TRZ		0.3	0.6	TNZ		0.1		MNG		0.8	1.4	
		WEL	0.1			COB			0.3					

SEP 23 18^h44^m01^s.7 40°.34s 173°.53E 170 km 80/ 563
 ± 0.9 0.03 0.06 7 S.E. of RES. 0.9 M = 4.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
COB	iP	18	44	28.3		0.1	100	0.96	219		4.4*		4.0*	
	S			49		0.3	100							
TNZ	P	18	44	31.3	D	-0.0	100	1.32	30		3.9*		4.0*	
	e(S)			54.5		0.3	100							
WEL	iP	18	44	32.4	UE	0.9	100	1.34	136	4.8				
	S			55		0.6	100							
MNG	iP	18	44	33.9		0.6	100	1.52	101		4.3			
	(S)			56		-1.5								
NGZ	iP	18	44	37.8		-0.3	100	1.98	55					
	S			45 05		-1.3	99							
KKZ	iP	18	44	38.9	U	-0.4	100	2.09	177					
	S			45 07		-1.4	99							
CAZ	iP	18	44	40.8	D	0.8	100	2.13	106					
	e			45 06										
	(S)			11.5		2.1								
WNZ	P	18	44	44.5		-1.4		2.63	50		4.6			
TRZ	P	18	44	45		-1.1		2.65	74		4.3		4.3	

	e(S)	45 23		2.5				
	e	35						
KAI	eP	18 44 45		-1.8	2.71	215	4.1*	
	S	45 16.5		-5.0				
KRP	P	18 44 46		-2.9	2.87	34	3.5* 3.4*	
	e	45 00						
	e(S)	22		-3.2				
TUA	P	18 44 51		-1.8	3.19	63	4.5 4.4	
	S	45 31		-1.3				
CMZ	P	18 44 51.5		-2.9	3.31	191	4.1* 4.7*	
	e	45 01						
	S	30		-5.0				
WTZ	eP	18 44 54.5		-3.3	3.57	50	4.1 4.1	
	e	45 16						
	S	39		-1.9				
GNZ	P	18 44 59.2	D	-2.3	3.87	66	5.0 4.7	
	eS	45 45		-2.7				
ECZ	P	18 45 09		-3.6	4.72	58	4.9 4.8	
	eS	46 04		-3.3				
	e	07						
THP	P	18 45 12		-4.2	4.99	211		
	e	27						
	S	46 05		-8.8				
OMZ					5.11	201	3.5* 3.5*	
MSZ	P	18 45 24.5		-4.9	6.00	222	3.6* 4.0*	
	S	46 29		-8.5				
BRZ					6.99	217		

AMPLITUDES:	COB	10 15	TNZ	1.6 2.7	WEL	8.5	
	MNG	10	KKZ	4.8 4.8	WNZ	0.2	
	TRZ	0.7 1.6	KAI	2.1	KRP	1.7 1.6	
	TUA	0.8 0.7	CMZ	3.0 17	WTZ	0.7 0.8	
	GNZ	4.5 3.7	ECZ	1.2 0.8	OMZ	0.4 0.7	
	MSZ	1.1 5.0	BRZ	0.6 0.3 0.9			

SEP 24 12^h13^m26^s.8 32°.15s 179°.28w 33 km M = 4.7
 ± 2.9 0.24 0.55 R S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	Pn	12 14	50.5			0.8	100	5.81	197		4.2	4.7
	(Sn)		15 52			-0.4	100					
	e		58									
WTZ	(Pn)	12 15	01			0.9	100	6.58	207		4.5	4.7
	Sn		16 12			1.2	100					
GNZ	(Pn)	12 15	02			-1.7	100	6.85	198			4.9
	Sn		16 17.5			0.3	100					
TUA	Sn	12 16	28			0.9	100	7.25	203			4.8
TRZ	e	12 16	29					8.04	202			4.9
	Sn		47.5			1.6	100					
MNG	ePn?	12 15	36			-3.3		9.45	205			5.0
	Sn		17 16			-3.8	97					
WEL	Sn	12 17	35			-5.1		10.30	206	5.0		
COB	e	12 17	50.5					10.99	213			4.2
	Sn		53.5			-3.3						
KKZ	Sn	12 18	07.5			-5.9		11.68	207			
KAI	e(Sn)	12 18	45			6.3		12.73	213	4.6		

AMPLITUDES:	ECZ	0.1 0.4	WTZ	0.7 1.0	GNZ	2.1
	TUA	0.4	TRZ	0.7	MNG	2.7

WEL 0.3 COB 0.3 KKZ 0.3
 KAI 0.1

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 SEP 24 12^h14^m14^s.8 40°.07S 175°.43E 33 km M = 3.4
 ± 0.3 0.01 0.03 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W S
MNG	iPn	12	14	25.2	U	-0.6	100	0.55	175				
	Sn			34.5		0.6	100						
NGZ	Pn	12	14	30		-0.6	100	0.90	9				
	Sn			43		0.6	100						
CAZ	P*	12	14	34.5		0.6		1.03	144				
	Sn			45		-0.5							
	S*			52		4.0							
TNZ	e(Pn)	12	14	36		1.3		1.20	317		3.4	3.6	
	S*			53		0.2	100						
TRZ	Pn	12	14	34		-0.6	100	1.20	65		3.0	3.6	
	Sn			50		0.6	100						
	S*			53		0.2							
WEL	ePn	12	14	35.5		-0.7	100	1.31	202	3.5			
	Sn			53		0.7	100						
TUA	ePn	12	14	40.5		-2.9		1.84	47		3.3	3.3	
	P*			48		0.5							
	S*			15 13		1.2							
KRP	Pn	12	14	46.5		-1.1		2.15	2		3.7	4.1	
	(Sn)			15 14		1.7							
	(S*)			17.5		-3.5							
COB	P*	12	14	52		-3.1		2.29	243		3.6	3.3	
	eS*			15 27.5		2.3							
WTZ	ePn	12	14	51		-0.3		2.41	31		2.8		
GNZ	ePn	12	14	50		-2.0		2.47	56		2.9		
KKZ	(Pn)	12	14	58.5		3.5		2.69	209				
	P*			15 05		3.1							
ECZ	e(Pn)	12	15	02.5		-2.3		3.40	47		3.8		
KAI	e(S*)	12	16	05		-8.2		3.90	230				

AMPLITUDES: TNZ 0.6 1.4 TRZ 0.3 1.7 WEL 0.7
 TUA 0.2 0.2 KRP 0.5 0.9 COB 0.4 0.8
 WTZ 0.1 GNZ 0.1 KKZ 0.1
 ECZ 0.1

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 SEP 25 01^h31^m44^s.7 36°.58S 177°.71E 165 km M = 4.2
 ± 0.6 0.05 0.06 10 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W S
ECZ	e(P)	01	32	18		4.2		1.30	149		3.7	3.8	
	e			20.5									
	e			34									
	e(S)			40		4.0							
WTZ	P	01	32	14.9	D	-1.0	92	1.51	202		4.5	3.7	
	eS			40		0.2	100						
GBZ	P	01	32	19.5		0.3	100	1.84	281				
GNZ	iP	01	32	22.1	US	0.2	100	2.08	173				
	S			51		0.3	100						
KRP	iP	01	32	23.7	DE	0.4	100	2.20	232		3.8*		
	S			53		-0.1	100						
TUA	P	01	32	24.3		0.1	100	2.27	191		4.5		
TRZ	P?	01	32	32.5		-1.5		3.05	193		4.4	4.2	

	S?	33	11	-0.8					
NGZ	P	01	32	34.0	-0.4	3.09	212		
MNG	P	01	32	46.6	-4.7	4.40	203	4.7	4.6
	S	33	35.5	-7.1					
CAZ	P	01	32	49.1	-3.2	4.47	195		
WEL	S	01	33	53.5	-8.7	5.23	205	4.3	
COB	eS	01	34	11	-8.3	5.95	219		3.2*
KKZ	eS	01	34	26.5	-8.5	6.61	207		
AMPLITUDES:	ECZ		0.5	0.7	WTZ	6.8	1.0	GBZ	0.6
	KRP		4.0		TUA	1.6		TRZ	0.7 1.0
	MNG		4.5	4.8	WEL	0.2		COB	0.6
	KKZ			0.4					

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SEP 25 18^h47^m40^s.9 33°.02S 177°.63W 33 km M = 4.4
 ± 2.4 0.13 0.30 R S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	e(Pn)	18	49	06		4.9		5.62	213		4.7	
GBZ	ePn	18	49	13.5		0.1	100	6.52	239			
	e			20.5								
WTZ	Pn	18	49	13.5		-1.3	100	6.62	220		4.3	4.2
	eSn			50 22.5		-3.5	98					
GNZ	ePn	18	49	16		1.0	100	6.63	211		4.5	4.3
	P*			40		4.9						
	eSn			50 29		2.7	99					
TUA	ePn	18	49	21		-1.2	100	7.16	215		4.7	4.1
	eSn			50 39		-0.0	100					
ONE	ePn	18	49	24		1.7	100	7.17	245			
KRP	ePn	18	49	26.5		0.8	100	7.42	227		4.6	
	e			36								
TRZ	ePn	18	49	31		-1.4	100	7.91	213		5.2	4.0
	Sn			50 58		1.0	100					
CRZ	e	18	49	49				8.20	257		4.9	
MNG	e(Pn)	18	49	50.5		-2.0		9.39	214		4.0	4.2
	e(Sn)			51 28		-4.3						
WEL	eSn	18	51	54		1.0		10.24	214	4.4		
COB	eSn	18	52	08		-6.6		11.14	221			3.8
AMPLITUDES:	ECZ			0.3		GBZ		0.6	WTZ		0.5	0.3
	GNZ			0.6	0.6	TUA		0.3	0.1	KRP		0.2
	TRZ			1.0	0.1	CRZ		0.1		MNG		0.2
	WEL			0.1		COB			0.1			

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SEP 25 18^h49^m49^s.6 33°.04S 177°.82W 33 km M = 4.8
 ± 1.8 0.08 0.20 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	ePn	18	51	10.5		2.1	99	5.52	212		4.9	
	e(P*)			24		-0.8						
GBZ	Pn	18	51	21.5		1.4	100	6.37	238			
	e			28								
	e			50								
WTZ	Pn	18	51	20		-1.9	99	6.51	219		4.8	4.5
	e(Sn)			52 30.5		-1.4	100					
	e(S*)			53 03		-3.0						
GNZ	ePn	18	51	22.5		0.1	100	6.53	210		4.9	4.6
	Sn			52 32.5		-0.1	100					
ONE	ePn	18	51	31		2.1	99	7.02	245			

TUA	ePn	18 51 29	-0.5	100	7.06	214	5.1	4.8
	Sn	52 45	-0.2	100				
	e(S*)	53 29	6.4					
KRP	ePn	18 51 31	-1.7	100	7.29	226	5.1	
	e	44						
TRZ	ePn	18 51 39.5	-0.3	100	7.81	212	5.0	4.7
	eSn	53 05.5	2.2	99				
CRZ	ePn	18 51 42	-0.9	100	8.04	257	5.2	
	e	51						
TNZ					8.80	224	5.0	
MNG	(Pn)	18 52 00	0.2		9.28	213	4.3	4.6
	e(Sn)	53 35	-3.5					
WEL	Sn	18 53 52.5	-6.7		10.13	214	4.7	
COB	Sn	18 54 14	-6.4		11.02	220		4.2
	e	21						
AMPLITUDES:		ECZ	0.6	GBZ	1.2	WTZ	1.6	0.7
		GNZ	1.4 1.3	TUA	0.8 0.5	KRP	0.6	
		TRZ	0.6 0.5	CRZ	0.2	TNZ	0.1	
		MNG	0.4 1.0	WEL	0.2	COB		0.3

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SEP 25 19^h23^m29^s.0 32°.94s 177°.58w 33 km M = 4.5
 ± 2.3 0.13 0.28 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	e(Pn)	19 24 54				3.6		5.71	213		5.0	4.7
	(P*)	25 04.5				-2.9						
	e	26 10.5										
GBZ	e	19 25 09						6.60	238			
	e(P*)	32				9.4						
WTZ	ePn	19 25 02.5				-1.6	100	6.71	220		4.3	4.4
	eSn	26 14				-2.2	99					
	e	33										
GNZ	e(Pn)	19 25 05				0.7	100	6.72	211		4.5	4.3
	eSn	26 17				0.5	100					
ONE	ePn	19 25 12.5				1.1	100	7.24	245			
TUA	ePn	19 25 11				-0.6	100	7.25	215		4.7	4.5
	eSn	26 31				1.7	99					
KRP	e(Pn)	19 25 15				0.0	100	7.51	227		4.8	
	e(P*)	34				-4.1						
TNZ								9.02	224		5.0	
MNG	e(Pn)	19 25 40				-1.8		9.48	214		3.7	4.3
	Sn	27 16				-6.6						
WEL	eSn	19 27 35				-8.3		10.33	214	4.4		
COB	Sn	19 27 59				-5.8		11.23	221			3.8
AMPLITUDES:		ECZ	0.6 0.4	GBZ	0.6	WTZ	0.5	0.5				
		GNZ	0.6 0.6	TUA	0.3 0.2	KRP	0.3					
		TNZ	0.1	MNG	0.1 0.5	WEL	0.1					
		COB	0.1									

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SEP 25 19^h40^m52^s.0 32°.93s 177°.85w 33 km M = 4.7
 ± 2.0 0.08 0.22 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	ePn	19 42 14				2.1	99	5.59	211		4.8	4.7
	eSn	43 14				1.6	100					
	e	20										
GBZ	Pn	19 42 24				1.0	100	6.41	237			

WTZ	Pn	19 42 23	-2.3	99	6.57	218	4.5	4.6
	Sn	43 34	-1.9	99				
GNZ	ePn	19 42 25.5	-0.4	100	6.61	209	4.6	4.6
	Sn	43 38	1.0	100				
ONE	ePn	19 42 33	1.3	100	7.04	244		
TUA	Pn	19 42 32.5	-0.4	100	7.14	213	5.0	4.7
	eSn	43 49	-0.4	100				
	e	54						
KRP	Pn	19 42 34	-1.8	100	7.34	225	4.9	
	e	46						
	e(P*)	56	-2.4					
TRZ	e(Sn)	19 44 05	-2.5		7.89	212		4.6
CRZ	ePn	19 42 45.5	0.2	100	8.04	257	5.2	
MNG	ePn	19 43 00.5	-2.7		9.35	213	4.2	4.5
	Sn	44 36.5	-6.3					
WEL	eSn	19 44 56	-7.4		10.21	213	4.7	
COB	eSn	19 45 19	-5.4		11.09	220		4.3
AMPLITUDES:	ECZ	0.4	0.4	GBZ	0.6	WTZ	0.8	0.9
	GNZ	0.7	1.1	TUA	0.6	0.4	KRP	0.4
	TRZ		0.4	CRZ	0.2	MNG	0.3	0.8
	WEL	0.2		COB		0.3		

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SEP 25 22^h05^m46^s.1 33°.07S 176°.83W 33 km M = 4.5

RES. 1.0

± 1.8 0.08 0.21 R S.E. of

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	e(Pn)	22	07	10		-1.2	99	5.97	218		4.5	4.9		
	e(Sn)		08	24		8.5								
	e(S*)			42.5		-4.0								
GNZ	e(Pn)	22	07	29		4.3		6.97	215		4.5	4.4		
	P*			46		0.0								
	Sn		08	39		-0.4	100							
WTZ	ePn	22	07	26		0.2	100	7.04	224		4.4	4.4		
	e(Sn)		08	43		1.8								
GBZ	ePn	22	07	27		0.7	100	7.08	241					
TUA	ePn	22	07	33.5		1.0	99	7.53	219		4.7	4.5		
	eSn		08	53.5		0.4	100							
ONE	ePn	22	07	35		-0.7	100	7.77	247					
KRP	e(Pn)	22	07	36		-1.4		7.89	230		4.9			
CRZ	ePn	22	07	49		-1.5		8.85	258		4.9			
MNG	ePn	22	08	02.5		-0.1		9.74	217		4.0	4.3		
	e(P*)			33		-0.2								
	Sn		09	41		-5.1								
COB	Sn	22	10	22		-7.8		11.56	223				3.8	
AMPLITUDES:	ECZ	0.2	0.6	GNZ	0.5	0.7	WTZ	0.5	0.5					
	GBZ	0.6		TUA	0.3	0.2	KRP	0.3						
	CRZ	0.1		MNG	0.2	0.5	COB		0.1					

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SEP 26 02^h51^m44^s.3 39°.12S 175°.22E 33 km M = 3.9

RES. 1.3

± 0.5 0.03 0.06 R S.E. of

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
CNZ	iP*	02	51	51.0	D	-0.5	100	0.26	107					
	S*			56.0		-0.7	100							
NGZ	iP*	02	51	51.8		-0.3	100	0.31	101					
	S*			57.7		0.0	100							
GSZ	P*	02	51	51.5		-0.8	100	0.32	119					

KRP	Pn	02 52 04.8	0.2	100	1.22	12	3.8	4.1
	e	09.9						
	Sn	20.1	0.4	100				
MNG	Pn	02 52 08.5	0.0	100	1.50	173	3.9	3.7
	e	11.3						
	e	14.1						
	Sn	26.1	-0.4	100				
	e	29.5						
TUA	ePn	02 52 10.5	1.6	99	1.54	79		
WEL	eSn	02 52 45.5	2.6	97	2.19	189	3.5	
COB	Pn	02 52 23.2	-2.1	99	2.74	223		4.2
AMPLITUDES:	KRP	2.2	4.2	MNG	5.0	4.0	WEL	0.2
	COB	1.0						

SEP 26 12^h39^m25^s.1 46°.70s 165°.84E 33 km M = 4.2
 ± 1.6 0.06 0.14 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	Pn	12 39	47.3			-1.7	99	1.49	53			
	Sn	40	07.2			0.2	100					
OBZ	Pn	12 39	49.8			-0.4	100	1.58	98		4.1	3.7
	Sn	40	08.8			-0.2	100					
MSZ	ePn	12 40	03			0.3	100	2.50	36		4.3	4.4
	Sn		30.8			-0.2	100					
	i		42.8									
DNZ	Pn	12 40	14.0			-0.3	100	3.35	77			
OMZ	ePn	12 40	24.5			2.6	96	3.91	67		4.4	4.2
RHP	Pn	12 40	22.7			0.0	100	3.96	51			
AMPLITUDES:	BRZ	4.3	7.3	OBZ	4.0	4.4	MSZ	4.8	9.8			
	OMZ	1.0	1.1	RHP	5.0							

SEP 27 08^h43^m04^s.8 48°.83s 165°.86E 33 km M = 4.2
 ± 2.3 0.13 0.28 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	Pn	08 43	43.0			1.2	100	2.46	39		4.4	4.2
	Sn	44	09.1			-0.6	100					
BRZ	Pn	08 43	51.9			-0.9	100	3.26	21			
	eSn	44	28			-1.1	100					
MSZ	Pn	08 44	08.0			-0.3	100	4.40	20		4.4	4.0
	eSn		58.0			1.6	99					
OMZ								5.11	44			4.0
AMPLITUDES:	OBZ	3.3	5.3	BRZ	0.9	1.0	MSZ	2.0	1.3			
	OMZ		0.4									

SEP 27 13^h59^m48^s.7 32°.63s 179°.98W 369 km M = 4.3
 ± 2.8 0.27 0.52 36 S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	14 01	21.8			2.2	99	5.89	204		4.4	4.2
	eS	02	31			0.1	100					
GNZ	eP	14 01	21			-2.3	99	6.22	195		4.1	4.4
	S	02	38			0.4	100					
MNG	eP	14 01	53			0.0	100	8.77	203		4.1	4.4
	eS	03	31			-0.2	100					
WEL	eS	14 03	48			-1.1	100	9.61	204	4.7		

COB	eS	14 04 02			-1.2	100	10.27	213					3.0*
KKZ	eS	14 04 21			2.3	99	10.99	205					
AMPLITUDES:		WTZ	0.4	0.3	GNZ	0.2	0.7	MNG				0.3	0.8
		WEL	0.2		COB		0.2	KKZ					0.2
													80/ 576
SEP 27	16 ^h 38 ^m 38 ^s .9	38°.51s	176°.14E	33 km	M = 3.8								
	± 0.5	0.03	0.05	R	S.E. of RES.	1.7							

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
KRP	iP*	16	38	54.7		1.3	100	0.76	321					3.2
	S*		39	05.0		0.9	100							
	e			09.1										
WTZ	iPn	16	38	54.8	D	0.7	100	0.85	52			3.8	3.8	
	eSn		39	06.5		1.2	100							
TRZ	Pn	16	38	59.9		1.4	100	1.17	153			3.5	3.8	
	eSn		39	16.0		3.0								
GNZ	Pn	16	39	01.5		-1.2	100	1.48	96					
	Sn			20.6		0.1	100							
ECZ	Pn	16	39	08.6		-2.1	99	2.07	68				4.3	
MNG	Pn	16	39	12.0		-0.1	100	2.17	193				4.0	
GBZ	Pn	16	39	12.0		-2.5	99	2.35	347					
CAZ	Sn	16	39	45.0		2.6	99	2.39	178					
WEL	Sn	16	39	55.0		-1.2	100	2.97	200					
COB	eSn	16	40	14.0		0.7	100	3.68	224					4.1
KKZ	eSn	16	40	27		-2.0	100	4.34	205					
AMPLITUDES:		KRP			1.9	WTZ	5.1	4.1	TRZ			0.6	1.5	
		ECZ	0.6		1.0	MNG	2.3		GBZ			1.0		
		COB			1.0									

													80/ 577
SEP 27	21 ^h 55 ^m 38 ^s .6	39°.99s	173°.70E	161 km	M = 4.3								
	± 0.6	0.03	0.05	6	S.E. of RES.	1.1							

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
COB	P	21	56	09.0		1.5	99	1.32	214					3.5* 3.6*
	e			25.0										
	eS			29.5		-0.1	100							
MNG	iP	21	56	10.8		1.5	99	1.49	115					
	S			32.0		-0.8	100							
WEL	P	21	56	10.8		1.2	100	1.52	148	4.1				
	S			32.9		-0.4	100							
CNZ	P	21	56	11.0		0.3	100	1.63	61					
	e			30.0										
	eS			34.9		-0.3	100							
	e			38.5										
NGZ	P	21	56	11.1		-0.1	100	1.68	62					
CAZ	P	21	56	17.8		1.5	99	2.13	116					
	S			46.0		0.8	100							
KKZ	P	21	56	20.0		0.2	100	2.43	180					
	e			42										
	e			44.5										
	eS			49.7		-1.8	99							
KRP	eP	21	56	22.0		1.1	100	2.51	35			2.9*	3.2*	
	S			52.2		-1.2	100							
TUA	eS	21	57	02.3		-0.2	100	2.92	67					4.4
KAI	eS	21	57	01.5		-4.2		3.07	214	3.5*				
WTZ	eP	21	56	29.6		-0.6	100	3.26	53			4.1	4.2	
	eS		57	10		0.0	100							

GNZ	P	21 56 34.1	-0.8	100	3.61	69						
	eS	57 14.6	-3.5									
CMZ	P	21 56 34.0	-1.7	99	3.68	192						
	eS	57 14	-5.7									
ECZ	P	21 56 45	-0.4	100	4.43	60				4.7		
MSZ	eP	21 57 07	-3.8		6.34	221						
	eS	58 15.5	-7.1									
AMPLITUDES:		COB	1.2	5.1	WEL	1.3		KKZ			6.3	
		KRP	0.5	1.0	TUA			0.9	KAI	0.4		
		WTZ	0.7	1.0	ECZ	0.8						

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SEP 28 07^h41^m49^s.7 34°.79S 179°.02E 340 km M = 4.4
 ± 1.3 0.10 0.23 11 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	07 42	54.0			-0.3	100	3.58	207		4.4	4.1
	eS	43	44.0			-0.9	100					
GNZ	eP	07 42	57.5			-0.3	100	3.92	191			4.3
	eS	43	51.5			0.3	100					
KRP	P	07 43	01.9			1.1	100	4.20	221		3.3*	
TRZ	eS	07 44	15.0			1.7	99	5.07	200			4.4
MNG	P	07 43	25.3			-0.8	100	6.46	205		4.7	4.2
	S	44	41.0			-1.0	100					
WEL	eS	07 45	00.0			0.2	100	7.30	206			
KKZ	P	07 43	53			0.4	100	8.68	207			

AMPLITUDES: WTZ 0.9 0.5 GNZ 1.1 KRP 0.7
 TRZ 0.5 MNG 2.3 0.9

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SEP 29 22^h19^m27^s.6 38°.67S 175°.78E 165 km M = 4.8
 ± 0.7 0.03 0.05 6 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	P	22 19	50.9			0.8	100	0.26	80			
NGZ	iP	22 19	52.0		U	1.1	100	0.52	194			
CNZ	iP	22 19	52.5			1.4	100	0.56	199			
KRP	iP	22 19	52.1		U	-0.2	100	0.77	346		3.8*	3.3*
	S	20	10.2			-1.1	100					
TUA	P	22 19	56.1			1.5	100	1.08	97		4.5	
	e	20	08.8									
	S	15.0				-0.5	100					
WTZ	iP	22 19	54.9		D	-0.6	100	1.18	55		4.4	4.5
	eS	20	14.5			-2.5						
TRZ	P	22 19	57.6			1.9	99	1.20	137		5.0	5.1
	eS	20	17.5			0.2	100					
TNZ	P	22 19	57.4			1.7	99	1.21	244		3.8*	3.8*
	eS	20	18			0.6	100					
MNG	iP	22 20	04.2		U	0.7	100	1.95	187		4.7	4.8
	S	29				-2.2	99					
CAZ	iP	22 20	08.6		U	1.6	100	2.26	171			
	S	40.0				2.7						
ECZ	P	22 20	08.5		U	-0.2	100	2.39	67		5.3	4.9
	i	20.6										
	S	38.1				-2.1	99					
GBZ	P	22 20	09.0			-0.6	100	2.47	354			
WEL	P	22 20	12.9			0.2	100	2.72	196	4.8		
	S	45.8				-1.6	100					
COB	eP	22 20	19.5			-1.3	100	3.36	223		4.1*	4.3*

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	S	21	00.3	-1.4	100				
KKZ	P	22	20 29.6	-0.3	100	4.07	202		
	S	21	12.0	-6.0					
CMZ	eP	22	20 46	-2.1		5.45	205		
	e	21	41.5						
	iS		46.7	-3.7					
OMZ						7.35	208		3.8*
AMPLITUDES:	WNZ		1.1	KRP	7.5	2.5	TUA		3.8
	WTZ		7.1	10	TRZ	10	29	TNZ	1.5
	MNG		19	32	ECZ	8.6	3.6	GBZ	1.2
	WEL	3.1		COB	2.1	12	KKZ		0.9
	OMZ		1.2						6.1

80/ 580
 SEP 29 23^h28^m31^s.4 39°.38S 176°.92E 52 km M = 3.6
 ± 0.4 0.02 0.03 4 S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TRZ	iP	23	28	39.9		-0.5	100	0.19	204					
	S			46.7		-0.4	100							
TUA	P	23	28	44.8		0.4	100	0.60	17					
	S			54.9		0.8	100							
WNZ	P	23	28	50.0		0.6	100	0.98	320		4.3			
	i			51.2										
NGZ	iP	23	28	50.0	U	-0.1	100	1.03	281					
	S			29 04.6		0.6	100							
CNZ	iP	23	28	50.6	U	-0.1	100	1.08	279					
GNZ	eP	23	28	51.5		0.1	100	1.13	50		3.3	3.4		
WTZ	P	23	28	54.9		-0.2	100	1.39	2		3.5	3.7		
	S			29 12.5		-0.4	100							
MNG	eP	23	28	59.8		1.1	99	1.66	221		3.5			
	e			29 04.0										
	e			06.9										
KRP	P	23	28	59.8		-1.1	99	1.82	323		3.1*			
TNZ	eP	23	29	02.5		-0.7	100	1.98	275		3.0*			
	e			10.1										
COB	eP	23	29	32.5		5.9		3.63	241				2.8*	
AMPLITUDES:	TRZ		8.1	25	WNZ	0.9	GNZ		1.3	2.5				
	WTZ		1.2	2.2	MNG	2.1	KRP		1.0					
	TNZ		0.2		COB		0.4							

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 SEP 30 06^h22^m42^s.3 45°.18S 167°.64E 113 km M = 3.7
 ± 0.5 0.02 0.04 4 S.E. of RES. 0.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
MSZ	iP	06	23	00.4	U	0.4	99	0.55	21		3.8	3.5		
	S			13.1		-0.3	100							
THP	P	06	23	12.2		-0.1	100	1.72	69					
	S			35.3		0.3	100							
OBZ	P	06	23	13.0		0.2	100	1.75	169		3.7	3.9		
	S			35.6		-0.1	100							
RHP	P	06	23	16.0		-0.4	99	2.05	59					
	S			42.0		-0.1	100							
AMPLITUDES:	MSZ		14	11	OBZ	1.1	3.0							

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SEP 30 15^h33^m28^s.4 40°.44s 174°.10E 129 km M = 3.3
 ± 1.3 0.04 0.06 11 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WEL	eS	15	34	08		-0.8	100	0.99	150	2.9		
MNG	P	15	33	53.3		1.2	100	1.07	100		3.5	3.2
	S		34	10.5		0.4	100					
COB	eP	15	33	53.5		-0.3	100	1.22	237		2.8*	2.8*
	S		34	12.0		-1.1	100					
TNZ	iS	15	34	14.0		0.2	100	1.27	10			3.0*
CNZ	eS	15	34	23.0		1.3	100	1.66	43			
NGZ	eS	15	34	24.3		1.7		1.71	43			
KKZ	P	15	34	04.0		1.2	100	2.01	189			
	eS			29		0.2	100					
WNZ	eS	15	34	42.2		5.0		2.38	41			
GNZ	eS	15	35	02.0		-2.2	98	3.52	61			3.5
AMPLITUDES:		WEL	0.2			MNG	3.2	2.0	COB		0.3	1.0
		TNZ		0.3		CNZ		0.3	NGZ			0.3
		KKZ	0.2	0.2		GNZ		0.3				

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SEP 30 19^h13^m53^s.9 36°.38s 178°.35E 190 km M = 4.9
 ± 0.9 0.03 0.06 6 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	19	14	24.8		-0.6	100	1.32	173		4.9	5.1
	i			29.2								
	i			45.2								
	iS			48.5		-1.2	100					
WTZ	P	19	14	31.0	D	-0.3	100	1.93	214		5.0	5.0
	eS		15	01		0.8	100					
GNZ	iP	19	14	35.1	U	0.1	100	2.28	186		5.1	
GBZ	iP	19	14	34.9	U	-0.7	100	2.32	273			
	i			43.1								
	S		15	07.7		-0.1	100					
TUA	P	19	14	39.0		0.2	100	2.61	201		4.8	
	S		15	14.2		0.7	100					
KRP	P	19	14	41.5		1.2	100	2.73	235		3.8*	3.6*
WNZ	e(P)	19	14	48.3		6.2		2.87	218		4.9	4.9
AUC	P	19	14	44.6		2.1	99	2.92	259			
ONE	eP	19	14	47.5		0.4	100	3.28	279	3.8*		
	eS		15	27.0		-1.2	100					
TRZ	P	19	14	48.0		-0.3	100	3.39	200		5.0	4.9
	S		15	32.3		1.8	99					
TNZ	eP	19	15	03		4.2		4.21	227		4.0*	
	e			03.6								
MNG	eP	19	15	07		0.8	100	4.80	207		4.7	4.8
	e			09.3								
	e			18.2								
	eS		16	03.0		0.9	100					
CAZ	P	19	15	06.2		-0.2	100	4.81	200			
	S		16	02.5		-0.1	100					
WEL	S	19	16	19.0		-2.8	93	5.64	209	4.8		
COB	P	19	15	26.9		-0.6	100	6.43	221		4.0*	3.7*
	S		16	39.5		-0.8	100					
KKZ	eP	19	15	39.5		4.2		7.03	209			
	eS		16	56.3		1.9						

AMPLITUDES:	ECZ	7.0	10	WTZ	11	14	GNZ	14
	GBZ	13	7.5	TUA	2.2		KRP	3.7 2.1
	WNZ	0.3	0.3	ONE	1.1		TRZ	2.3 4.0
	TNZ	0.9		MNG	4.0	6.3	WEL	0.7
	COB	0.9	1.6					

OCT 01 05^h30^m55^s.6 33°.64s 178°.89w 301 km 80/ 584
 ± 1.6 0.07 0.18 17 S.E. of RES. 1.5 M = 4.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	05	32	09.0		0.5	100	4.55	207		4.8	4.8
	eS		33	07.0		1.3	100					
GBZ	P	05	32	16.5		-0.6	100	5.29	239			
	WTZ	05	32	18.2		-1.1	100	5.48	217		5.0	
GNZ	e			21.2								
	P	05	32	20.5		-0.1	100	5.59	206		4.9	4.7
ONE	S		33	25.0		-2.2	99					
	eP	05	32	25		0.0	100	5.96	247			
TUA	eP	05	32	25.5		-0.9	100	6.07	211		4.8	4.7
	eS		33	37		-0.6	100					
KRP	eP	05	32	29.3		1.0	100	6.23	225		3.4*	3.3*
	e		33	52								
TRZ	eS	05	33	56		1.7	100	6.84	209			4.4
	CRZ	05	32	38.0		-0.3	100	7.05	261		3.8*	
NGZ	eP	05	32	40.8		2.0	99	7.09	217			
	e			45.0								
TNZ	e			52.2								
	e		34	31								
MNG	e	05	32	54				7.76	222		3.7*	
	P	05	32	52.7		-0.8	100	8.30	211		4.3	4.4
WEL	eS		34	27		0.8	100					
	eS	05	34	42		-3.3	95	9.15	212	4.6		
COB	eS	05	35	04		0.2	100	9.99	219			3.3*
	eS	05	35	17.5		1.3	100	10.54	212			

AMPLITUDES:	ECZ	0.8	0.7	GBZ	1.7	WTZ	2.0	
	GNZ	1.6	1.8	TUA	0.5	0.4	KRP	0.6 0.5
	TRZ		0.3	CRZ	0.4		NGZ	0.7 0.7
	TNZ	0.2		MNG	0.6	0.8	WEL	0.2
	COB		0.4	KKZ		0.3		

OCT 01 06^h50^m39^s.4 31°.62s 179°.83E 452 km 80/ 585
 ± 1.5 0.09 0.23 15 S.E. of RES. 1.9 M = 5.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	06	52	19.0		2.6	99	6.16	190		5.0	5.1
	eS		53	32		-0.8	100					
ONE	e			37.8								
	eP	06	52	18.0		1.6	100	6.16	226			
CRZ	eP	06	52	22.0		0.6	100	6.63	243		3.7*	
	WTZ	06	52	21.0		-1.9	100	6.78	199		5.4	5.2
GNZ	i			23.1								
	eS		53	42.0		-2.6	99					
KRP	P	06	52	27.3		0.2	100	7.17	191		5.3	5.2
	eS		53	53		0.7	100					
KRP	P	06	52	29.2		1.5	100	7.23	208		4.0*	
	e(S)		53	58		4.7						

TUA	eP	06 52 30.7	-0.1	100	7.51	196	4.9	5.2
	eS	53 59.2	0.3	100				
TRZ	P	06 52 39.0	-0.4	100	8.30	196	4.9	5.3
	eS	54 17	2.6	99				
NGZ	P	06 52 40.8	1.3	100	8.31	203		
	eS	54 12	-2.6	99				
TNZ	eP	06 52 47	2.3		8.77	209	3.7*	
MNG	eP	06 52 51.2	-3.2	99	9.66	200	5.2	5.3
	i	53.6						
	eS	54 42.0	0.5	100				
WEL	eS	06 54 58	-0.2	100	10.48	201	5.1	
COB	eP	06 53 07	-2.8	99	11.05	209	3.7*	3.6*
	eS	55 09	-0.8	100				
KKZ	eP	06 53 18	-0.4	100	11.85	203		
	eS	55 29	3.2	99				
KAI	eS	06 55 50	5.5		12.80	209	3.8*	
AMPLITUDES:	ECZ	0.6	0.7	CRZ	0.3	WTZ	3.2	2.1
	GNZ	2.6	3.1	KRP	1.8	TUA	0.4	0.7
	TRZ	0.3	1.6	NGZ	0.5	0.7	TNZ	0.2
	MNG	2.7	4.4	WEL	0.4		COB	0.3
	KKZ	0.2	0.4	KAI	0.2			

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OCT 01 16^h38^m22^s.8 32°.01s 179°.92E 478 km M = 4.8
 ± 1.2 0.11 0.28 14 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GBZ	P	16	39	55.7		0.6	100	5.59	220			
ECZ	P	16	40	00		3.0	97	5.79	191		4.9	
WTZ	P	16	40	04.0		0.5	100	6.43	201		5.2	4.6
	eS	41	23.8			0.5	100					
GNZ	P	16	40	06.0		-1.3	100	6.80	193		5.0	4.9
	e		10									
	S	41	29.0			-1.1	100					
KRP	eP	16	40	07.2		-1.3	100	6.92	210		3.4*	
TUA	P	16	40	12.3		1.4	100	7.15	198		4.8	4.6
	eS	41	36			-0.7	100					
NGZ	eP	16	40	20		0.3	100	7.97	205			
MNG	eP	16	40	31.5		-2.6	98	9.31	201		5.1	4.6
	i		34.2									
	eS	42	19			0.6	100					
WEL	eP	16	40	43		-0.0	100	10.14	203	4.8		
	eS	42	34			-0.7	100					
COB	eP	16	40	48		-1.5	100	10.75	211		3.6*	3.2*
	eS	42	47			0.4	100					
KKZ	eP	16	40	59		1.4	100	11.52	204			
	eS	43	03			1.2	100					

AMPLITUDES:	GBZ	0.4	ECZ	0.5	WTZ	2.0	0.6
	GNZ	1.3	1.5	KRP	0.5	TUA	0.3
	NGZ	0.3	MNG	2.6	1.1	WEL	0.2
	COB	0.2	0.3	KKZ	0.2	0.2	

80/ 587

OCT 02 03^h30^m14^s.0 31°.49s 179°.99w 523 km M = 5.3
 ± 1.5 0.11 0.27 20 S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GBZ	eP	03	31	51.3		-1.3	100	6.04	217			
ECZ	P	03	31	56.0		0.9	100	6.31	191		5.2	5.2

	e		33	12.5								
	eS			19		3.6	98					
CRZ	eP	03	32	00		-0.1	100	6.82	243		3.7*	
WTZ	eP	03	32	00.0		-1.3	100	6.94	200		5.5	5.2
	eS			33	24.8			-1.7	100			
GNZ	eP	03	32	05.0		-0.1	100	7.33	192		5.5	5.5
	i			07.2								
	S			33	29.0			-4.5	95			
KRP	P	03	32	07.8		1.9	100	7.41	209		3.8*	
	e			33	42							
TUA	eP	03	32	09.5		0.9	100	7.67	197		5.2	5.3
	eS			33	41			1.2	100			
TRZ	P	03	32	19.0		2.3	100	8.46	197		5.4	5.7
	eS			33	52.3			-1.9	100			
NGZ	P	03	32	18.0		1.1	100	8.48	204			
	eS			33	55.7			1.1	100			
CNZ	eP	03	32	17		-0.3		8.51	204			
TNZ	eP	03	32	23		1.3		8.95	209			
MNG	eP	03	32	28.5		-2.2	100	9.82	201		5.2	5.1
	i			30.3								
	S			34	20.3			0.4	100			
WEL	eS	03	34	36		0.4	100	10.66	202	5.0		
COB	eP	03	32	44		-1.3	100	11.23	209		3.8*	3.3*
	eS			34	48			1.4	100			
KKZ	eP	03	32	53		-0.4	100	12.02	203			
	eS			35	01			-0.6				
	e			05								
AMPLITUDES:	GBZ				0.6	ECZ		0.8	0.9	CRZ		0.3
	WTZ				3.6	2.1	GNZ	3.6	5.4	KRP		1.2
	TUA				0.7	0.9	TRZ	0.8	3.2	NGZ		0.4
	CNZ				0.2		MNG	2.8	2.8	WEL	0.3	
	COB				0.3	0.4	KKZ	0.2	0.3			

80/ 588

OCT 02 03^h51^m00^s.1 35°.17s 179°.61w 220 km M = 5.5
 ± 1.0 0.04 0.08 12 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	03	51	49.2		-1.2	100	2.93	210		5.4	5.9
	i			56.8								
	i			58.0								
	e			52	44.0							
WTZ	P	03	52	01.2		-1.1	100	3.93	223		5.6	5.5
	eS			50.3		-0.3	100					
GNZ	P	03	52	01.7		-1.0	100	3.96	208		5.4	
	e			04.8								
	e			19.0								
TUA	P	03	52	09.8		0.8	100	4.47	215		5.4	5.6
	eS			53	04.0			1.6	99			
KRP	P	03	52	14.0		1.1	100	4.79	233		4.5*	
	e			53	06							
	eS			13		3.5						
AUC	eP	03	52	15		1.2	100	4.86	248			
	e			16.7								
	e			53	25							
WNZ	eP	03	52	16		1.9		4.88	224		6.0	
	e			24.0								
TRZ	eP	03	52	17.2		-1.3	100	5.22	212		5.6	5.1
	eS			53	20			0.5	100			

	Sn	33.8	1.0	100					
KKZ	eP*	15 08 17	1.1		2.70	210			
AMPLITUDES:	NGZ	26 21	CAZ	4.7	7.5	TRZ	0.4	1.6	
	TNZ	1.3 2.6	WEL	1.8		TUA	0.4		
	KRP	1.2 2.1	COB	0.7	1.1	WTZ	0.3	0.9	
	GNZ	0.4 0.6							

OCT 03 07^h15^m45^s.3 38°.42S 175°.68E 186 km M = 4.2
 ± 1.1 0.04 0.06 8 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
KRP	iP	07	16	10.6	D	-0.2	100	0.50	347		3.4* 2.7*
	S			30.0		-0.7	100				
NGZ	P	07	16	13.3		1.1	100	0.76	184		
	eS			35		2.0	99				
CNZ	P	07	16	13.2		0.9	100	0.78	188		
WTZ	P	07	16	13.6		-0.9	100	1.12	68		3.8 3.7
	e			34.6							
	iS			36.4		-0.9	100				
TUA	P	07	16	15.6		0.1	100	1.21	109		4.2 4.3
	e			33.2							
	eS			37.0		-1.8	100				
TNZ	eP	07	16	17.0		1.0	100	1.28	233		
TRZ	P	07	16	19.2		1.7	100	1.44	142		4.0 4.2
	S			44.5		2.2	99				
GNZ	P	07	16	21.4		-0.1	100	1.85	98		4.6 4.2
	S			47.5		-1.9	99				
MNG	iP	07	16	25.6	D	0.3	100	2.20	184		4.1 4.5
	S			53.9		-2.3	99				
GBZ	P	07	16	24.4		-0.9	100	2.20	356		
ECZ	P	07	16	27.0		-0.3	100	2.38	73		4.3 4.1
	eS			17 02.0		2.3	99				
WEL	S	07	17	10.0		-1.8	100	2.95	194	4.1	
COB	eP	07	16	41.0		0.0		3.50	220		3.1*
	S			17 22.9		-1.0					
AMPLITUDES:	KRP	3.0	0.6	WTZ	1.4	1.2	TUA	1.4	2.0		
	TRZ	0.7	2.5	GNZ	6.3	4.0	MNG	4.0	11		
	ECZ	0.8	0.6	WEL	0.4		COB		0.8		

OCT 03 11^h33^m21^s.8 38°.68S 176°.21E 0 km M = 2.7
 ± 0.3 0.02 0.03 R S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
WNZ	iPg	11	33	24.0		0.2	100	0.10	300		
NGZ	ePg	11	33	35.0		-0.6	99	0.68	223		
KRP	ePg	11	33	40.4		-0.0	100	0.92	325		2.6
WTZ	ePg	11	33	40.5		0.0	100	0.93	42		2.4
MNG	eP*	11	33	59		0.4	100	2.02	196		3.3
AMPLITUDES:	KRP	0.3		WTZ	0.2		MNG	0.6			

FELT: Wairakei (41)

OCT 03 22^h39^m53^s.5 40°.35S 176°.08E 33 km M = 3.4
 ± 0.5 0.03 0.05 R S.E. of RES. 1.3

INSTRUMENTAL DATA

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TCW	P*	17 01 52.2	-1.5	100	0.89	224				
TNZ	P*	17 02 04.6	0.8	100	1.48	338			3.8	
	S*	25.2	1.7	99						
KRP	P*	17 02 24.8	0.9	100	2.66	8			4.0	4.1
	iPg	29.6	-1.5	99						
	S*	57.0	-1.8	99						

AMPLITUDES: WEL 1.0 TNZ 1.2 KRP 0.7 0.6

80/ 595

OCT 05 09^h08^m23^s.2 36°.25S 179°.81W 33 km M = 3.8
 ± 1.1 0.06 0.11 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
GNZ	ePn	09	09	07		0.0	100	2.95	215		3.5	3.7		
	Sn			39.5		-0.5	100							
	i			42.0										
WTZ	Pn	09	09	08.8		-0.1	100	3.10	235		4.1	3.8		
	eSn			43.5		0.1	100							
TUA	eSn	09	09	53		-0.6	100	3.52	222				3.8	
KRP	ePn	09	09	22.5		0.1	100	4.08	244		3.9			
TRZ	eSn	09	10	12.2		1.1	98	4.24	218				3.8	

AMPLITUDES: GNZ 0.3 0.8 WTZ 1.4 0.6 TUA 0.2
 KRP 0.2 TRZ 0.2

80/ 596

OCT 05 09^h53^m03^s.2 41°.88S 173°.90E 12 km M = 3.2
 ± 0.4 0.02 0.04 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
KKZ	P*	09	53	12.3		-1.6	100	0.56	195					
	iPg			14.0		-0.7	100							
	S*			22.0		0.4	100							
	iSg			23.3		1.0	100							
TCW	iP*	09	53	16.6	U	-0.1	100	0.73	23					
WEL	P*	09	53	20.2		0.8	100	0.88	48	2.9				
	Sg			34.2		1.0	100							
COB	P*	09	53	24.6		0.1	100	1.18	312		3.6	2.7		
	S*			41.0		0.8	100							
BLW	eP*	09	53	24.4		-1.9	99	1.29	67					
MNG	iPn	09	53	31.6		-0.8	100	1.74	44		3.5			
	eP*			34.0		0.0	100							
	e			42.0										
CMZ	eP*	09	53	40.0		2.6	98	1.93	208					
KAI	eS*	09	54	02		-1.5	100	1.96	250					

AMPLITUDES: KKZ 3.4 5.4 WEL 0.4 COB 1.6 0.7
 MNG 2.0

80/ 597

OCT 05 15^h32^m50^s.3 39°.72S 176°.87E 30 km M = 5.6
 ± 0.4 0.02 0.05 3 S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TRZ	iP*!	15	32	56.4		0.2	100	0.16	347					
TUA	Pn	15	33	06.2		-0.6	100	0.94	14					
CNZ	iPn	15	33	09.9	U	0.1	100	1.15	296					
WNZ	Pn	15	33	11.8		0.8	100	1.23	331					
CAZ	Pn	15	33	13.3		1.6	97	1.29	202					
MNG	iPn	15	33	13.7	D	0.5	100	1.39	229					
GNZ	Pn	15	33	13.2		0.0	100	1.39	40					

WTZ	Pn	15 33 16.8	-1.0	99	1.73	3		
KRP	Pn	15 33 21.6	-0.8	100	2.07	329		
WEL	Pn	15 33 24.2	-0.6	100	2.24	225	5.5	
	P*	29.2	-0.6	100				
	i	35.2						
	Sn	50.6	-0.1	100				
	i	53.4						
AUC	i	34 07.0						
	ePn	15 33 39.5	0.4	100	3.29	329		
	P*	47.8	0.1	100				
	i	53.0						
	i	34 00.2						
COB	Pn	15 33 40.6	-0.6	100	3.45	245	6.0	5.6
KKZ	Pn	15 33 43.0	-0.5	100	3.62	221		
	i	34 04.8						
GBZ	Pn	15 33 45.1	1.0	99	3.66	342		
	i	59.6						
ONE	ePn	15 33 58.2	3.9		4.41	332	5.9	
	eSn	34 39	-3.7					
KAI	Pn	15 34 04	1.7		4.99	234	5.7	
	P*	16.5	-0.1					
	i	30.6						
	Sn	58.4	1.7					
CMZ	Pn	15 34 03.0	0.6		5.00	218	5.7	5.6
	i	33.8						
	i	46.2						
OMZ	Sn	55.5	-1.4					
	ePn	15 34 28.0	-0.8		6.94	218	5.2	5.4
	eSn	35 43.0	-0.4					
DNZ	ePn	15 34 41	1.4		7.72	215		
	Sn	36 04.5	2.1					
MSZ	ePn	15 34 44.5	-2.8		8.29	230	5.6	5.5
	i	57.6						
	Sn	36 14.5	-1.5					
BRZ	Sn	15 36 35.5	-1.3		9.16	226		
OBZ	ePn	15 35 06	0.7		9.61	219		
	Sn	36 48.8	1.1					
AMPLITUDES:		WEL 27	AUC 22	14 COB 44	69			
		KKZ 12	17 ONE 6.4	KAI 7.8				
		CMZ 14	19 OMZ 2.0	5.4 DNZ 4.6	6.8			
		MSZ 9.2	12 BRZ 2.8					

FELT: As widely as Gisborne, Hawera and Eastbourne. Intensities reached MM VI in Hastings, Taradale and Waipawa (60) and MM V in parts of the Hawke's Bay district. There were about ten aftershocks of magnitude greater than 3.0 within six hours of the main shock. A possible foreshock of about magnitude 2 occurred on October 4 at 1830 hours.

							80/ 598					
OCT 05	15 ^h 38 ^m 12 ^s .0	39°.68S	176°.92E	33 km	M = 3.0							
	± 0.6	0.04	0.04	R	S.E. of RES.	1.0						
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	iP*	15	38	17.0		-1.0	100	0.14	329			
	S*			23.4		1.0	100					
TUA	ePn	15	38	28		0.3	100	0.89	12	2.9	3.2	
	eSn			39		-0.3	100					

CNZ	iPn	15 38	31.4	-0.0	100	1.16	294				
	Sn		46.2	0.3	100						
GNZ	ePn	15 38	35.5	1.6	99	1.34	40			2.9	
	S*		54.0	-0.4	100						
MNG	ePn	15 38	35	-0.3	100	1.45	229			2.8	
	e		40.5								
WTZ	ePn	15 38	37.5	-1.2	99	1.69	2				
AMPLITUDES:	TRZ		15	17	TUA	0.3	0.8	GNZ			0.6
	MNG		0.6								

80/ 599

OCT 05 15^h46^m35^s.7 39°.70S 176°.98E 33 km M = 2.9
 ± 0.5 0.02 0.05 R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TRZ	iP*	15	46	41.1	D	-0.9	99	0.19	320					
	i			45.3										
	S*			47.2		0.5	100							
TUA	Pn	15	46	51.4		-0.1	100	0.90	9					2.9
	Sn			47 03.7		0.5	100							
CNZ	iPn	15	46	55.6		-0.2	100	1.21	294					
	Sn			47 10.5		-0.3	100							
MNG	P*	15	47	03.4		1.2	99	1.47	231					2.8
	e			09.4										
	Sn			17.0		0.0	100							
CAW	Pn	15	47	06.0		-0.9	99	2.02	225					
WEL	Sn	15	47	37.4		0.1	100	2.31	226					
AMPLITUDES:	TRZ			4.3	11	TUA		0.4	MNG					0.7

80/ 600

OCT 05 15^h49^m49^s.3 39°.77S 177°.01E 33 km M = 3.1
 ± 0.5 0.02 0.04 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TRZ	iP*!	15	49	55.8		-0.6	100	0.26	326					
	S*			50 01.9		0.3	100							
TUA	ePn	15	50	06.0		-0.1	100	0.96	7					3.3
	Sn			19.4		0.9	99							
CNZ	iPn	15	50	10.0		-0.1	100	1.27	296					
	Sn			25.4		-0.3	100							
GNZ	eP*	15	50	17.5		3.4		1.38	35					3.1
	e			22										
	eSn			32		3.7								
MNG	ePn	15	50	13.1		0.5	100	1.45	233					3.1 3.2
	e			22										
	Sn			25.6		-4.4								
WTZ	ePn	15	50	16		-1.2	98	1.78	360					
CAW	Pn	15	50	20.3		0.2	100	2.00	227					
KRP	eP*	15	50	28		0.4	100	2.17	328					
AMPLITUDES:	TUA					0.8	GNZ		0.8	MNG				1.0 1.6

80/ 601

OCT 05 15^h50^m31^s.8 39°.77S 176°.95E 33 km M = 3.7
 ± 0.4 0.02 0.04 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TRZ	iP*!	15	50	37.5		-1.1	99	0.23	336					
TUA	Pn	15	50	47.7		-0.9	99	0.97	9					3.5 3.6
	Sn			51 01.6		0.5	100							

CNZ	Pn	15 50 52.0	0.0 100	1.22 297		
	Sn	51 07.2	0.1 100			
GNZ	e	15 51 02.5		1.40 37	3.7	
	i	04.2				
MNG	ePn	15 50 54.5	0.0 100	1.40 232	3.4 3.6	
	e	51 04.5				
WTZ	Pn	15 51 00.8	1.1 99	1.78 1	3.6	
CAW	Pn	15 51 02.5	0.4 100	1.96 226		
KRP	P*	15 51 09.4	-0.2 100	2.14 329	4.0 3.9	
	eS*	38	0.1 100			
AMPLITUDES:	TUA	1.0 1.7	GNZ	2.0	MNG	2.6 4.2
	WTZ	1.2	KRP	1.2 0.8		

FELT: Patoka (52)

OCT 05 16^h11^m05^s.3 39°.90S 176°.93E 33 km M = 3.0
 ± 1.1 0.06 0.08 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TRZ	iP*	16	11	13.4	D	-0.4	100	0.36	346		3.1	3.5		
	S*			19.2		-0.7	100							
TUA	ePn	16	11	23.5		-0.5	100	1.11	9			3.0		
	eSn			36.5		-1.4	100							
CNZ	iPn	16	11	27.8		1.4	100	1.29	303					
	Sn			43.0		0.9	100							
MNG	ePn	16	11	26		-0.9	100	1.32	237			2.4		
GNZ	eSn	16	11	49.5		1.8	99	1.52	34					
AMPLITUDES:	TRZ	3.8	13	TUA	0.3	MNG	0.3							0.3

OCT 05 16^h24^m43^s.8 39°.75S 176°.90E 33 km M = 3.5
 ± 0.4 0.03 0.05 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TRZ	iP*	16	24	49.7	D	-0.7	100	0.21	342					
TUA	Pn	16	25	00.1		-0.4	100	0.96	12		3.3	3.7		
	Sn			13.4		0.6	100							
CNZ	iPn	16	25	03.6		0.1	100	1.18	297					
	Sn			18.6		0.4	100							
MNG	iPn	16	25	07	D	0.6	100	1.39	231		3.1	3.6		
	i			15.8										
GNZ	ePn	16	25	09		2.4	91	1.40	39		3.5	3.4		
	i			17.4										
	eSn			22.5		-1.0	100							
	i			34										
WTZ	ePn	16	25	10.6		-0.8	100	1.76	2		3.6			
	e			19.8										
	e			25.4										
MTW	Pn	16	25	11.7		0.1	100	1.77	217					
CAW	iPn	16	25	13.9		-0.1	100	1.95	225					
KRP	ePn	16	25	12		-4.2		2.12	329		3.6	3.7		
TCW	ePn	16	25	20.4		-0.9	100	2.48	233					
AMPLITUDES:	TUA	0.7	2.2	MNG	1.2	4.3	GNZ	1.2	1.6					
	WTZ	1.2		KRP	0.5	0.5								

FELT: Patoka (52)

KIW	Pn	21 17 52.1	-0.5	100	1.95	232
	Sn	18 15.9	0.6	100		
KRP	eP*	21 17 59	0.2	100	2.05	328
WEL	Sn	21 18 24.3	0.4	100	2.31	225
AMPLITUDES:	TRZ	9.4 17	TUA	0.5 1.6	MNG	2.0

OCT 06 03^h31^m18^s.8 39°.73S 176°.99E 33 km M = 3.3
 ± 1.0 0.06 0.06 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TUA	Pn	03 31	34.6			-0.5	100	0.94	8		3.0	3.5
	Sn		47			-0.1	100					
CNZ	Pn	03 31	38.7			-0.5	100	1.23	295			
	Sn		53.2			-1.3	100					
GNZ	i	03 31	50.7					1.35	37		3.3	
MNG	Pn	03 31	42.4			0.2	100	1.46	232		3.4	3.4
	e		51.0									
TNZ	eP*	03 31	55.0			-0.8	100	2.10	284			
	S*		32 24.4			1.0	100					
KRP	ePn	03 31	53.5			2.0	98	2.13	327		3.5	
AMPLITUDES:	TUA	0.4 1.3	CNZ	13 12	GNZ	0.8						
	MNG	2.0 2.5	KRP	0.4								

OCT 06 04^h55^m02^s.1 38°.04S 177°.68E 33 km M = 5.0
 ± 0.6 0.03 0.05 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPn	04 55	12.7		U	-0.4	100	0.55	276			
GNZ	iPn!	04 55	14.6			-0.1	100	0.66	156			
ECZ	Pn	04 55	18.0		U	1.9	99	0.76	64		5.0	5.0
TUA	iPn	04 55	17.8		D	0.2	100	0.87	208			
WNZ	Pn	04 55	25.0			0.6	100	1.38	244			
TRZ	ePn	04 55	27.5			-0.7	100	1.66	204			
	P*		32.2			0.6	100					
KRP	iPn	04 55	28.1		D	-0.7	100	1.69	273		4.7	4.9
	Sn		47.8			-1.0	100					
NGZ	Pn	04 55	33.0			0.3	100	1.98	234			
	Sn		58.2			2.5	99					
GBZ	Pn	04 55	39.6			-0.6	100	2.53	315			
	i		44.5									
	S*		56 18			-1.7	100					
AUC	Pn	04 55	41.2			0.2	100	2.59	296			
	P*		47.6			0.1	100					
	eSn		56 12.5			2.2	99					
TNZ	Pn	04 55	45.8			1.6	100	2.83	245		5.1	5.4
CAZ	Pn	04 55	45.2			-2.4	99	3.08	201			
	Sn		56 22.5			0.6	100					
MNG	Pn	04 55	45.4			-2.4	99	3.09	213		4.9	5.0
	P*		55			-1.0	100					
WEL	P*	04 56	07.7			-2.8		3.94	214	5.0		
	e		21.8									
	Sn		40.3			-2.5						
	S*		57 01.0			-0.9						
TCW	Pn	04 55	58.5			-3.3		4.11	219			
KKZ	iSn	04 57	15.0			-1.2		5.34	214			
AMPLITUDES:	ECZ	33 49	KRP	9.6 12	GBZ	2.0 3.8						

AUC 2.2 1.3 TNZ 1.8 3.2 CAZ 5.8
MNG 17 23 WEL 2.6 KKZ 0.7 2.4

FELT: Opotiki (35) and Ormond (44) No aftershocks recorded

OCT 06 05^h32^m07^s.6 46°.75S 168°.74E 12 km M = 2.6
± 0.6 0.04 0.05 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	P*	05	32	15.5		-1.0	100	0.45	250		2.1	2.8
	ePg			18.4		1.4	99					
	S*			22.4		-0.4	100					
DNZ	eSn	05	32	53		-0.4	100	1.52	55			
MSZ	Pn	05	32	42.4		-0.1	100	2.16	344			2.9
	Sn		33	08.6		-0.2	100					
RHP	ePn	05	32	51.4		-0.1	100	2.82	20			
	eP*			57.7		0.9	100					

AMPLITUDES: OBZ 0.5 5.8 MSZ 0.4

FELT: Awarua Radio (154)

OCT 06 06^h59^m16^s.2 39°.68S 176°.94E 33 km M = 3.5
± 0.5 0.04 0.03 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	iP*	06	59	22.0		-0.2	100	0.15	325			
TUA	Pn	06	59	31.7		-0.1	100	0.89	11		3.3	3.6
	Sn			44		0.6	100					
	i			47.6								
CNZ	ePn	06	59	35.8		0.0	100	1.18	294			
	eSn			51		0.6	100					
GNZ	ePn	06	59	39.5		1.5	99	1.33	40			3.5
	i			48								
MNG	ePn	06	59	39.5		-0.1	100	1.46	229		3.6	3.5
	e			41.6								
	i			49.4								
WTZ	Pn	06	59	42.0		-0.8	100	1.69	1		3.5	
	e			49.8								
TNZ	eP*	06	59	51.5		-0.7	100	2.04	283			
	S*	07	00	20.4		1.2	99					
KRP	ePn	06	59	46.5		-1.4	99	2.07	328		3.5	
	eP*			53.0		0.3	100					
	Sn	07	00	11.0		-0.8	100					
e			17.5									

AMPLITUDES: TUA 0.8 1.7 CNZ 32 11 GNZ 2.4
MNG 3.2 3.8 WTZ 1.2 KRP 0.4

OCT 06 15^h53^m36^s.0 37°.76S 177°.27E 136 km M = 3.2
± 1.2 0.05 0.05 6 S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	15	53	53.8		-1.2	99	0.31	225		3.2	2.5
	eS		54	10.0		0.5	100					
TUA	eP	15	54	00.5		0.5	100	1.05	185			
	eS			17.5		-0.8	100					
	e			23.5								
GNZ	P	15	54	00.4		0.2	100	1.06	146		3.4	3.5

	eS		19.0		0.4	100						
	i		23.2									
KRP	S	15 54	24.7		0.3	100	1.38	263				
MNG	eS	15 55	04.0		0.2	100	3.18	205				
AMPLITUDES:		WTZ	1.2	0.3	GNZ	1.0	2.2					

OCT 07 12^h48^m37^s.5 37°.14S 176°.57E 210 km M = 3.8
 ± 1.2 0.05 0.09 10 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
WTZ	eP	12	49	07		-0.7	100	0.90	159			3.1
	S			29.3		-1.8	99					
	i			33.4								
GBZ	iP	12	49	11.3		0.9	100	1.28	316			
ECZ	eP?	12	49	13.5		-0.2	100	1.66	110			3.8
	eS			42.6		0.8	100					
TUA	eP	12	49	14.5		0.2	100	1.72	165			
	S			44.7		2.0	99					
GNZ	P	12	49	15.2		-0.7	100	1.88	143		4.1	4.0
	i			42.6								
	S			44.4		-1.1	100					
TRZ	P	12	49	21.9		0.5	100	2.41	175			4.0
	eS			57.0		1.7	99					
MNG	eP	12	49	34.2		-0.7	100	3.57	193		4.1	3.8
	eS			50 18.5		-0.8	100					
AMPLITUDES:		WTZ		0.3	GBZ	1.6	ECZ	0.4				
		GNZ	1.7	2.3	TRZ	0.7	MNG	1.6	1.0			

OCT 07 18^h30^m49^s.1 36°.78S 177°.22E 225 km M = 4.1
 ± 1.4 0.07 0.11 11 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
WTZ	P	18	31	23.8		0.8	100	1.21	189		3.8	3.8
	i			30.7								
	S			48.8		-0.6	100					
	i			51.7								
	i			57.9								
ECZ	eP	18	31	23.6		-0.8	100	1.39	131		3.7	3.9
	eS			52.5		0.7	100					
GBZ	iP	18	31	25.4	D	-0.0	100	1.51	291			
GNZ	iP	18	31	29.6	D	0.1	100	1.96	161		4.6	4.5
	i			52.4								
	S			59.2		-1.5	100					
TRZ	P	18	31	38.9		0.9	100	2.78	186		4.2	4.7
	S			32 18.7		2.7	97					
MNG	eP	18	31	52.5		-0.7	100	4.06	199		3.9	4.0
	eS			32 41.5		-1.3	100					
AMPLITUDES:		WTZ	1.0	1.2	ECZ	0.3	0.5	GBZ	2.8			
		GNZ	5.0	6.4	TRZ	0.4	3.2	MNG	0.8	1.3		

OCT 08 05^h44^m13^s.2 39°.82S 176°.95E 33 km M = 3.9
 ± 0.6 0.03 0.06 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
TRZ	iP*	05	44	20.1		-0.6	100	0.29	340			
TUA	Pn	05	44	30.0		-0.8	100	1.03	9		3.6	3.8

	i			37.2									
	Sn			43.4									
CAZ	ePn	05 44		36.5		-0.4	100			1.21	207		
	Sn			45.5		-2.8	97						
CNZ	Pn	05 44		33.5		-0.3	100		1.25	299			
	Sn			49.2		0.0	100						
WNZ	Pn	05 44		35.8		0.5	100		1.36	331			4.4
MNG	iPn	05 44		36.7	D	1.1	100		1.38	234		3.5	3.8
	e			45.5									
GNZ	eP*	05 44		40.5		1.2	100		1.44	36		3.7	3.8
	i			44.5									
	S*			58.8		0.2	100						
WTZ	ePn	05 44		42.5		0.6	100		1.84	1			3.8
KRP	Pn	05 44		45.6		-1.1	100		2.20	329		4.1	
	P*			51.6		-0.3	100						
WEL	Sn	05 45		14.8		2.4	98		2.21	228			
AMPLITUDES:	TUA			1.3	2.2	CAZ			2.5			34	40
	WNZ			1.3		MNG		3.4	8.3	GNZ		2.0	4.4
	WTZ			1.7		KRP		1.5					

FELT: Patoka (52) and Hastings (60)

OCT 08 08^h35^m22^s.7 33°.49S 177°.69W 33 km M = 4.5
 ± 2.1 0.18 0.26 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	ePn	08 36	52.2			1.2	100	6.21	213			4.6
	e		37 05									
	eSn		59			1.2	100					
WTZ	ePn	08 36	51.5			0.1	100	6.24	222			4.5
	Sn		37 58.0			-0.5	100					
TUA	eSn	08 38	11.5			0.6	100	6.75	217			
KRP	ePn	08 37	01			-1.7	100	7.06	229			
	eSn		38 20			1.5	100					
MNG	ePn	08 37	29			0.3	100	8.96	216			4.4
	Sn		39 01.4			-2.8	98					

AMPLITUDES: GNZ 1.2 WTZ 0.7 MNG 0.7

OCT 08 09^h34^m40^s.1 33°.75S 177°.72W 33 km M = 4.2
 ± 3.1 0.22 0.29 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	eSn	09 37	11.2			1.4	100	5.98	214			4.3
WTZ	ePn	09 36	05			-1.0	100	6.03	224			4.2
	eSn		37 11.0			-0.0	100					
TUA	eSn	09 37	24			0.9	100	6.53	218			
KRP	eSn	09 37	32			0.4	100	6.88	231			
MNG	ePn	09 36	44			0.9	100	8.75	216			4.0
	eSn		38 13.5			-2.8	98					

AMPLITUDES: GNZ 0.8 WTZ 0.4 MNG 0.3

OCT 08 14^h36^m30^s.6 45°.19S 167°.49E 66 km M = 4.0
 ± 0.5 0.02 0.04 4 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BRZ	iP!	14 36	44.2			-0.3	100	0.59	176			

	S		55		0.1	100					
MSZ	iP	14 36	44.6	U	0.1	100	0.60	31		4.0	
	S		55		-0.0	100					
OBZ	P	14 37	01		1.2	97	1.77	166		4.0	4.1
	S		21		-0.3	100					
THP	iP	14 37	00.5		0.1	100	1.83	70			
TMP	iP	14 37	03.4		-0.4	100	2.07	66			
	S		28.6		0.2	100					
RHP	iP	14 37	04.3	D	-0.6	100	2.15	61			
	S		31.5		1.1	98					
DNZ	P	14 37	06.6		0.4	100	2.23	109			
	S		32.5		-0.0	100					
BSP	iP	14 37	06.5		-0.4	100	2.29	56			
OMZ	iP	14 37	08.6	D	-0.2	100	2.43	88		4.1	3.8
	S		37.0		-0.5	100					
CMZ							4.03	68			4.0
AMPLITUDES:		BRZ	4.6		MSZ	42		OBZ		3.5	10
		RHP	46	40	OMZ	2.2	1.8	CMZ			1.2

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OCT 08 20^h56^m57^s.7 39°.46s 176°.27E 33 km M = 3.4
 ± 0.4 0.03 0.04 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CNZ	iPn	20	57	10.0		0.4	100	0.61	295			
	P*			12.2		2.2	99					
	i			14.6								
	eSn			19.2		0.8	100					
	S*			20.3		1.4	100					
TUA	Pn	20	57	14.0		-0.1	100	0.94	47		3.1	3.1
	Sn			27.6		1.2	100					
MNG	ePn	20	57	18.5		-0.6	100	1.30	207		3.3	3.5
	eP*			22.8		1.4	100					
	Sn			35.6		0.6	100					
TNZ	Pn	20	57	21.0		-0.5	100	1.49	280		4.0	
WTZ	Pn	20	57	21.2		-1.5	100	1.57	21		3.1	
	Sn			40.3		-1.2	100					
	Pn	20	57	22.6		-0.3	100	1.59	60		3.9	3.4
	Sn			44.0		2.1	99					
KRP	eSn	20	57	40.5		-2.4	99	1.64	339			
MTW	Pn	20	57	24.8		-1.0	100	1.80	199			
TCW	Pn	20	57	31.1		-1.8	99	2.32	220			
	Sn			58.7		-0.7	100					
AMPLITUDES:		CNZ		10	15	TUA	0.5	0.5	MNG		2.0	4.0
		TNZ		0.8		WTZ	0.5		GNZ		2.3	1.3

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OCT 09 05^h51^m54^s.9 36°.64s 177°.59E 239 km M = 3.9
 ± 1.9 0.14 0.21 14 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eS	05	52	58		-0.9	100	1.30	144			3.8
WTZ	P	05	52	32.2		0.4	100	1.43	200		3.5	3.4
	eS			53 00.5		0.0	100					
GNZ	iP	05	52	37.0		-0.1	100	2.03	170		4.2	4.1
	S			53 08.5		-1.2	100					
TRZ	P	05	52	50.1		3.3	97	2.97	192			4.2
	eS			53 29.5		2.3	99					
NGZ	eP	05	52	47		0.1	100	2.99	211			

MNG	eP	05 53	01.0	-1.5	100	4.30	202					
	eS		55.5	0.6	100							
CAW	P	05 53	08.4	-1.0	100	4.88	203					
TCW	S	05 54	13.8	-2.0	99	5.25	209					
AMPLITUDES:		ECZ		0.4	WTZ	0.4	0.4	GNZ		1.6	2.2	
		TRZ		0.8								

OCT 09 06^h38^m14^s.8 38°.98S 178°.62E 33 km M = 3.5
 ± 1.0 0.03 0.08 R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
GNZ	iPn	06 38	25.7		D	-0.5	100	0.57	305					
TUA	Pn	06 38	33.6			-0.6	100	1.15	278			3.3		
WTZ	Pn	06 38	41.2			0.7	100	1.62	307			3.6	3.6	
	Sn		59.7			0.0	100							
CNZ	Pn	06 38	52.0			0.9	99	2.40	264					
	eSn		39 18.0			-0.4	100							
MNG	ePn	06 38	57.5			-0.7	100	2.92	235					
	eSn		39 31.5			0.6	100							
AMPLITUDES:		TUA		0.5	WTZ			1.5	1.3					

OCT 09 10^h43^m09^s.9 36°.20S 177°.93E 263 km M = 3.9
 ± 0.8 0.08 0.14 10 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	eP	10 43	53.2			0.1	100	1.93	203			3.9		
GNZ	P	10 43	57.2			-0.6	99	2.44	178			4.0		
	S		44 35.5			0.4	100							
MNG	eP	10 44	24.5			0.1	100	4.81	203					
MTW	P	10 44	30.4			-0.0	100	5.30	200					
TCW	P	10 44	36.6			0.6	99	5.77	209					
	S		45 43			-0.3	100							
AMPLITUDES:		WTZ		0.7	GNZ			0.8						

OCT 09 10^h51^m36^s.5 37°.45S 176°.82E 219 km M = 4.0
 ± 1.0 0.07 0.08 7 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P	10 52	05.2			-0.9	100	0.55	166			3.7	3.4	
	eS		29.0			0.0	100							
KRP	P	10 52	08.5			-0.7	100	1.13	245			2.9*		
ECZ	eP	10 52	11			-0.2	100	1.39	101			3.8		
GNZ	iP	10 52	12.9		U	0.6	100	1.52	142			4.8	4.3	
	S		40.0			-0.2	100							
NGZ	eP	10 52	18.5			1.9	97	1.97	208					
	eS		48			0.5	100							
	e		52											
TRZ	P	10 52	18.4			0.6	100	2.10	180				3.9	
	eS		53			3.3								
MNG	P	10 52	30.7			-0.7	100	3.33	198			4.3	3.9	
	eS		53 13.0			-1.1	100							
AMPLITUDES:		WTZ		1.1	0.7	KRP		0.6	ECZ		0.4			
		GNZ		9.5	4.8	TRZ		0.7	MNG		3.0	1.5		

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OCT 10 00^h59^m19^s.7 39°.37S 175°.95E 67 km M = 3.4
 ± 0.9 0.04 0.07 10 S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
NGZ	P	00	59	32.7		1.4	100	0.32	305					
	S			40.9		1.0	100							
CNZ	P	00	59	31.8		0.3	100	0.36	298					
	eS			38.0		-2.3	99							
TRZ	eP	00	59	36		1.1	100	0.70	105			3.1		
TUA	eS	00	59	53.0		-1.6	100	1.09	59				3.1	
MNG	P	00	59	44.0		1.4	100	1.30	196			3.6	3.7	
	S	01	00	00.8		1.2	100							
KRP	P	00	59	45.0		0.1	100	1.48	347			3.4*	3.5*	
	S	01	00	04.3		0.3	100							
WEL	eP	00	59	52		-1.6	100	2.12	205	3.5				
	eS	01	00	17		-1.6	100							

AMPLITUDES: NGZ 14 44 CNZ 16 35 TRZ 0.6
 TUA 0.3 MNG 4.2 7.6 KRP 2.8 3.7
 WEL 0.3

80/ 625

OCT 10 03^h59^m56^s.5 38°.23S 177°.51E 47 km M = 3.4
 ± 0.4 0.02 0.02 5 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P	04	00	08.8		1.1	99	0.48	301			3.2	3.4	
	S			15.0		-1.0	100							
GNZ	P	04	00	08.1		-0.8	100	0.58	135			3.4	3.5	
	S			17.8		-0.2	100							
TUA	P	04	00	09.0		-0.7	100	0.64	206			3.0	3.3	
	S			20.3		1.0	100							
ECZ	P	04	00	14.0		-0.4	100	0.98	57			3.5	3.6	
	eS			28.6		1.0	100							
KRP	i			32.2										
	eP	04	00	21.2		-1.5	99	1.58	281			2.7*		
NGZ	e			23.0										
	eS			43.2		0.9	100							
NGZ	P	04	00	25.0		-0.1	100	1.75	237					
	S			47.0		0.5	100							
CNZ	P	04	00	25.4		-0.4	100	1.81	237					
MNG	eP	04	00	41		0.3	100	2.85	213			3.1	3.3	
	e			01 09										
WEL	eS			14		-0.1	100							
	e(S)	04	01	28		-7.7		3.71	214	3.8				

AMPLITUDES: WTZ 5.0 8.0 GNZ 5.8 11 TUA 0.8 1.7
 ECZ 1.0 1.3 KRP 0.5 NGZ 1.7 2.8
 CNZ 4.5 MNG 0.3 0.6 WEL 0.2

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OCT 10 09^h13^m09^s.8 36°.09S 179°.19W 191 km M = 5.0
 ± 1.6 0.08 0.18 16 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	P	09	13	52.2		-0.4	100	2.42	228			5.1	5.1	
	eS			14 25.8		0.1	100							
GNZ	P	09	14	04.0		-0.1	100	3.38	220			5.0	4.9	
	eS			46		-0.2	100							

WTZ	P	09 14 05.9	-1.0	100	3.60	237	5.3	5.0		
	S	48.4	-2.5	99						
TUA	P	09 14 12.0	0.3	100	3.99	226	5.2	5.1		
	S	15 00.0	0.5	100						
GBZ	P	09 14 14.2	-1.7	100	4.32	267				
KRP	eP	09 14 18.5	-1.1	100	4.60	245				
	e(S)	15 10.2	-3.4							
TRZ	eP	09 14 20.8	0.1	100	4.69	221	4.9	4.9		
	S	15 17.0	1.5	100						
AUC	eP	09 14 25.5	1.8		4.92	259				
NGZ	P	09 14 29.0	2.3	99	5.16	232				
	S	15 30	3.6	97						
CNZ	P	09 14 29.2	1.8	100	5.21	232				
TNZ	eP	09 14 40	2.7		5.97	237	3.8*			
CAZ	S	09 15 46.7	0.5	100	6.00	215				
MNG	eP	09 14 38.0	-1.8	100	6.16	221	4.6	4.9		
	i	40.8								
	S	15 48	-1.9	100						
CRZ	eP	09 14 50	1.1	100	6.86	282				
WEL	S	09 16 07.3	-2.7	99	7.02	220	4.8			
KKZ	e(P)	09 15 13	3.9		8.40	219				
	S	16 40	-2.3							
CMZ	S	09 17 12.7	-1.8		9.77	217		3.6*		
RHP	P	09 15 51.5	2.6		11.47	222				
	S	17 52	-1.9							
AMPLITUDES:		ECZ	5.6	5.2	GNZ	5.7	7.2	WTZ	9.3	5.6
		TUA	2.6	2.5	GBZ	2.6		TRZ	0.9	2.1
		AUC	0.5		NGZ	1.7	2.6	CNZ	1.6	
		TNZ	0.4		CAZ	1.3		MNG	2.2	5.2
		WEL	0.5		KKZ	0.3	0.8	CMZ		0.5
		RHP	1.1	1.6						

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OCT 10 12^h36^m19^s.9 38°.23s 175°.89E 185 km M = 3.7
 ± 1.1 0.04 0.06 8 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	eP	12 36	45.0			-0.1	100	0.41	317		2.7*	2.5*
	S	37	04.4			-0.1	100					
WTZ	P	12 36	47			-0.5	100	0.90	75		3.3	3.4
	S	37	08.0			-0.9	100					
NGZ	P	12 36	49.7			1.6	99	0.98	193			
CNZ	eP	12 36	49.8			1.5	99	1.01	196			
TUA	P	12 36	50.0			0.6	100	1.14	121		3.6	3.6
	eS	37	12.5			0.4	100					
TRZ	eP	12 36	52.8			0.1	100	1.51	152		3.6	3.7
	S	37	19.2			1.2	100					
TNZ	eP	12 36	55			2.2		1.53	231		3.2*	
GNZ	eP	12 36	54.8			0.1	100	1.72	105		3.6	3.5
	S	37	20.5			-1.1	100					
MNG	P	12 37	01.4			-0.9	100	2.41	187		3.9	4.1
	S	33.5				-1.5	99					
CAZ	S	12 37	42.0			1.3	100	2.69	175			
WEL	S	12 37	49.8			-1.6	99	3.18	196	4.0		
KKZ	e	12 38	15.0					4.52	201			
	eS	20.8				-0.7						
KAI	eS	12 38	40			-4.2		5.50	217	3.4*		
CMZ	eS	12 38	51			-2.6		5.89	204			3.0*

	S		11		0.5	100						
WEL	eP	02	26	49	-0.8	100	2.03	203	3.9			
	S		27	12.8	-1.2	99						
ECZ	eP	02	26	59	-0.6	100	2.74	52	3.9	4.0		
	eS		27	33	1.2	99						
GBZ	P	02	27	06.0	-0.2	100	3.21	355				
KKZ	eP	02	27	06	-3.0		3.41	208				
	eS			43	-5.3							
KAI	eS	02	28	12	-5.2		4.56	226	3.6*			
CMZ	eS	02	28	16	-7.1		4.81	209			3.7*	
AMPLITUDES:	NGZ		23		TRZ		2.2	4.8	TNZ		3.0	4.0
	TUA		2.6	3.6	KRP		3.0	2.6	CAZ		4.6	
	WTZ		3.4	7.3	GNZ		4.0	6.0	WEL	0.7		
	ECZ		0.3	0.4	GBZ		0.7		KKZ		0.2	0.9
	KAI		0.4		CMZ			1.2				

FELT: Moawhango (58) Ohakune (49) MM IV.

OCT 12 15^h45^m20^s.1 34°.07S 179°.49E 347 km M = 4.5
 ± 2.2 0.24 0.41 27 S.E. of RES. 1.9 80/ 630

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	15	46	25.8		-0.5	100	3.70	192		4.5	4.4		
	i			27.2										
	eS		47	22.0		3.8	97							
WTZ	P	15	46	33.0		-0.6	100	4.40	207		4.5	4.6		
	S		47	29		-2.3	99							
GNZ	P	15	46	36.8		-0.3	100	4.72	194		4.7	4.7		
	e		47	30.3										
	S			34.9		-2.4	99							
KRP	eP	15	46	42		1.8		5.01	219		2.9*			
TUA	eP	15	46	42.5		1.3	100	5.09	201		4.3	4.6		
	eS		47	44		-0.8	100							
TRZ	e	15	47	56				5.88	201			4.4		
	eS		48	01		0.3	100							
MNG	eP	15	47	05.4		-1.0	100	7.28	205		4.0	4.3		
	S		48	29.0		-1.0	100							
WEL	eS	15	48	48		0.0	100	8.12	206	4.6				
COB	eS	15	49	05		1.9	100	8.83	215				2.9*	
AMPLITUDES:	ECZ		0.5	0.4	WTZ		0.8	1.2	GNZ		1.4	2.0		
	KRP		0.2		TUA		0.2	0.4	TRZ		0.4			
	MNG		0.3	0.8	WEL	0.2			COB		0.2			

OCT 12 22^h23^m14^s.9 37°.17S 177°.46E 172 km M = 5.1
 ± 2.1 0.12 0.11 15 S.E. of RES. 2.0 80/ 631

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P	22	23	39.2		-2.0	100	0.90	204					
ECZ	iP	22	23	40.8		-1.2	100	1.02	122		5.4			
	S		24	04.3		1.3	100							
GNZ	P	22	23	45.5		-1.4	100	1.54	163					
TUA	P	22	23	47.2		-0.8	100	1.66	188		4.9			
KRP	iP	22	23	51.4		2.9	99	1.70	243					
	S		24	12.4		-2.1	100							
TRZ	P	22	23	56.8		0.0	100	2.43	192		5.2	5.1		
	e		24	20.8										
	S			31.2		2.1	100							

NGZ	P	22 23 59.7	2.3	99	2.48	215		
CNZ	P	22 24 00.0	2.1	100	2.53	216		
	e	36						
TNZ	(P)	22 24 09.8	4.1		3.15	229	4.8*	
MNG	P	22 24 12.1	-1.5	100	3.77	203	4.9	5.0
	S	57.2	-1.7	100				
CAZ	P	22 24 14.0	-0.6	100	3.85	194		
WEL	eP	22 24 23	-1.4		4.61	206	4.9	
	S	25 16	-2.1					
COB	P	22 24 34.1	-0.2		5.36	222	4.4*	4.1*
	eS	25 36.0	0.2					
	e	39.8						
KKZ	eP	22 24 41.1	-1.4		5.99	208		
	eS	25 51	0.4					
KAI	eS	22 26 14	-2.7		7.09	219	3.9*	
CMZ	eP	22 24 57.5	-3.5		7.39	208	3.4*	4.1*
	e	26 19.0						
	iS	25.7	1.9					
RHP	P	22 25 21.1	0.0		8.91	217		
	S	26 55.5	-4.1					
AMPLITUDES:	ECZ	34	TUA	6.6	TRZ	6.1	11	
	NGZ	45	TNZ	7.5	MNG	10	17	
	CAZ	14	WEL	1.4	COB	2.8	5.5	
	KKZ	0.4 1.0	KAI	0.5	CMZ	0.3	2.0	
	RHP	2.3 3.2						

FELT: Opotiki (35) MM IV

OCT 12 22^h25^m37^s.4 38°.14S 176°.29E 207 km 80/ 632
 ± 1.3 0.08 0.11 10 S.E. of RES. 1.4 M = 4.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P	22	26	03.8		-2.0	99	0.58	75		3.8	3.6		
	S			29.8		2.1	99							
TUA	P	22	26	08.0		0.3	100	0.95	135		3.8	3.9		
	i			09.9										
	eS			29.5		-1.8	99							
GNZ	P	22	26	12.2		0.6	100	1.46	111		4.4	3.9		
	S			37.5		-0.6	100							
TRZ	S	22	26	39		0.6	100	1.48	164			3.8		
ECZ	P	22	26	15.3		0.1	100	1.84	77		4.0	4.0		
	eS			42		-2.4								
MNG	P	22	26	23.9		1.2	100	2.56	194		4.5	4.0		
	S			57.8		-0.0	100							
WEL	eS	22	27	15		0.4	100	3.36	200	4.0				
COB	eS	22	27	28.3		-0.9	100	4.03	222			2.9*		
KKZ	eS	22	27	45		0.3		4.72	204					
AMPLITUDES:	WTZ	1.6	1.2	TUA	0.6	0.7	GNZ	4.5	2.5					
	TRZ	0.8	0.8	ECZ	0.5	0.5	MNG	7.5	3.0					
	WEL	0.3		COB	0.4	0.4	KKZ	0.4	0.4					

OCT 13 09^h52^m55^s.0 39°.15S 174°.80E 33 km 80/ 633
 ± 0.2 0.01 0.02 R S.E. of RES. 0.6 M = 3.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TNZ	P*	09	53	02.6		-0.4	100	0.32	263		2.4	2.5		
	S*			09.2		0.4	100							

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CNZ	P*	09 53 06.9	0.1	100	0.58	95				
	S*	15.8	0.3	100						
NGZ	P*	09 53 07.1	-0.5	100	0.64	93				
	S*	16.8	-0.0	100						
KRP	P*	09 53 19.0	-0.5	100	1.35	26	2.6	2.8		
	S*	38.3	0.6	100						
MNG	Pn	09 53 19.2	-0.7	99	1.56	160	3.3	3.2		
	e	37.6								
	iSn	40.0	1.5							
WTZ	ePn	09 53 29	2.1		2.08	57	3.6			
WEL	eSn	09 53 53	0.7	99	2.13	181	3.3			
AMPLITUDES:		TNZ	0.8	1.3	CNZ	2.6	8.8	NGZ	0.8	4.3
		KRP	0.3	0.6	MNG	1.6	1.5	WTZ	0.2	
		WEL	0.2							

OCT 13 13^h15^m54^s.7 37°.74S 176°.29E 213 km M = 3.9
 ± 0.9 0.04 0.06 7 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P	13	16	23.2		-0.6	100	0.60	114		3.5	3.2		
	S			45.8		-0.5	100							
KRP	eP	13	16	24.5		0.6	100	0.63	253		2.5*			
TUA	P	13	16	28.3		0.4	100	1.26	148		3.8	3.7		
	eS			54		0.4	100							
NGZ	P	13	16	31.5		1.4	99	1.54	200					
CNZ	eP	13	16	31.8		1.4	99	1.57	202					
GNZ	P	13	16	31.0		-0.0	100	1.64	124		4.4	4.2		
	e			56										
	S			59.2		0.1	100							
GBZ	P	13	16	29.7		-1.5	99	1.66	337					
ECZ	eP	13	16	32.5		0.1	100	1.79	89		3.9	3.7		
	e			36										
	e(S)			17 06		4.4								
TRZ	P	13	16	33.2		0.1	100	1.85	167		3.8	3.7		
	eS			17 05		2.3								
	e			08.0										
TNZ	eP	13	16	36.7		1.4	99	2.09	226		3.2*			
MNG	P	13	16	44.3		-0.6	100	2.94	192		4.3	4.0		
	S			17 23.0		-0.7	100							
WEL	eS	13	17	39		-1.4	99	3.73	198	4.0				
KKZ	eS	13	18	09.5		-1.1		5.08	202					
AMPLITUDES:		WTZ	0.8	0.4	KRP	0.3		TUA	0.5	0.4				
		NGZ	0.8		CNZ	0.3		GNZ	3.5	4.3				
		GBZ	0.3		ECZ	0.4	0.3	TRZ	0.3	0.5				
		TNZ	0.2		MNG	3.6	2.3	WEL	0.2					
		KKZ		0.3										

OCT 13 14^h32^m56^s.5 45°.00S 167°.70E 96 km M = 3.5
 ± 0.3 0.01 0.02 2 S.E. of RES. 0.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
MSZ	iP	14	33	11.3		0.1	100	0.37	25		3.4	3.3		
	S			22.5		0.0	100							
THP	iP	14	33	24.8		0.2	100	1.63	74					
	S			45.8		0.0	100							
OBZ	P	14	33	28.5		0.1	100	1.93	171		3.3	3.5		
	S			51.6		-0.4	99							

RHP	iP	14 33 28.2	-0.2	100	1.93	63		
	S	51.8	-0.3	100				
DNZ	S	14 33 58.1	0.4	99	2.17	114		
OMZ	S-P	27	-0.3	100	2.29	93	3.6	3.5
AMPLITUDES:	MSZ	9.0	13	THP	38	10	OBZ	0.5 1.6
	RHP	26	6.0	DNZ		1.8	OMZ	0.5 0.6

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OCT 14 12^h27^m34^s.8 39°.17S 177°.95E 33 km M = 5.0
 ± 0.7 0.04 0.07 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	Pn	12	27	46.4		0.9	100	0.52	6			
TUA	Pn	12	27	46.9		-1.2	100	0.72	300			
TRZ	Pn	12	27	51.8		0.4	100	0.95	246			
	e			55.5								
WTZ	Pn	12	27	56.8		-0.6	100	1.39	327			
WNZ	ePn	12	27	59.0		-0.3	100	1.54	290			
	iP*			28 01.1		-1.2						
ECZ	Pn	12	28	00.8		1.4	99	1.54	18	4.6	5.1	
	Sn			16.1		-1.6	99					
NGZ	Pn	12	28	03.9		0.8	100	1.82	269			
	i			10.2								
CNZ	Pn	12	28	04.2		0.4	100	1.86	268			
	iP*			07.3		-0.6						
CAZ	Pn	12	28	08.8		0.7	100	2.19	217			
	iP*			12.2		-1.0						
	iSn			35.8		2.6						
KRP	Pn	12	28	08.0		-1.1	100	2.26	302	5.2		
	eP*			13.0		-1.6						
	e			28.0								
MNG	ePn	12	28	10.6		-0.3	100	2.39	232	4.7	4.8	
	iP*			13.8		-3.0						
	e			25.3								
TNZ	Pn	12	28	17.0		0.8	100	2.77	268	5.1		
	i			26.0								
WEL	ePn	12	28	21		-1.4	100	3.23	228	5.0		
	e			42.3								
	Sn			58.0		-0.3	100					
AUC	Pn	12	28	26.0		1.3	100	3.40	312			
GBZ	Pn	12	28	25.2		-1.3	100	3.54	326			
	i			43.0								
ONE	ePn	12	28	40.8		2.1	99	4.43	319	5.1		
	eSn			29 27.5		0.4						
COB	Pn	12	28	37.8		-1.0	100	4.44	243	4.7	4.8	
	eP*			53.5		1.9						
	Sn			29 27.5		0.2	100					
KKZ	Pn	12	28	40.0		-0.8		4.58	223			
	Sn			29 31.3		0.5						
CMZ	ePn	12	28	59.0		-0.6		5.96	220	5.4	5.2	
	Sn			30 00.5		-3.3						
	i			19.4								
KAI	e(P*)	12	29	13		-5.0		5.98	234	5.2		
	Sn			30 03.5		-1.1						
CRZ	e(Pn)	12	29	11.5		6.7		6.34	317			
RHP	Pn	12	29	22.4		-0.7		7.68	228			
	i			34.8								
	Sn			30 43.2		-2.1						
THP	Pn	12	29	27.3		-1.1		8.06	226			

Sn	30	52.2	-2.3						
AMPLITUDES:	ECZ	3.6	15	KRP	21	MNG	16	27	
	TNZ	2.5		WEL	3.9	AUC	1.0		
	GBZ	8.0		ONE	1.0	COB	1.6	7.0	
	KKZ	0.4	2.7	CMZ	4.6	4.7	KAI	1.8	
	RHP	4.8	15	THP	0.8	10			

FELT: Ormond (44) Gisborne (45) Wairoa (53) MM IV

OCT 14 12^h53^m33^s.2 38°.98S 177°.82E 33 km M = 3.6
 ± 1.2 0.07 0.11 R S.E. of RES. 1.8 80/ 637

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
GNZ	P*	12	53	42.2		0.4	100	0.37	25					
	i			44.0										
TUA	iPn	12	53	43.0		-1.3	100	0.55	288		3.7	3.7		
	Sn			51.0		-1.4	100							
TRZ	ePn	12	53	48.8		-1.1	100	0.96	233		3.4	3.8		
	i			54 00.2										
	Sn			03.8		1.5	100							
WTZ	Pn	12	53	53.0		0.0	100	1.19	326		3.8			
	iP*			56.2		1.2								
ECZ	eP*	12	54	02		3.4		1.40	24					
	e			07										
NGZ	ePn	12	54	02.3		1.9	100	1.73	263					
	iP*			05.2		1.1								
CNZ	Pn	12	54	02.7		1.6	100	1.78	262					
	e			05.8										
	e			09.7										
KRP	ePn	12	54	06		0.8	100	2.08	300		3.4			
	eP*			09.2		-0.8								
	e			13.2										
MNG	Pn	12	54	07.2		-2.8	99	2.44	227		3.0	3.3		
	i			26.0										
	eSn			34.8		-2.9								
TNZ	eP*	12	54	22.5		2.2		2.69	265		4.0			
WEL	eSn	12	54	54		-4.1		3.28	224	3.7				
AMPLITUDES:	TUA	5.5	6.5	TRZ	1.2	3.6	WTZ	4.6						
	NGZ	2.6		CNZ	2.2		KRP	0.4						
	MNG	0.3	0.8	TNZ	0.2		WEL	0.2						

OCT 14 14^h22^m55^s.5 39°.02S 177°.87E 33 km M = 3.5
 ± 1.0 0.05 0.09 R S.E. of RES. 1.8 80/ 638

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
GNZ	Pn	14	23	05.2		0.8	100	0.39	18					
TUA	Pn	14	23	05.7		-1.5	100	0.59	290		3.7	3.8		
	Sn			14.0		-1.8	100							
TRZ	Pn	14	23	11.2		-1.1	100	0.97	236		3.4	3.5		
	Sn			27.0		2.1	100							
WTZ	Pn	14	23	15.3		-0.7	100	1.24	326		3.4	3.8		
	e			19.3										
	Sn			31.7		0.4	100							
ECZ	eSn	14	23	34.8		-0.9	100	1.42	22				3.4	
NGZ	ePn	14	23	24.5		1.4	100	1.76	264					
	e			30.3										
CNZ	ePn	14	23	25		1.2	100	1.82	263					

	e			33.2							
KRP	eP*	14	23	34.9	1.8	100	2.13	300			3.3
MNG	P*	14	23	39.8	1.5	100	2.44	228			3.2
	e			47.2							
	e			58.0							
WEL	eSn	14	24	17	-3.3	98	3.28	225	3.7		
COB	ePn	14	23	57	-2.8		4.45	241			3.3
	eSn		24	47	-1.4						
AMPLITUDES:	TUA			5.0	6.2	TRZ	1.0	2.1	WTZ	1.6	3.6
	ECZ				0.3	NGZ		1.1	CNZ		0.7
	KRP			0.3		MNG	0.5		WEL	0.2	
	COB				0.2						

80/ 639

OCT 14 16^h14^m08^s.3 39°.11S 177°.79E 33 km M = 4.2
 ± 0.6 0.03 0.06 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	Pn	16	14	18.8		0.1	100	0.49	21			
TUA	Pn	16	14	19.0		-0.8	100	0.58	301			
TRZ	Pn	16	14	24.7		0.9	100	0.87	239		4.2	4.6
	iP*			25.6		0.8						
	i			29.0								
	S*			38.0		1.1						
WTZ	iPn	16	14	29.1		-0.4	100	1.29	330		4.1	4.1
	iP*			33.0		1.3						
	iSn			45.2		-0.1	100					
WNZ	eP*	16	14	33.5		-0.1		1.40	289		4.5	4.4
	e			38.0								
	eS*			54.0		1.5						
ECZ	ePn	16	14	33.0		0.2	100	1.53	23		4.1	
	e			43								
NGZ	Pn	16	14	36.1		1.1	100	1.70	267			
	iP*			41.2		2.6						
CNZ	Pn	16	14	36.5		0.7	100	1.75	266			
KRP	ePn	16	14	40.0		-0.9	100	2.13	303		4.2	
	iP*			44.9		-1.0						
	i			47.5								
CAZ	eSn	16	15	07.9		1.7		2.16	213			
MNG	ePn	16	14	42.4		-1.3	99	2.33	229		3.8	4.0
	i			43.2								
	e			15 00.4								
TNZ	ePn	16	14	49.2		1.1	99	2.65	267		4.2	
WEL	Sn	16	15	30		-0.6	100	3.18	226	4.0		
COB	ePn	16	15	09.8		-1.5		4.36	241		4.1	3.9
	eP*			25		1.2						
	eSn			59		0.0						
KKZ	e	16	15	20				4.54	222			
	Sn			16 04.2		0.7						
CMZ	eSn	16	16	34		-2.6		5.92	219			4.0
KAI	eSn	16	16	35		-1.7		5.93	233	4.2		
AMPLITUDES:	TRZ			9.3	27	WTZ	8.6	7.5	WNZ	1.2	1.2	
	ECZ			1.0		NGZ	8.0		CNZ	7.5		
	KRP			2.2		MNG	2.2	4.7	TNZ	0.3		
	WEL	0.4				COB	0.4	0.9	KKZ		0.7	
	CMZ				0.3	KAI	0.2					

FELT: Wairoa (53) MM IV

		OCT 14 17 ^h 54 ^m 22 ^s .2			39°.04S	177°.84E	33 km	80/ 640 M = 3.6				
		± 1.1			0.05	0.10	R	S.E. of RES. 1.6				
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	iPn	17 54	32.3			0.8	100	0.42	20			
TUA	Pn	17 54	32.9			-0.9	100	0.58	293		3.5	3.8
	Sn		41.3			-1.0	100					
TRZ	Pn	17 54	38.2			-0.5	100	0.94	237		3.7	3.7
	eSn		53.4			2.5	98					
WTZ	Pn	17 54	43.0			0.2	100	1.25	327		3.4	3.7
	eP*		47.3			2.3						
	iSn		58.9			0.7	100					
ECZ	eSn	17 54	59			-4.1		1.46	23			
NGZ	eP*	17 54	53.3			0.1		1.74	265			
	e		58.0									
KRP								2.12	301			3.3
MNG	Pn	17 54	56.8			-1.8	99	2.40	228			3.4
	e		55 14.0									
TNZ	ePn	17 55	03.5			0.9		2.70	266			4.0
COB	ePn	17 55	23.8			-2.3		4.42	241			4.0
AMPLITUDES:		TUA	2.7	6.2	TRZ	2.3	3.6	WTZ	1.6	3.1		
		NGZ	1.3		KRP	0.3		MNG	0.8			
		TNZ	0.2		COB	0.3						

		OCT 14 18 ^h 21 ^m 37 ^s .9			39°.23S	178°.19E	33 km	80/ 641 M = 4.0				
		± 1.8			0.08	0.17	R	S.E. of RES. 1.4				
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	iPn	18 21	51.0			1.4	100	0.59	347			
TUA	iPn	18 21	50.8			-3.1	96	0.91	297			
TRZ	ePn	18 21	57.8			1.1	100	1.12	252		3.9	4.4
	Sn		22 11.2			0.6	100					
WTZ	Pn	18 22	01.8			-0.9	100	1.56	322			
WNZ	ePn	18 22	06.0			0.8	100	1.74	289			4.2
	eP*		08.8			-0.1						
NGZ	Pn	18 22	09.8			0.9		2.01	270			
	eP*		15.8			2.4						
CNZ	Pn	18 22	10.0			0.5	100	2.05	270			
KRP	ePn	18 22	15.2			0.2	100	2.46	301			4.5
	eP*		20.8			-0.2						
MNG	Pn	18 22	16.0			0.3	100	2.50	235		3.7	3.9
	e		31.3									
	eSn		44.8			0.7	100					
TNZ	ePn	18 22	23			1.1	100	2.96	270			4.2
	e		32.5									
WEL	eSn	18 23	03			-0.9	100	3.33	231	3.9		
COB	ePn	18 22	42			-1.9	99	4.58	244		4.0	3.6
	eP*		56			-1.1						
	e		23 14									
	eSn		33.0			-0.9						
KKZ	eSn	18 23	36			-0.1		4.67	225			
AMPLITUDES:		TRZ	2.9	13	WNZ	0.4		CNZ	4.6			
		KRP	3.1		MNG	1.5	2.8	TNZ	0.3			
		WEL	0.3		COB	0.3	0.4	KKZ	0.3			

FELT: Wairoa (53) MM IV

								80/ 642								
OCT 14		19 ^h 04 ^m 43 ^s .8			39°.16S			177°.93E			33 km			M = 4.0		
		± 0.9			0.05			0.10			R			S.E. of RES. 1.1		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S				
GNZ	iPn	19	04	54.5		0.0	100	0.52	8							
TUA	iPn	19	04	55.2		-1.8	99	0.70	300							
TRZ	Pn	19	05	01.2		0.9	100	0.94	245		4.1	4.4				
	iSn			14.8		2.3										
	i			20.8												
WTZ	iPn	19	05	05.2		-1.1	100	1.39	327							
WNZ	ePn	19	05	09.5		1.3	100	1.52	290							
	eP*			14.2		3.0										
	e			16.9												
ECZ	Pn	19	05	09.0		0.6	100	1.54	18		3.8	4.0				
	eSn			24.8		-2.0										
	e			30.8												
NGZ	Pn	19	05	13.2		1.2	100	1.80	269							
	eP*			17.0		1.1										
CNZ	Pn	19	05	12.9		0.2	100	1.85	268							
	iP*			17.5		0.7										
CAZ	e(Sn)	19	05	38.5		-3.7		2.18	216							
	i			47.4												
	iS*			50.7		-0.3										
KRP	Pn	19	05	18.0		-0.0	100	2.25	303		4.3					
	eP*			23.8		0.4										
MNG	Pn	19	05	19.6		-0.3	100	2.38	232		3.5	3.9				
	e			33.0												
	iSn			49.0		1.9										
TNZ	ePn	19	05	26.0		0.9	100	2.76	268		4.6					
	eP*			34.5		2.3										
WEL	Sn	19	06	07		-0.2	100	3.22	228	4.0						
COB	ePn	19	05	46		-1.8	99	4.43	243		4.0	3.8				
	eP*		06	02		1.5										
	eSn			36.5		0.3										
AMPLITUDES:	TRZ	6.0		17	ECZ	0.6		1.2	NGZ	15						
	CNZ	12			KRP	2.4			MNG	1.0 3.6						
	TNZ	0.8			WEL	0.3			COB	0.3 0.6						

FELT: Wairoa (53) MM IV

								80/ 643								
OCT 14		21 ^h 29 ^m 33 ^s .0			39°.06S			177°.85E			33 km			M = 3.6		
		± 1.4			0.08			0.13			R			S.E. of RES. 1.9		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S				
GNZ	iPn	21	29	42.9		0.4	100	0.44	18							
TUA	iPn	21	29	43.1		-1.6	100	0.60	295		3.8					
	eSn			52.2		-1.1	100									
TRZ	ePn	21	29	48.0		-1.3	100	0.94	238		3.2	3.7				
	eSn		30	02.5		1.1	100									
	i			04.5												
WTZ	Pn	21	29	52.9		-1.0	100	1.27	328		3.6	3.5				
	iP*			56.2		0.1										
	eS*		30	15.0		1.8										
NGZ	Pn	21	30	01.8		1.5	100	1.75	265							
	eP*			04.5		0.5										
	eS*			31.0		3.9										
KRP	ePn	21	30	09.0		3.3	98	2.14	301		3.7					

MNG	eP*		12.0		1.2								
	Pn	21 30	08.0		-1.2	100	2.39	229		3.3	3.5		
	eP*		18.5		3.4								
WEL	eSn		36		-0.5								
	eSn	21 30	56		-0.8		3.24	226	3.7				
AMPLITUDES:	TUA		6.2		TRZ		0.8	3.4	WTZ		2.3	1.8	
	NGZ		1.7	1.8	KRP		0.7		MNG		0.7	1.3	
	WEL		0.2										

80/ 644

OCT 15 03^h18^m53^s.1 39°.18S 178°.00E 33 km M = 3.9
 ± 1.5 0.07 0.15 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
GNZ	iPn	03 19	04.1			0.2	100	0.53	2					
TUA	iPn	03 19	04.6			-2.3	99	0.76	299		4.3			
	eSn		12.8			-4.3								
TRZ	Pn	03 19	11.0			0.9	100	0.99	247		3.6	4.0		
	Sn		23.9			1.2	100							
WTZ	Pn	03 19	14.6			-1.5	100	1.43	326		4.3			
	iP*		18.0			-0.8								
ECZ	ePn	03 19	19.0			1.4		1.54	16					
	eSn		37.5			1.4								
WNZ	eP*	03 19	25			3.7		1.57	290					
	eSn		33.5			-3.4								
NGZ	ePn	03 19	22.3			0.4	100	1.85	269					
	eP*		27.0			1.0								
CNZ	ePn	03 19	23.2			0.6	100	1.91	268					
	iP*		25.0			-1.8								
KRP	ePn	03 19	30.3			2.3	99	2.29	302		3.9			
	eP*		34.5			1.0								
MNG	Pn	03 19	29.9			0.3	100	2.41	233		3.3	3.8		
	Sn		57.0			-0.0	100							
TNZ	ePn	03 19	35			0.0		2.82	269			4.2		
	e		45											
WEL	eSn		20 02			-4.6								
	Sn	03 20	15.8			-1.3	100	3.25	229	3.8				
COB	ePn	03 19	55.0			-2.6		4.46	243		4.0	3.6		
	eP*		20 08			-2.4								
	eSn		45.5			-0.8	100							
AMPLITUDES:	TUA		11			TRZ		1.6	6.2	WTZ		9.5		
	NGZ		3.5			CNZ		2.6		KRP		0.9		
	MNG		0.6	2.4		TNZ		0.3		WEL		0.2		
	COB		0.3	0.4										

80/ 645

OCT 15 03^h49^m16^s.1 39°.52S 177°.34E 33 km M = 3.6
 ± 0.5 0.02 0.04 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TRZ	Pn	03 49	25.6			0.5	100	0.40	265		3.1	3.6		
	Sn		30.9			-0.8	99							
TUA	Pn	03 49	29.5			-0.0	100	0.73	348		3.6	3.7		
	eSn		39.0			-0.4	100							
GNZ	eP*	03 49	36.3			1.3		1.03	31		3.5			
	e		42.5											
WNZ	e(S*)		54			5.0								
	ePn	03 49	38			0.5	100	1.31	312		3.9	4.0		
	eSn		54.5			1.0	99							

NGZ	Pn	03 49 39.3	0.8	99	1.38	283		
	Sn	55.2	-0.0	100				
CNZ	ePn	03 49 39.0	-0.1	100	1.43	282		
	i	40.0						
	Sn	56.1	-0.2	100				
WTZ	ePn	03 49 40.5	-0.4	100	1.56	350	3.4	
	eP*	43.0	-1.0					
	e	47.5						
MNG	Pn	03 49 44.9	0.7	100	1.80	232	3.4	3.4
	i	54.1						
	eSn	50 02.5	-2.8					
KRP	ePn	03 49 47.7	-1.0	99	2.12	318	3.4	
	eP*	53.0	-0.6					
TNZ	eP*	03 49 59	2.1		2.32	277	3.8	4.2
	eS*	50 28	0.6					
	e	38.3						
WEL	eSn	03 50 25	-0.5	100	2.65	227	3.5	
COB	ePn	03 50 10.4	-1.9		3.86	245		3.9
	e	24.4						
	e	28.0						
AMPLITUDES:	TRZ	3.3	15	TUA	2.4	3.5	GNZ	2.4
	WNZ	0.3	0.6	NGZ	5.6	28	CNZ	10 22
	WTZ	1.1		MNG	1.3	1.6	KRP	0.3
	TNZ	0.2	0.5	WEL	0.2		COB	0.3

80/ 646

OCT 15 04^h09^m22^s.3 32°.58s 179°.56w 492 km M = 4.7
 ± 2.3 0.26 0.56 27 S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	e	04	11	57				5.33	196					4.6
	eS			12 07		2.7	99							
WTZ	P	04	10	59.1		-1.0	100	6.08	207		4.9		4.4	
	eS			12 14		-3.4	99							
GNZ	P	04	11	02.6		-0.3	100	6.36	197		4.8		4.6	
	eS			12 21		-1.4	100							
KRP	P	04	11	07.0		1.1	100	6.67	216		3.3*			
TUA	eS	04	12	32		2.2	100	6.76	202				4.8	
TRZ	eS	04	12	45		0.7	100	7.55	202				4.7	
MNG	P	04	11	29.5		-0.3	100	8.95	205		5.1		4.4	
	eS			13 09		-2.1	100							
WEL	eS	04	13	27		-0.5	100	9.80	206	4.7				
COB	eP	04	11	46		-0.1	100	10.49	214		3.7*	3.0*		
	eS			13 43		2.1	100							
AMPLITUDES:	ECZ				0.3	WTZ	1.1	0.4	GNZ	0.9	0.9			
	KRP			0.4		TUA		0.3	TRZ		0.4			
	MNG			2.4	0.7	WEL	0.2		COB		0.3	0.2		

80/ 647

OCT 16 04^h57^m31^s.9 39°.20s 178°.02E 33 km M = 4.0
 ± 1.0 0.05 0.09 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
GNZ	iPn	04	57	43.3		0.3	100	0.56	0					
TUA	Pn	04	57	43.5		-2.6	97	0.78	300					
TRZ	Pn	04	57	49.0		-0.0	100	0.99	249		3.9		4.2	
	Sn			58 04.0		2.3	99							
WTZ	iPn	04	57	53.8		-1.6	100	1.46	326		4.2		4.3	
	iSn			58 13.2		0.3	100							

ECZ	ePn	04 57 58.0		1.2	100	1.56	16		3.8	4.0
	e	58 08.2								
	eSn	12		-3.3						
WNZ	eP*	04 57 59.0		-1.5		1.60	290		4.5	
	e	58 02.2								
NGZ	ePn	04 58 01.0		0.0	100	1.87	270			
	iP*	06.8		1.7						
CNZ	Pn	04 58 02.2		0.5	100	1.93	269			
KRP	Pn	04 58 08.0		0.8	100	2.33	302		4.1	
	iP*	12.3		-0.6						
MNG	Pn	04 58 08.1		-0.3	100	2.41	233		3.8	3.9
	eP*	16.0		1.7						
	e	22.0								
	iSn	36.2		0.3						
TNZ	ePn	04 58 14		-0.1	100	2.83	269		4.2	
	eP*	20.8		-0.6						
WEL	eSn	04 58 55		-0.9	100	3.25	229	3.9		
COB	ePn	04 58 34		-2.5		4.47	243		4.1	3.7
	eP*	50		0.7						
	eSn	59 26		0.7						
KKZ	e	04 59 11				4.60	224			
	eSn	29		0.6						
AMPLITUDES:	TRZ	3.4	10	WTZ	8.0	7.9	ECZ	0.5	1.0	
	WNZ	0.8		NGZ	7.0		CNZ	7.6		
	KRP	1.6		MNG	2.2	3.2	TNZ	0.3		
	WEL	0.3		COB	0.4	0.5	KKZ	0.6		

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OCT 16 17^h58^m36^s.5 37°.89s 176°.20E 231 km M = 4.0
 ± 1.6 0.07 0.09 11 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
KRP	P	17 59	08.0			0.6	100	0.52	266		2.5* 2.5*
	S		31.4			0.0	100				
WTZ	P	17 59	06.9			-0.9	100	0.63	99		4.1
TUA	eP	17 59	11.2			0.3	100	1.19	141		4.4
NGZ	eP	17 59	14.5			2.2		1.38	199		
GNZ	P	17 59	14.6			0.3	100	1.63	118		4.6 4.1
	S		41.0			-2.6	99				
TRZ	P	17 59	16.8			1.5	100	1.74	164		3.8 3.8
	S		48.3			3.0	97				
ECZ	P	17 59	16.2			-0.4	100	1.87	85		3.8
TNZ	eP	17 59	19			2.0		1.93	227		3.2*
MNG	P	17 59	26.9			1.0	100	2.79	191		3.8 3.9
	S	18 00	03.8			-0.4	100				
WEL	eS	18 00	19			-1.2	100	3.57	198	3.9	
COB	eP	17 59	43.5			1.3		4.18	219		2.8*
	eS	18 00	32			-1.1	100				
AMPLITUDES:	KRP	0.3	0.3	WTZ	2.5		TUA	1.7			
	NGZ	0.2		GNZ	6.0	2.8	TRZ	0.3	0.7		
	ECZ	0.3		TNZ	0.2		MNG	1.1	2.1		
	WEL	0.2		COB	0.3						

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OCT 17 03^h08^m42^s.8 39°.78s 176°.84E 33 km M = 3.7
 ± 0.4 0.02 0.02 R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
TRZ	iP*	03 08	49.5			-0.1	100	0.22	357		

TUA	S*		55.2	0.7	100				
	P*	03 09	00.0	-1.3	99	1.00	14	3.7	4.3
	S*		15.2	0.2	100				
NGZ	P*	03 09	03.3	-0.0	100	1.12	302		
	S*		18.8	0.3	100				
CNZ	P*	03 09	02.8	-1.1	99	1.15	300		
	S*		18.2	-1.3	99				
MNG	P*	03 09	06.6	-0.4	100	1.33	231	3.7	
	i		15.0						
GNZ	Pn	03 09	06.0	-0.3	100	1.46	40	3.8	
	e		16.0						
	e		18.5						
WTZ	ePn	03 09	12.0	1.1	99	1.79	4	3.5	
	eP*		17.3	2.5					
	e		21.5						
TNZ	eP*	03 09	19.0	0.9	100	1.99	286	3.9	3.8
	e		22.0						
	eS*		45.0	0.6	100				
	e		49						
KRP	eP*	03 09	20.2	0.1	100	2.11	331	3.4	
	e		22.0						
	eS*		48	0.1	100				
WEL	e(P*)	03 09	24	2.7		2.19	226	3.5	
	eS*		49	-1.1					
	e		57						
COB	ePn	03 09	33.2	0.5	100	3.39	246	3.8	3.4
	eP*		45.0	3.1					
	e		10 05						
	eS*		27.2	0.9					

AMPLITUDES:	TRZ	33	43	TUA	1.7	7.2	NGZ	15	31
	CNZ	22	30	MNG	4.6		GNZ	2.7	
	WTZ	1.0		TNZ	0.6	0.7	KRP	0.3	
	WEL	0.3		COB	0.3	0.4			

OCT 17 19^h49^m02^s.6 38°.36S 176°.83E 33 km M = 3.8
 ± 0.3 0.02 0.03 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P*	19	49	12.0		0.4	100	0.40	18			
	S*			19.2		1.1	100					
TUA	P*	19	49	14.2		0.9	100	0.51	151			
WNZ	e	19	49	22.0				0.63	245		3.3	
	e(S*)			27.0		2.6						
GNZ	P*	19	49	19.3		-1.5	99	0.97	107		3.7	3.9
	eS*			33.5		-0.6	100					
	e			38.7								
KRP	P*	19	49	21.9		-1.1	100	1.11	293		3.2	3.3
	S*			37.6		-0.5	100					
TRZ	P*	19	49	25.6		1.2	100	1.19	180		3.9	
	e			45.8								
NGZ	P*	19	49	25.2		-0.3	100	1.26	229			
	eS*			44.0		1.6	99					
CNZ	P*	19	49	26.0		-0.3	100	1.30	230			
	eS*			44.0		0.1						
TNZ	ePn	19	49	35.0		0.3	100	2.09	246		3.9	
	eP*			37.2		-2.3						
GBZ	Pn	19	49	38.2		-0.7	100	2.40	333			
MNG	ePn	19	49	41.3		1.2	100	2.48	204		4.1	4.1

	eP*	46.5	0.3						
	eS*	50 18.5	-0.3						
	i	22.5							
WEL	S*	19 50 42	-2.0	99	3.33	208	4.0		
COB	ePn	19 50 03.0	-0.1		4.18	228		4.1	3.8
	e	05.7							
	eP*	14.8	-0.1						
	e(Sn)	56.5	7.7						
AMPLITUDES:	WNZ	0.3	GNZ	4.6	10	KRP	0.8	0.8	
	TRZ	2.2	NGZ	2.3	5.3	CNZ	2.3	4.1	
	TNZ	0.2	GBZ	0.9		MNG	3.6	5.0	
	WEL	0.4	COB	0.4	0.8				

OCT 18 01^h15^m45^s.3 44°.20s 174°.34E 33 km M = 4.1
 ± 0.8 0.04 0.07 R S.E. of RES. 1.4 80/ 651

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
CMZ	Pn	01	16	09.0		1.4	100	1.38	296		4.4	4.5		
	Sn			26.5		2.2	99							
KKZ	Pn	01	16	14.3		0.3	100	1.84	345					
	i			19.7										
	Sn			35.2		-0.2	100							
OMZ	Pn	01	16	24.0		-0.3	100	2.60	249		4.3	4.0		
	e			17 13										
KAI	eSn	01	16	55.0		-1.5	100	2.72	307	4.0				
WEL	eSn	01	17	00		-1.7	99	2.93	6	3.6				
RHP	Pn	01	16	30.8		0.1	100	3.07	270					
	e			38										
DNZ	ePn	01	16	33.6		1.3	100	3.19	237					
	e			17 03.5										
	eSn			05.0		-2.8	97							
THP	Pn	01	16	32.9		0.2	100	3.21	262					
	e			49										
COB	Pn	01	16	35.0		0.7	100	3.33	339		4.2	3.7		
	eSn			17 11.0		-0.3	100							
MNG	Pn	01	16	40.2		1.1	100	3.68	14		3.6	4.0		
	Sn			17 19.2		-0.5	100							
MSZ	Pn	01	16	51.3		-0.7	100	4.63	262		4.4			
	e			17 04.8										
	e			16.8										
AMPLITUDES:	CMZ			10	18	KKZ	0.8	1.7	OMZ		1.6	1.8		
	KAI	0.5				WEL	0.2		RHP		5.3			
	DNZ		0.4	0.7		THP	6.0		COB		0.8	1.0		
	MNG		0.6	1.7		MSZ	1.7							

OCT 18 09^h55^m13^s.4 33°.19s 178°.76W 302 km M = 5.3
 ± 1.9 0.10 0.24 20 S.E. of RES. 2.1 80/ 652

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	P	09	56	31.0		-0.6	100	5.00	205		5.4	5.6		
	S			57 36.8		4.0	98							
GBZ	P	09	56	38.0		-0.8	100	5.62	236					
WTZ	eP	09	56	39.2		-3.0	99	5.90	215		5.7			
GNZ	eP	09	56	43.0		-0.8	100	6.04	205		5.5	5.3		
	eS			57 53.5		-1.2	100							
ONE	eP	09	56	47		0.8	100	6.24	244					
KRP	P	09	56	52.5		1.6	100	6.62	223		4.1*			

	e		59.0								
CRZ	eP	09 56	58.2	-0.1	100	7.24	258				
NGZ	eP	09 57	02.8	1.0	100	7.51	216				
	e		30.3								
CNZ	eP	09 57	03.0	0.7	100	7.56	216				
	e		17.7								
TNZ	eP	09 57	12.2	2.5		8.15	221	4.0*			
	e		32.8								
MNG	eP	09 57	15.0	-1.7	100	8.73	210	4.9	5.1		
	eS		58 50	-3.7	99						
WEL	eP	09 57	29	1.8	100	9.59	211	5.0			
	eS		59 10.3	-2.4	100						
COB	eP	09 57	36	-1.3	100	10.40	218	3.7*	3.6*		
	eS		59 31	0.1	100						
KKZ	eP	09 57	46	1.7	100	10.97	211				
	eS		59 45	1.3	100						
CMZ	eS	10 00	17.0	2.4	100	12.37	210			3.7*	
MSZ	eP	09 58	43.8	6.1		15.43	218	3.6*			
	e		54								
AMPLITUDES:	ECZ		2.6	4.4	GBZ	5.2	WTZ	9.0			
	GNZ		5.7	6.0	KRP	3.2	NGZ	2.6			
	CNZ		1.3		TNZ	0.4	MNG	2.2	4.0		
	WEL	0.4			COB	0.3	0.8	KKZ	0.2	0.4	
	CMZ		0.5	MSZ	0.4						

OCT 19 04^h00^m06^s.2 38°.68S 176°.06E 111 km M = 3.8
 ± 0.9 0.03 0.04 9 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
NGZ	P	04	00	22.8		-1.4	100	0.61	215			
KRP	P	04	00	26.1		-0.1	100	0.85	331		2.8*	2.8*
	e			36.0								
	S			40.9		-0.6	100					
TUA	eP	04	00	25.5		-0.8	100	0.86	99		3.8	3.9
	e			36.8								
	S			43.2		1.6	100					
WTZ	P	04	00	28.0		0.2	100	1.01	47		3.4	3.6
	eS			44.7		0.6	100					
TRZ	P	04	00	28.3		0.0	100	1.05	146		4.0	4.1
	eS			43.8		-1.2	100					
	e			49								
TNZ	P	04	00	31.2		-1.1	100	1.40	248		3.6*	3.0*
	S			53.5		1.3	100					
GNZ	P	04	00	34.6		0.6	100	1.54	89		3.7	4.1
	i			45.2								
	S			55.0		0.0	100					
MNG	P	04	00	36.3		-3.2	96	1.99	193			
	eS			01 04		-0.4	100					
GBZ	P	04	00	47.2		0.8	100	2.50	349			
WEL	eP	04	00	51		0.7	100	2.79	200	3.8		
	eS			01 26.5		3.0	97					
COB	eP	04	00	56.0		-4.2		3.51	226		3.4*	3.2*
	e			01 35.2								
	eS			40.6		-0.4						
AMPLITUDES:	NGZ		6.8	KRP	1.0	1.0	TUA	1.7	2.0			
	WTZ		1.2	2.1	TRZ	1.7	4.8	TNZ	1.0	0.3		
	GNZ		1.5	6.0	GBZ	0.3	WEL	0.3				

COB 0.4 0.9

OCT 19 16^h05^m05^s.3 36°.28S 179°.21E 178 km M = 4.2
 ± 1.4 0.07 0.14 12 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	16	05	36.5		-1.0	100	1.51	200		3.8	
WTZ	P	16	05	46.8		-1.0	100	2.46	226		4.8	4.1
	eS		06	19.2		-1.5	100					
GNZ	P	16	05	48.0		-0.9	100	2.55	201		4.6	4.1
	S		06	22.8		0.4	100					
TUA	P	16	05	55.5		1.0	100	3.01	212		4.8	4.1
	eS		06	34		1.6	100					
GBZ	P	16	05	56.6		2.0	99	3.01	270			
KRP	P	16	05	59.0		0.0	100	3.37	240		3.3*	
	eS		06	37		-3.3						
TRZ	eP	16	06	04.8		0.6	100	3.78	209		4.2	3.9
	eS			52		2.4	99					
MNG	eP	16	06	22.2		-0.8	100	5.23	213		3.8	4.0
	eS		07	22.2		-1.0	100					
	e			25.0								
WEL	eS	16	07	42.5		-0.8	100	6.09	213	4.3		
COB	eS	16	08	03		-1.5	100	6.98	225			3.0*
KKZ	eS	16	08	18		1.7	100	7.48	213			

AMPLITUDES:	ECZ	0.5	WTZ	5.9	1.2	GNZ	3.6	1.8
	TUA	1.8	0.4	GBZ	0.4	KRP	0.8	
	TRZ	0.3	0.3	MNG	0.4	0.8	WEL	0.2
	COB	0.3	KKZ	0.2				

OCT 21 04^h40^m24^s.6 38°.43S 176°.01E 182 km M = 4.0
 ± 1.0 0.05 0.06 7 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	P	04	40	51.0		0.7	100	0.62	323		3.2*	2.8*
	S		41	08.8		-1.3	100					
NGZ	P	04	40	52.3		1.0	100	0.82	202			
	S		41	12.0		0.0	100					
CNZ	P	04	40	53.3		1.7	100	0.85	205			
	eS		41	14.5		2.1	99					
	i			17.2								
WTZ	P	04	40	51.9		0.2	100	0.89	60		3.8	3.8
	S		41	10.5		-2.3	99					
TUA	e(P)	04	40	57		4.6		0.97	113			4.0
	e		41	08.8								
	eS			13.8		-0.1	100					
TRZ	eP	04	40	57.0		2.1	99	1.29	151		3.7	4.1
	S		41	19.5		1.1	100					
TNZ	eP	04	40	58.5		1.7	100	1.48	239		3.2*	
GNZ	eP	04	40	59.7		1.8	100	1.59	98		3.6	3.9
	e		41	16.7								
	S			23.5		0.0	100					
ECZ	eP	04	41	03.0		-0.6	100	2.13	71		3.8	3.9
	eS			32		-1.6	100					
MNG	iP	04	41	05.5		0.9	100	2.22	190		4.5	4.5
	e			28.5								
	S			33.3		-2.2	99					
CAZ	i	04	41	38.5				2.47	176			

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DNZ	eP*	07 17 53	1.5	2.82	198				
	eS*	18 30.4	2.0						
MSZ	P*	07 17 58.0	0.9	100	3.14	241		3.7	3.5
	eS*	18 36.0	-2.2						
	e	43.0							
AMPLITUDES:	CMZ	14 9.6	RHP	7.5	7.5	KKZ		0.8	
	THP	3.8 5.8	OMZ	1.5	1.3	COB		0.3	0.5
	DNZ	0.3 0.5	MSZ	0.7	0.8				

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OCT 22 00^h07^m22^s.6 39°.68S 173°.58E 33 km M = 3.5
 ± 0.4 0.02 0.03 R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
TNZ	eP*	00	07	38.0		0.2	100	0.79	52		2.8	3.0	
	S*			49.8		0.9	99						
COB	eP*	00	07	50.5		0.1	100	1.55	204		3.5	3.2	
	eS*	08	10.0			-1.0	99						
CNZ	iP*	00	07	51.1		-0.1	100	1.60	73				
	S*	08	11.8			-0.7	100						
NGZ	P*	00	07	51.8		-0.3	100	1.66	73				
	S*	08	13.0			-1.1	99						
MNG	P*	00	07	54.1		0.6	100	1.74	123		3.9	4.1	
	i	08	00.0										
	S*			16.1		-0.4	100						
WEL	eS*	00	08	21		1.2	99	1.84	151	3.6			
KRP	P*	00	08	04.0		0.4	100	2.33	42		3.3		
	e(Sn)			27.7		3.2							
	eS*			33.0		-1.2							
WTZ	eSn	00	08	43.0		-1.4		3.16	59			4.2	
GNZ	eSn	00	08	57.5		2.3		3.61	75				
AMPLITUDES:	TNZ			0.3	0.8	COB		0.8	1.5	CNZ		4.9	2.1
	NGZ			2.7	2.8	MNG		4.6	9.7	WEL	0.4		
	KRP			0.5		WTZ			0.2				

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OCT 22 02^h58^m53^s.8 39°.80S 176°.92E 33 km M = 4.2
 ± 0.6 0.04 0.05 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	iP*	02	59	00.3		-0.6	100	0.25	342			
NGZ	Pn	02	59	14.0		0.5	100	1.19	301			
	Sn			29.3		1.1	100					
CNZ	Pn	02	59	14.2		0.2	100	1.21	299			
	Sn			29.3		0.2	100					
CAZ	Pn	02	59	17.5		3.4		1.22	205			
	iSn			25.6		-3.6						
	e			45								
WNZ	Pn	02	59	15.7		0.2	100	1.33	331			
	iP*			19.1		1.2						
	eSn			29.8		-1.8						
MNG	Pn	02	59	17.2		1.1	100	1.38	233		3.7	4.0
	i			25.8								
	eS*			35.5		-1.5						
GNZ	Pn	02	59	17.3		0.3	100	1.43	37		4.2	
	eP*			24.5		4.8						
WTZ	Pn	02	59	20.9		-1.2	100	1.81	2		4.1	
	iP*			25.8		-0.2						
TNZ	ePn	02	59	24.0		-1.4	99	2.06	286		4.6	4.3

	eP*	30.0	-0.2					
	Sn	52.0	2.8					
KRP	Pn	02 59 24.8	-2.0	99	2.16	330		4.4
	eP*	31.8	-0.1					
WEL	ePn	02 59 29	1.4		2.21	227		
	eSn	55	2.0					
WIZ	Pn	02 59 30.5	2.1	99	2.28	5		
	eP*	35.0	1.1					
COB	ePn	02 59 44.2	-0.2	100	3.45	247		4.2 4.0
	eP*	53	-0.7					
	eSn	03 00 25.8	3.3					
	eS*	36	-2.7					
KKZ	ePn	02 59 47.5	1.3		3.58	222		
	eSn	03 00 28	2.3					
KAI	eSn	03 00 59	-0.3	100	4.98	235		4.3
RHP	Sn	03 01 41.0	1.0		6.67	228		
AMPLITUDES:	CAZ	0.5	MNG	5.2	12	GNZ	6.6	
	WTZ	4.0	TNZ	2.8	2.3	KRP	3.1	
	COB	0.8 1.6	KAI	0.3		RHP	2.2	

FELT: Hastings (60) MM IV-V

OCT 22 10^h16^m45^s.4 41°.31s 173°.13E 101 km 80/ 660
 ± 0.6 0.03 0.05 6 S.E. of RES. 1.3 M = 3.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	P	10	17	01.4		0.7	100	0.37	306		4.0*	3.6*
	S			12.3		-0.0	100					
KKZ	P	10	17	08.0		-0.4	100	1.19	160			
	S			27.1		1.4	100					
WEL	P	10	17	09.0		0.2	100	1.23	90	3.9		
	S			26.0		-0.6	100					
KAI	e	10	17	22				1.77	226	4.1*		
	S			37.2		-0.9	100					
MNG	P	10	17	16.2		-1.1	100	1.91	70		3.5	4.1
	e			24.0								
	S			41.2		0.3	100					
CMZ	P	10	17	21.8		-0.8	100	2.31	189		3.3*	4.4*
	i			45.0								
	S			49.0		-1.4	100					
TNZ	eP	10	17	23		0.2	100	2.32	25			
	eS			51		0.2	100					
CAZ	eS	10	17	54.2		2.2		2.38	81			
CNZ	P	10	17	32.4		2.9	96	2.80	42			
	i			43.0								
NGZ	eP	10	17	31		0.9	100	2.84	43			
	e			40								
TRZ	e	10	17	57.8				3.32	59			
	e			18 04								
	eS			15.5		0.4	100					
RHP	eP	10	17	42		1.8	99	3.59	218			
	e			46.7								
	i			49.0								
	S			18 19.0		-2.8						
KRP	eP	10	17	43.0		-0.9	100	3.85	30		3.1*	
	e			54.5								
	S			18 25.8		-2.6	98					
THP	P	10	17	44.5		-1.6		4.02	215			

INSTRUMENTAL DATA

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		e		51.0									
		S		18 27.4		-5.1							
AMPLITUDES:		COB		9.3	11	KKZ		2.7	4.3	WEL	1.7		
		KAI	3.0			MNG		1.5	8.4	CMZ		0.7	15
		CAZ		0.3		KRP		0.5		THP		1.7	8.5

		80/ 661											
		OCT 22		19 ^h 00 ^m 42 ^s .1		41°.56S		171°.91E		12 km		M = 3.7	
		± 0.5		0.03		0.04		R		S.E. of		RES. 1.1	
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
COB	P*	19	00	57.6		1.0	100	0.78	53		3.5	3.3	
	S*		01	08.0		0.8	100						
KAI	eP*	19	01	01		0.1	100	1.03	201				
	S*			14		-0.8	100						
KKZ	P*	19	01	09.7		-0.7	100	1.59	123				
	e			13.8									
	S*			32.2		0.8	100						
CMZ	iP*	19	01	18.9		-0.2	100	2.10	165				
	i			23.0									
	eSn			40.0		-1.9							
WEL	eP*	19	01	20		-0.3	100	2.17	84	3.6			
	S*			48.5		-0.4	100						
MNG	ePn	19	01	28.0		1.3	100	2.86	72		4.1	4.0	
	eP*			30.9		-1.2	100						
	S*		02	10.0		0.4	100						
RHP	Pn	19	01	28.9		2.1	98	2.87	207				
	i			40.0									
	eSn		02	03		2.5							
TNZ	eS*	19	02	13		-1.7		3.03	39			3.8	
	e			26									
THP	Pn	19	01	33		-0.1	100	3.33	206				
	iSn		02	11.2		-0.3	100						
NGZ	eP*	19	01	44.0		-2.4	97	3.70	51				
	e			52.8									
MSZ	ePn	19	01	44		-1.8		4.27	222				
	e			48									
	eSn		02	33		-1.0							

AMPLITUDES:		COB	3.1	6.5	KKZ	2.9	4.3	WEL	0.3				
		MNG	2.6	2.6	TNZ		0.3	THP		0.2	2.6		
		NGZ	0.3	0.7									

FELT: Gravity (79) Westport (79) MM IV

		80/ 662											
		OCT 25		11 ^h 17 ^m 44 ^s .5		45°.18S		167°.37E		93 km		M = 3.7	
		± 0.6		0.02		0.04		5		S.E. of		RES. 0.7	
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
BRZ	P	11	18	00.3		-0.4	100	0.61	169				
	S			12.5		-0.6	100						
MSZ	iP	11	18	01.6	U	0.6	100	0.64	38				
	e(S)			14.5		1.0							
ROX	P	11	18	10.3	D	0.6	100	1.40	103		4.1	3.9	
	S			29		0.3	100						
OBZ	eP	11	18	15		0.3	100	1.80	164		3.2	3.4	
	S			38		0.7	100						
THP	iP	11	18	16.0	U	-0.0	100	1.90	71				
	S			40		0.7	100						

RHP	iP	11 18 19.8	D	-0.5	100	2.21	62		
	S	47		0.1	100				
OMZ	iP	11 18 23.5	D	-0.9	99	2.51	89	4.1	3.7
	S	53.5		-0.7	100				
CMZ	e(S)	11 19 29		-4.4		4.10	69		3.3
COB	eS	11 20 06		-6.1		5.67	46		3.7
AMPLITUDES:	BRZ	3.7		ROX	3.0	4.5	OBZ	0.4	1.5
	OMZ	1.5	0.8	CMZ		0.1	COB		0.2

80/ 663

OCT 25 21^h11^m19^s.5 37°.14S 176°.76E 223 km M = 3.7
 ± 0.7 0.05 0.06 5 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	21	11	51.3		0.3	100	0.86	168		3.6	3.6
	S			12 15		-0.5	100					
KRP	(P)	21	11	54		0.5	100	1.25	231		2.4*	
ECZ	eP?	21	11	58.5		2.8		1.53	112		3.2	3.7
	(S)			12 30		6.2						
TUA	P	21	11	57		-0.3	100	1.70	170		3.3	3.7
	S			12 26.5		0.1	100					
GNZ	P	21	11	58.8		0.5	100	1.81	147		4.1	4.2
	S			12 28		-0.2	100					
NGZ	eP?	21	12	03.5		1.0		2.24	204			
TRZ	P	21	12	03.5		-0.8	99	2.41	179		4.0	3.8
	S			39.5		0.5	100					
TNZ	eP	21	12	08		-0.3	100	2.78	222		3.0*	
MNG	P	21	12	14.4	U	-3.7		3.62	196		4.0	3.8
	S			57.5		-6.0						
WEL	S	21	13	14		-7.1		4.43	200			
COB	S	21	13	26.5		-8.3		5.04	217			2.8*
KKZ	eP	21	12	40.5		-4.6		5.79	203			
	S			13 46		-5.7						
AMPLITUDES:	WTZ			0.7	0.8	KRP		0.2	ECZ		0.1	0.3
	TUA			0.1	0.3	GNZ		1.7	3.7	TRZ	0.3	0.5
	TNZ			0.1		MNG		1.2	1.0	COB		0.3
	KKZ			0.1	0.2							

80/ 664

OCT 26 06^h37^m22^s.8 42°.83S 171°.00E 12 km M = 3.8
 ± 0.6 0.04 0.06 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KAI	P*	06	37	30.7	F	-0.6	100	0.43	44	3.4		
	e(S*)			37		-0.3						
CMZ	Pn	06	37	45.6	D	-2.0	99	1.41	123		4.1	3.5
	e(Sn)			38 06.5		0.3	100					
	(Sg)			12.5		1.9						
RHP	Pn	06	37	47.7	U	-0.2	100	1.43	207			
	S*			38 09.5		2.1	99					
THP	Pn	06	37	53.6		-0.5	100	1.89	205			
	P*			56		-0.3						
	Sn			38 20		2.3	99					
	S*			24		2.8						
KKZ	Pn	06	37	55		-1.0	100	2.03	79			
	(Pg)			38 05		1.1						
	Sn			22		1.0	100					
	(Sg)			31		-0.2						
COB	Pn	06	37	57.7		-0.2	100	2.17	37		4.3	3.9

	P*	38 02	0.9					
	S*	31.5	1.9	99				
OMZ	ePn	06 37 57	-1.8	100	2.24	182	3.9	3.5
	e(P*)	38 03	0.8					
	e(Sn)	26.5	0.5					
MSZ	e(Pn)	06 38 09	1.2		2.90	230	3.9	3.7
	eP*	15	1.6					
	eS*	50	-1.2	100				
ROX	P*	06 38 17	3.4		2.91	204	4.1	3.6
	e(S*)	55	3.4					
WEL	e(Sn)	06 38 50	0.8		3.20	62		
MNG	Pn	06 38 21.2	-2.0		4.02	58	4.3	3.7
	P*	27	-5.6					
	e(Sn)	39 11	2.2					
	S*	24	-1.0					
TNZ	Pn	06 38 30	0.9		4.45	36	3.8	3.6
	e(Sn)	39 27	7.8					
KRP	Pn	06 38 50.5	0.2		6.00	37	4.0	
	e(Sn)	39 59	2.5					
AMPLITUDES:		KAI 5.0	CMZ 4.2	1.9	KKZ 0.8	0.9		
	COB	2.3	3.1	OMZ 0.9	0.8	MSZ 1.3	1.7	
	ROX	0.8	0.7	MNG 2.1	0.8	TNZ 0.1	0.1	
	KRP	0.4						

FELT: Ross (91) MM IV

80/ 665

OCT 26 08^h14^m07^s.6 38°.84S 175°.21E 227 km M = 4.0
 ± 1.1 0.04 0.06 8 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CNZ	iP	08 14	38.5			0.8		0.44	144			
	e(S)	15 03				2.0						
NGZ	iP	08 14	38.8			1.0	100	0.46	138			
	e(S)	15 04				2.9						
TNZ	P	08 14	38.7			-0.2	100	0.74	242		3.2*	
KRP	P	08 14	39.9			-0.1	100	0.95	16		2.9*	
	S	15 05				-0.2	100					
TRZ	P	08 14	44.4			1.0	100	1.44	120		3.5	4.3
	S	15 12.5				1.3	99					
TUA	e	08 15	09					1.51	89			4.2
	S	12.5				0.2	100					
WTZ	P	08 14	44			-1.1	100	1.64	59		3.2	3.8
	e(S)	15 12.5				-1.6						
	e	15										
MNG	iP	08 14	46.4		U	-0.1	100	1.79	173		4.4	4.5
	S	15 15				-1.5	99					
GNZ	P	08 14	50.7			0.2	100	2.20	86		4.3	4.1
	S	15 22.5				-1.2	99					
CAZ	e	08 15	22					2.20	160			
	S	24				0.4						
WEL	P	08 14	52			-1.2		2.47	188	4.1		
	S	15 26				-2.5						
ECZ	eP	08 14	58			0.4		2.86	67		3.8	
COB	iP	08 14	55.9		U	-2.6		2.94	220		4.2*	3.3*
	S	15 34				-4.0						
KKZ	P	08 15	06.0			-2.0		3.76	197			
	e	50										
	S	53				-1.9						

KAI	e(P)	08 15 25		5.6	4.68	217	3.0*		
	eS	16 08.5		-6.6					
CMZ	eP	08 15 21.5		-3.4	5.13	201	2.8* 3.2*		
	S	16 21		-4.0					
RHP	P	08 15 39		-3.6	6.52	215			
	S	16 50		-6.8					
THP	P	08 15 44.5		-3.7	6.96	213			
MSZ	S	08 17 24		-6.4	7.98	221			2.8*
AMPLITUDES:									
	TNZ	0.3		KRP	0.6	TRZ	0.2	2.7	
	TUA		1.0	WTZ	0.2	0.8	MNG	8.0	12
	GNZ	2.0	2.1	WEL	0.5		ECZ	0.2	
	COB	3.2	1.2	KKZ	0.8	0.7	KAI	0.1	
	CMZ	0.1	0.4	MSZ		0.2			

OCT 26 23^h12^m26^s.2 35°.32S 179°.39E 33 km M = 3.8
 ± 0.8 0.03 0.08 R S.E. of RES. 0.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	e(Sn)	23	13	33		1.6		2.47	196			3.8
	e			38								
WTZ	Pn	23	13	14.8	U	0.2	100	3.29	215		4.1	3.8
	e(Sn)			53.5		2.3						
GBZ	Pn	23	13	15		0.1	100	3.31	253			
GNZ	Pn	23	13	17.7		0.3	100	3.50	198		4.1	4.2
	Sn			56.5		0.4	100					
TUA	Pn	23	13	22.5		-0.7	98	3.91	207		3.7	3.6
	(P*)			32.5		-1.6						
	Sn			14 06		-0.3	100					
KRP	Pn	23	13	25		0.0	100	4.05	229		4.1	
MNG	Pn	23	13	47.5		-5.9		6.13	209		3.6	3.8
	e(P*)			14 05		-6.8						
	eSn			50		-9.4						
COB	eSn	23	15	29		-10.3		7.79	220			3.5
AMPLITUDES:												
	ECZ			0.3	WTZ	1.1	0.5	GBZ	0.3			
	GNZ	0.8	1.8	TUA	0.1	0.1	KRP	0.2				
	MNG	0.2	0.4	COB		0.1						

OCT 27 05^h07^m15^s.3 39°.77S 177°.16E 33 km M = 3.4
 ± 0.6 0.03 0.04 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	iP*	05	07	22.6	D	-0.9	100	0.34	310		3.5	3.7
	S*			28.5		-0.9	100					
TUA	e(Sn)	05	07	42		-2.3		0.96	360			3.4
	S*			48		1.6	99					
GNZ	e	05	07	48				1.31	31			3.1
	eSn			51.5		-1.2	99					
GSZ	Pn	05	07	37		0.2		1.31	292			
	Sn			51.5		-1.3						
NGZ	iPn	05	07	36.9		-0.1	100	1.33	296			
	Sn			52		-1.3	99					
CNZ	Pn	05	07	37.3		-0.3		1.38	294			
	Sn			52		-2.2						
WNZ	e(P*)	05	07	41		0.4		1.40	324		3.9	3.8
	e(Sn)			53		-2.0						
	e(S*)			58		-1.4						
MNG	iPn	05	07	40.5	D	0.6	100	1.54	236		3.2	3.3

	i		49						
WTZ	Sn		59	0.7	100				
	Pn	05 07	44	0.7	100	1.79	356	3.0	2.8
	(P*)		55	7.8					
TNZ	e		08 27.5						
	e(Pn)	05 07	52	2.7		2.23	284	3.5	3.3
	P*		55	0.4	100				
KRP	eS*	08 24		0.0	100				
	ePn	05 07	51.5	2.1		2.24	325	3.3	3.3
	P*		54	-0.7	100				
COB	(Sn)	08 15		-0.0					
	S*		25	0.8	100				
	eP*	05 08	17	-1.4		3.63	247	3.7	3.1
	Sn		48	-0.4					
	S*	09 07		1.3					

AMPLITUDES:	TRZ	12 26	TUA	0.9	GNZ	0.9
	WNZ	0.3 0.3	MNG	1.1 2.1	WTZ	0.3 0.2
	TNZ	0.2 0.2	KRP	0.2 0.2	COB	0.2 0.2

FELT: Patoka (52) MM IV

80/ 668

OCT 27 15^h58^m05^s.1 36°.10s 174°.10E 12 km M = 2.8

RES. 1.1

± 1.1 0.02 0.08 R S.E. of RES.

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ONE	P*	15 58	12.8			-0.1	100	0.39	33	2.6		
	S*		18.5			0.1	100					
AUC	Pg	15 58	25			0.9	100	0.94	144			
	S*		36			1.3	99					
GBZ	P*	15 58	25			-0.4	100	1.13	96			
	Pg		26.5			-1.4						
KRP	S*		40.5			0.1	100					
	P*	15 58	43			-0.0	100	2.15	148		3.0	2.5
	e(Pg)		48			-0.7						
	eS*		59 09.5			-1.8	98					
MNG	e		25									
	eP*	15 59	26			0.5		4.64	167		3.1	
AMPLITUDES:	ONE	1.6				GBZ	1.2 0.6	KRP	0.3 0.1			
	MNG	0.1										

FELT: Paparao (12) MM V

80/ 669

OCT 28 03^h22^m35^s.8 40°.74s 176°.80E 33 km M = 3.8

RES. 1.6

± 1.5 0.10 0.12 R S.E. of RES.

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	iPn	03 22	45.1		U	-0.6	100	0.47	249			
	Sn		55			2.1	99					
MNG	Pn	03 22	51.4			-1.7	100	1.01	276		4.1	
	Sn		23 05			-1.0	100					
TRZ	(Pn)	03 22	57			1.4		1.19	1		3.8	3.9
	e(P*)		23 01			3.5						
WEL	(Sn)		11.5			1.2						
	(P*)	03 23	06			1.0		1.63	250	3.6		
NGZ	Sn		21			0.0	100					
	Pn	03 23	06			2.0		1.80	329			
CNZ	Pn	03 23	06			1.9	99	1.82	328			
	P*		10			1.9						

	S*		33.5		1.3							
TUA	ePn?	03 23	08.5		2.5		1.95	8		3.5	3.6	
	Sn		28		-0.6	100						
GNZ	e(Pn)	03 23	09.5		-1.2	100	2.29	25		3.6	3.8	
	Sn		38		1.0	100						
TNZ	eP*	03 23	18.5		0.1		2.42	309		3.9		
WTZ	e(Pn)	03 23	19		2.0		2.75	3		3.6	3.8	
	Sn		47.5		-0.5							
KKZ	Sn	03 23	52		1.2		2.87	233				
KRP	P*	03 23	28		0.2		2.98	340		4.0	4.1	
	e		24 04									
	S*		11.5		4.7							
COB	P*	03 23	30		0.1		3.10	262		3.8	3.7	
	Sn		58		1.7							
	eS*		24 14		3.5							
KAI	Sn	03 24	28		0.0		4.42	244	3.7			
RHP	Sn	03 25	06		0.0		6.00	234				
AMPLITUDES:	MNG		23		TRZ		2.0	3.0	WEL	0.6		
	TUA		0.3	0.4	GNZ		0.6	1.6	TNZ		0.4	
	WTZ		0.5	0.7	KKZ		0.2	0.8	KRP		0.5	0.5
	COB		0.4	1.1	KAI		0.1					

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OCT 28 03^h40^m35^s.3 37°.94s 176°.17E 225 km M = 3.6
 ± 2.5 0.13 0.18 26 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	(P)	03 41	05			-0.4		0.50	272		2.5*	
	e(S)		29			0.3						
TUA	e	03 41	44					1.16	139			3.1
NGZ	P	03 41	12			2.0	99	1.31	199			
	e(S)		40			3.1						
GNZ	P	03 41	12			-0.5	100	1.62	116		3.7	3.6
	S		41			-0.3	100					
TRZ	eS	03 41	45			2.6		1.69	163			3.3
MNG	iP	03 41	23.3		U	-0.3	100	2.73	191		3.9	3.9
	S		42 01			-0.1	100					
WEL	S	03 42	18			0.8	100	3.52	198	3.6		
COB	S	03 42	28.5			-1.7	99	4.12	219			2.9*
KKZ	e	03 42	42					4.86	202			
	S		47.5			0.8	100					
AMPLITUDES:	KRP		0.3		TUA		0.1	GNZ		0.8	1.0	
	TRZ		0.2	MNG		1.5	2.2	WEL		0.1		
	COB		0.4	KKZ		0.1						

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OCT 28 03^h59^m50^s.0 37°.77s 176°.28E 307 km M = 4.4
 ± 0.9 0.05 0.07 6 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	04 00	28.9		D	-0.9	100	0.60	111		4.2	4.2
	e		56									
	(S)		58			-3.0						
KRP	P	04 00	29.9		U	0.1	100	0.61	255		3.3*	
	S		01 00.5			-0.5	100					
TUA	P	04 00	33.1		U	0.6	100	1.24	147		4.4	4.6
	e		01 00.5									
	e(S)		03.5			-2.3						
NGZ	P	04 00	34.8			0.7	100	1.50	200			

	S	01 09		0.4	100				
GNZ	P	04 00 35.5		0.5	100	1.63	123		4.6 4.5
	S	01 10		-0.0	100				
GBZ	iP	04 00 34.8	D	-0.5	100	1.68	337		
ECZ	e(P)	04 00 41		4.9		1.80	88		4.1 4.1
	e	01 06							
	e(S)	12.5		0.4					
TRZ	P	04 00 37		0.6	100	1.83	167		4.2 4.7
	S	01 13		0.4	100				
TNZ	e(P)	04 00 39		0.9		2.06	226		2.8*
	eS	01 17		1.3	99				
MNG	iP	04 00 45.6		-0.1	100	2.92	192		
	S	01 27		-2.3	90				
CAZ	P	04 00 49		1.1		3.13	181		
	S	01 34.5		1.4					
WEL	P	04 00 53.8		-0.0		3.70	198	4.7	
	S	01 42		-1.7					
COB	P	04 00 58.2		-2.2		4.30	219		4.5* 3.8*
	S	01 52.5		-3.1					
KKZ	P	04 01 08.6	D	-0.3		5.05	202		
	e	02 04							
	S	11.5		0.7					
KAI	eP	04 01 20.5		-0.1		6.05	217	3.8*	
	S	02 29		-2.7					
CMZ	S	04 02 39		-1.2		6.43	204		4.1*
RHP	P	04 01 42.0	D	-0.9		7.87	215		
	S	03 10		-1.6					

AMPLITUDES:	WTZ	1.7	2.0	KRP	1.3	TUA	1.1	1.7
	GNZ	3.8	4.6	GBZ	1.3	ECZ	0.4	0.4
	TRZ	0.5	3.5	TNZ		0.1	WEL	1.1
	COB	4.5	3.2	KKZ	1.5	1.5	KAI	0.4
	CMZ		2.6					

OCT 29 08^h37^m58^s.0 39°.59s 174°.15E 209 km M = 4.5
 ± 0.7 0.03 0.05 5 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	P	08	38	27		0.9	100	0.45	24		3.0*	3.3*
	S			49		1.2	100					
CNZ	P	08	38	30.3		0.4	100	1.15	71			
	S			54		-0.6	100					
MNG	iP	08	38	33.2		0.9	100	1.45	135			
	S			57		-1.8	99					
WEL	P	08	38	36		0.9	100	1.75	164	4.3		
	S			39 03		-0.7	100					
COB	iP	08	38	36.7	U	0.8	100	1.84	215		4.1*	3.9*
	S			39 04		-1.2	100					
KRP	P	08	38	36.5		-0.9	100	1.99	34		3.2*	
	e			39 23								
CAZ	P	08	38	39.3		1.2	100	2.06	130			
	e			39 05								
	S			10.5		1.4	99					
TRZ	P	08	38	38.5		0.3	100	2.07	90		4.4	4.6
	S			39 10		0.8	100					
WTZ	P	08	38	44.1	U	-1.5	99	2.74	55		4.5	
KKZ	P	08	38	47		0.3	100	2.84	187			
	S			39 24		-0.5	100					
GNZ	iP	08	38	49.4	U	-1.1	100	3.17	74		4.9	4.5

	S	39 26	-5.1				
KAI	S	08 39 38.5	-1.7	3.59	214	3.6*	
CMZ	P	08 39 02.1	-0.4	4.15	195		3.5* 4.5*
	S	48.5	-4.0				
THP	P	08 39 25	0.4	5.88	211		
	S	40 27.5	-4.4				
OMZ				5.98	203		3.2*
MSZ	S	08 40 50	-4.9	6.87	220		3.1*
BRZ	eS	08 41 15	-3.2	7.87	216		
AMPLITUDES:	TNZ	0.2	0.6	WEL	1.3	COB	3.4 7.0
	KRP	1.0		TRZ	1.0	3.4	WTZ 2.1
	KKZ	1.6	3.2	GNZ	5.5	3.3	KAI 0.5
	CMZ	0.6	8.3	OMZ	0.3		MSZ 0.5
	BRZ	0.1	0.1				

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OCT 29 16^h36^m35^s.8 39°.95S 175°.39E 12 km M = 3.6
 ± 0.2 0.01 0.02 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iP*	16	36	49.1	D	0.6	100	0.67	174		3.2	3.5
	eS*			58		0.3	100					
GSZ	iP*	16	36	48.1		-0.5	100	0.68	13			
	S*			58		0.0	100					
CNZ	iP*	16	36	49.4		-0.4	100	0.76	9			
	S*			59.5		-0.6	100					
TNZ	P*	16	36	55		-0.5	100	1.09	314		3.0	3.3
	Sg			37 13.5		0.9	100					
CAZ	eP*	16	36	57.5		0.9	100	1.15	147			
	(Pg)			59.5		0.4						
	Sg			37 18		3.3						
TRZ	P*	16	36	57		0.0	100	1.17	71		3.5	3.6
	P*			58		1.0						
	Sg			37 15		-0.4						
WEL	ePn	16	37	00.5		-0.1	100	1.42	199	3.4		
	Sn			19.5		0.2	100					
KRP	ePn	16	37	08		-0.9	100	2.02	3		4.0	4.4
	eP*			11		-0.5						
	Sn			35		1.2	99					
	S*			39		0.9						
COB	Pn	16	37	13		0.0	100	2.32	240		3.9	3.6
	eSn			42		1.0						
	eSg			57		2.9						
WTZ	Pn	16	37	13		0.0	100	2.32	33		3.6	3.7
	Sn			43		2.0	96					
GNZ	Pn	16	37	13		-1.4	99	2.42	58		3.5	3.5
	Pg			26		1.2						
	Sn			43		-0.4	100					
KKZ	ePn	16	37	18		-1.3	99	2.78	207			
	P*			27		2.5						
	eSn			54.5		2.4						
	eSg			38 09		-0.6						
AMPLITUDES:	MNG			7.0	17	TNZ	0.3	0.7	TRZ		0.9	1.7
	WEL	0.5				KRP	1.1	2.2	COB		0.8	1.4
	WTZ		0.5	0.5		GNZ	0.4	0.7	KKZ		0.2	0.2

		18 ^h 13 ^m 55 ^s .5			47°.70s	166°.11E	12 km	80/ 674				
		± 1.0			0.07	0.08	R	M = 4.4				
								S.E. of RES. 1.0				
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	P*	18	14	23		-0.6	100	1.57	61		4.4	4.4
	(Pg)			26.5		-1.0						
	S*			45		0.5						
BRZ	Sg			49		0.2	100					
	Pn	18	14	30		-0.4	100	2.16	28			
	S*			15 02		0.1	100					
ROX	e(Pn)	18	14	44		0.1		3.14	46			
	e			46								
MSZ	ePn	18	14	46.5		0.7	100	3.28	23		4.8	4.8
	e(S*)			15 38		2.5						
DNZ	ePn	18	14	51		1.7	98	3.54	60			
	eSg			15 55		0.3						
THP	Pn	18	14	56.4	U	-0.6	100	4.10	41			
	e(Pg)			15 20		1.5						
	(S*)			54		-6.2						
OMZ	e(P*)	18	15	08		-1.0	100	4.24	53		4.4	4.5
	Sg			16 23		4.7						
RHP	Pn	18	15	02.7	D	-0.3		4.54	39			
	Pg			23		-4.4						
	(S*)			16 06		-7.4						
CMZ	ePn	18	15	25		-0.0		6.16	50		4.0	4.3
	eSg			17 18		-4.8						
KAI	eSn	18	16	46		7.6		6.39	38	4.3		
KKZ	ePn	18	15	43		-0.8		7.53	48			
	e			54								
	eSn			17 09		3.2						
COB	ePn	18	15	54		1.9		8.14	38		4.8	4.1
	e(Sn)			17 27		6.6						
MNG	ePn	18	16	16.5		2.2		9.77	47		4.2	3.9
	e			25								
AMPLITUDES:		OBZ		8.0	19	BRZ	8.5	12	18	MSZ	9.0	15
		DNZ		1.7	5.0	OMZ		0.9	2.1	CMZ	0.2	0.6
		KAI	0.2			KKZ		0.1	0.1	COB	0.5	0.4
		MNG		0.3	0.2							

FELT: Stewart I. (158) MM III

		07 ^h 11 ^m 25 ^s .6			49°.78s	164°.20E	33 km	80/ 675				
		± 1.2			0.09	0.17	R	M = 4.6				
								S.E. of RES. 1.1				
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	Pn	07	12	22.0	U	-0.2	100	3.89	44		5.1	4.9
	Sn			13 04		-1.0	100					
BRZ	Pn	07	12	32		0.1	100	4.60	31			
	Sn			13 21		-1.0	100					
MSZ	Pn	07	12	47.7	D	0.7	100	5.71	28		4.8	4.4
	Sn			13 50		1.3	99					
DNZ	Pn	07	12	49.5		1.4	99	5.79	50			
	Sn			13 51.5		1.0	100					
THP	Pn	07	12	56.6	D	-1.5	99	6.52	39			
	Sn			14 08		-0.2	100					
OMZ	Pn	07	12	58		-0.6	100	6.56	47		4.6	4.4
	e(Sn)			14 02		-7.1						

RHP	e		30										
	Pn	07 13	02.5		-1.7		6.97	38					
	e		13										
	e(Sn)		14 13		-6.0								
CMZ	e(Pn)	07 13	24.5		-0.5		8.49	46		4.3	4.1		
	Sn		14 59		3.4								
COB	Pn	07 13	53		-0.2		10.56	38		4.8			
AMPLITUDES:	OBZ		7.4 12		BRZ	0.7 1.0 2.2	MSZ			2.9 1.9			
	DNZ		0.6 1.5		OMZ	0.5 0.7	CMZ			0.2 0.2			
	COB		0.3										

OCT 31 10^h26^m21^s.9 37°.93S 176°.87E 1 km M = 2.9
 ± 1.9 0.16 0.08 20 S.E. of RES. 2.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPg	10 26	23.1			-1.0	100	0.11	119			
	eSg		24.8			-0.7	100					
WIZ	Sg?	10 26	35			-2.9		0.48	32			
KRP	Pg	10 26	44			0.8	100	1.05	270		2.5	
GNZ	e(P*)	10 26	43.5			-0.3	100	1.15	128		3.2	2.8
	e		46									
	(Sg)	27 03				2.3	99					
	e		05.5									
TRZ	ePg?	10 26	53.5			-1.1	100	1.62	181		2.9	
CNZ	e	10 27	06.5					1.64	219			
	e		35.5									
MNG	eP*?	10 27	17			3.5		2.89	201			
AMPLITUDES:	KRP		0.2			GNZ		0.8 0.6	TRZ		0.1	

FELT: Whakatane (27) MM III

NOV 01 23^h59^m30^s.7 37°.98S 175°.82E 253 km M = 3.7
 ± 1.6 0.08 0.14 16 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	P	24 00	03.8			0.3	100	0.22	283			
WTZ	iP	24 00	05.3		D	-0.5	100	0.93	91		3.9	2.8
	e(S)		34			0.9						
CNZ	e(P)	24 00	12			4.4		1.24	190			
TUA	P	24 00	08.5			0.2	100	1.34	129		3.5	3.5
	S		37			-0.5	100					
TRZ	S	24 00	45.5			2.3	96	1.75	154			3.8
GNZ	P	24 00	12.6			0.2	100	1.86	112		4.2	3.2
	S		44			-0.7	100					
MNG	P	24 00	20.4		U	0.3	100	2.65	186		4.1	3.9
	S		57			-1.4	99					
WEL	S	24 01	12.5			-0.4		3.40	193	3.6		
COB	e(P)	24 00	35.5			1.3		3.91	217		2.8*	2.3*
	e(S)	01 23				-0.4						
AMPLITUDES:	KRP		0.3			WTZ		1.2 0.1	TUA		0.2 0.2	
	TRZ			0.6		GNZ		1.7 0.3	MNG		2.4 1.9	
	WEL	0.1				COB		0.1 0.1				

NOV 02 10^h10^m32^s.0 38°.79S 177°.08E 33 km M = 4.1
 ± 0.3 0.02 0.04 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
TUA	iP*	10	10	37.5		0.0	100	0.05	110		
	e(S*)			43		1.6	99				
GNZ	Pn	10	10	45.3	U	-0.4	100	0.75	79	4.2	4.1
	(P*)			49.5		3.1					
WNZ	Pn	10	10	46		-0.2	100	0.78	281	3.7	3.9
	e(Sn)			58.5		1.7					
TRZ	Pn	10	10	45.0		-1.3	99	0.79	195	4.0	4.8
	(Sn)			56		-0.9					
	S*			59		0.8	100				
WTZ	iPn	10	10	45.8	U	-0.7	100	0.81	355	3.8	4.1
	eSn			58.5		1.2	99				
NGZ	iPn	10	10	51.4		-0.7	100	1.21	251		
	Sn			11 07.5		0.4	100				
WIZ	Pn	10	10	52.2	U	-0.6	100	1.26	4		
	e(Sn)			11 08		-0.2					
GSZ	iPn	10	10	52.2		-0.6		1.26	247		
	Sn			11 10		1.7					
CNZ	iPn	10	10	52.2		-0.6		1.27	251		
	Sn			11 09.5		1.1					
KRP	Pn	10	10	54.5		-1.4		1.49	305	3.7	
	(P*)			11 02		3.2					
ECZ	ePn	10	10	57		-0.2		1.59	47	4.3	4.1
	e(P*)			11 04.5		4.1					
	e			08							
	e(S*)			22.5		0.9					
TNZ	Pn	10	11	04.5		-0.3		2.14	258	4.2	4.5
	e(Sn)			32		2.5					
	e(S*)			43		4.9					
MNG	iPn	10	11	02.1	D	-3.5		2.20	214		
	P*			12.5		1.6					
WEL	ePn	10	11	14		-3.3		3.07	215	4.1	
	P*			25		-0.5					
	Sn			48		-3.6					
COB	Pn	10	11	27		-3.9		4.06	234	4.4	4.1
	P*			35		-7.3					
	e(Sn)			12 13		-2.5					
KKZ								4.45	214		
KAI								5.71	227	3.9	
CMZ								5.85	214		3.8
AMPLITUDES:	TUA	10	22	GNZ	21	30	WNZ	0.6	1.3		
	TRZ	7.3	54	WTZ	9.5	19	KRP	1.5			
	ECZ	1.7	1.3	TNZ	0.5	1.0	WEL	0.5			
	COB	0.9	1.6	KKZ	0.3	0.8	KAI	0.1			
	CMZ		0.2								

FELT: Wairoa (53) MM III

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Nov 02 10^h21^m12^s.1 38°.77s 177°.11E 33 km M = 3.4
 ± 0.3 0.02 0.05 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
TUA	iP*	10	21	17.8	D	0.3	100	0.04	135		
	S*			23		1.5	99				
GNZ	Pn	10	21	25.5		-0.1	100	0.73	80	3.5	3.6
	P*			29		2.8					
	S*			38		1.5					
	e			44							

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NOV 03 06^h56^m51^s.8 40°.05S 176°.88E 12 km M = 3.2
 ± 1.1 0.04 0.08 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	iPg	06	57	02.7	D	0.5	100	0.50	355		3.6	3.4
	e			08								
	Sg			10		0.9	100					
MNG	Pg	06	57	17		0.6	100	1.21	242		2.9	2.8
	e			25								
	e(Sg)			35		2.2						
TUA	Pg	06	57	16.5		-0.9	100	1.26	10			
	e			26								
GSZ	(P*)	06	57	15		0.4		1.27	307			
	e(Sg)			33.5		-1.1						
NGZ	P*	06	57	15.0		-0.4	100	1.31	311			
	Sn			32		-0.7	100					
CNZ	P*	06	57	15.5		-0.3		1.34	309			
	Pg			20		1.0						
	Sn			32		-1.4						

AMPLITUDES: TRZ 7.0 5.8 MNG 0.9 1.1

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NOV 03 06^h57^m19^s.3 38°.58S 175°.23E 255 km M = 4.8
 ± 0.7 0.03 0.05 5 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CNZ	iP	06	57	54.6		1.2	100	0.67	158			
	S			58 20.5		0.5	100					
NGZ	iP	06	57	54.8		1.3		0.67	154			
	(S)			58 22		2.0						
WNZ	P	06	57	52.5		-1.0	100	0.68	94		4.5	4.4
	(S)			58 20.5		0.4						
KRP	iP	06	57	54.0	D	0.4	100	0.70	20		4.1*	3.2*
	iS			58 20.2	W	-0.1	100					
GSZ	P	06	57	55.0		1.2		0.75	158			
	iS			58 21.5		0.9						
TNZ	eP	06	57	55.5	U	1.0	100	0.90	227		3.9*	3.3*
	e(S)			58 29		7.1						
WTZ	iP	06	57	57.6	D	-0.8	100	1.50	67		4.7	4.4
	S			58 28		-0.7	100					
TUA	iP	06	57	58.6	D	0.1	100	1.52	99		5.1	4.8
	S			58 29.5		0.7	100					
TRZ	P	06	58	00		1.1	100	1.57	129		5.0	4.9
	S			31		1.4	99					
MNG	iP	06	58	03.5	U	0.7	100	2.04	175			
	(S)			34.5		-2.1	96					
GNZ	iP	06	58	04.4	US	0.2	100	2.19	93		5.2	4.9
	S			38		-1.0	100					
GBZ	eP	06	58	05		-0.9	100	2.37	5			
CAZ	P	06	58	07.6	U	0.9		2.45	162			
	e			39								
	e			44.5								
	(S)			45.5		2.0						
WEL	P	06	58	09.5		-0.1	100	2.73	187	4.9		
	S			48		-0.7	100					
ECZ	P	06	58	09.8		-0.1	100	2.76	72		5.4	4.7
	S			49.5		0.2	100					

COB	iP	06 58 13.3	U	-0.9	3.16	217	4.6* 3.6*
	S	54.5		-2.3			
KKZ	P	06 58 23.6	U	-0.4	4.01	197	
	eS	59 13.5		-0.8			
KAI					4.90	215	3.8*
CMZ	P	06 58 39.1		-1.3	5.37	201	3.9* 4.1*
	S	59 41		-2.7			
OMZ					7.24	205	3.5* 3.4*
MSZ	P	06 59 12		-3.8	8.19	220	3.4* 3.5*
	S	07 00 43		-4.0			
BRZ					9.19	216	
AMPLITUDES:	WNZ	0.3 0.2	KRP	9.0 1.5	TNZ	1.2 0.5	
	WTZ	6.3 3.2	TUA	6.6 3.5	TRZ	4.2 8.4	
	GNZ	15 12	GBZ	0.4	WEL	2.6	
	ECZ	6.3 1.3	COB	7.0 2.2	KKZ	2.7 1.6	
	KAI	0.5	CMZ	1.0 2.6	OMZ	0.3 0.4	
	MSZ	0.5 1.1	BRZ	0.1 0.1 0.2			

Nov 03 23^h31^m34^s.6 32°.27s 179°.75w 33 km M = 4.4
 ± 1.6 0.10 0.26 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	ePn?	23	32	55		0.6	100	5.59	194		4.5	4.5
	e			57								
	eSn?		33	56		1.1						
	e			34 03								
WTZ	Pn	23	33	03		-1.1	99	6.30	204		4.6	4.0
	eSn			34 12		0.1	100					
GNZ	eSn	23	34	19.5		-0.1	100	6.61	195			4.4
KRP	Pn	23	33	12		0.5	100	6.84	213		4.3	
MNG	ePn	23	33	34.5		-8.9		9.18	203		4.6	4.1
	e			36.5								
	Sn		35	09.5		-11.6						
AMPLITUDES:	ECZ	0.2	0.2	WTZ	1.0	0.2	GNZ	0.6				
	KRP	0.1		MNG	0.8	0.3						

Nov 04 02^h42^m59^s.7 40°.25s 179°.01E 33 km M = 4.3
 ± 0.9 0.04 0.06 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	iPn	02	43	26.8		-0.7	100	1.77	334			
TRZ	ePn?	02	43	28.5		0.4		1.82	292		4.0	4.3
	e			38								
	Sn			50.5		1.1	100					
TUA	Pn	02	43	31.1	U	0.1	100	2.03	314		4.3	4.5
	e			40								
	Sn			54		-0.5	100					
CAZ	e	02	43	58				2.22	252			
	(Sn)			44 00		0.9	100					
ECZ	Pn	02	43	39		0.6	100	2.57	352		4.3	4.3
	(P*)			46		1.1						
	(Sn)			44 10		2.4						
	(S*)			14		-4.7						
MNG	Pn	02	43	40		-0.4	100	2.72	261		4.1	4.4
	e(P*)			44		-3.3						
	Sn			44 09		-2.0	97					
WTZ	iPn	02	43	40.4	U	-0.4	100	2.75	325		4.5	4.4

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	(P*)		48		0.1								
GSZ	Sn	44	11.5		-0.3	100							
	Pn	02 43	43.6		1.9		2.81	289					
	P*		49		0.1								
NGZ	Sn	44	15		1.8								
	Pn	02 43	43.4		1.5		2.83	291					
	(P*)		46		-3.2								
CNZ	e	44	09.5										
	Sn		15		1.4								
	Pn	02 43	43.7		1.3	99	2.87	290					
WIZ	Sn	44	15		0.4	100							
	Pn	02 43	44		-1.1		3.06	332					
	e(Sn)		44 18		-1.3								
WEL	ePn	02 43	50.5		1.0		3.38	251	4.3				
	Sn	44	26		-1.0								
	Pn	02 43	53		1.1		3.56	310		4.2	3.9		
KRP	Sn	44	30		-1.2								
	e(Pn)	02 43	56		1.9		3.73	285		3.9	4.2		
	Sn	44	36.5		1.3								
KKZ	Pn	02 44	03		-2.5		4.55	240					
	eSn		53		-2.2								
	Pn	02 44	10		0.5		4.85	258		4.4	4.4		
COB	Sn	45	03		0.8								
	Sn	02 45	22.5		-2.8		5.81	233				4.4	
	Sn												
AMPLITUDES:		TRZ	1.3	3.3	TUA	1.5	2.7	ECZ		0.6	0.7		
	MNG	3.0	7.1	WTZ	4.3	3.2	WEL	0.7					
	KRP	0.7	0.3	TNZ	0.2	0.5	KKZ		0.2	0.9			
	COB	0.6	2.0	CMZ		0.8							

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NOV 04 14^h04^m59^s.2 35°.55s 179°.17w 12 km M = 4.6
 ± 1.4 0.11 0.22 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	Pn	14 05	45			1.8	97	2.82	220		4.7	4.6
	e(Pg)		06	01		4.8						
	e(S*)			27		1.6						
GNZ	Pn	14 05	56			-0.8	100	3.82	215		4.5	4.5
	Sn		06	40.5		0.2	100					
	e(Sg)		07	14		6.2						
WTZ	Pn	14 05	57.8			-0.5	100	3.92	231		4.7	4.5
	e(Sn)		06	40		-2.9						
	ePn	14 06	04			-0.5	100	4.38	221		4.9	4.4
TUA	Sn		53			-0.9	100					
	eSg		07	30		3.2						
	Pn	14 06	11.5			0.4	100	4.87	239		4.9	
KRP	e(P*)		21			-2.4						
	Pn	14 06	14			-0.4	100	5.11	217		4.3	4.4
	Sn		07	12		0.6	100					
ONE	eP*	14 06	32			1.6		5.27	266			
TNZ	e(Pn)	14 06	34			3.4		6.29	233		5.3	
MNG	Pn	14 06	32			-2.6		6.59	218		4.3	4.5
	eP*		56			3.2						
	Pg		07	10		-2.3						
CRZ	eSn		45			-1.8						
	Pn	14 06	39			1.7		6.79	277		5.0	
	Sn	14 08	02			-5.5		7.44	218	4.3		
COB	ePn	14 07	02			2.3		8.43	227		4.1	4.1
	eSn		08	27		-4.1						

KKZ	Sn	14 08 36	-4.7	8.83	217							
AMPLITUDES:	ECZ	1.3 1.4	GNZ	1.8 3.0	WTZ	3.0 1.7						
	TUA	1.5 0.5	KRP	1.1	TRZ	0.3 0.6						
	TNZ	0.4	MNG	0.9 1.5	CRZ	0.3						
	WEL	0.1	COB	0.1 0.4	KKZ	0.3						

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NOV 04 14^h32^m21^s.3 35°.52s 179°.24w 12 km M = 4.4
 ± 1.4 0.10 0.13 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	Pn	14	33	07		1.9	99	2.81	219		4.5	4.6		
	e(Sn)			35.5		-2.6								
	e(Sg)			53		-2.9								
GNZ	ePn	14	33	18.5		-0.3	100	3.82	214		4.3	4.5		
	Sn			34 03		0.7	100							
WTZ	Pn	14	33	20		-0.1	100	3.91	230		4.4	4.1		
	e(Sn)			34 03		-1.5								
	e(Sg)			33		0.2								
TUA	ePn	14	33	26		-0.4	100	4.37	220		4.7	4.3		
	eSn			34 14		-1.7	99							
KRP	Pn	14	33	33		0.2	100	4.83	239		4.7			
	(P*)			44		-1.0								
	Sn			34 27		0.1	100							
TRZ	ePn	14	33	35		-1.4	99	5.10	217		4.3	4.4		
	(Pg)			58		-6.4								
	eSn			34 34		0.7	100							
TNZ	e(P*)	14	34	03		-6.4		6.26	232		5.2			
MNG	Pn	14	33	54		-2.6		6.58	218		4.0	4.2		
	P*			34 18.5		3.8								
	Sn			35 07		-1.8								
CRZ	e(Pn)	14	34	01		2.4		6.72	277		5.0			
WEL	Sn	14	35	24.5		-4.9		7.43	217	4.1				
COB	Sn	14	35	47.5		-5.3		8.41	226				3.8	
KKZ	Sn	14	35	58		-4.6		8.82	216					
AMPLITUDES:	ECZ	0.8 1.2	GNZ	1.1 2.7	WTZ	1.6 0.8								
	TUA	0.9 0.4	KRP	0.7	TRZ	0.3 0.5								
	TNZ	0.3	MNG	0.4 0.9	CRZ	0.3								
	WEL	0.1	COB	0.2	KKZ	0.2								

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NOV 04 16^h52^m21^s.6 42°.28s 173°.15E 12 km M = 3.7
 ± 0.3 0.02 0.03 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
KKZ	iP*	16	52	30.7	D	0.7	100	0.42	110					
	S*			34.5		-1.4	99							
COB	iP*	16	52	42.8	U	-1.0	100	1.23	345		4.3	3.5		
	i			48.5										
	S*			53 00		-0.2	100							
	(Sg)			02.5		-0.7								
KAI	ePn	16	52	44.5		-0.5	100	1.31	259	3.6				
	e			53.5										
	Sn			53 03		0.4	100							
CMZ	ePn	16	52	45		-0.6	100	1.36	196		3.5	3.9		
	(P*)			46.5		0.6								
	Pg			50		0.9								
	Sn			53 04.5		0.9	100							
WEL	P*	16	52	50.5		1.1	100	1.57	51	3.4				

	e(Sn)	53	10.5		2.0					
	e(Sg)		14		-0.4					
MNG	Pn	16	52	59.5	-0.5	100	2.41	47	3.9	3.9
	e(P*)		53	05	1.1					
	Sn			30	1.1	100				
	e(S*)			40	4.4					
TNZ	eP*	16	53	14	-3.8		3.23	17	3.8	3.8
	eS*			58	-2.0					
	eSg		54	13	2.6					
THP	Pn	16	53	15	3.1		3.28	225		
	(Pg)			25	-3.0					
CNZ	P*	16	53	24	0.2		3.57	31		
	Sg		54	20	-2.0					
MSZ							4.50	236		3.4
TUA	P*	16	53	41	-0.5		4.62	43		
	eSg		54	52	-5.1					
KRP	Pn	16	53	31.5	0.0		4.72	24	3.8	3.6
	eSn		54	28	3.6					
GNZ	e(Sn)	16	54	36	0.2		5.19	47		3.6
AMPLITUDES:		KKZ	12	12	COB	7.3	4.5	KAI	1.0	
		CMZ	1.2	5.0	WEL	0.4		MNG		2.7 3.3
		TNZ	0.2	0.3	MSZ		0.3	KRP		0.4 0.3
		GNZ		0.2						

Nov 05 05^h04^m35^s.3 38°.27s 176°.35E 144 km M = 4.1
 ± 0.6 0.02 0.03 4 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	P	05	04	56		0.4	100	0.41	208		4.2	4.2
	e(S)			05 04		-7.3						
WTZ	iP	05	04	56.0	U	-0.5	100	0.58	61		3.9	3.9
	e			05 07.5								
	S			11		-1.8	97					
KRP	iP	05	04	58.0	E	0.6	100	0.73	298		3.9*	3.3*
	iS			05 14.5		0.1	100					
TUA	iP	05	04	58.4	U	0.3	100	0.83	131		4.2	3.9
	S			05 16.5		0.8	100					
NGZ	iP	05	05	01.0		0.7	100	1.08	212			
	(S)			22		2.5						
TRZ	P	05	05	03.5	U	0.6	100	1.33	164		4.5	4.2
	eS			25		1.0	100					
	e			28.5								
GNZ	P	05	05	03.4	D	0.2	100	1.37	106		4.2	4.1
	S			24		-0.6	100					
TNZ	eP	05	05	09		1.1		1.79	239		3.2*	3.2*
	e(S)			37		4.1						
	e			50.5								
ECZ	P	05	05	08.5		0.1	100	1.83	72		3.6	4.0
	e			30								
	S			34		0.4	100					
GBZ	P	05	05	12.4	D	0.1	100	2.16	341			
MNG	iP	05	05	14.3	U	-1.7	98	2.45	196		4.5	4.2
	S			46		-0.9	100					
CAZ	iP	05	05	17.6	U	-0.8		2.64	182			
	S			52.5		1.2						
WEL	P	05	05	23.9		-2.5		3.26	202	4.1		
	S			06 02.5		-3.1						
COB	P	05	05	32.6		-3.3		3.97	224		3.4*	3.5*

	S	06 18.5	-3.8							
KKZ	P	05 05 41	-3.5	4.63	205					
	eS	06 34.5	-3.3							
KAI	eS	05 06 57	-6.4	5.69	220	3.4*				
CMZ				6.01	207					3.5*
RHP	P	05 06 20.5	-2.7	7.51	217					
	e(S)	07 39.5	-7.7							
OMZ				7.93	209					3.4*
AMPLITUDES:	WNZ	0.5 0.5	WTZ	4.7 4.6	KRP	11 2.8				
	TUA	3.1 1.6	TRZ	3.4 3.4	GNZ	4.5 5.5				
	TNZ	0.3 0.4	ECZ	0.3 0.7	GBZ	2.0				
	MNG	9.0 6.5	WEL	0.4	COB	0.4 1.6				
	KKZ	0.2 0.9	KAI	0.2	CMZ	0.6				
	OMZ	0.4								

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Nov 05 09^h09^m44^s.1 35°.13S 179°.96E 33 km M = 4.0
 ± 1.7 0.15 0.40 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	Pn	09	10	27.5		1.5	99	2.81	204		4.1	4.2
	(Sn)			54		-3.5						
WTZ	Pn	09	10	38		-0.5	100	3.73	219		3.9	4.0
	P*			51		2.2						
	Sn		11	19		-0.6						
	e			26								
GNZ	Pn	09	10	38.5		-1.6	99	3.84	203		4.0	4.2
	Sn		11	22		-0.4	100					
TUA	Pn	09	10	47		0.5	100	4.31	211		4.1	3.7
	(P*)			58		-0.8						
	e(Sn)		11	39		5.3						
KRP	P*	09	10	58		-4.5		4.53	231		4.4	
TRZ	ePn	09	10	57		0.0	100	5.08	209		3.8	4.1
	P*		11	09		-2.9						
	Sn			52.5		0.3	100					
NGZ	e(P*)	09	11	08		-8.2		5.34	219			
MNG	ePn	09	11	15		-1.8		6.53	212		3.8	4.0
	e(P*)			28		-8.6						
	Sn		12	24.5		-2.5						
WEL	Sn	09	12	44		-3.6		7.39	212	4.1		
COB	Sn	09	13	10		1.9		8.24	222			3.5
AMPLITUDES:	ECZ	0.3 0.5	WTZ	0.6 0.6	GNZ	0.5 1.5						
	TUA	0.2 0.1	KRP	0.3	TRZ	0.1 0.3						
	MNG	0.3 0.5	WEL	0.1	COB	0.1						

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Nov 05 11^h38^m25^s.6 44°.42S 167°.10E 12 km M = 4.4
 ± 1.0 0.05 0.07 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	iP*	11	38	37.6		0.0	100	0.64	114			
THP	ePn	11	38	58.4		0.1	100	2.00	95			
	ePg		39	05		-1.0						
RHP	ePn	11	39	00.7		0.1	100	2.17	83			
	Pg			07.5		-1.9						
OBZ	Pn	11	39	07		0.6	100	2.59	164		4.6	4.3
	eP*			10.5		-0.4						
	e(Pg)			14.5		-3.4						
	Sn			36		-1.1	100					

OMZ	e(S*)	41			-3.8							
	Pn	11 39 09.0			-0.2	100	2.80	105		4.7	4.5	
	P*	16			1.6							
	S*	49.5			-1.5	99						
DNZ	iPn	11 39 09.7		D	0.2	100	2.82	122				
	P*	15			0.2							
	eS*	53.5			1.8	98						
KAI	ePg	11 39 38.5			-1.1		3.66	60	4.6			
	Sn	40 00			-2.9							
	e(Sg)	30			1.1							
CMZ	ePn	11 39 24.5			-2.3		4.09	80		4.5	4.3	
	e(P*)	39.5			3.1							
	e(Pg)	51			2.9							
	eSn	40 08			-5.0							
KKZ	Pn	11 39 42			-0.0		5.20	70				
	Sn	40 36			-3.9							
COB	Pn	11 39 43			-0.6		5.32	53		4.7	4.6	
	Sn	40 40.5			-2.2							
WEL	ePn	11 40 02.5			3.4		6.44	64	4.0			
	e(P*)	18			1.3							
	Sn	41 05			-4.8							
	e	14										
MNG	ePn	11 40 08			-2.2		7.26	61		4.6	4.5	
	e	14										
	Sn	41 24.5			-5.0							
NGZ	ePn	11 40 27			3.6		8.23	53				
	eSn	41 53.5			0.7							
TRZ	Sn	11 42 03			-1.5		8.72	59			4.1	
KRP	ePn	11 40 38			3.0		9.09	47		4.2	4.2	
	Sn	42 11			-2.2							
GNZ	Sn	11 42 29.5			-6.1		10.02	59			4.4	
AMPLITUDES:		OBZ	4.5	6.7	OMZ	4.1	4.3	DNZ	7.5	10		
		KAI	1.3		CMZ	1.4	1.3	COB	1.0	2.9		
		WEL	0.1		MNG	1.3	1.3	TRZ		0.1		
		KRP	0.3	0.3	GNZ		0.3					

FELT: Te Anau Downs (130) MM IV

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NOV 06 23^h22^m42^s.5 36°.11S 174°.26E 5 km M = 2.6
 ± 0.5 0.01 0.04 R S.E. of RES. 0.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ONE	ePg	23	22	49.1		-0.4	99	0.34	14	2.5		
	Sg			54.4		0.3	100					
GBZ	eP*	23	23	01.5		0.2	100	0.99	97			
	e(Pg)			02.3		-0.3	100					
KRP	e(P*)	23	23	20		0.1	100	2.08	151		2.8	
AMPLITUDES:		ONE	1.6			GBZ	1.5		KRP	0.2		

FELT: Paparoa (12) MM V

80/ 692

NOV 07 03^h46^m27^s.0 41°.17S 176°.86E 33 km M = 3.8
 ± 1.3 0.06 0.10 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	P*	03	46	40.2		1.9	99	0.55	299			
	S*			47.2		0.7	100					
MTW	P*	03	46	46.6		0.6	100	1.03	270			

MNG	iP*	03 46 45.8	-2.8	99	1.18	298			
MOW	P*	03 46 51.3	1.8	100	1.23	258			
CAW	iP*	03 46 50.9	-0.6	100	1.36	272			
WDW	P*	03 46 52.0	-0.4	100	1.41	266			
KIW	iP*	03 46 51.8	-2.3	99	1.50	281			
BHW	P*	03 46 54.4	0.2	100	1.52	260			
WEL	Sn	03 47 12.0	1.0	100	1.58	265	3.6		
TRZ	ePn	03 46 51.9	-0.7	100	1.62	359		3.9	
	eP*	59.0	3.0						
MRW	P*	03 46 55.1	-1.0	100	1.63	267			
TCW	Pn	03 46 59.0	1.8	100	1.95	268			
NGZ	Pn	03 47 01.0	0.3	100	2.20	334			
	iP*	05.7	-0.2						
	eSn	24	-1.9						
CNZ	Pn	03 47 01.0	0.2	100	2.21	333			
	iP*	05.2	-0.8						
TUA	eP*	03 47 11	2.3		2.38	5		3.7	
	e(Sn)	26	-4.0						
KKZ	eP*	03 47 15	1.2	100	2.67	241			
	e	21							
	eSn	35	-2.2	99					
	e	43							
TNZ	ePn	03 47 10	2.0		2.74	315			
	e	14							
COB	e(Pn)	03 47 17.5	4.4		3.11	270		4.1	3.5
	e	24.0							
	eSn	49.2	1.3						
KRP	eP*	03 47 26	-0.2		3.40	342			
AMPLITUDES:	CAZ	14 56	WEL	0.6	TRZ	1.2			
	NGZ	3.5 3.7	CNZ	3.5	TUA	0.3			
	COB	0.7 0.7							

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Nov 07 19^h55^m55^s.8 35°.46s 178°.93w 33 km M = 4.3
 ± 0.6 0.05 0.07 R S.E. of RES. 0.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	e	19	56	46				3.01	222				4.5	
GNZ	ePn	19	56	53.8		-0.2	100	4.00	217				4.2	4.2
	Sn		57	38		-0.1	100							
WTZ	ePn	19	56	56.1		0.3	100	4.14	231				4.2	4.3
	e(P*)		57	07.3		-0.2	100							
	(Sn)			41.4		0.2	100							
TUA	e(Pn)	19	57	02.7		0.8	97	4.58	222				4.4	
KRP	ePn	19	57	08.5		-0.2	100	5.08	239					
MNG	ePn	19	57	31.7		-0.2	100	6.79	219					
AMPLITUDES:	ECZ		0.7		GNZ	0.9	1.2	WTZ		1.0	1.1			
	TUA		0.4											

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Nov 08 05^h30^m15^s.8 42°.26s 173°.17E 15 km M = 4.3
 ± 0.4 0.02 0.03 4 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
KKZ	iP*	05	30	25.0	D	0.8	99	0.42	113					
COB	iPn	05	30	37.2	U	-0.5	100	1.21	344					
	Sn			53.5		-0.4	100							
TCW	Pn	05	30	39.5	U	0.2	100	1.33	39					
KAI	ePn	05	30	39.7		0.4	100	1.33	258				4.6	

	Sn		57.4		0.7	100						
CMZ	Pn	05 30	39.0	D	-0.9	99	1.39	196				
	Sn		57.5		-0.4	100						
WEL	P*	05 30	43.3		-0.0	100	1.54	51	4.4			
	e		45.0									
	e		58.0									
	S*	31	03.7		-0.0	100						
MRW	Pn	05 30	42.9	D	0.8	99	1.54	49				
MOW	Pn	05 30	45.3		0.1	100	1.76	62				
CAW	Pn	05 30	46.5	D	0.5		1.83	52				
BLW	Pn	05 30	47.3	D	-0.2		1.94	63				
MTW	Pn	05 30	48.8	D	-0.4		2.06	59				
MNG	iPn	05 30	53.9	U	0.2	100	2.39	47	3.0	3.1		
CAZ	eP*	05 31	01.5		-0.9	99	2.66	60				
RHP	Pn	05 31	00.8		-0.0	100	2.92	230				
OMZ	ePn	05 31	04.1		-1.4		3.26	209	4.6	4.3		
	(P*)		11.3		-1.2							
THP	ePn	05 31	05.4		-0.8		3.31	225				
	e(P*)		15.8		2.3							
	eSn		43.7		-0.5							
TRZ	eP*	05 31	26.1		3.1		3.87	47	4.4	4.5		
MSZ	e	05 31	41.5				4.53	236	4.4	4.6		
	Sn		32 10.9		-2.5							
KRP	ePn	05 31	27.2		2.0		4.70	24	4.6			
GNZ	eP*	05 31	47.0		1.7		5.17	47	4.4	4.4		
	Sn		32 30		0.9							
WTZ	e(P*)	05 31	42.6		-2.8		5.18	36	4.7	4.8		
AMPLITUDES:	KAI	9.5		WEL	3.9	8.0	19	MNG	0.3	0.5		
	OMZ	2.0	2.0	TRZ	0.7	1.1		MSZ	1.8	5.0		
	KRP	2.5		GNZ	0.8	1.2		WTZ	0.8	0.6		

80/ 695

Nov 10 20^h39^m29^s.9 42°.01s 171°.43E 12 km M = 3.9
 ± 0.6 0.03 0.04 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
KAI	e(Pg)	20	39	41.3		0.8	100	0.51	182		
	S*			47.3		0.4	100				
COB	P*	20	39	54.3		0.2	100	1.35	47	4.0	4.0
	Sn			40 11.4		-0.2	100				
KKZ	eP*	20	40	00.5		-0.1	100	1.73	104		
	(S*)			24.9		1.4	99				
CMZ	e	20	39	50				1.81	151		
	eSn			40 21		-1.7	99				
RHP	eP*	20	40	11.2		0.7	100	2.31	205		
	S*			40		-0.8	100				
WEL	e	20	40	34.6				2.61	75	3.7	
	(Sn)			44.2		2.3					
	(S*)			48.9		-0.8	100				
MNG	e	20	40	12.7				3.36	67	4.1	3.9
	eP*			30.0		1.6					
MSZ	ePn	20	40	29.5		3.7		3.69	223	3.6	4.0
	e			41 13.2							
AMPLITUDES:	COB	3.3	10	KKZ	1.9	3.3	RHP	11	11		
	WEL	0.3		MNG	1.9	1.5	MSZ	0.4	1.7		

											80/ 696		
NOV 11 09 ^h 26 ^m 57 ^s .0											M = 5.1		
35°.21s											178°.37E		
± 1.1											0.06		
09											11		
											S.E. of RES. 1.1		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
ECZ	eP	09	27	48.5		-0.5	100	2.48	177		4.7	5.1	
	S		28	30.0		0.5	100						
GBZ	eP	09	27	48.5		-1.2	100	2.56	246				
	e(S)		28	34.5		3.8							
WTZ	S-P			45.0		0.8	100	2.99	201		5.5	5.0	
ONE								3.32	259	3.3*			
GNZ	iP	09	27	58.0	D	-0.2	100	3.44	185				
	e		28	37.5									
	S			45.1		-1.0	100						
KRP	P	09	28	01.7	D	2.5	92	3.55	219		4.3*		
TUA	eP	09	28	01.4		0.2	100	3.73	195		5.1	5.1	
TRZ	P	09	28	10.2		0.4	100	4.51	195				
	eS		29	09.0		2.1							
	e			10.9									
NGZ	eP	09	28	12.1		2.0		4.54	208				
CNZ	P	09	28	13.0	U	2.4		4.58	209				
CRZ	eP	09	28	12.2		-0.3	100	4.75	278				
TNZ	P	09	28	20.5	U	4.1		5.09	218		4.2*		
MNG	e?	09	28	24.2				5.87	202			5.0	
	eP			25.8		0.2	100						
	(S)		29	34.2		-0.8	100						
COB	eP	09	28	43.1		-0.5		7.36	215		4.1*	3.5*	
	e		30	11.1									
KKZ	eP	09	28	53.3		0.9		8.07	205				
	e		29	17.5									
	e			23.0									
	e			25.1									
KAI								9.11	215	3.6*			
AMPLITUDES:	ECZ		1.2	3.2	WTZ		14	5.0	ONE	0.3			
	KRP		7.5		TUA		2.0	2.0	CNZ		4.0	1.3	
	TNZ		1.1		MNG			7.0	COB		1.1	0.9	
	KKZ		1.0	1.0	KAI	0.2							

											80/ 697		
NOV 11 16 ^h 37 ^m 09 ^s .1											M = 3.5		
39°.55s											173°.56E		
± 0.3											0.02		
16											R		
											S.E. of RES. 0.6		
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
TNZ	P*	16	37	22.6		-0.2	100	0.74	61		3.5	3.3	
	(Sg)			35.3		1.2	96						
COB	e(Pn)	16	37	37.0		-0.2	100	1.66	202			3.5	
	iP*			38.7		0.1	100						
	iSn			58.8		0.4	100						
MNG	ePn	16	37	39.7		0.2	100	1.83	126		3.9	4.0	
	Sn		38	01.9		-0.3	100						
KRP	Pn	16	37	45.1		-0.1	100	2.24	44		3.2	3.2	
	eP*			46.7		-1.9							
	(Sn)		38	11.8		-0.6	100						
TRZ	e	16	37	57.5				2.53	91		3.5	3.5	
	eS*		38	26.1		-0.3	100						
KKZ	eP*	16	38	00.8		1.5		2.87	178				
AMPLITUDES:	TNZ		1.8	1.8	COB			2.2	MNG		4.0	6.5	
	KRP		0.5	0.5	TRZ		0.2	0.3					

	eS*	04 00	08.3		0.7					
	eSg		16		-1.6					
	e		21.0							
TRZ	e(P*)	03 59	34.5		4.4	3.36	44		3.9	
RHP	Pn	03 59	24.8		0.9	100	3.44	232		
	iP*		31.0		-0.3					
TUA	eP*	03 59	46		3.4		4.09	40		
	ePg		52		-2.3					
KRP	e(Pn)	03 59	40.2		4.4		4.30	18	4.7	
	eP*		48.0		1.9					
AMPLITUDES:	WEL		3.5	3.0	COB	10	6.5	CMZ	13	8.0
	KAI	2.6			MNG	11	11	CAZ		2.2
	NGZ		4.7	3.2	TRZ	0.3		RHP		9.0
	KRP		1.3							

80/ 700

Nov 14 00^h34^m11^s.1 38°.26S 177°.54E 33 km M = 4.5
 ± 0.4 0.02 0.05 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPn	00 34	21.9			0.2	100	0.52	302			
GNZ	Pn	00 34	22.4			0.5	100	0.53	135			
TUA	Pn	00 34	24.1			1.0	100	0.62	209			
WIZ	Pn	00 34	25.1			-0.2	100	0.78	339			
	Sn		34.4			-1.5	100					
ECZ	Pn	00 34	28.7			0.8	100	0.97	55		4.9	4.6
	i		32.2									
	i		33.2									
	i		54.0									
WNZ	Pn	00 34	31.3			0.5	100	1.19	252		4.3	4.6
	eSn		46.3			0.7	100					
TRZ	Pn	00 34	34.0			0.2	100	1.40	203		4.6	4.4
	i		44.3									
	e		35 06.0									
KRP	Pn	00 34	36.8			0.1	100	1.62	281		4.0	
	eP*		44.5			4.5						
NGZ	Pn	00 34	39.8			1.1	100	1.76	238			
CNZ	Pn	00 34	40.1			0.7	100	1.82	238			
AUC	eSn	00 35	22			2.4		2.61	302			
GBZ	ePn	00 34	50.0			-0.4	100	2.62	321			
	i		51.2									
	Sn		35 20.0			-0.0	100					
TNZ	Pn	00 34	53.0			2.4	98	2.64	249		4.8	
CAZ	Pn	00 34	51.8			-1.4	100	2.83	201			
	Sn		35 25			0.1	100					
MNG	Pn	00 34	50.8			-2.6	97	2.84	214		4.4	4.5
	e		35 03.0									
	eSn		26.8			1.5						
WEL	Sn	00 35	43.8			-2.1	99	3.70	214	4.6		
COB	Pn	00 35	16.2			-2.0		4.66	231		4.7	4.4
	e		23.8									
	eSn		36 08			-1.0						
KKZ	ePn	00 35	21			-3.0		5.08	214			
	Sn		36 16.1			-3.1						
KAI	eSn	00 36	46			-3.0		6.33	226	4.7		
CMZ	ePn	00 35	38			-5.1		6.48	213		4.2	4.8
	Sn		36 48.5			-4.3						
RHP	Pn	00 36	02.0			-3.1		8.10	222			
	Sn		37 28.2			-3.4						

THP	Pn	00 36 06.9	-3.8	8.50	220
	Sn	37 36	-5.5		
AMPLITUDES:	WIZ	28 55	ECZ	17 11	WNZ 0.8 2.6
	TRZ	9.2 6.7	KRP	2.5	NGZ 17
	CNZ	20	GBZ	1.5 1.3	TNZ 1.1
	CAZ	3.5 2.4	MNG	5.8 10	WEL 1.3
	COB	1.3 2.5	KKZ	0.4 1.6	KAI 0.5
	CMZ	0.3 1.7	RHP	9.1 4.1	THP 1.2 2.1

FELT: Opotiki (35) MM IV

NOV 14 05^h14^m50^s.5 39°.65S 176°.80E 33 km 80/ 701
 ± 0.4 0.02 0.04 R S.E. of RES. 1.1 M = 4.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
TRZ	iP*	05	14	56.1		-0.1	100	0.10	8		
TUA	P*	05	15	06.1		-1.1	100	0.88	18		
NGZ	P*	05	15	10.0		0.3	100	1.03	297		
	eS*			21.9		-1.9	99				
CNZ	P*	05	15	10.0		-0.3	100	1.07	295		
WNZ	Pn	05	15	11.0		1.1	100	1.16	332	5.1	5.0
	eSn			25.2		0.9	100				
CAZ	Pn	05	15	13.0		0.8	100	1.32	199		
	i			21.1							
	i			50.8							
GNZ	ePn	05	15	13.3		0.3	100	1.39	44		
	e			22.3							
MNG	iPn	05	15	13.2		0.0	100	1.39	226		
WTZ	Pn	05	15	16.8		-0.1	100	1.67	5		4.3
	e			23.1							
	e			24.6							
TNZ	ePn	05	15	21.8		1.3	99	1.93	283		4.9
	iP*			25.2		0.4					
	i			28.0							
KRP	Pn	05	15	21.5		0.3	100	1.99	330		4.9
	i			28.0							
WEL	ePn	05	15	23.0		-1.8	99	2.25	223	4.4	
	e			33.2							
	Sn			51.0		0.4	100				
	e			16 08							
COB	Pn	05	15	40.0		-0.8	100	3.42	244		4.6
	eP*			50.0		-0.1					
	eSn			16 20.2		1.5	99				
KKZ	ePn	05	15	42.5		-1.1	100	3.63	219		
	e			16 02							
	e			22							
	e			29.2							
KAI								4.99	233	4.6	
CMZ	ePn	05	16	03		0.5		5.01	217		4.0 5.0
	Sn			56		-1.0					
RHP	Pn	05	16	24.1		-1.4		6.70	226		
	Sn			17 37.0		-0.4					
AMPLITUDES:	WNZ			5.8 7.5		CAZ		31 40	WTZ		6.7
	TNZ			6.3		KRP		11	WEL	1.8	
	COB			1.8		KAI	0.7		CMZ		0.3 4.1
	RHP			4.0 6.0							

FELT: Hastings (60) Waipawa (60) MM IV

80/ 702

Nov 16 02^h48^m09^s.8 40°.18S 174°.90E 12 km M = 4.4
 ± 0.4 0.02 0.05 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
MNG	iP*	02	48	21.7		0.0	100	0.62	135					
CNZ	P*	02	48	28.7		-1.0	100	1.10	27					
	S*			43.2		-1.1	100							
WEL	P*	02	48	30.0		0.0	100	1.11	185	4.6				
	S*			44.2		-0.6	100							
NGZ	P*	02	48	29.8		-0.6	100	1.13	29					
	S*			45.0		-0.5	100							
CAZ	Pn	02	48	32.8		0.5	100	1.24	126					
	i			35.0										
TRZ	(Sn)			54.5		5.4								
	ePn	02	48	38.5		1.3	100	1.60	68		4.4	4.3		
	eP*			40.9		2.5								
	eSg		49	02.5		-1.5								
WNZ	e			08.5										
	ePn	02	48	40.3		0.4		1.80	31		4.8			
COB	iP*			42.0		0.2								
	ePn	02	48	41.2		0.2	100	1.88	240					
TUA	iP*			43.2		0.1								
	eS*		49	11		3.1								
	ePn	02	48	44.5		-1.0	100	2.21	53		4.6			
KRP	e			47.8										
	Pn	02	48	45.5		-1.3	100	2.30	13		4.8			
KKZ	iP*			50.2		-0.1								
	i		49	13.8										
	Sn			17.5		3.0	91							
WTZ	Pn	02	48	48.8		0.5	100	2.42	202					
	iPg			56.7		-2.0								
GNZ	iPn	02	48	53.7		1.2	100	2.73	37		4.3	4.5		
	eP*			56.7		-0.8								
	eSn		49	25		0.3	100							
KAI	ePn	02	48	53.0		-1.4	100	2.86	59		4.6	4.1		
	ePg		49	05.0		-2.7								
	Sn			29.0		1.0	100							
CMZ	ePn							3.52	227	4.2				
	e	02	49	08		0.8		3.80	206		4.2	3.9		
	eSn			23		2.5								

AMPLITUDES:	STN	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
	WEL	13									25	26		
	TRZ	4.0	4.6				0.8				2.5			
	KRP	5.2					3.2				1.5	1.6		
	GNZ	3.6	2.0				0.5				0.8	0.6		

FELT: Wanganui (57) Waikawa Beach (65) Wellington (68) MM III

80/ 703

Nov 16 06^h12^m24^s.9 40°.19S 175°.03E 12 km M = 3.5
 ± 0.4 0.02 0.06 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
MNG	iP*	06	12	35.2		-0.1	100	0.55	141		3.3	3.2		
CNZ	S*			43.8		0.9	100							
	P*	06	12	42.1		-2.2	99	1.07	22					
	S*			57.3		-1.3	100							

NGZ	P*	06 12	43.2	-1.7	100	1.11	24		
	e		56.5						
	S*		59.0	-0.7	100				
WEL	eP*	06 12	43	-2.0	100	1.11	190		
	S*		57.8	-2.0	100				
CAZ	(P*)	06 12	48.6	2.9		1.15	128		
	(S*)	13	06.5	5.4					
TRZ	ePn	06 12	52.0	0.9	100	1.52	66	3.2	3.2
	e	13	20.0						
COB	Pn	06 12	57.0	-0.2	100	1.96	242	3.9	3.5
	eSn	13	22	0.6	100				
TUA	ePn	06 13	01.5	1.8	100	2.14	50	3.6	
KRP	Pn	06 13	04.0	2.2	99	2.30	10	3.8	4.1
	Sn		31.0	1.5	100				
KKZ	eP*	06 13	10	2.3	99	2.44	204		
WTZ	ePn	06 13	07	0.0	100	2.68	35	3.6	
AMPLITUDES:		MNG	12 13	CNZ	29 19	NGZ	5.6 10		
		WEL	1.1 1.1	CAZ	2.5 2.0	TRZ	0.3 0.4		
		COB	1.3 1.5	TUA	0.3	KRP	0.6 0.8		
		KKZ	0.4	WTZ	0.3				

80/ 704

Nov 16 16^h07^m08^s.1 40°.15S 174°.85E 12 km M = 3.7
 ± 0.3 0.01 0.03 R S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iP*	16	07	20.5		-0.2	100	0.67	134		3.4	3.5
	S*			29.0		-0.9	99					
CNZ	P*	16	07	27.8		-0.1	100	1.09	30			
	S*			42.3		-0.2	100					
WEL	P*	16	07	28.8		0.1	100	1.13	183	3.8		
	S*			43.8		0.0	100					
NGZ	P*	16	07	28.3		-0.3	100	1.13	32			
	e			42.0								
	S*			44.2		0.5	100					
CAZ	Pn	16	07	33.5		2.3	54	1.29	126			
	(S*)			53.0		4.5						
TRZ	ePn	16	07	36		0.1	100	1.63	69		3.7	3.5
	eP*			39.2		2.1						
	eS*		08	02		3.3						
TUA	ePn	16	07	44		-0.0	100	2.23	54		3.5	3.7
	eP*			47.2		-0.1						
KRP	ePn	16	07	44.0		-0.8	100	2.29	14		4.2	4.4
	iP*			48.8		0.5						
	S*		08	16.4		-1.9						
WTZ	eP*	16	07	54		-1.8		2.73	38		3.8	
GNZ	eP*	16	08	00		1.5		2.88	60		3.5	
	e			09.0								
	Sn			27.0		0.3	100					
AMPLITUDES:		MNG	10 16	CNZ	32	WEL	1.8					
		NGZ	11 22	CAZ	2.6 2.8	TRZ	0.7 0.7					
		TUA	0.2 0.4	KRP	1.3 1.7	WTZ	0.4					
		GNZ	0.3									

80/ 705

Nov 17 03^h16^m49^s.6 40°.07S 177°.01E 33 km M = 4.0
 ± 0.5 0.02 0.05 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TRZ	Pn	03	17	00.8		0.3	100	0.53	344		3.7	3.9		
	iSn			07.2		-1.2	99							
	i			11.8										
	i			18.8										
CAZ	ePn	03	17	10.0		2.8		1.03	215					
	i			17.2										
	eSn			19.4		-0.9	100							
	e			24.5										
TUA	Pn	03	17	10.8		0.4	100	1.26	5		3.7	4.0		
	Sn			26.0		0.1	100							
MNG								1.30	244		4.1	3.9		
NGZ	Pn	03	17	13.0		0.7	100	1.39	309					
	Sn			30.2		1.0	100							
CNZ	iPn	03	17	13.7		1.0	100	1.42	307					
	eSn			30.5		0.6								
GNZ	ePn	03	17	16.8		1.4		1.62	29			3.7		
	i			25.4										
	i			32.5										
	iSn			36.6		2.0								
WTZ	Pn	03	17	20.2		-1.4	99	2.08	359		3.5	4.2		
	Sn			45.6		0.0	100							
WEL	ePn	03	17	22.5		0.7	100	2.10	234	4.1				
	Sn			46.0		0.0	100							
KRP	ePn	03	17	27		0.6	100	2.43	331		3.7			
	e			49										
WIZ	Sn	03	17	55		-1.6	99	2.54	3					
ECZ	iPn	03	17	31.0		1.6	99	2.65	27		4.4			
COB	Pn	03	17	39.0		-0.8	100	3.41	251		4.2	4.0		
	Sn		18	17.0		-0.7	100							
KKZ	ePn	03	17	40		-0.0	100	3.43	226					
	Sn		18	18.3		0.2	100							
CMZ	Sn	03	18	49.4		-1.5		4.80	221			4.6		
RHP	Pn	03	18	22.9		0.4		6.54	230					
	Sn		19	31.2		-1.6								

AMPLITUDES:	TRZ	7.2	15	TUA	1.1	2.5	MNG	14	12
	NGZ	10	12	CNZ	10	12	GNZ	2.4	
	WTZ	0.8	3.6	WEL	1.3		KRP	0.4	
	WIZ	1.0		ECZ	0.7		COB	0.8	1.6
	KKZ	1.4		CMZ	2.2		RHP	1.1	2.7

80/ 706

Nov 17 10^h17^m42^s.9 37°.92s 179°.27w 33 km M = 4.5
 ± 1.6 0.10 0.15 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	Pn	10	18	10.0		-0.2	100	1.75	277		4.6	4.7		
	i			13.0										
	e			23.0										
GNZ	Pn	10	18	18.0		0.9	100	2.25	251		4.4			
	Sn			42.8		-0.0	100							
WIZ	ePn	10	18	27		1.9	100	2.83	277					
	i			40										
TUA	Pn	10	18	26.8		0.1	100	2.94	251		4.3	4.6		
	Sn			58.2		-1.4	100							
WTZ	Pn	10	18	26.0		-0.8	100	2.95	268		4.2			
	i			34.5										
TRZ	ePn	10	18	34.5		0.8	100	3.46	241		4.6	4.5		

	Sn	19	15.0	3.0	99				
KRP	ePn	10	18 41	-1.5	100	4.10	268		4.2
	e		50						
NGZ	e(Pn)	10	18 48.8	5.0		4.20	251		
	e		56.5						
	eSn	19	28.5	-1.3					
CNZ	ePn	10	18 47.0	2.5	99	4.26	251		
	e		56.8						
	eSn	19	31.2	0.1					
CAZ	Sn	10	19 40.5	1.5	100	4.58	228		
MNG	Sn-Pn		54.0	0.9	100	4.88	235	5.0	4.6
WEL	ePn	10	19 02.5	-1.7	100	5.70	232	4.7	
	Sn	20	04.5	-1.2	100				
COB	ePn	10	19 20.0	-1.2	100	6.94	240	4.8	4.1
	eSn	20	33	-2.6	99				
AMPLITUDES:									
	ECZ		2.8	4.0	GNZ	3.7	WIZ	2.2	
	TUA		0.8	1.5	WTZ	2.0	TRZ	1.3	1.4
	KRP		0.5		NGZ	1.6	CNZ	1.6	
	CAZ		1.6	MNG	7.5	3.7	WEL	0.5	
	COB		0.7	0.5					

Nov 17 15^h12^m55^s.3 38°.64s 176°.67E 33 km M = 2.8
 ± 0.3 0.02 0.03 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TUA	P*	15	13	04.2		-0.3	100	0.41	114		2.7	2.9
	S*			11.9		0.8	100					
WTZ	P*	15	13	08.9		-0.0	100	0.70	21		2.6	3.1
	S*			19.8		0.9	100					
TRZ	eP*	15	13	12.0		-0.5	100	0.92	173		2.8	3.0
	eS*			26.5		1.2	99					
NGZ	P*	15	13	13.2		-0.5	100	0.99	236			
	S*			27.2		0.0	100					
CNZ	P*	15	13	14.1		-0.4	100	1.04	237			
GNZ	P*	15	13	15.5		0.7	100	1.06	91		2.6	2.8
	S*			27.3		-1.9	97					
MNG								2.18	205			2.9
AMPLITUDES:												
	TUA		1.1	1.6	WTZ	0.9	2.6	TRZ	0.3	0.7		
	NGZ		0.4	1.0	CNZ	0.9		GNZ	0.3	0.7		
	MNG			0.4								

Nov 17 21^h53^m16^s.6 35°.37s 179°.95W 218 km M = 4.2
 ± 1.3 0.06 0.14 13 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	21	54	03		-0.3	100	2.62	207		4.1	4.3
	e			56								
WTZ	P	21	54	13.0		-1.6	99	3.59	222		4.4	4.3
	eS			55 00.2		0.7	100					
GNZ	eS	21	55	00		-0.9	100	3.65	206		4.6	
TUA	eP	21	54	23.0		1.6	99	4.14	213		4.3	4.4
	eS			55 12		0.5	100					
KRP	eP	21	54	24.8		-0.2	100	4.44	234		3.2*	
CRZ	P	21	54	46.2		-0.1	100	6.13	277		3.8*	
MNG	eP	21	54	50		0.6	100	6.36	213		3.8	3.9
	e			55 07								
	eS			56 02		0.1	100					

WEL	eS	21 56 21	-0.7	100	7.22	213	4.4
COB	eS	21 56 42	-0.3		8.11	223	
AMPLITUDES:		ECZ	0.4 0.6	WTZ	1.1 1.0	GNZ	2.2
		TUA	0.3 0.4	KRP	0.5	CRZ	0.5
		MNG	0.3 0.5	WEL	0.2		

80/ 709

NOV 18 08^h27^m55^s.2 37°.75S 176°.40E 12 km M = 2.6
 ± R R R R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	Pg	08	28	05.2		-0.7	100	0.52	117		2.4	2.5		
	eSg			14.0		0.9	99							
	i			16.0										
KRP	Pg	08	28	09.0		-0.6	100	0.70	255		2.7	3.0		
	Sg			19.5		0.3	100							

AMPLITUDES: WTZ 0.6 0.6 KRP 0.8 1.7

FELT: Maketu (26) MM IV

80/ 710

NOV 18 12^h40^m10^s.9 32°.08S 177°.69W 273 km M = 4.7
 ± 2.3 0.14 0.30 40 S.E. of RES. 2.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	12	41	48		3.0	99	6.40	208		4.6	4.7		
	eS			43 01		2.3								
WTZ	eP	12	41	53.0		-3.6	98	7.33	215		4.8	4.7		
	e			42 00.2										
GNZ	eS			43 17		-2.5	99							
	eP	12	41	58		0.2	100	7.42	207		4.6	4.8		
TUA	S			43 22.2		0.5	100							
	eP	12	42	04		-0.0	100	7.92	211		4.8	4.9		
KRP	S			43 35		2.1	100							
	e(P)	12	42	10		4.4		8.05	222		3.0*			
CRZ	eP	12	42	11		1.0	100	8.40	251		3.7*			
	e(P)	12	42	18		4.4		8.68	209			4.7		
MNG	eS			43 51		1.1	100							
	eP	12	42	31		-0.8	100	10.14	211		4.2	4.5		
WEL	S			44 22		-0.8	100							
	eS	12	44	41		-1.1	100	11.00	211	4.9				
COB	eS	12	45	02		1.4	100	11.83	218				3.2*	

AMPLITUDES: ECZ 0.3 0.4 WTZ 0.8 0.7 GNZ 0.6 1.3
 TUA 0.3 0.4 KRP 0.2 CRZ 0.3
 TRZ 0.4 MNG 0.3 0.8 WEL 0.2
 COB 0.3

80/ 711

NOV 18 21^h25^m33^s.6 39°.27S 175°.73E 88 km M = 4.1
 ± 0.5 0.02 0.03 5 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
NGZ	P	21	25	46.1		-0.3	100	0.13	315					
	S			54.2		-1.7	99							
CNZ	P	21	25	46.3		-0.2	100	0.15	297					
	S			56.0		-0.2	100							
WNZ	eP	21	25	49.0		-1.2	100	0.70	25		3.7			
TRZ	P	21	25	53.2		1.0	100	0.89	109		4.1	4.3		
	eS			26 09.0		2.8	94							

	e			11.8							
TNZ	P	21 25	55.7		1.6	99	1.05	274			3.6* 3.6*
	eS		26 11.0		1.6	99					
TUA	P	21 25	55.8		-0.1	100	1.20	68			4.1 4.3
	i		57.2								
	S		26 14.5		1.8	99					
KRP	P	21 25	58.4		0.6	100	1.35	354			3.4* 3.6*
	S		26 16.0		-0.1	100					
MNG	P	21 25	57.7		-0.2	100	1.36	188			
	i		59.6								
WTZ	P	21 26	00.8		-0.5	100	1.62	38			4.0 4.4
	e		04.2								
	eS		21.0		-1.1	100					
CAZ	P	21 26	01.9		-0.1	100	1.67	167			
	e		08.3								
	S		22.8		-0.4	100					
GNZ	P	21 26	04.2		-0.6	100	1.90	71			4.0 3.9
	e		14.5								
	S		27		-1.0	100					
WEL	eP	21 26	07.5		-0.7	100	2.14	200		4.1	
	e		12.8								
	eS		32		-1.8	99					
	e		40.5								
COB	eP	21 26	19.0		-0.2	100	2.92	231			3.7* 3.6*
	e		25								
	eS		54		0.8	100					
	e		57.5								
KKZ	eS	21 27	07		-0.6		3.50	205			
KAI	eS	21 27	30		-5.1		4.62	224		3.5*	
AMPLITUDES:		NGZ	60 48	WNZ	0.3	TRZ	3.5	12			
		TNZ	1.1 1.8	TUA	2.5 4.0	KRP	2.7	5.0			
		WTZ	2.6 6.5	CAZ	4.2 3.6	GNZ	2.0	2.7			
		WEL	1.0	COB	1.1 2.8	KKZ	0.7				
		KAI	0.3								

NOV 19 03^h21^m41^s.2 32°.85s 179°.49w 302 km 80/ 712
 ± 2.3 0.18 0.37 22 S.E. of RES. 1.4 M = 4.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	eP	03	23	10		0.4	100	5.87	208		4.5	4.5
	eS		24	19		0.1	100					
GNZ	S	03	24	26.0		1.7	99	6.12	199			4.7
TUA	eS	03	24	33		-0.3	100	6.53	204			
TRZ	eS	03	24	49		-1.4	100	7.32	203			4.7
MNG	eP	03	23	44		-0.5	100	8.74	206		4.3	4.6
	e			52.5								
	eS		25	20		-1.6	99					
WEL	eS	03	25	40		-0.5	100	9.59	207	4.9		
COB	eS	03	25	57		0.5	100	10.30	215			3.1*
KKZ	eS	03	26	13		1.7	99	10.97	207			
AMPLITUDES:		WTZ	0.6 0.6	GNZ	1.5	TRZ	0.6					
		MNG	0.5 1.2	WEL	0.3	COB	0.3					
		KKZ	0.3									

NOV 19 16^h41^m41^s.3 45°.28s 167°.34E 33 km 80/ 713
 ± 1.4 0.06 0.11 R S.E. of RES. 1.5 M = 4.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
MSZ	Pn	16	41	55.0		0.1	100	0.74	34					
ROX	iPn	16	42	05.3		1.2	100	1.41	99		4.6	4.2		
	(Sn)			23.5		2.3	99							
THP	iPn	16	42	11.8		0.2	100	1.95	69					
	Sn			34.5		0.2	100							
	e			37.5										
RHP	iPn	16	42	16.0	D	-0.1	100	2.29	60					
DNZ	Pn	16	42	17.2		0.8	100	2.30	106					
	Sn			40.6		-2.1	99							
KAI								4.03	48	4.2				
CMZ	ePn	16	42	41		-0.6	100	4.16	68				4.2	
	eSn			43 25.0		-2.2	99							
COB	ePn	16	43	03.0		-0.4	100	5.75	45		4.6	4.4		
	eSn			44 07.5		2.0	99							
MNG	ePn?	16	43	26.5		-1.7	100	7.58	55		4.2	4.1		
	e			34.0										
	eSn			44 49.5		0.2	100							

AMPLITUDES: ROX 12 12 KAI 0.4 CMZ 1.0
 COB 0.7 1.6 MNG 0.5 0.5

FELT: Te Anau Downs (130) MM IV

NOV 20 14^h20^m29^s.3 41°.00s 175°.48E 3 km 80/ 714
 ± 0.2 0.01 0.01 R S.E. of RES. 0.6 M = 3.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
MTW	iPg	14	20	32.0		-0.4	100	0.15	175					
CAW	iPg	14	20	36.6		0.6	100	0.33	251					
BLW	iPg	14	20	35.9		-0.7	100	0.36	181					
MNG	Pg	14	20	36.0		-1.0	99	0.39	360					
	Sg			41.8		-0.4	100							
MOW	iPg	14	20	37.9		-0.5	100	0.45	203					
WDW	Pg	14	20	38.5		0.0	100	0.46	234					
KIW	iPg	14	20	39.1		0.6	100	0.46	288					
CAZ	Pg	14	20	40.9		0.1	100	0.57	80					
	iSg			49.6		1.1	99							
	e			51.3										
WEL	Pg	14	20	41.4		-0.2	100	0.61	242	3.2				
	Sg			50.4		0.6	100							
BHW	iPg	14	20	41.3		-0.4	100	0.61	229					
MRW	iPg	14	20	41.9		-0.1	100	0.63	249					
TCW	iP*	14	20	47.3		0.0	100	0.94	257					
TRZ	ePn	14	21	01.8		1.6		1.77	36		3.2	3.2		
KKZ	ePg	14	21	09.8		1.2		1.95	223					
COB	ePn	14	21	05.0		0.6	100	2.08	267		3.8	3.7		
	S*			36.2		1.6								
GNZ	eSn	14	21	51.5		-2.6		3.06	40					
KRP	eP*	14	21	24.2		0.4		3.08	1		4.2			
	e			22 07										

AMPLITUDES: CAZ 14 17 WEL 1.7 TRZ 0.2 0.3
 COB 0.9 2.3 KRP 0.8

FELT: Masterton (66) MM IV Adopted depth from Wellington Net .

	e		57	33.5								
	eS			40		1.3	100					
TRZ	P	11	56	26.1		1.3	100	7.55	200		5.1	5.4
	eS			57	54	0.3	100					
CNZ	eP	11	56	28		1.9	100	7.67	208			
	eS			57	57	0.9	100					
MNG	eP?	11	56	36		-3.9		8.94	204		5.6	5.6
	e			39.8								
	e			58	13							
	eS			19		-1.8						
AMPLITUDES:	ECZ		0.5	0.7	WTZ	7.3	2.1	GNZ		3.8	4.0	
	KRP		0.9	0.4	TUA	0.7	0.7	TRZ		0.5	2.3	
	CNZ		0.4	1.3	MNG	9.0	10					

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NOV 22 11^h58^m54^s.5 34°.53s 179°.37w 33 km M = 4.5
 ± 2.0 0.15 0.18 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	ePn	11	59	48		1.0	100	3.58	208		4.4	4.4		
	e(Sn)	12	00	36		9.4								
	e			01	03									
WTZ	iPn!	12	00	00.0		0.0	100	4.54	219		4.3	4.5		
	eSn			51.5		2.0	99							
GNZ	ePn	12	00	01		-0.1	100	4.62	206		4.3	4.6		
	eSn			50		-1.4	100							
KRP	ePn	12	00	10		-0.9	100	5.34	229		4.9	4.8		
	eSn			01	08	-0.7	100							
MNG	ePn	12	00	34		-4.1		7.33	212		4.2	4.4		
	e(P*)			54		-6.6								
	eSn			01	54	-2.6								
	eS*			02	38	2.4								
AMPLITUDES:	ECZ		0.4	0.5	WTZ	0.9	1.3	GNZ		0.8	2.3			
	KRP		0.7	0.4	MNG	0.5	1.0							

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NOV 22 13^h12^m45^s.2 34°.83s 178°.66w 33 km M = 5.2
 ± 2.2 0.11 0.24 R S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	Pn	13	13	42.0		3.5	98	3.64	218		5.1	5.3		
	e			14	30.0									
	e			52.5										
GNZ	Pn	13	13	52.7		0.5	100	4.64	214		5.3	5.2		
	eSn			14	43.5	0.6	100							
WTZ	Pn	13	13	53.0		-0.1	100	4.72	227		5.0	5.1		
	eSn			14	43.5	-1.0	100							
KRP	ePn	13	14	05		-0.3	100	5.61	235		5.6	5.6		
	e			06.8										
	e(Sn)			15	16	10.0								
	e			20.5										
CRZ	ePn	13	14	27		0.6	100	7.15	271		5.7	5.4		
	e			15	57									
MNG	ePn	13	14	28		-1.9	100	7.42	217		5.0	5.3		
	eP*			51		-1.7	100							
	eSn			15	47	-2.3	99							
	eS*			16	31	2.2	100							
CIZ	Sn-Pn			1	35	-3.5		9.26	171					
MSZ	ePn	13	16	00		-3.2		14.25	222		5.0	4.6		

		eSn	18 24			-9.5						
AMPLITUDES:		ECZ	2.0	3.6	GNZ	7.3	10	WTZ			4.7	5.6
		KRP	3.5	2.5	CRZ	1.2	0.4	MNG			3.2	9.3
		MSZ	0.7	0.5								
80/ 719												
Nov 22	14 ^h 56 ^m 40 ^s .6	34°.84s	178°.47w	33 km			M = 4.9					
		± 1.8	0.10	0.21	R	S.E. of RES.		1.7				
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	ePn	14	57	37.5		2.3	99	3.73	219		4.8	5.0
	e(P*)			53		7.5						
	eS*		58	35		0.7	100					
	e			51								
GNZ	ePn	14	57	49		0.2	100	4.73	216		4.9	4.8
	eSn		58	40		-0.3	100					
WTZ	ePn	14	57	49.7		-0.4	100	4.83	228		4.8	4.9
	eSn		58	41.5		-1.1	100					
KRP	Pn	14	58	03.4		0.9	100	5.73	236		5.4	5.2
	e		59	15								
CRZ	ePn	14	58	24		0.0	100	7.32	271		5.3	
MNG	ePn	14	58	25		-1.6	100	7.51	218		4.7	5.1
	e(P*)			46		-3.7						
	eSn		59	44		-2.9	99					
	eS*	15	00	29		2.0	99					
MSZ	ePn	15	00	01		1.0		14.35	223		4.8	4.6
	eSn		02	19		-12.3						
AMPLITUDES:		ECZ	0.9	1.7	GNZ	2.7	3.7	WTZ			2.7	3.0
		KRP	2.5	1.0	CRZ	0.5		MNG			1.5	4.8
		MSZ	0.4	0.5								

80/ 720												
Nov 22	15 ^h 10 ^m 15 ^s .1	33°.98s	179°.09w	317 km			M = 4.8					
		± 2.1	0.23	0.40	28	S.E. of RES.		1.7				
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	15	11	23.7		-1.0	100	4.18	207		4.8	4.8
	eS		12	21		1.9	99					
WTZ	eP	15	11	34		-1.1	100	5.11	217		5.1	5.0
	eS		12	36		-1.9	99					
GNZ	eP	15	11	35.5		-0.8	100	5.21	206		5.1	4.9
	eS		12	40		0.1	100					
KRP	P	15	11	46.4		2.3	99	5.89	226		3.6*	
MNG	eP	15	12	09		0.3	100	7.92	212		4.5	4.4
	eS		13	38		0.0	100					
MSZ	eP	15	13	40		10.0		14.66	219		3.7*	3.3*
	eS		16	13		7.6						
AMPLITUDES:		ECZ	0.8	0.8	WTZ	2.8	2.7	GNZ			3.0	3.0
		KRP	1.0		MNG	1.0	1.0	MSZ			0.5	0.4

80/ 721												
Nov 22	19 ^h 23 ^m 09 ^s .7	37°.20s	176°.93E	234 km			M = 4.0					
		± 0.7	0.05	0.07	5	S.E. of RES.		0.6				
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	19	23	41.9	U	-0.1	100	0.78	177		3.7	3.2
	eS		24	07		-0.2	100					
KRP	P	19	23	45.9		0.5	100	1.32	236		2.7*	
TUA	eS	19	24	17		-0.2	100	1.62	174			4.0

GNZ	iP	19 23 49.0	DN	0.7	99	1.68	150	4.4	4.0
	eS	24 18		-0.2	100				
NGZ	P	19 23 53.2		-0.3	100	2.24	207		
TRZ	eP	19 23 54		-0.7	99	2.36	182	4.1	3.8
	eS	24 30		0.5	100				
MNG	iP	19 24 05.9	D	-2.6		3.60	198	4.6	3.9
	e	43							
	eS	50		-4.3					
COB	eS	19 25 20.5		-5.9		5.08	219		2.9*
AMPLITUDES:	WTZ	1.0	0.3	KRP	0.4	TUA		0.5	
	GNZ	3.5	2.0	NGZ	1.5	TRZ		0.4	0.5
	MNG	4.7	1.2	COB		0.3			

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Nov 22 21^h51^m22^s.9 38°.28s 176°.20E 154 km M = 4.2
 ± 1.4 0.06 0.07 10 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
KRP	iP	21 51	46.8		DW	1.3	100	0.63	304		3.2*	3.1*
	eS		52 04			1.1	100					
WTZ	iP	21 51	45.3		U	-0.4	100	0.68	65		4.2	4.2
	eS		52 01			-2.5	99					
TUA	iP	21 51	48.2		U	0.8	100	0.91	126		4.4	4.1
	eS		52 07			0.7	100					
CNZ	P	21 51	50.0			1.4	100	1.05	209			
TRZ	iP	21 51	53.0		D	1.4	100	1.36	159		4.4	3.9
	e(S)		52 19.5			5.9						
GNZ	iP	21 51	52.9		D	0.2	100	1.48	105			
	eS		52 15			-0.6	100					
TNZ	P	21 51	51.6			-3.4	96	1.69	237		3.4*	3.1*
	e		52 30									
MNG	iP!	21 52	03.1			-0.3	100	2.40	193			4.4
	eS		33			-1.4	100					
CAZ	iP	21 52	06.4		U	0.2	100	2.62	180			
	eS		40			0.6	100					
WEL	P	21 52	12.8			-0.8		3.20	200	4.4		
	eS		50			-2.5						
COB	eP	21 52	21			-1.4		3.88	223		3.4*	3.4*
	eS		53 06			-2.3						
AMPLITUDES:	KRP	2.2	1.8	WTZ	6.5	7.0	TUA	3.7	2.1			
	CNZ	11		TRZ	2.2	1.8	TNZ	0.5	0.3			
	MNG		10	CAZ	7.7	2.1	WEL	0.8				
	COB	0.4	1.3									

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Nov 23 04^h51^m38^s.6 34°.85s 179°.15W 33 km M = 4.5
 ± 1.7 0.06 0.17 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	WP	WS
ECZ	ePn	04 52	30			1.4	100	3.40	213		4.4	4.4
	eP*		41			3.2	97					
	eS*		53 22			-0.2	100					
	e		55									
GNZ	ePn	04 52	42			-0.5	100	4.42	210			3.9
	eSn		53 32			1.2	100					
WTZ	iPn	04 52	41.2		U	-1.3	100	4.42	224		4.5	4.4
	e		54 03									
GBZ	ePn	04 52	44			-0.8	100	4.59	251			
	eP*		58			-0.1	100					

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TUA	ePn	04 52 48			-1.7	100	4.95	216		4.6	4.5
	e(Sn)	53 49			5.5						
KRP	ePn	04 52 56			1.8	100	5.27	233		4.9	5.1
	e(P*)	53 15			5.2						
	e	54 10									
CRZ	ePn	04 53 15			0.6	100	6.76	271		5.1	
MNG	ePn	04 53 19			-1.0	100	7.16	215		4.1	4.5
	eP*	40.5			-1.4	100					
	Sn	54 35.7			-1.1	100					
	e(S*)	55 25			10.2						
CIZ	Sn-Pn	1 31			-8.1		9.31	168			
AMPLITUDES:		ECZ	0.5	0.6	GNZ		0.5	WTZ		1.5	1.3
		GBZ	1.0		TUA		0.5	0.5	KRP	0.8	0.8
		CRZ	0.3		MNG		0.4	1.4			

NOV 23 05^h55^m37^s.5 40°.28s 173°.39E 208 km M = 4.1
 ± 1.3 0.07 0.07 11 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	iP	05	56	08.6	U	0.7	100	0.94	211		3.9*	3.4*
	e			14								
	e			28								
	eS			32.5		1.1	100					
WEL	eP	05	56	12.5		0.8	100	1.45	134	3.9		
	eS			37		-1.2	100					
MNG	iP	05	56	13.6	U	0.2	100	1.64	103		4.0	4.3
	e			16.6								
	e			32.5								
	S			39.8		-1.3	100					
CNZ	iP	05	56	16.0	U	-0.8	100	1.99	58			
	e			33.5								
KKZ	eP	05	56	18.5		0.0	100	2.15	174			
	e			22								
	e			45								
	eS			51		0.8	100					
CAZ	S	05	56	53.2		1.2	100	2.25	107			
KAI	eS	05	56	59		-1.8	99	2.69	213	3.7*		
CMZ	eS	05	57	11		-3.5		3.35	189			3.5*
GNZ	P	05	56	37.7		-1.8		3.94	67		4.3	4.0
	eS			57 23		-4.5						
AMPLITUDES:		COB	2.5	2.8	WEL	0.7		MNG		4.4	9.0	
		CNZ	3.0	1.5	KKZ	1.0	1.2	CAZ			0.9	
		KAI	0.7		CMZ		1.1	GNZ		1.0	0.7	

NOV 23 23^h17^m54^s.1 37°.84s 179°.08E 12 km M = 3.7
 ± 1.6 0.04 0.09 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	iP*	23	18	04.0	D	1.1	100	0.45	289		3.9	4.0
	eS*			09		-0.2	100					
GNZ	iP*!	23	18	15.7		0.8	100	1.15	226			
	eS*			30		-0.3	100					
WIZ	iPn	23	18	18.8	D	-1.7	100	1.53	281			
	eS*			42		0.3	100					
TUA	eP*	23	18	28		2.1	99	1.80	237		3.7	3.7
	eS*			51		1.4	100					
TRZ	ePg	23	18	44		0.2	100	2.46	225		3.8	3.5

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TNZ	iPn	04 23 07.0	U	0.7	4.44	249	5.8	5.7
	eS*	24 17		2.0				
ONE	ePn	04 23 12		2.1	4.70	292	5.6	
	e	54						
WEL	ePn	04 23 15		-2.3	5.24	225	5.3	
	e	24 07						
	eS*	45		6.1				
CRZ	iPn	04 23 40.0	U	4.8	6.55	298	5.6	5.4
	eSn	24 49		1.9				
CIZ	Sn-Pn	1 15		-0.1	6.87	157		
MSZ	S*-Pg	1 50		-1.9	11.29	228	5.0	5.0
AMPLITUDES:	TRZ	21	31	WNZ	5.6	7.5	GSZ	14
	GBZ	10	15	AUC	8.5	4.3	CAZ	3.0
	MNG		33	TNZ	3.5	2.8	ONE	2.7
	WEL	3.1		CRZ	1.6	0.7	CIZ	1.8
	MSZ	1.1	2.0					

FELT: From Cape Runaway (28) to Gisborne (45), maximum intensity MM V at Tokomaru Bay (37).

Nov 24 08^h00^m07^s.0 33°.16S 178°.88W 33 km M = 4.8
 ± 2.4 0.11 0.22 R S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	ePn	08	01	19		0.3	100	4.99	204		4.9	4.9		
	eSn		02	15		2.0	100							
WIZ	ePn	08	01	22.5		-2.0	100	5.42	215					
GBZ	eP*	08	01	43.5		0.5	100	5.56	235					
WTZ	Pn	08	01	31.7		0.9	100	5.88	214		4.8	4.7		
	eSn		02	36		1.7	100							
GNZ	Pn	08	01	32.2		-0.6	100	6.03	204		4.8	4.7		
	eSn		02	34		-3.8	98							
ONE	eP*	08	01	51.5		-1.8	100	6.16	243	5.5				
TUA	ePn	08	01	39.5		0.3	100	6.50	209		5.0	4.5		
	eSn		02	49		-0.1	100							
KRP	ePn	08	01	43		2.5	99	6.59	222		5.0			
TRZ	ePn	08	01	48		-1.8		7.26	207		4.6	4.7		
	eSn		03	05		-2.6								
NGZ	ePn	08	01	55		2.3		7.49	215					
MNG	ePn	08	02	06		-3.5		8.71	210		4.3	4.5		
	eSn		03	39		-3.3								

AMPLITUDES:	ECZ	0.7	0.8	WIZ	1.2	GBZ	0.7
	WTZ	2.0	1.2	GNZ	1.4	ONE	0.4
	TUA	0.8	0.3	KRP	0.6	TRZ	0.3
	NGZ	0.7		MNG	0.5		0.9

Nov 24 09^h55^m16^s.6 33°.94S 178°.77W 314 km M = 4.5
 ± 1.2 0.20 0.26 29 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	09	56	27		-0.7	100	4.34	209		4.6	4.6		
	eS		57	24		0.6	100							
GBZ	e	09	56	54				5.24	243					
WTZ	P	09	56	38.0		-0.7	100	5.31	219		4.7	4.5		
	eS		57	43		-0.1	100							
GNZ	P	09	56	39.4		0.0	100	5.36	208		4.6	4.3		
	eS		57	43.5		-0.9	99							

TUA	iP	09 56 46.5	U	1.1	99	5.87	213	4.8	4.6
	eS	57 55		0.0	100				
KRP	eP	09 56 50		2.0		6.10	228	3.3*	
	eS	57 56		-3.8					
CRZ	eP	09 57 07		6.8		7.11	264	3.6*	
MNG	eP	09 57 13		0.8		8.09	213	4.0	4.1
	eS	58 42		-1.1					
AMPLITUDES:	ECZ	0.5	0.5	GBZ	0.6	WTZ	1.0	0.8	
	GNZ	0.9	0.8	TUA	0.5	0.3	KRP	0.5	
	CRZ	0.3		MNG	0.3	0.5			

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Nov 24 11^h41^m32^s.2 40°.30s 176°.63E 12 km M = 3.4
 ± 0.8 0.04 0.08 R S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	iP*	11 41	46.1		U	1.1	100	0.67	207			
	eSg		58.5			3.1	99					
TRZ	P*	11 41	46.9			0.6	100	0.76	11		3.1	3.6
	eSg	42	00.5			2.5	99					
MNG	iP*	11 41	47.9		D	-1.4	100	0.94	250		3.5	3.4
	eS*	42	01			-0.8	100					
CNZ	Pn	11 41	56.4			-0.1	100	1.38	322			
	eS*	42	17			1.8	100					
TUA	ePn	11 41	57			-1.8	100	1.54	15		3.3	3.3
	e(Sg)	42	30			5.7						
WEL	eSn	11 42	20			-3.0	99	1.73	234	3.4		
GNZ	e	11 42	18					1.97	34		3.3	
	eSn		28			-1.0	100					
	e		59									
WTZ	eSn	11 42	35			-2.5	99	2.33	7			3.4
KRP	eP*	11 42	18			1.6	100	2.52	340		3.6	
	eSg		57			-0.1	100					
COB	ePg	11 42	31			-3.2		3.07	254		3.7	3.3
	eS*	43	05			-0.8						
AMPLITUDES:	CAZ	1.8	8.1	TRZ	0.9	4.0	MNG	6.5	7.1			
	CNZ	3.0	2.6	TUA	0.3	0.3	WEL	0.3				
	GNZ	0.4		WTZ	0.4		KRP	0.3				
	COB	0.3	0.4									

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Nov 24 14^h08^m55^s.3 35°.09s 178°.66W 212 km M = 4.6
 ± 1.7 0.09 0.19 24 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	14 09	52			0.8	100	3.45	220		4.3	4.6
	eS		10 33			-1.6	100					
	e		11 14									
WIZ	P	14 09	59.8			-0.1	100	4.15	233			
GNZ	eP	14 10	04			0.4	100	4.44	216		4.6	4.6
	eS		56			-0.5	100					
WTZ	iP	14 10	04.1		U	-0.9	100	4.54	229		4.8	4.6
	eS	11	01			2.1	99					
GBZ	eP	14 10	08			-1.4	100	4.90	255			
TUA	eP	14 10	12			1.3	100	5.00	221		4.8	4.6
	eS	11	09.5			0.1	100					
KRP	P	14 10	17.0			0.3	100	5.47	237		3.3*	
TRZ	eS	14 11	28			2.1	99	5.73	218			4.6
CRZ	eP	14 10	39			0.5	100	7.16	273		3.8*	

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MNG	eS	14 11 58	-2.2	99	7.21	218	4.3
AMPLITUDES:		ECZ	0.5 0.8	WIZ	0.8	GNZ	1.6 2.3
		WTZ	1.8 1.3	GBZ	0.8	TUA	0.7 0.5
		KRP	0.6	TRZ		0.8 CRZ	0.4
		MNG	1.0				

Nov 25 03^h24^m33^s.9 44°.72S 167°.89E 12 km 80/ 732
 ± 0.9 0.03 0.08 R S.E. of RES. 1.1 M = 4.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	iPg!	03	24	34.8		-1.6	99	0.05	20			
ROX	iPn	03	24	56.8	D	0.1	100	1.26	127		4.7	
THP	iPn	03	25	00.0	U	0.9	100	1.44	84			
RHP	iPn	03	25	03.1	D	0.6	100	1.69	69			
DNZ	iPn	03	25	08.8	U	-0.3	100	2.18	123			
	eSn			35		-0.6	100					
KAI	ePn	03	25	27		1.5	99	3.37	51	4.7		
	ePg			42		-0.1	100					
	e(Sn)			26 09		4.7						
	eSg			27		-0.6	100					
	e			44								
CMZ	ePn	03	25	28		-0.6		3.61	73		4.6	4.4
	eSn			26 11		1.1						
KKZ	ePn	03	25	46		0.9		4.81	63			
	eSn			26 44		5.1						
KRP	ePn	03	26	38		-3.0		8.91	43		4.4	
AMPLITUDES:		ROX		16	DNZ	28	32	KAI	2.0			
		CMZ	2.0	2.4	KKZ	0.4	0.5	KRP	0.5			

Nov 25 03^h26^m01^s.1 44°.79S 167°.83E 12 km 80/ 733
 ± 2.1 0.07 0.12 R S.E. of RES. 1.6 M = 4.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ROX	e?	03	26	27				1.26	123			4.1
	e(Sg)			44		0.4	100					
THP	e(Pn)	03	26	27		0.1	100	1.49	81			
	e(Sg)			50		-1.4	99					
RHP	e(Pn)	03	26	30		-0.6	100	1.75	68			
	e(S*)			57		1.5	99					
AMPLITUDES:		ROX			11	THP	41	25	RHP	22	35	

Nov 25 03^h29^m20^s.2 38°.92S 179°.23E 12 km 80/ 734
 ± 1.3 0.06 0.08 R S.E. of RES. 1.2 M = 3.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	eP*	03	29	39.5		1.4	99	0.98	286		3.1	3.3
	eS*			50		-1.3	100					
ECZ	Pn	03	29	42.8		-1.2	100	1.33	336		3.5	3.5
	eSn			30 02.5		0.8	100					
TUA	ePn	03	29	48		0.1	100	1.63	273		3.6	3.7
	eSn			30 10		1.3	100					
WTZ	Pn	03	29	53.3		0.4	100	1.99	297		3.8	3.9
	eSn			30 17		-0.4	100					
CNZ	ePn	03	30	04		-1.0	100	2.88	263			
KRP	ePn	03	30	10		2.4		3.07	288		3.7	
MNG	Pn	03	30	09.1		-2.4		3.35	238		3.9	4.0

	eSn	50	-0.1						
WEL	eSn	03 31 08.5	-1.1	4.16	234	4.2			
COB	ePn	03 30 41	1.0	5.44	244				3.8
	eSn	31 40.5	0.2						

AMPLITUDES:	GNZ	1.2 2.5	ECZ	0.4 0.5	TUA	0.5 0.7
	WTZ	1.5 1.8	CNZ	0.4	KRP	0.3
	MNG	1.3 2.1	WEL	0.4	COB	0.4

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NOV 25 04^h57^m05^s.3 37°.87s 178°.49E 12 km M = 5.2
 ± 0.3 0.02 0.03 R S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	iP*	04	57	10.2	D	0.6	100	0.19	15					
GNZ	P*	04	57	21.8		0.8	99	0.85	205					
WIZ	iP*	04	57	25.0	U	0.1	100	1.08	288					
WTZ	iP*	04	57	26.8	D	0.1	100	1.19	264					
TUA	ePn	04	57	29		-0.9	99	1.40	228					
WNZ	ePn	04	57	38		-0.4	100	2.02	247			5.4	5.5	
	eP*			41		0.0	100							
	Pg			46.1		-0.1	100							
	eSg			58 14		0.5	100							
TRZ	Pn	04	57	38.9		-0.8	99	2.12	217			5.2	5.1	
	ePg			49		0.8	99							
	e			58 27										
KRP	iPn	04	57	42.1	DE	-0.5	100	2.33	268					
CNZ	Pn	04	57	46.9		-0.1	100	2.65	239					
	e(Sg)			58 44		9.2								
GBZ	iPn	04	57	50.6	D	0.0	100	2.92	304					
AUC	iPn	04	57	54.2	D	0.8		3.12	288					
MNG	iPn	04	57	56.6	U	-3.3		3.60	219			4.9	5.3	
	ePg			58 21		3.0								
	eSg			59 16		9.5								
ONE	ePn	04	58	06		1.8		3.91	301			5.4		
	e			38										
CRZ	ePn	04	58	31.5		1.3		5.81	304			5.8	5.2	
	e			59 49										
MSZ	ePn	04	59	35		1.6		10.45	226			4.8	4.7	
	eSn	05	01	21		-4.8								

AMPLITUDES: WNZ 4.2 6.2 TRZ 14 17 CNZ 25 24
 GBZ 14 AUC 6.6 MNG 10 34
 ONE 2.5 CRZ 3.0 0.6 MSZ 0.8 1.2

FELT: From Cape Runaway (28) to Gisborne (45), maximum intensity
 MM V at Cape Runaway and East Cape (29).

80/ 736

NOV 25 05^h02^m35^s.2 37°.92s 178°.46E 12 km M = 3.8
 ± 0.7 0.04 0.06 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	iP*	05	02	39.1	D	-1.3	100	0.23	17					
	eS*			45		1.0	100							
GNZ	iP*	05	02	50.8		0.7	100	0.80	205					
	e			03 14										
WTZ	iP*	05	02	55.9	D	-0.4	100	1.17	266			3.9	4.1	
	eS*			03 12		0.2	100							
TUA	ePg	05	03	02		-0.8	100	1.36	229			3.6	3.7	
	eSg			21		-0.1	100							

WTZ	eP	11 39 49	-1.0	100	3.20	222	4.3	4.4
	eS	40 47	0.1	100				
	e	41 50						
GNZ	eP	11 39 49	-1.6	99	3.29	203	4.1	4.2
	eS	40 48	-0.2	100				
	e	41 52						
TUA	eP	11 39 56	1.5	99	3.77	212	4.3	4.5
	eS	40 55	0.1	100				
	e	42 05.5						
KRP	e	11 40 09			4.05	234	2.9*	3.0*
	eS	59	0.1					
	e							
TRZ	eP	11 40 08	7.1		4.54	209	4.4	4.2
	e	41 26						
	e	42 24						

AMPLITUDES: ECZ 0.2 0.3 WTZ 0.5 0.8 GNZ 0.4 0.7
TUA 0.2 0.3 KRP 0.2 0.3 TRZ 0.2 0.3

80/ 740

Nov 25 12^h00^m40^s.9 34°.06S 178°.02W 251 km M = 4.4
± 3.2 0.52 0.59 144 S.E. of RES. 2.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	12 01	54.5			2.3	100	4.58	217		4.5	
GNZ	eP	12 02	01			-3.5	99	5.59	214		4.5	4.0
	eS	03	10			0.2	100					
WTZ	eP	12 02	04.9			-0.3	100	5.63	224		4.4	4.5
	eS	03	09			-1.9	100					
TUA	eP	12 02	12			0.6	100	6.14	218		4.6	4.4
	eS	03	24			1.8	100					
KRP	eP	12 02	17			1.1	100	6.50	232		3.1*	
TRZ	e	12 02	32					6.88	216		4.7	4.4
	eS	03	42			3.2						
MNG	eP	12 02	43			3.6		8.35	216		4.0	4.2
	eS	04	10			-2.3						

AMPLITUDES: ECZ 0.4 GNZ 0.7 0.4 WTZ 0.5 0.7
TUA 0.3 0.2 KRP 0.3 TRZ 0.3 0.3
MNG 0.3 0.6

80/ 741

Nov 25 13^h34^m27^s.6 31°.96S 179°.12W 472 km M = 4.8
± 3.2 0.25 0.57 105 S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP?	13 36	06			1.9	99	6.04	198		4.7	
GBZ	P?	13 36	04.9			-0.6	100	6.17	225			
WTZ	iP	13 36	10.9		D	-1.1	100	6.81	207		5.0	
	i		12.0									
GNZ	P	13 36	13.8			-0.9	100	7.07	198		5.9	4.6
	eS	37	38			-1.6	100					
KRP	P	13 36	19.0			0.8	100	7.40	215		3.3*	
TUA	eS	13 37	49			1.5	100	7.49	203			4.6
TRZ	eP	13 36	30			2.5		8.27	202		4.8	4.6
	eS	38	03			0.3						
MNG	eP	13 36	39.5			-3.3		9.68	205		4.4	4.5
	eS	38	27			-3.3						

AMPLITUDES: ECZ 0.3 GBZ 0.6 WTZ 1.3
GNZ 9.0 0.7 KRP 0.4 TUA 0.2
TRZ 0.2 0.3 MNG 0.5 0.7

80/ 742

NOV 25 15^h51^m59^s.5 37°.78S 178°.79E 33 km M = 3.6
 ± 1.0 0.03 0.08 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	iP*	15	52	05.8	D	-0.3	100	0.22	294			
	eS*			10.5		-0.4	100					
	e			12.8								
GNZ	iPn	15	52	17.2	DN	-0.2	100	1.05	215			
	eS*			32		-1.4	99					
WTZ	iPn	15	52	22.1	D	-0.6	100	1.44	261		3.8	3.6
	eSn			40.5		0.4	100					
TUA	ePn	15	52	27		1.4	99	1.65	231		3.4	3.5
	e(S*)			57		6.1						
TRZ	ePn	15	52	35		-0.1	100	2.35	220			3.5
	eSn			53 03		1.1	99					
KRP	iPn	15	52	38.6	D	0.3	100	2.58	266		3.7	
MNG	ePn	15	52	51		-4.3		3.82	221		3.6	3.5
	eSn			53 36		-1.5						
AMPLITUDES:		ECZ		5.6	6.1	WTZ		3.0	1.9	TUA	0.3	0.4
		TRZ			0.3	KRP		0.4		MNG	0.5	0.5

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NOV 25 22^h31^m30^s.1 40°.94S 175°.63E 12 km M = 3.9
 ± 0.4 0.03 0.03 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iP*!	22	31	36.3		-0.8	100	0.34	341			
CAZ	iP*	22	31	38.9	U	-0.2	100	0.46	85			
	eSg			47		1.1	100					
WEL	P*	22	31	44.1		0.3	100	0.74	242	3.6		
	eS*			54.5		0.7	100					
CNZ	iPn	22	31	58.2	U	-1.2	100	1.75	358			
	eSn			32 23		1.6	99					
TNZ	Pn	22	32	04.0		1.1	100	2.00	331		3.7	3.8
	eS*			32		0.3	100					
COB	Pn	22	32	04.3		-1.3	100	2.20	265		4.2	3.5
	eP*			08		-0.7	100					
	eSn			31		-1.2	100					
TUA	eS*			39		1.4	99					
	ePg	22	32	18		-1.4	100	2.44	29		3.7	
KRP	P*	22	32	23.8		1.0		3.01	359		4.1	4.3
	eS*			59		-3.2						
AMPLITUDES:		CAZ		30	46	WEL	2.8			CNZ	3.6	6.0
		TNZ		0.4	0.7	COB		2.0	1.5	TUA	0.3	
		KRP		0.7	0.8							

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NOV 26 11^h29^m25^s.2 49°.54S 164°.22E 33 km M = 4.5
 ± 3.1 0.35 0.53 R S.E. of RES. 2.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	ePn	11	30	20		0.6	100	3.71	46		4.5	4.9
	e			53								
	eSn			59.5		-0.8	100					
DNZ	ePn	11	30	47		1.5	100	5.62	51			
	eSn			31 43		-3.2	99					
THP	ePn	11	30	54		-1.1	100	6.33	40			

	eSn	32 02		-1.2	100							
RHP	ePn	11 31 00		-1.1	100	6.77	39					
	e	10										
	eSn	32 15		1.1	100							
CMZ	eSn	11 32 55		4.0	98	8.32	47				4.3	
AMPLITUDES:	OBZ	1.7	12	DNZ	0.5	2.7	THP				2.1	3.6
	RHP	0.8	2.2	CMZ		0.3						

80/ 745

Nov 26 13^h48^m43^s.9 39°.81S 176°.73E 12 km M = 3.5
 ± 1.1 0.06 0.05 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TRZ	iPg	13	48	51.1	D	1.4	100	0.27	15					
	eSg			56		2.4	99							
TUA	eP*	13	49	01		-2.1	100	1.05	18		3.2	3.7		
	eP*			03.5		0.4	100							
	eS*			15		-2.2	99							
CNZ	P*	13	49	04.8		0.9	100	1.11	303					
	eS*			20		1.3	100							
MNG	iPn	13	49	07.9	D	1.4	100	1.25	230		3.1	3.4		
	e			17										
	e			48										
GNZ	ePg	13	49	16		0.9	100	1.54	41		3.6	3.5		
	eSg			36.5		0.7	100							
WTZ	Pn	13	49	12		-2.5	99	1.84	6		3.2	3.5		
	e(Pg)			23.5		2.4								
	e			32										
TNZ	ePg	13	49	21		-1.9	100	1.93	288		3.7	3.5		
	eSg			49		0.1	100							
KRP	eP*	13	49	20		-1.0	100	2.11	333		3.7			
	e(Pg)			23		-3.5								
AMPLITUDES:	TRZ		20	23	TUA	0.5	1.6	CNZ			18	17		
	MNG		1.6	4.0	GNZ	1.5	1.8	WTZ			0.5	0.8		
	TNZ		0.4	0.4	KRP	0.6								

FELT: Hastings MM IV

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Nov 26 14^h53^m19^s.4 39°.43S 177°.03E 12 km M = 4.0
 ± 0.4 0.02 0.03 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TRZ	P*	14	53	24.9		0.8	100	0.21	232					
	e			31										
TUA	iPg	14	53	31.4	U	-0.8	100	0.62	9		3.6	4.0		
	eSg			41		0.3	100							
GNZ	ePn	14	53	40		0.1	100	1.10	45		4.1			
	eSg			57		0.4	100							
CNZ	iPn	14	53	40.1	D	-0.8	100	1.17	281					
	e			49										
	eSg			57.5		-1.6	100							
WTZ	ePn	14	53	44.5		-0.1	100	1.44	359		4.0			
CAZ	Pn	14	53	45.8		-0.9	100	1.60	202					
	ePg			53.5		1.7	100							
	e			54										
MNG	iPn	14	53	46.2	U	-1.7	100	1.68	224		3.9	4.3		
	ePg			53		-0.5	100							
WIZ	ePg	14	53	56		-1.8	99	1.90	4					

KRP	Pn	14 53 49.7		-1.1	100	1.90	322	4.0	4.1
	e	54 07							
	eSg	24		0.4	100				
TNZ	ePn	14 53 54.5		1.3	100	2.07	276	4.3	4.6
	eSg	54 32		2.7	98				
ECZ	ePn	14 53 55		1.4	100	2.10	35	3.8	3.9
	e	54 12							
WEL	eP*	14 54 06		2.1	99	2.54	222	3.9	
	eSg	43		-2.0	99				
AMPLITUDES:		TRZ	12 52	TUA	3.1 9.6	GNZ	8.0		
		CNZ	53 50	WTZ	4.5	CAZ	2.3 4.0		
		MNG	5.0 15	WIZ	1.6	KRP	1.5 1.6		
		TNZ	0.8 1.5	ECZ	0.3 0.5	WEL	0.5		

FELT: Patoka (52) Kotemaori (53) and Hastings (60) MM IV

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NOV 26 18^h16^m26^s.8 32°.81s 179°.92w 436 km M = 4.3
 ± 0.7 0.07 0.18 7 S.E. of RES. 0.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	eP	18	17	59		0.2	100	5.75	205		4.3	4.4
	eS		19	11		-0.1	100					
GNZ	eS	18	19	17		-0.1	100	6.06	195			4.2
KRP	e(P)	18	18	15.5		10.8		6.31	215		3.1*	
MNG	eP	18	18	30		-0.2	100	8.63	204		4.2	4.4
	eS		20	08		0.1	100					
AMPLITUDES:		WTZ	0.3 0.4	GNZ		0.4	KRP	0.3				
		MNG	0.4 0.8									

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NOV 27 08^h28^m23^s.4 37°.78s 178°.45E 12 km M = 3.8
 ± 0.5 0.03 0.04 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	iPg	08	28	27	D	0.4	100	0.11	40			
	eSg			30.0		1.3	100					
	e			33								
	e			41								
GNZ	iP*	08	28	38.7	N	-1.7	99	0.93	201		3.6	3.9
	eS*			53		0.1	100					
WIZ	eP*	08	28	42.5		0.2	100	1.03	284			
	eS*			57		0.9	100					
WTZ	iPn	08	28	44.1	D	-0.9	100	1.18	260		4.1	4.1
	eSn			29 01		-0.1	100					
TUA	ePn	08	28	49		0.2	100	1.45	225		3.8	3.7
	eSg			29 15		2.5	97					
KRP	Pn	08	28	59.0		-1.5	99	2.31	266		3.8	3.7
	eSn			29 28		-0.4	100					
GBZ	ePn	08	29	07		-0.8	100	2.84	302			
AMPLITUDES:		ECZ	5.5 17	GNZ	4.2 11	WIZ	11 4.8					
		WTZ	8.7 8.9	TUA	1.0 0.8	KRP	0.7 0.4					
		GBZ	0.3									

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NOV 27 09^h43^m42^s.1 37°.67s 179°.55E 12 km M = 4.9
 ± 1.3 0.08 0.11 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	iP*	09	43	57.2	D	0.4	100	0.80	268					
GNZ	iPn	09	44	09.0	DN	0.3	100	1.55	231					
WIZ	iPn	09	44	11.5	D	-1.8	99	1.88	274					
	e			32										
WTZ	iPn	09	44	14.2	D	-1.4	100	2.05	261					
TUA	Pn	09	44	16.2		-1.4	100	2.20	238			5.0	5.1	
	eP*			21.5		0.6	100							
	eSn			45		0.6	100							
TRZ	ePn	09	44	26		-0.4	100	2.84	228			4.8	4.7	
	e(P*)			36		4.2								
	eSg			45		-1.0	100							
WNZ	ePn	09	44	29		2.1	99	2.88	250			5.1	5.0	
	eP*			34.5		2.1	99							
	eS*			45		-0.1	100							
KRP	iPn	09	44	29.0	D	-2.1		3.19	264			5.0	4.9	
	eP*			34.5		-3.2								
	ePg			45.5		-1.0								
	e			45		00								
CNZ	ePn	09	44	33.8		-1.5		3.49	243					
	eP*			45.5		2.6								
GBZ	Pn	09	44	37.9		1.6		3.57	293					
	eSn			45		22.5		5.3						
AUC	Pn	09	44	41.8		1.1		3.90	281					
MNG	ePn	09	44	44		-2.5		4.32	226			4.7	4.5	
	ePg			45		07		-2.4						
	e			46		15								
TNZ	Pn	09	44	47.1		0.4		4.34	248			5.1		
ONE	ePn	09	44	53		2.9		4.58	293	4.9				
	eSn			45		39		-2.5						
CRZ	ePn	09	45	20		-4.5		6.44	298			5.4		
CIZ	Sn-Pn			1		13		-2.9	6.94	156				
AMPLITUDES:	TUA			7.0	10	TRZ		3.5	3.7	WNZ		1.0	1.0	
	KRP			5.2	3.6	CNZ		4.4		GBZ		2.5	3.8	
	AUC			2.0		MNG		5.0	3.6	TNZ		0.7		
	ONE			0.6		CRZ		1.0						

FELT: East Cape (29) and Tokomaru Bay (37) MM IV

Nov 28 22^h09^m40^s.2 45°.41S 166°.53E 12 km M = 3.9
 ± 1.8 0.06 0.13 R S.E. of RES. 1.6 80/ 750

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
BRZ	eP*	22	09	55		-0.0	100	0.80	118					
	eS*			10		05.1		-0.7	100					
	e(Sg)			11		3.6								
MSZ	Pn	22	10	00.3		-2.2	99	1.22	54			3.8	4.0	
	eSn			18		-1.0	100							
ROX	iPn	22	10	13.3	U	0.8	100	1.96	93			4.1	4.0	
	eSn			37		0.2	100							
RHP	iPn	22	10	26.8	D	2.2	99	2.84	64					
	eS*			11		08		0.8	100					
OMZ	Sn-Pn			40		3.8		3.11	85			3.8	3.8	
CMZ	eSn	22	11	39		-4.4		4.73	70					3.8
COB	Sn-P*			55		3.2		6.25	49			4.3	3.8	
AMPLITUDES:	BRZ			5.6		MSZ		6.5	16	ROX		2.0	4.0	
	RHP			6.7	9.0	OMZ		0.4	0.7	CMZ			0.3	

COB 0.3 0.3

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Nov 29 04^b01^m30^s.5 35°.38S 179°.69E 33 km M = 4.1

± 1.7 0.07 0.15 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	ePn	04	02	07		-0.9	100	2.48	201		4.0	
WIZ	ePn	04	02	19		-1.2	100	3.38	219		3.8	3.7
	eS*		03	14		0.3	100					
GNZ	ePn	04	02	23		0.9	100	3.52	202		3.9	3.8
	eSn		03	02		1.0	100					
GBZ	eP*	04	02	30		-1.8	99	3.53	255			
KRP	Pn	04	02	30.8		-0.5	100	4.19	232		4.5	
CRZ	ePn	04	02	56		2.2	99	5.84	277		4.9	
AMPLITUDES:	ECZ			0.3	WTZ	0.6	0.4	GNZ		0.5	0.6	
	GBZ			0.2	KRP	0.5		CRZ		0.3		

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Nov 29 04^b28^m39^s.6 35°.23S 178°.66W 33 km M = 5.2

± 1.3 0.07 0.13 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	ePn	04	29	27		-1.6	99	3.34	222		5.2	5.3
	eS*		30	21		-0.3	100					
WIZ	ePn	04	29	40		1.4	99	4.07	234			
	e(Sn)		30	30		6.8						
GNZ	ePn	04	29	43		0.9	100	4.32	217		5.1	5.0
	eSn		30	30		0.6	100					
	e		31	06								
WTZ	iPn	04	29	43.1	D	-0.8	100	4.45	231		4.9	5.0
	e(Sn)		30	42		9.4						
GBZ	Pn	04	29	48.7	D	-0.9	100	4.88	257			
KRP	iPn	04	29	56.0	DE	-0.7	100	5.39	238		5.6	5.5
	Sn		30	55.0		-0.1	100					
AUC	ePn	04	30	01		1.9	99	5.57	251			
ONE	ePn	04	30	01		-0.2	100	5.72	263			
CRZ	Pn	04	30	21.2		0.2		7.17	274		5.9	
WEL	eP*	04	30	52		-4.3		7.96	219	5.0		
	eSn		31	49		-7.8						
	e		32	28								
CIZ	Sn-Pn		1	30		-4.4		8.86	170			
AMPLITUDES:	ECZ			3.0	4.9	WIZ	5.2	7.5	GNZ		5.0	6.5
	WTZ			4.2	4.5	GBZ	3.6		KRP		4.6	2.6
	AUC			0.7		CRZ	1.8		WEL	0.6		

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Nov 29 06^h35^m52^s.2 35°.20S 179°.32W 33 km M = 4.3

± 1.9 0.07 0.18 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	ePn	06	36	38.5		1.5	99	3.02	214		4.1	
WIZ	ePn	06	36	47		1.4	100	3.65	229			
GNZ	ePn	06	36	49		-1.9	99	4.04	211		4.0	3.9
	eSn		37	35		-0.3	100					
WTZ	e?	06	36	43				4.07	226		4.1	4.0
	ePn			52		0.7	100					
	eSn			37	36	0.1	100					
GBZ	ePn	06	36	55		-0.1	100	4.36	255			

KRP	ePn	06 37 02		-1.3	100	4.95	235		4.6
CRZ	ePn	06 37 26		-0.2	100	6.63	274		5.0
AMPLITUDES:		ECZ	0.3	WIZ	0.6	GNZ	0.5	0.7	
		WTZ	0.8	0.6	GBZ	0.3	KRP	0.5	
		CRZ	0.3						

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NOV 29 06^h48^m36^s.3 35°.09s 178°.37w 33 km M = 6.2
 ± 1.3 0.07 0.13 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	Pn	06	49	30.7		1.7	99	3.60	223		6.1	6.4		
	eS*		50	25		-0.9	100							
WIZ	iPn	06	49	38.0	U	-1.1	100	4.34	235					
	eSn		50	28		1.5	99							
GNZ	Pn	06	49	43.4		1.0	100	4.58	218					
WTZ	Pn	06	49	43	U	-1.4	100	4.72	231		5.6	6.0		
	eSn		50	36		0.1	100							
GBZ	iPn	06	49	49.0	U	-1.0	100	5.14	256					
KRP	iPn	06	49	56.0	UW	-1.2	100	5.67	238		6.5			
AUC	iPn	06	50	00.3	U	0.8	100	5.83	250					
ONE	Pn	06	50	01.6		0.1	100	5.98	261					
CRZ	Pn	06	50	21.3		0.4	100	7.40	273		6.6			
WEL	ePn?	06	50	33		1.0		8.22	219	6.3				
	e			40										
	eP*			52		-5.5								
	eSn		51	51		-8.8								
	e		52	27										
CIZ	Sn-Pn		1	30		-5.5		8.97	172					
AMPLITUDES:		ECZ	22	47	WIZ	34	40	WTZ		20	42			
		GBZ	34		KRP	32		AUC		14				
		CRZ	10		WEL	11								

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NOV 29 06^h53^m38^s.2 35°.12s 179°.64w 33 km M = 4.6
 ± 6.0 0.14 0.51 R S.E. of RES. 2.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eSn	06	54	55		-0.3	100	2.96	209		4.5			
WTZ	ePn	06	54	34		-1.6	100	3.95	222		4.3	4.1		
	eSn		55	20.5		1.5	100							
GNZ	eSn	06	55	21		0.9	100	4.00	207					
GBZ	eP*	06	54	46		-3.7	99	4.12	253					
KRP	ePn	06	54	47		-0.2	100	4.80	233		4.8			
CRZ	iPn	06	55	12.0	U	3.4	99	6.36	274		5.4			
AMPLITUDES:		ECZ			1.0	WTZ	1.3	0.8	GBZ	0.6				
		KRP	0.7		CRZ	0.7								

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NOV 29 06^h55^m52^s.8 35°.24s 179°.13w 33 km M = 4.5
 ± 1.3 0.06 0.12 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP*	06	56	47.5		0.8	100	3.09	217		4.4			
WIZ	ePn	06	56	47		-0.6	100	3.75	231					
	eSn		57	29		0.1	100							
GNZ	ePn	06	56	53		0.7	100	4.09	213		4.2	4.1		
	eSn		57	36		-1.2	99							
WTZ	ePn	06	56	52		-1.1	100	4.16	228		4.2	4.4		

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	eSn	57 39.5		0.8 100				
GBZ	ePn	06 56 57		-0.7 100	4.50	256		
KRP	ePn	06 57 07		1.5 99	5.07	236		4.9
CRZ	ePn	06 57 29		-0.0 100	6.79	274		5.2
AMPLITUDES:	ECZ	0.6	WIZ	1.3 1.2	GNZ	0.7 1.0		
	WTZ	0.9 1.2	GBZ	0.4	KRP	0.9		
	CRZ	0.4						

Nov 29 07^h00^m26^s.3 35°.26s 179°.01w 33 km M = 4.8
 ± 1.2 0.05 0.12 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	ePn	07 01 14				1.4 98		3.13	218		4.7	
WIZ	ePn	07 01 21				-0.9 100		3.82	232			
GNZ	ePn	07 01 26				-0.3 100		4.13	214		4.4	4.6
	eSn	02 12				0.4 100						
WTZ	ePn	07 01 26.8				-0.6 100		4.22	229		4.7	4.6
	eSn	02 13.5				-0.1 100						
GBZ	ePn	07 01 32.5				0.1 100		4.58	256			
KRP	ePn	07 01 39.2				-0.7 100		5.13	237		5.1	5.0
	e(Sn)	02 44				8.4						
CRZ	ePn	07 02 04.5				0.7 100		6.88	274		5.5	
AMPLITUDES:	ECZ	1.1	WIZ	3.6	GNZ	1.2 3.0						
	WTZ	3.0 2.0	GBZ	1.3	KRP	1.4 0.8						
	CRZ	0.9										

Nov 29 07^h09^m58^s.2 35°.58s 177°.69w 33 km M = 4.5
 ± 4.8 0.13 0.42 R S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP*	07 11 03				0.6 100		3.69	234		4.4	4.4
	e	12 01										
WIZ	eP*	07 11 18				0.8 100		4.56	243			
GNZ	eP*	07 11 14.5				-3.3 98		4.60	227		4.2	4.1
	eSn	55				0.3 100						
WTZ	ePn	07 11 11				2.3 99		4.90	239		4.5	
GBZ	e(Pn)	07 11 23				5.0		5.58	261			
	eP*	34				-0.5 100						
KRP	ePn	07 11 23				0.4 100		5.92	245		4.6	
CRZ	ePn	07 11 50				-0.8 100		7.99	275		5.2	
AMPLITUDES:	ECZ	0.4 0.5	WIZ	0.5	GNZ	0.6 0.7						
	WTZ	1.4	GBZ	0.5	KRP	0.5						
	CRZ	0.3										

Nov 29 07^h12^m19^s.2 35°.39s 178°.52w 33 km M = 4.3
 ± 3.4 0.13 0.32 R S.E. of RES. 2.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP*	07 13 13				-3.7 98		3.29	225		4.2	4.4
	e	14 16										
WIZ	e(Pn)	07 13 24.5				6.2		4.07	237			
GNZ	ePn?	07 13 23				2.0 100		4.27	219		4.0	3.9
	eSn	14 09				1.3 100						
WTZ	ePn	07 13 23				-0.4 100		4.45	233		4.2	3.9
	eSn	14 12				0.0 100						
GBZ	ePn?	07 13 32				1.7 100		4.95	259			

KRP	ePn	07 13 36	-0.6	100	5.41	240	4.5		
CRZ	Pn	07 14 02.0	-0.4	100	7.30	275	5.1		
AMPLITUDES:		ECZ	0.3	0.6	WIZ	0.8	GNZ	0.5	0.6
		WTZ	0.8	0.4	GBZ	0.2	KRP	0.4	
		CRZ	0.3						

Nov 29 07^h14^m40^s.9 35°.18s 179°.25W 33 km M = 4.2
 ± 2.3 0.08 0.22 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	e	07	15	38.6				3.08	215					4.0
	eSn			16 00		-0.8	100							
GNZ	Pn	07	15	41.9		1.6	99	4.09	212					3.9
WTZ	ePn	07	15	39		-1.8	99	4.13	226					3.8
	eSn			16 27		1.0	100							3.7
GBZ	ePn?	07	15	44		-0.7	100	4.42	255					
KRP	ePn	07	15	53		0.1	100	5.01	235					4.6
CRZ	Pn	07	16	16.3		0.6	100	6.69	274					4.8
AMPLITUDES:		ECZ		0.3	GNZ	0.4	WTZ	0.4	0.3					
		GBZ	0.2		KRP	0.4	CRZ	0.2						

Nov 29 09^h20^m47^s.5 35°.50s 178°.22W 33 km M = 4.7
 ± 2.2 0.11 0.20 R S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP*	09	21	44		-2.7	99	3.40	229					4.6
	eSn			22 15		-0.2	100							4.5
	e			40										
WIZ	ePn	09	21	50		1.4	100	4.22	240					
	eP*			22 01		0.4	100							
	e(Sn)			29		-5.8								
GNZ	ePn	09	21	51		0.6	100	4.35	223					4.5
	e			22 19										4.5
	eSn			39		1.1	100							
WTZ	ePn	09	21	54		0.4	100	4.58	236					4.6
	e(P*)			22 01.9		-4.8								4.5
	eSn			40.5		-3.0	99							
GBZ	Pn	09	22	00.9		-0.7	100	5.17	260					
KRP	Pn	09	22	07.3		0.2	100	5.57	242					5.1
	e(P*)			17		-6.6								4.7
	eSn			23 10		2.7	99							
CRZ	Pn	09	22	33.7		-0.4	100	7.55	276					5.4
AMPLITUDES:		ECZ	0.7	0.7	WIZ	2.2	1.3	GNZ	1.3	2.0				
		WTZ	2.1	1.5	GBZ	0.8		KRP	1.4	0.5				
		CRZ	0.6											

Nov 29 11^h36^m28^s.4 35°.49s 179°.11W 33 km M = 4.3
 ± 1.5 0.06 0.14 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	ePn	11	37	13		1.5	99	2.90	220					4.3
	e			38 08										4.3
WIZ	ePn	11	37	20		-1.2	99	3.61	235					
	eSn			38 02.		0.9	100							
GNZ	ePn	11	37	25.3		0.2	100	3.90	215					4.3
	eSn			38 07		-0.9	100							4.0

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WTZ	Pn	11 37 26.5	-0.1	100	4.00	230	4.1			
GBZ	ePn	11 37 32	-0.7	100	4.45	259				
CRZ	Pn	11 38 05.4	0.3	100	6.83	277	5.0			
AMPLITUDES:		ECZ	0.5	0.6	WIZ	0.4	0.6	GNZ	1.0	0.9
		WTZ	0.9		GBZ	0.5		CRZ	0.3	

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Nov 29 14^h22^m44^s.2 35°.62S 177°.55W 33 km M = 4.5
 ± 3.3 0.18 0.32 R S.E. of RES. 2.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP*	14	23	47		-2.6	100	3.76	235		4.5	4.7
	eSn		24	25		4.4	99					
	e			48								
GNZ	e?	14	23	43				4.65	228		4.0	4.2
	Pn			49.7		-1.6	100					
WTZ	e		24	17								
	(Pn)	14	24	01.6		5.8		4.99	240		4.4	4.5
TUA	eSn			51		1.1	100					
	e(P*)	14	24	22		6.3		5.30	231		4.4	4.5
GBZ	eS*		25	22		-2.5	100					
	ePn	14	24	05		-0.4	100	5.70	262			
KRP	ePn	14	24	12		2.2	100	6.01	245		4.9	4.7
	e(Sn)		25	09		-5.6						
MNG	ePn?	14	24	20		-9.1		7.42	226		4.3	4.3
	eP*			54		2.1	100					
	eS*		26	27		-1.2	100					
CRZ	ePn	14	24	37		-1.4	100	8.11	276		5.2	
AMPLITUDES:		ECZ	0.5	1.0	GNZ	0.4	1.0	WTZ	1.0	1.1		
		TUA	0.3	0.4	GBZ	0.4		KRP	1.0	0.4		
		MNG	0.7	0.9	CRZ	0.3						

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Nov 29 15^h49^m50^s.9 37°.72S 176°.34E 238 km M = 3.6
 ± 0.9 0.06 0.09 6 S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	eP	15	50	22		-0.8	99	0.58	118			3.0
	eS			48		0.5	100					
TUA	eS	15	50	54		-0.1	100	1.27	150			
GNZ	P	15	50	29.9		0.6	99	1.62	125		3.8	3.7
	eS			58.7		-0.3	100					
MNG	iP	15	50	42.8	U	0.0	100	2.98	193		4.1	3.6
	eS			51 23		0.0	100					
AMPLITUDES:		WTZ	0.2		GNZ	0.8	1.2	MNG	2.0	0.8		

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Nov 30 06^h02^m31^s.7 35°.62S 179°.33W 33 km M = 5.0
 ± 1.7 0.11 0.20 R S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	S*-Pn			39		-3.0	99	2.68	219		4.9	5.0
WIZ	eP*	06	03	30		-0.7	100	3.39	235			
GNZ	Pn	06	03	24.7		-0.8	100	3.69	214		4.7	4.7
	e(P*)			40.5		4.7						
	eSn		04	07		0.7	100					
WTZ	Pn	06	03	25.0		-1.8	100	3.78	230		4.7	4.8
	eSn		04	10		1.5	100					
TUA	Pn	06	03	32.4		-0.8	100	4.25	220		5.2	4.8

	eP*	43			-2.3	100							
	eSn	04 20			0.3	100							
KRP	iPn	06 03 38.9	DW		-0.7	100	4.72	239		5.3	4.9		
	eP*	47			-6.3								
	e	04 46											
AUC	ePn	06 03 49			6.6		4.92	254					
TRZ	ePn	06 03 42			-1.2	100	4.98	217		4.6	4.5		
	eSn	04 41			3.7	98							
ONE	ePn	06 03 46			0.7	100	5.14	266	5.2				
CNZ	ePn	06 03 52			2.8	99	5.43	227					
	eP*	04 04			-1.3	100							
TNZ	ePn	06 04 01			1.9		6.15	233		5.6	5.5		
	e	08											
	eP*	27			9.4								
MNG	Sn-Pn	1 09			-0.4		6.45	218		4.7	4.7		
CRZ	iPn	06 04 04.8	D		-1.4		6.67	278		5.6			
CIZ	Sn-Pn	1 29			-2.7		8.59	167					
AMPLITUDES:	ECZ	2.2	3.9	WIZ	4.0	GNZ	2.9	4.7					
	WTZ	3.3	4.2	TUA	2.8	1.3	KRP	3.0	0.8				
	AUC	0.5		TRZ	0.6	0.8	ONE	0.7					
	CNZ	6.8		TNZ	0.8	0.5	MNG	2.3	2.7				
	CRZ	1.2		CIZ	0.9	1.1							

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Nov 30 20^h18^m24^s.0 35°.76s 178°.88w 33 km M = 4.8
 ± 2.3 0.16 0.22 R S.E. of RES. 2.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	iPn	20	19	07.8	U	1.6	100	2.83	226		4.9	4.7		
	e	20	17.5											
GNZ	ePn	20	19	20		0.6	100	3.80	220		4.6	4.6		
	eSn	58				-3.2	99							
WTZ	Sn-Pn	46				2.2	100	3.99	235		4.6	4.6		
TUA	Pn	20	19	28.2		0.7	100	4.39	225		4.9	4.6		
	eSn	20	18			2.5	99							
GBZ	ePn	20	19	31		0.7	100	4.60	263					
KRP	ePn	20	19	34		-1.4	100	4.98	243		5.0	5.1		
	eSn	20	28			-1.5	100							
TRZ	eSn	20	20	33		0.5		5.10	221				4.7	
ONE	eP*	20	19	59		0.1		5.50	268	5.1				
CNZ	ePn	20	19	44		-0.1		5.61	231					
MNG	Sn-Pn	1	09			-1.7		6.58	221		4.3	4.4		
CRZ	ePn	20	20	04		0.3		7.05	278		5.2			
CIZ	Sn-Pn	1	28			-1.5		8.39	168					
AMPLITUDES:	ECZ	2.0	1.8	GNZ	2.5	4.0	WTZ	2.5	2.5					
	TUA	1.5	0.8	GBZ	1.3		KRP	1.6	1.3					
	TRZ	1.0		ONE	0.5		CNZ	0.7						
	MNG	0.9	1.4	CRZ	0.4		CIZ	0.5	0.6					

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Nov 30 20^h31^m24^s.9 33°.47s 179°.69w 305 km M = 5.3
 ± 1.3 0.13 0.19 39 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	P	20	32	38.2		1.2	100	4.46	198		5.3	5.6		
	eS	33	33.5			0.1	100							
GBZ	eP	20	32	41		-0.2	100	4.83	234					
WTZ	S-P	1	04			0.2	100	5.26	210		5.5	5.2		
ONE	P	20	32	47.3		-0.8	100	5.43	243	3.7*				

GNZ	iP	20 32 47.9	D	-1.0	100	5.49	199		
	eS	33 53		-1.8	99				
KRP	eP	20 32 55		1.2	100	5.91	220	3.5*	3.2*
	e(S)	34 09		5.3					
TUA	eP	20 32 54		0.1	100	5.91	205	5.1	5.3
	eS	34 05		1.2	100				
CRZ	P	20 32 57.0		-3.0		6.43	259	4.1*	
TRZ	eS	20 34 24		3.3		6.70	204		5.1
CNZ	eP	20 33 06.5		0.8		6.90	213		
	e	34 42.5							
MNG	S-P	1 34		2.9		8.12	207	5.2	5.1
CIZ	S-P	1 54		-3.2		10.75	168		
AMPLITUDES:	ECZ	2.5	4.8	GBZ	1.3	WTZ	6.5	4.2	
	ONE	0.5		KRP	0.8	0.5	TUA	1.0	1.7
	CRZ	1.0		TRZ		1.7	CNZ	0.6	1.4
	MNG	4.7	4.2	CIZ	0.6	0.6			

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NOV 30 21^h45^m05^s.1 36°.20s 178°.02w 33 km M = 4.2

S.E. of RES. 2.6

± 3.2 0.27 0.35 R

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP*	21	46	01		1.2	100	3.13	240		4.3	4.3
	e	47	06									
GNZ	ePn?	21	46	03		-0.1	100	4.00	231		4.0	4.1
	eSn		48			1.0	100					
WTZ	Sn-Pn		46.5			-1.3	100	4.37	244		4.1	4.2
TUA	Pn	21	46	12.1		0.0	100	4.64	234		4.4	4.2
	eSn		47	03		0.3	100					
GBZ	ePn	21	46	23		2.5	100	5.26	268			
KRP	Pn	21	46	17.8		-5.1	96	5.44	250		4.4	
CIZ	Sn-Pn		1	29		5.3		7.84	172			
AMPLITUDES:	ECZ	0.4	0.5	GNZ	0.5	1.0	WTZ	0.7	0.8			
	TUA	0.4	0.3	GBZ	0.4		KRP	0.4				

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DEC 01 14^h23^m15^s.4 37°.91s 178°.40E 12 km M = 4.6

S.E. of RES. 1.0

± 0.5 0.04 0.05 R

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	iP*	14	23	20.2	D	-0.4	100	0.24	28			
GNZ	iP*	14	23	31.3	DS	1.2	99	0.79	202			
WTZ	S*-P*		16			1.0	100	1.13	266			
TUA	Pn	14	23	39.0		-0.1	100	1.33	227		4.4	4.6
	e		24	11								
TRZ	ePn	14	23	48		-0.9	100	2.06	217		4.5	4.4
	e		24	05.5								
	eS*		19			0.3	100					
	e		51									
KRP	iPn	14	23	52.1	U	0.3	100	2.27	269		4.5	
CNZ	Pn	14	23	56.9		0.7	100	2.58	239			
	e		24	06								
	eS*		33			-1.5	99					
GBZ	iPn	14	24	00.8	U	0.6	100	2.89	305			
AUC	ePn	14	24	04		1.2		3.08	289			
ONE	ePn	14	24	17		3.2		3.88	302	4.8		
WEL	e?	14	24	26				4.39	219	4.5		
	eSn		25	09		-1.3						
CRZ	ePn	14	24	43.5		3.6		5.79	305		5.2	

CIZ	Sn-Pn	1 17	-1.0	7.15 149
AMPLITUDES:	TUA	5.0 9.0	TRZ	3.0 3.2
	CNZ	3.5 4.0	GBZ	3.5
	ONE	0.7	WEL	0.6
			CRZ	0.8

FELT: Tokomaru Bay (37) MM IV

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DEC 01 20^h47^m07^s.8 37°.86s 179°.02E 12 km M = 3.9
 ± 1.4 0.04 0.08 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	iP*	20	47	15.8	D	-0.1	100	0.40	293		3.7	3.8
	eS*			22		0.4	100					
GNZ	iP*	20	47	27.9	DN	0.0	100	1.12	225		4.1	4.2
	eS*			42		-0.7	100					
WIZ	Sn-Pn			20		0.7	100	1.48	282			
WTZ	Sn-P*			18		-1.4	100	1.61	265		3.9	3.9
TUA	eP*	20	47	41		2.2	99	1.75	236		3.7	3.8
	e(Pg)			47		3.8						
	eSg			48 07		0.1	100					
KRP	ePn	20	47	49		-1.9	99	2.75	267		3.7	
AMPLITUDES:	ECZ	5.8	10		GNZ	7.5	18	WIZ	8.5	2.5		
	WTZ	3.0	3.0		TUA	0.5	0.7	KRP	0.4			

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DEC 02 01^h04^m53^s.8 33°.11s 178°.31W 295 km M = 5.0
 ± 1.4 0.13 0.17 45 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	01	06	15		0.4	100	5.25	208		5.1	5.0
	eS			07 18		0.1	100					
GBZ	P	01	06	23.0		-0.3	100	5.98	237			
WTZ	S-P			1 14		1.7	99	6.20	217		5.3	5.1
GNZ	eP	01	06	28		1.1	100	6.28	207		5.0	4.9
	eS			07 38		-2.0	98					
TUA	P	01	06	33.3		0.2	100	6.78	212		5.2	5.0
	eS			07 51		0.1	100					
	e			08 22								
KRP	eP	01	06	36		0.9	100	6.95	224		3.5*	3.2*
	e			08 10								
CRZ	eP	01	06	43		-0.4	100	7.62	258		3.7*	
MNG	S-P			1 37		-2.7		9.00	212		4.5	4.7
CIZ	S-P			1 45		-13.8		10.93	173			
AMPLITUDES:	ECZ	1.2	1.1		GBZ	1.1		WTZ	3.0	2.3		
	GNZ	2.0	2.2		TUA	1.0	0.6	KRP	0.7	0.4		
	CRZ	0.3			MNG	0.7	1.5					

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DEC 02 07^h37^m14^s.2 39°.68s 174°.52E 167 km M = 3.7
 ± 1.3 0.05 0.08 7 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	eS	07	37	55.3		-0.4	100	0.50	347			2.9*
CNZ	eP	07	37	40.7		0.5	100	0.93	59			
	eS			38 01		0.7	100					
MNG	S-P			21.5		-0.3	100	1.20	142		4.2	3.8
WEL	eS	07	38	13		1.4	100	1.62	173	3.4		
TRZ	eP	07	37	49		0.7	100	1.78	87		3.5	3.6

	eS		38 16		1.3 100				
CAZ	eP?	07 37	52		3.6	1.79	134		
	eS		38 13		-1.9 99				
KRP	P	07 37	49.2		-0.6 100	1.93	25		2.6*
COB	S-P		26		-1.9 99	1.96	223		2.9* 2.9*
GNZ	eP	07 38	01		-0.8 100	2.92	70		3.9 3.9
	e		35						
	eS		37.5		-0.9 100				

AMPLITUDES:		TNZ		0.3	CNZ	1.5 0.4	MNG		11 6.0
		WEL	0.2		TRZ	0.2 0.5	CAZ		0.8
		KRP		0.3	COB	0.2 0.7	GNZ		0.6 1.0

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DEC 02 08^h25^m11^s.4 36°.99S 177°.36E 261 km M = 4.4
 ± 1.0 0.08 0.07 7 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
WIZ	S-P			26		-0.8	100	0.56	194		
ECZ	eP?	08 25	47.5			-1.3	100	1.18	127		3.8 4.1
	e		54								
	eS		26 20			2.2	98				
	e		29								
KRP	eP	08 25	51.5			-1.2	100	1.73	237		3.1* 2.8*
	eS		26 25			0.2	100				
GNZ	iP	08 25	52.9		U	0.2	100	1.74	163		4.4 4.6
	eS		26 23			-1.9	99				
TUA	e?	08 25	44.5					1.83	185		4.1 4.1
	eP		53			-0.5	100				
	e		26 23								
TRZ	P	08 26	00.7			0.0	100	2.60	189		4.3 4.5
	e		37.5								
	eS		40			1.0	100				
CNZ	eP	08 26	01.0			-0.1	100	2.63	212		
	eS		40			0.3	100				
TNZ	eP	08 26	08.0			0.8	100	3.22	226		3.6*
MNG	S-P		49			-0.6	100	3.91	201		5.4 4.8

AMPLITUDES:		WIZ	1.7 1.5	ECZ	0.4 0.8	KRP	0.7 0.4
		GNZ	3.0 6.8	TUA	0.6 0.6	TRZ	0.5 1.8
		CNZ	1.3 0.7	TNZ	0.4	MNG	24 9.0

80/ 774

DEC 03 17^h44^m12^s.7 38°.39S 179°.21E 12 km M = 4.0
 ± 1.2 0.03 0.08 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
ECZ	P*	17 44	28.9			0.2	100	0.87	323		3.7 4.2
	e		37.0								
	eS*		39			-1.4	99				
	eSg		43			0.8	100				
GNZ	iP*	17 44	29.0		DS	-1.3	99	0.96	254		4.0
	e		38								
	eS*		42.5			-0.8	100				
TUA	ePg	17 44	48			1.5	99	1.66	255		4.0 3.8
	e		45 17								
WTZ	Sn-Pn		23			0.5	100	1.80	282		4.1 4.1
TRZ	ePn	17 44	48			-0.1	100	2.20	237		3.5 3.8
	e(Sn)		45 10			-4.8					
KRP	eP*	17 45	05			1.1	100	2.93	278		3.9
	ePg		12			0.0	100				

MNG	Sn-Pg	24.7	1.4	3.64	231	4.7	4.1
TNZ	Pn	17 45 10	-0.8	3.86	257	4.3	
WEL	eSn	17 46 04	-5.7	4.48	228	4.2	
AMPLITUDES:	ECZ	1.3 5.0	GNZ	14	TUA	1.1	0.9
	WTZ	3.7 3.7	TRZ	0.3 0.8	KRP	0.6	
	MNG	6.7 2.1	TNZ	0.2	WEL	0.3	

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DEC 03 19^h07^m33^s.9 35°.05S 178°.85W 214 km M = 4.3
 ± 1.1 0.15 0.12 48 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	19	08	30		0.8	100	3.37	218				4.2	
GNZ	eP	19	08	41		-0.5	100	4.38	214				4.4	4.0
	eS		09	33		-0.9	100							
WTZ	S-P			54		1.0	99	4.45	228				4.3	4.1
GBZ	P	19	08	45.7		-0.6	100	4.76	254					
TUA	P	19	08	49.6		1.1	99	4.94	219				4.5	
KRP	P	19	08	54.3		0.4	100	5.35	236				3.0*	
	eS?		09	56		-0.0	100							

AMPLITUDES:	ECZ	0.4	GNZ	0.9 0.6	WTZ	0.7 0.5
	GBZ	0.3	TUA	0.4	KRP	0.3

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DEC 03 20^h35^m40^s.3 39°.97S 176°.72E 60 km M = 3.8
 ± 0.6 0.03 0.05 9 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TRZ	iP	20	35	51.9	D	-0.1	100	0.42	11				3.5	3.5
	eS			36 00		-0.7	100							
CAZ	P	20	35	59.5		0.5	100	1.01	202					
	e			36 07										
	eS			14		1.1	100							
	e			31										
MNG	iP	20	36	00.0	U	-0.8	100	1.15	235				3.7	3.9
	eS			15		-1.1	100							
NGZ	iP	20	36	01.8	D	0.8	100	1.16	312					
	eS			18		1.7	100							
TUA	eP	20	36	01		-0.5	100	1.21	16				3.6	3.9
	eS			17		-0.5	100							
GNZ	iP	20	36	08.7	D	0.9	100	1.66	38				3.8	4.0
	e			23										
	eS			30		1.7	100							
TNZ	eP	20	36	16		4.0	87	1.97	293				3.7*	3.4*
	e			20										
	e			58										
WTZ	S-P			24.0		0.3	100	1.99	6				3.9	4.0
WEL	eS	20	36	34		-1.9	99	1.99	228	3.6				
	e			50										
	e			37 04										
KRP	P	20	36	15.9		0.1	100	2.24	335				3.1*	3.3*
	e			24										
	eS			40		-2.2	99							
ECZ	eP	20	36	22		-0.1	100	2.68	33				3.8	3.9
	eS			52		-1.5	100							
COB	S-P			38		0.4		3.24	248				3.6*	3.1*

AMPLITUDES:	TRZ	3.8 9.0	CAZ	9.5 5.0	MNG	7.8 14
	NGZ	18 29	TUA	0.8 1.7	GNZ	2.0 4.1

		TNZ	0.9	0.7	WTZ	1.3	2.1	WEL	0.4					
		KRP	1.0	1.7	ECZ	0.3	0.4	COB		0.7	0.8			
80/ 777														
DEC 04	08 ^h 18 ^m 35 ^s .7	33°.11s	177°.48w	411 km	M = 4.7									
	± 2.4	0.20	0.44	40	S.E. of RES.	2.3								
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	P	08	20	08		2.8	99	5.61	214		4.6	4.7		
	eS			21 15		-0.4	100							
GNZ	eP?	08	20	14		-2.2	100	6.62	212		4.4	5.0		
	eS			21 34		-1.5	100							
WTZ	S-P			1 18		-1.5	100	6.63	221		4.8	4.7		
TUA	eS	08	21	47		0.6	100	7.16	216				4.9	
KRP	eP	08	20	23		-2.5	99	7.45	228		3.2*			
TRZ	eS	08	22	05		3.5	99	7.91	214		5.0			
MNG	P	08	20	47.0		-0.6	100	9.38	215		4.5	4.7		
	eS			22 32		0.0	100							
CIZ	S-P			1 57		-1.1	100	10.86	176					
AMPLITUDES:		ECZ	0.3	0.4	GNZ	0.4	2.2	WTZ	0.8	0.8				
		TUA	0.4		KRP	0.3		TRZ	0.4					
		MNG	0.7	1.2	CIZ	0.4	0.3							

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DEC 08	03 ^h 58 ^m 25 ^s .9	37°.53s	179°.06E	33 km	M = 4.2									
	± 0.9	0.04	0.08	R	S.E. of RES.	0.9								
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	iPn	03	58	35.2	U	-0.3	100	0.44	249		4.1	4.4		
	e(Sn)			40		-2.5								
	e(S*)			45		2.5								
GNZ	iPn	03	58	47.8	U	-0.5	100	1.38	216		4.3	4.1		
	Sn			59 05		-0.0	100							
WIZ	e?	03	58	49				1.49	270					
	(Pn)			50.5		0.7								
	e			59 00.5										
	e(Sn)			05		-2.7								
WTZ	iPn	03	58	53.1	U	0.3	100	1.71	254		4.4	4.6		
	P*			58.5		2.1								
	e			59 03										
	e(Sn)			13		0.1								
TUA	Pn	03	58	56		-0.4	100	1.97	229		4.0	4.2		
	(P*)			59 05		4.1								
	Sn			20		0.7	100							
TRZ	Pn	03	59	04.9		-1.1	100	2.68	220		4.3	4.1		
	Sn			38		1.8	98							
KRP	iPn	03	59	08.7	D	0.7	100	2.83	261		4.3	4.1		
	P*			17		1.7								
	Sn			39		-0.7	100							
GBZ	Pn	03	59	13.5		0.9	100	3.16	293					
	P*			21		-0.0								
	e(Sn)			51.5		3.7								
NGZ	Pn	03	59	12.6		-0.2	100	3.18	238					
	Sn			47		-1.2	99							
TNZ	Pn	03	59	25		0.4		4.04	244		4.5	4.2		
MNG	eSn-Pn			48.5		2.9		4.16	221		4.0	4.0		
WEL	Sn	04	00	28		-4.3		5.01	220	3.8				
CRZ	e(Pn)	03	59	55		3.2		6.04	299					
COB								6.06	232					3.6

AMPLITUDES:	ECZ	12 35	GNZ	9.0 8.5	WTZ	9.6 12
	TUA	0.9 1.4	TRZ	1.2 1.1	KRP	1.2 0.7
	GBZ	1.0 0.5	TNZ	0.2 0.1	MNG	1.1 1.3
	WEL	0.1	COB	0.2		

DEC 09 05^h07^m34^s.6 42°.92S 171°.40E 12 km M = 3.8
 ± 0.2 0.01 0.03 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KAI	Pg	05	07	43		0.2	100	0.40	1	3.6		
	Sg			48.5		0.2	100					
CMZ	P*	05	07	55.0	U	0.1	100	1.13	127		3.7	4.0
	(Pg)			56.5		-0.9						
KKZ	S*	08	10	5		0.6	100					
	P*	05	08	05		-0.8	99	1.76	74			
THP	e(S*)			28.5		-0.5						
	P*	05	08	09.5		0.2	100	1.96	214			
OMZ	Pg			14.5		0.2	100					
	e(S*)			35		-0.1						
	e(Sg)			46		5.2						
OMZ	Pg	05	08	17.5		-1.2	98	2.18	189		4.2	3.5
	eSg			48.5		0.4	100					
WEL	eS*?	05	09	04.5		-1.4		2.99	58			
	eSg?			17.5		2.2						
MNG	eSg-Pg			52		0.5		3.82	54		3.9	3.5
AMPLITUDES:	KAI	10				CMZ	3.1 8.3	KKZ	1.0 0.6			
	OMZ	2.0 0.7				MNG	0.9 0.5					

DEC 12 23^h13^m25^s.7 35°.33S 179°.20W 12 km M = 4.3
 ± 2.1 0.07 0.22 R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	Pn	23	14	13		1.1	99	2.98	217		4.1	4.3
	(Pg)			25		-0.9						
	(S*)			54		-2.6						
	Sg			15 13		6.9						
GNZ	e(Pn)	23	14	26.5		0.8		3.99	213		4.0	4.1
	(Pg)			42		-4.3						
	Sn			15 11		0.1	100					
WTZ	e			51								
	ePn	23	14	26		-0.5	100	4.05	228		4.3	4.6
	ePg			49		1.4						
GBZ	e(S*)			15 35		6.1						
	Pn	23	14	32		0.5	100	4.42	257			
TUA	Pn	23	14	32.5		-0.6	100	4.54	219		4.3	4.1
	(Sn)			15 27		2.9						
KRP	Pn	23	14	38.5		-0.5	100	4.97	237		4.6	
	eP*			52		0.4						
TRZ	e(Pn)	23	14	43		-0.2		5.27	216		4.1	4.0
	ePg			15 14		1.7						
	e(Sn)			47		5.2						
NGZ	eP*	23	15	03		-0.3		5.65	226			
TNZ	e(Pn)	23	15	04		5.3		6.41	231		4.7	
CRZ	Pn	23	15	03.8		0.6		6.74	275		5.1	
MNG	(Sn-P*)			53		-2.2		6.75	217		4.0	4.1
	(S*-P*)			1 33		5.4						
WEL	Sn	23	16	33.5		-4.4		7.60	217	4.1		

AMPLITUDES:	ECZ	0.3	0.6	GNZ	0.5	1.0	WTZ	1.3	2.2
	GBZ	0.5		TUA	0.3	0.2	KRP	0.5	
	TRZ	0.2	0.2	TNZ	0.1		CRZ	0.4	
	MNG	0.4	0.7	WEL	0.1				

DEC 13 09^h41^m04^s.9 32°.50s 177°.14w 12 km M = 4.6
 ± 3.1 0.26 0.40 R S.E. of RES. 2.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP*	09	42	53		-0.1	100	6.27	213		4.6	4.8		
	Sn		43	48		3.0	99							
WTZ	Pn	09	42	48		-1.8	100	7.28	220		4.2	4.8		
	e		44	05.5										
GNZ	Sn			08.5		-0.8	100							
	ePn	09	42	48.5		-1.4	100	7.29	211		4.3	4.9		
TUA	Sn		44	08		-1.4	100							
	eP*	09	43	16		-3.6		7.82	215		4.3	4.8		
KRP	Sn		44	23		0.7	100							
	ePn	09	43	04		3.3	99	8.07	226		4.7	4.6		
TRZ	(P*)			23		-0.9								
	Sn		44	27		-1.4	100							
CRZ	Sn	09	44	40		-0.3		8.57	213				5.0	
	eP*	09	43	29		-6.0		8.73	255					
NGZ	eSn	09	44	45.5		-2.5		8.89	219					
MNG	eSn-Pn		1	47		-1.1		10.04	214		4.2	4.8		
WEL	Sn	09	45	29.5		-6.8		10.90	214	4.9				

AMPLITUDES:	ECZ	0.2	0.4	WTZ	0.3	1.1	GNZ	0.3	2.0
	TUA	0.1	0.4	KRP	0.2	0.1	TRZ		0.8
	MNG	0.3	1.5	WEL	0.2				

DEC 14 16^h09^m16^s.0 37°.00s 176°.73E 340 km M = 4.5
 ± 0.9 0.06 0.08 7 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	iP	16	10	00.0	U	-0.8	100	1.01	168		4.7	3.9		
	S			35		-1.1	100							
GBZ	eP	16	10	02		-0.1	100	1.27	308					
KRP	iP	16	10	03.1	U	0.6	100	1.32	225		3.7*			
	S			39.5		0.7	100							
ECZ	P	16	10	04		-0.0	100	1.61	116		4.0	4.2		
	S			42.5		0.8	100							
TUA	iP	16	10	05.3	U	-0.2	100	1.84	170		4.9	4.1		
	S			42		-2.3	92							
GNZ	iP	16	10	06.0	D	-0.2	100	1.93	148		4.8	4.3		
	S			47		1.4	99							
NGZ	P	16	10	10.5		1.1		2.35	202					
CNZ	P	16	10	10.4		0.7	100	2.38	203					
TRZ	P	16	10	11		-0.0	100	2.56	178		4.3	4.5		
	S			54.5		0.4	100							
MNG	S-P			52	U	0.1	100	3.74	195		5.0	4.7		
WEL	e(P)	16	10	29.5		-1.2		4.54	199	4.5				
	S			11 29		-0.3								
COB	e(P)	16	10	35		-2.2		5.13	216		3.0*	3.2*		
	e(S)			11 37.5		-3.4								
	e			42										
KAI								6.88	215	3.2*				
CMZ	eS	16	12	22		-3.8		7.29	204				3.1*	

eSn	51	22	-0.1								
AMPLITUDES:	CMZ	2.4	21	KAI	4.0			WEL	9.3	6.0	21
	MNG	17	23	OMZ		1.9	1.8	TNZ		0.5	1.1
	TRZ	0.3	1.4	DNZ		1.5	4.2	ROX		0.4	1.8
	MSZ	0.5	1.2	TUA		0.1	0.6	KRP		2.8	1.2
	GNZ	0.3	4.2	WTZ		0.3	1.7	BRZ	1.3	0.1	2.1
	ECZ		0.3	CIZ			1.0	CRZ			0.1

FELT: Greta Valley (95) and Waiau (96) MM IV

DEC 15 06^h52^m37^s.8 42°.38S 172°.23E 12 km M = 4.1
 ± 0.3 0.03 0.04 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KAI	P*	06	52	49.5		-0.1	100	0.63	256	4.0		
	S*			58.5		0.3	100					
CMZ	P*	06	52	59		-1.2	100	1.25	166		4.0	4.2
	Pg			53 03		-0.1						
COB	S*			18		1.2	100					
	Pn	06	53	00.2	U	-1.4	100	1.34	16			
WEL	e(Sn)			19		-0.4						
	Pn	06	53	12		-1.1	100	2.19	61	3.6		
	eP*			16		-0.3						
	ePg			21		-1.1						
	S*			44.5		-0.6						
	eSg			51		-0.6						
RHP	Pn	06	53	15.1	D	-0.0	100	2.33	222			
	P*			18		-0.7						
THP	S*			49		-0.3	100					
	Pn	06	53	20		-0.9	100	2.76	217			
	P*			26		-0.0						
	e(Sn)			53		-0.5						
OMZ	Sg			54 11.5		0.7						
	ePn?	06	53	21		-1.3		2.86	199		4.3	3.7
	(P*)			30.5		2.8						
	(Sg-Pn)			51.5	U	-3.3		3.01	55		4.8	4.2
MNG	e(Pg)	06	53	47		1.7		3.34	65			
CAZ	Pn	06	53	32.5		0.3	100	3.58	28		4.3	4.3
	e(P*)			42		1.9						
DNZ	e(Sg)			54 40		1.5						
	eP*	06	53	46		3.8		3.71	199			
ROX	e(Sg)			54 49		6.4						
	e(P*)	06	53	44		1.1		3.74	213		4.2	3.9
MSZ	e(Sg)			54 44		0.0						
	Pn	06	53	38		1.6	99	3.89	232		3.9	4.0
	(P*)			49		3.7						
	eSn			54 20		-0.6						
NGZ	Pn	06	53	41.5		2.3	98	4.09	40			
	P*			51		2.1						
TRZ	P*	06	53	55		-0.4	100	4.48	52		4.0	
	(Pg)			54 07		-1.3						
BRZ	Pn	06	53	47		-1.8	99	4.80	223			
	P*			54 07		6.2						
	Sn			43.5		1.0	100					
	Pn	06	53	53		-0.2	100	5.12	31		4.6	3.9
KRP	P*			54 10		3.7						
	Sn			51		0.8	100					
	Sg			55 27		-3.2						

TUA	eP*	06 54 10		2.8	5.17	48	3.9
WTZ	e(P*)	06 54 16		-0.3	5.71	41	4.4
	e	21					
GBZ	e(Pn)	06 54 16.5		2.4	6.65	23	
CRZ	e(Pn)	06 54 32		0.3	7.95	3	
AMPLITUDES:		KAI	11	CMZ	5.0	13	WEL 0.3 2.0 2.5
		OMZ	1.3 0.7	MNG	13	4.0	TNZ 0.5 0.7
		DNZ	1.3 1.2	ROX	0.7	0.8	MSZ 0.8 1.6
		TRZ	0.2	BRZ	0.3	0.1 0.3	KRP 2.0 0.5
		TUA	0.1	WTZ	0.2		GBZ 0.2

FELT: Maruia (87) MM III

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DEC 15 13^h08^m23^s.3 37°.46S 176°.45E 236 km M = 3.6
 ± 1.3 0.07 0.08 9 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P	13	08	55.0	U	-0.4	100	0.67	141		3.3	3.0		
	e(S)			09 19		-1.3	100							
KRP	eP	13	08	56.5		0.2	100	0.86	237		2.4*			
	e(S)			09 23		1.1	100							
TUA	e(P)	13	08	59.5		-0.7	100	1.46	158				3.2	
	S			09 27		-1.8	99							
	e			30										
GBZ	P	13	09	00		-0.2	100	1.47	327					
ECZ	S	13	09	34		2.0	99	1.68	99				3.6	
GNZ	iP	13	09	02.5	D	0.2	100	1.72	134		4.3	4.3		
	S			32		-0.6	100							
TRZ	P	13	09	06		0.0	100	2.12	172		3.4	3.4		
	e			15										
	eS			41		1.9	99							
MNG	eS-P			42	U	-0.6		3.25	193		3.5	3.6		
COB	eS	13	10	27		-3.4		4.63	217				2.3*	
AMPLITUDES:		WTZ	0.4	0.2	KRP	0.2		TUA			0.1			
		GBZ	0.2		ECZ	0.2		GNZ			2.5	4.1		
		TRZ	0.1	0.2	MNG	0.5	0.7	COB				0.1		

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DEC 15 16^h28^m18^s.4 36°.91S 176°.79E 281 km M = 3.8
 ± 0.8 0.06 0.09 6 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	eP	16	28	57		-0.3	100	1.08	172		3.6	3.2		
	e(S)			29 28		0.3	100							
KRP	P	16	28	59.6		0.2	100	1.42	224		2.7*			
ECZ	e(S)	16	29	41		7.5		1.60	120				3.4	
TUA	eP	16	29	02.7		-0.3	100	1.92	172		3.9	3.4		
	eS			37		-0.8	99							
GNZ	P	16	29	04		0.4	100	1.99	151		4.3	4.1		
	S			39		0.2	100							
TRZ	S	16	29	50		0.5	100	2.64	179				3.6	
MNG	S-P			47		-2.9		3.84	195		4.3	4.1		
WEL	S	16	30	21		-7.8		4.64	199	3.8				
COB	e(S)	16	30	34		-7.3		5.23	216				2.7*	
AMPLITUDES:		WTZ	0.5	0.2	KRP	0.3		ECZ			0.1			
		TUA	0.3	0.1	GNZ	1.9	2.0	TRZ			0.2			
		MNG	2.2	1.5	WEL	0.1		COB				0.2		

		22 ^h 45 ^m 59 ^s .7			39°.94s	176°.83E	33 km	80/ 787				
		± 0.3			0.02	0.03	R	S.E. of RES. 0.6				
STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	iP*	22	46	08.7	U	0.1	100	0.39	359			
	e(S*)			14		-1.1						
CAZ	iPn	22	46	18.1	U	0.3	100	1.06	206			
	i(Sn)			26		-5.3						
	e			42.5								
TUA	ePn	22	46	18		-1.1	98	1.16	12		3.8	3.9
	(P*)			27		6.0						
	(S*)			35		-1.7						
GSZ	ePn	22	46	19.7		0.4		1.17	304			
	Sn			34.5		0.7						
NGZ	iPn	22	46	20.3		0.5	100	1.21	309			
	Sn			35		0.2	100					
MNG								1.23	236		4.0	4.0
CNZ	Pn	22	46	20.5		0.3		1.24	306			
	Sn			36		0.5						
WNZ	eP*	22	46	26		0.5		1.43	336		4.2	4.4
	e			30								
	e(Sn)			39		-1.0						
	e(S*)			44		-0.6						
GNZ	Pn	22	46	26		0.9	99	1.59	36		3.9	3.7
	(P*)			36		7.7						
	e(Sn)			44		0.0	100					
	(S*)			48		-1.5						
WTZ	Pn	22	46	29.4	D	-0.6	100	1.96	4		3.6	3.8
	P*			37.5		3.0						
	(Sn)			53		0.2	100					
TNZ	ePn	22	46	31		-0.1	100	2.04	291		3.7	4.0
	P*			35		-0.8						
	S*			47 04.5		1.7						
	e			13.5								
WEL	eP*	22	46	41		4.8		2.06	229	3.7		
	Sn			55		-0.3	100					
	e(S*)			47 10		6.5						
KRP	ePn	22	46	34		-0.1	100	2.26	333		3.9	
	eP*			38.5		-1.0						
	e			47								
	e			56								
ECZ	e(Sn)	22	47	05		-3.6		2.62	31			3.9
COB	ePn	22	46	47		-1.7		3.32	249		4.1	3.6
	eP*			58		0.3						
	e(Sn)			47 25		-0.6						
	e			53								
GBZ	Pn	22	46	56		-0.1		3.87	344			
CMZ	Sn	22	48	00		-1.1		4.81	219			4.1
KAI								4.83	236	4.1		
CIZ	(Pn)	22	47	32.5		2.6		6.34	131			
	(Sn)			48 40		1.8						
RHP	e(Pn)	22	47	31		-1.2		6.52	228			
	Sn			48 40		-2.3						
THP	ePn	22	47	37		-0.5		6.90	226			
	Sn			48 48		-3.5						
BRZ	Sn	22	49	40		-1.3		8.97	226			
AMPLITUDES:	TUA	1.7	2.3	MNG	12	16	WNZ	0.5	1.1			

GNZ	2.3	2.8	WTZ	1.1	1.6	TNZ	0.4	1.1
WEL	0.5	2.7	2.0	KRP	0.8	ECZ		0.3
COB		0.6	0.7	GBZ	0.2	CMZ		0.6
KAI	0.2			CIZ	0.5	1.6	BRZ	0.1

FELT: Waipawa (60) MM IV

80/ 788

DEC 16 19^h24^m09^s.8 38°.65S 175°.99E 136 km M = 4.0
 ± 0.8 0.03 0.05 8 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WGZ	P	19	24	28.5		-0.9		0.48	41			
	e(S)			44		-0.5						
NGZ	P	19	24	31		0.7		0.61	209			
CNZ	iP	19	24	31		0.5	100	0.65	212			
	e(S)			52		5.6						
TUA	(P)	19	24	37		4.4		0.92	100		3.4	3.7
	e(S)			49		-1.0						
WTZ	iP	19	24	32.9	D	-0.6	100	1.03	50		4.0	3.8
	e			45								
	e(S)			50.5		-1.1	100					
TRZ	P	19	24	35.8		1.4	100	1.12	145		4.1	4.2
	S			55		1.8	99					
TNZ	P	19	24	37.5		0.4	100	1.37	246		3.4*	3.2*
	S			59		1.0	100					
GNZ	P	19	24	39.8	U	0.2	100	1.59	91		3.9	4.2
	S			25 01.5		-0.8	100					
MNG	S-P			24	U	-2.4	98	2.01	191		4.7	4.3
ECZ	P	19	24	48		0.7	100	2.23	66		4.1	3.9
	e(S)			25 16		0.3						
CAZ	iP	19	24	48.3	U	0.6	100	2.26	175			
	S			25 16		-0.4	100					
GBZ	P	19	24	49.5		-0.7	100	2.46	350			
WEL	P	19	24	53		-1.6	99	2.80	199	3.9		
	S			25 27.5		-1.3	100					
COB	P	19	25	02		-1.9		3.49	225		3.5*	3.5*
	S			44		-1.2						
KAI								5.21	221	3.4*		
CMZ	S	19	26	28		-6.3		5.54	206			3.6*
RHP	eP	19	25	49.5		-1.8		7.03	217			
	eS			27 04		-6.2						
OMZ	S	19	27	12		-8.3		7.45	209			3.2*
	e			28								
THP	eP	19	25	52		-5.0		7.46	216			
	S			27 13		-7.5						
CIZ	S	19	27	23.5		-3.3		7.71	136			
MSZ	S	19	27	39		-7.3		8.52	223			3.1*
AMPLITUDES:		TUA	0.5	0.9	WTZ	3.5	2.6	TRZ	1.9	5.0		
		TNZ	0.5	0.5	GNZ	2.0	6.3	MNG	19	10		
		ECZ	0.7	0.4	GBZ	0.5		WEL	0.3	0.6	2.5	
		COB	0.6	1.9	KAI	0.2		CMZ			1.0	
		OMZ		0.3	CIZ		0.4	MSZ			0.4	

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DEC 16 21^h19^m41^s.9 49°.06S 164°.90E 12 km M = 4.0
 ± 1.6 0.11 0.20 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
OBZ	ePn	21	20	29		-0.0	100	3.05	46		3.5	4.1	
	Sn		21	03		-1.6	99						
ROX	Pn	21	20	51		-0.3	100	4.68	42		4.4	4.1	
	Sn		21	45		1.3	99						
MSZ	Pn	21	20	53		-0.6	100	4.85	26		4.3	4.0	
	e(Sn)		21	48		0.1	100						
DNZ	Pn	21	20	56		0.8	100	4.97	52				
THP	Pn	21	21	02.5		-2.2		5.67	39				
	e(Sn)		22	03		-4.4							
OMZ	e			09									
	ePn	21	21	07		1.4		5.72	48		3.8	3.9	
	e			59									
RHP	e(Sn)		22	07		-1.9							
	S*			35		-0.2							
	ePn	21	21	09		-1.8		6.11	38				
	e(P*)			20		-7.3							
	e(Sn)		22	18		-0.1							
	e(S*)			41		-5.8							
AMPLITUDES:		OBZ		0.3	2.7	ROX		0.6	0.8	MSZ		1.2	1.0
		DNZ		0.7		OMZ		0.1	0.3				

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DEC 17 12^h45^m57^s.4 37°.50s 176°.42E 225 km M = 3.8

± 0.7 0.04 0.04 5 S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
WTZ	P	12	46	27.5		-0.6	100	0.67	138		3.3	3.3	
	S			51		-1.0	99						
	e			53									
KRP	P	12	46	29.0	D	0.1	100	0.83	238		3.0*	2.3*	
	S			53.5		0.2	100						
TUA	P	12	46	32.5		-0.5	100	1.43	157		3.2	3.7	
	e			56									
GBZ	S		47	01		0.4	100						
	iP	12	46	33.8	D	0.3	100	1.48	329				
ECZ	e(P)	12	46	38		2.7		1.69	97		3.9	3.7	
	e			40									
	e(S)		47	05.5		0.9	99						
GNZ	e			07									
	iP	12	46	35.7	U	0.4	100	1.70	133		4.5	4.2	
CNZ	S		47	03.5		-1.2	99						
	eP	12	46	37		0.5		1.84	202				
TRZ	eS		47	10		3.2							
	P	12	46	38.5		-0.4	100	2.08	172		3.7	3.8	
	e(S)		47	12		1.1	99						
	eP	12	46	41		-0.4	100	2.33	223		2.9*		
ONE	e(P)	12	46	45		3.0		2.38	315				
MNG	S-P			39		-2.8		3.20	193		4.2	4.0	
CAZ	eS	12	47	36		-1.1		3.41	183				
WEL	S	12	47	44		-5.7		4.00	198	3.7			
CMZ	S	12	48	44.5		-6.8		6.73	204			2.7*	
AMPLITUDES:		WTZ		0.4	0.5	KRP		0.8	0.2	TUA		0.1	0.3
		GBZ		0.9		ECZ		0.4	0.3	GNZ		4.5	3.2
		TRZ		0.2	0.6	TNZ		0.1		MNG		2.5	2.0
		WEL	0.1		0.6	CMZ			0.1				

DEC 18 05^h31^m14^s.8 39°.02S 174°.91E 218 km M = 4.0
 ± 1.3 0.06 0.09 9 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TNZ	P	05	31	44.7		0.8	100	0.45	248					3.3*
CNZ	iP	05	31	44.9		0.7		0.52	110					
	eS			32 08		1.1								
NGZ	iP	05	31	45.2		0.9	100	0.57	107					
	S			32 07.5		0.3	100							
KRP	P	05	31	48		0.1	100	1.20	24					2.6* 2.1*
	S			32 13		-0.7	100							
TRZ	P	05	31	52		1.1	100	1.57	110					3.7 4.0
	e			32 19										
	S			21.5		2.5	98							
MNG	iP	05	31	51.9	U	0.3	100	1.66	165					4.6 4.4
	S			32 17.5		-2.7	97							
TUA	P	05	31	52.5		-0.2	100	1.75	84					3.9 4.0
	eS			32 19.5		-2.4								
WTZ	iP	05	31	53.1	D	-1.2	100	1.93	58					4.0 3.7
	S			32 24.5		-0.3	100							
CAZ	S	05	32	29.5		1.1		2.13	152					
WEL	P	05	31	57.5		-0.1		2.27	183	3.3				
	(S)			32 28		-2.8								
GNZ	iP	05	31	59.6		-0.2	100	2.46	82					4.4 4.2
	S			32 33.5		-1.0	100							
KAI								4.40	216	3.3*				
CMZ	S	05	33	23		-3.0		4.87	200					3.2*
RHP	e(P)	05	32	46		0.0		6.24	214					
	S			33 54.5		-2.7								
AMPLITUDES:														
	TNZ			0.4		KRP		0.3	0.1	TRZ			0.3	1.2
	MNG		15	13		TUA		0.4	0.5	WTZ			1.2	0.7
	WEL	0.1	0.7	0.3		GNZ		2.6	2.1	KAI	0.2			
	CMZ			0.4										

DEC 18 10^h10^m18^s.1 37°.56S 176°.45E 290 km M = 3.6
 ± 1.6 0.08 0.14 15 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P	10	10	54.8	U	-1.1	100	0.60	135					3.4 3.1
	e(S)			11 19		-6.6								
	e			23										
KRP	P	10	10	57		0.3	100	0.81	243					2.5*
GNZ	P	10	11	02		0.4	100	1.65	132					3.8 3.8
	S			34.5		-0.7	100							
ECZ	e(S)	10	11	35.5		-0.1	100	1.66	95					3.9
CNZ	P	10	11	03		0.5	100	1.78	203					
TRZ	eP	10	11	05		0.7	100	2.01	172					3.5 3.5
	S			42		1.6	99							
MNG	iP	10	11	14.5	U	-0.4	100	3.15	194					3.9 3.7
	S			58		-1.4	99							
AMPLITUDES:														
	WTZ			0.3	0.2	KRP		0.2		GNZ			0.6	1.1
	ECZ			0.3		TRZ		0.1	0.2	MNG			1.1	0.9

DEC 20 13^h54^m49^s.0 36°.77S 178°.64E 113 km M = 3.9
 ± 1.1 0.06 0.09 10 S.E. of RES. 1.3

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STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
ECZ	eP	13	55	09.2		-0.7	100	0.93	184		3.1	3.8	
	e			22.2									
	eS			26.0		0.4	100						
WIZ	eP	13	55	14.0		-0.9	100	1.39	236				
	S			33.5		-1.2	100						
WTZ	P	13	55	19.9		0.1	100	1.79	227		4.1	3.9	
	S			43.5		0.5	100						
GNZ	P	13	55	20.9		-0.7	100	1.93	194		4.1	3.9	
	S			46.7		0.5	100						
TUA	P	13	55	27.2		0.0	100	2.35	210		4.2	4.4	
	S			56.8		0.9	100						
GBZ	eP	13	55	31.8		1.2	100	2.60	281				
KRP	eP	13	55	33.5		1.2		2.73	244		2.5*		
TRZ	eP	13	55	36.0		-1.7	99	3.12	207		3.9	4.0	
	S			56 16.2		1.7	99						
NGZ	e(S)	13	56	22.5		1.5		3.39	224				
MNG	S-P			50		-2.4	98	4.56	212		3.5	3.6	
WEL	eS	13	57	05		-5.5		5.42	213	4.3			
AMPLITUDES:		ECZ		0.3	1.5	WIZ		0.5	1.8	WTZ		2.6	1.7
		GNZ		2.2	2.6	TUA		0.8	1.3	GBZ		0.2	
		KRP		0.2		TRZ		0.2	0.6	NGZ			0.5
		MNG		0.3	0.5	WEL	0.2						

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DEC 21 02^h33^m28^s.5 39°.20s 179°.85E 33 km M = 4.0
 ± 1.6 0.07 0.11 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
ECZ	ePn	02	33	57.7		0.8	100	1.82	325		3.7		
TUA	ePn	02	34	01.0		-0.3	100	2.14	280		3.8	3.9	
	eSn			24.8		-1.2	100						
TRZ	eSn	02	34	34		2.4	99	2.38	260				
	e			41.0									
WTZ	Pn	02	34	07.7		0.8	100	2.56	297		4.2	3.9	
	e			32.2									
	eSn			34.0		-1.8	99						
WIZ	ePn	02	34	06.5		-2.1		2.68	308				
NGZ	eSn	02	34	55.8		2.1	99	3.29	269				
MNG	Pn	02	34	21.3		-0.6	100	3.65	246		3.6	3.9	
	Sn			35 01.3		-0.9	100						
TNZ	ePn	02	34	30		-0.1	100	4.26	268		4.4		
WEL	Sn	02	35	19.8		-0.8	100	4.42	240	4.4			
AMPLITUDES:		ECZ		0.3		TUA		0.5	0.7	WTZ		2.4	1.2
		WIZ		0.4		NGZ			1.5	MNG		0.6	1.3
		TNZ		0.2		WEL	0.5						

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DEC 21 17^h32^m50^s.8 38°.49s 176°.02E 122 km M = 3.7
 ± 1.4 0.06 0.09 17 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
NGZ	P	17	33	09.8		-1.2	100	0.76	204			
	i			21.2								
WTZ	P	17	33	13.8		1.5	100	0.92	57		3.4	
TUA	P	17	33	12.0		-0.6	100	0.94	110		3.7	3.7
	i			13.9								
	S			30.7		1.4	100					

TRZ	P	17 33	14.8	-0.9	100	1.23	150	3.7	3.2
	i		16.0						
	e		31.0						
	S		35.0	0.4	100				
TNZ	P	17 33	18.0	-0.2	100	1.46	241	3.4*	
GNZ	P	17 33	20.2	0.6	100	1.58	96	3.9	
	S		40.2	-1.4	100				
MNG	iP	17 33	27.0	0.1	100	2.17	191	3.7	3.8
	S		52.8	-1.3	100				
WEL	eS	17 34	15	2.3	99	2.95	199	3.7	
AMPLITUDES:	NGZ	1.0	WTZ	1.3	TUA	1.0	1.1		
	TRZ	0.7	0.5	TNZ	0.5	GNZ	2.1		
	MNG	2.1	3.0	WEL	0.2				

DEC 21 18^h17^m34^s.1 38°.07S 176°.00E 272 km M = 4.2
 ± 1.1 0.07 0.10 8 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
KRP	eP	18	18	08.8		-0.6	100	0.39	292		2.7*			
WTZ	P	18	18	09.2		-1.4	100	0.78	84		4.2	3.8		
	S			37.7		-1.5	99							
NGZ	P	18	18	13.7		1.2	100	1.15	195					
	S			44.0		1.5	100							
TUA	eP	18	18	12.5		-0.1	100	1.17	130		4.2	4.2		
	S			44.0		1.4	100							
TRZ	P	18	18	17.2		1.6	99	1.62	157		4.0	4.1		
	S			49.0		1.2	100							
GNZ	P	18	18	16.9		0.7	100	1.69	110		4.6	4.2		
	S			47.8		-1.0	100							
TNZ	eP	18	18	16.6		0.4	100	1.69	228		3.2*			
ECZ	eP	18	18	19.2		0.1	100	2.05	80		4.4			
MNG	P	18	18	24.0		-0.1	100	2.58	189		3.9	4.3		
	S			19 01.2		-1.7	99							
WEL	S	18	19	16		-1.3	100	3.35	196	4.1				
CMZ	eS	18	20	12		-2.8		6.07	204				3.2*	
AMPLITUDES:	KRP	0.4	WTZ	2.3	0.9	NGZ	0.8	0.6						
	TUA	0.8	0.8	TRZ	0.4	1.2	GNZ	4.3	2.7					
	TNZ	0.2	ECZ	0.9	MNG	1.6	4.6							
	WEL	0.3	CMZ	0.3										

DEC 22 04^h05^m49^s.0 38°.20S 177°.58E 88 km M = 3.8
 ± 1.3 0.05 0.08 13 S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	iP	04	06	04.2		0.3	100	0.51	294		3.5	3.9		
	e			12.8										
	eS			14.0		-1.3	100							
TUA	P	04	06	06.0		0.4	100	0.69	209		3.7	3.8		
	S			18.0		-0.2	100							
WIZ	P	04	06	05.8		-0.3	100	0.74	335					
	S			17.0		-1.9	100							
ECZ	iP	04	06	08.0		0.1	100	0.92	57		4.2	4.1		
	S			22.9		0.8	100							
TRZ	P	04	06	15.2		0.4	100	1.48	204		3.4	3.8		
	S			37.5		3.1	99							
KRP	P	04	06	19.0		2.0	100	1.64	279		3.4*			
	S			40.0		2.1	100							

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MNG	eP	04 06 32.0	-2.4	99	2.92	213	3.1	3.8
	e	34.3						
	e	56.5						
	eS	07 05.6	-2.9					
WEL	eS	04 07 26.8	-2.9	99	3.77	214	4.1	
AMPLITUDES:	WTZ	5.0	12	TUA	2.0	3.0	ECZ	4.6
	TRZ	0.3	1.8	KRP	2.6		MNG	0.3
	WEL	0.3						

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DEC 22 20^h11^m30^s.6 37°.45S 176°.41E 247 km M = 5.8
 ± 1.3 0.06 0.08 11 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	20	12	04.2		0.2	100	0.70	139			
KRP	P	20	12	06.0		1.4	100	0.84	236			
	S			29.0		-2.0	99					
WNZ	P	20	12	07.7		1.0	100	1.20	192		5.7	
AUC	iP	20	12	08.2		-0.1	100	1.43	294			
GBZ	P	20	12	07.8		-0.6	100	1.44	329			
TUA	iP	20	12	09.4		0.8	100	1.48	157			
ECZ	iP	20	12	10.8		0.2	100	1.71	99		5.8	6.0
	S			40.5		-1.0	100					
GNZ	iP	20	12	11.0		0.2	100	1.74	134			
NGZ	P	20	12	11.7		0.1	100	1.84	200			
CNZ	P	20	12	12.2		0.2	100	1.87	201			
TRZ	P	20	12	17.1		2.9	99	2.12	171			
ONE	iP	20	12	14.5		-1.9	100	2.35	315	4.6*		
	S			54.0		2.1	99					
MNG	P	20	12	23.1		-2.9	99	3.24	193			
CAZ	P	20	12	26.6		-1.7	100	3.45	182			
	S			13 14.2		1.1	100					
KAI	P	20	12	57.7		-6.1		6.35	216	4.8*		
	S			14 09.0		-7.6						
CMZ	P	20	13	01.5		-7.4		6.77	204			
	S			14 19.6		-6.3						
CIZ	P	20	13	26.3		-3.5		8.40	143			
	(S)			15 17		14.0						
THP	P	20	13	23.0		-9.7		8.63	213			
OMZ	P	20	13	26.0		-7.1		8.66	207		4.9*	
DNZ	P	20	13	35.6		-8.0		9.49	206			
OBZ	P	20	13	57.3		-8.7		11.27	210		4.5*	
AMPLITUDES:	WNZ			4.0		AUC		23		ECZ		32
	ONE			9.0		KAI	4.7			THP		25
	OMZ			6.2		DNZ		23		OBZ		2.8

FELT: Widely East Coast North Island from Tokomaru Bay (37) to Wellington. Maximum intensity MM IV

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DEC 25 00^h34^m31^s.9 34°.11S 179°.45W 231 km M = 5.0
 ± 2.0 0.09 0.15 36 S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	00	35	34.0		-0.5	100	3.93	204		5.2	5.1
	e			36 29.5								
WIZ	P	00	35	37.3		-2.7	99	4.37	218			
	eS			36 30.5		-2.2						
WTZ	eP	00	35	44.0		-1.5	100	4.82	216		5.2	4.9

	e		45.9								
	eS		36 45.8		2.9						
GNZ	P	00 35	45.5		-1.8 100	4.97	204		5.1	5.0	
	S		36 49.5		3.6 98						
ONE	eP	00 35	53.5		1.4 100	5.35	250				
TUA	eP	00 35	53		-0.2 100	5.43	209		5.3	5.4	
	eS		36 56		-0.4 100						
KRP	eP	00 35	55.8		0.9 100	5.57	225		4.0*		
	e		59								
	eS		37 02.8		3.4						
TRZ	eP	00 36	03		0.1 100	6.20	208		5.0	4.8	
	eS		37 16.5		2.6						
NGZ	e(P)	00 36	09.5		3.7	6.43	217				
CRZ	eP	00 36	07.2		0.2 100	6.52	265		3.6*		
	S		37 21		-0.3 100						
TNZ	eP	00 36	17		2.8	7.09	223		4.0*		
MNG	eP	00 36	25		3.7 98	7.65	210		4.7	4.8	
	e		43.0								
	eS		37 45		-2.0 100						
WEL	eS	00 38	06		-0.7 100	8.50	211	4.8			
AMPLITUDES:	ECZ		2.5 2.0	WIZ	5.8 3.9	WTZ	4.7 2.6				
	GNZ		3.6 4.6	TUA	1.8 2.3	KRP	2.8				
	TRZ		0.7 1.1	NGZ	1.1	CRZ	0.3				
	TNZ		0.5	MNG	1.6 2.7	WEL	0.3				

80/ 800

DEC 29 02^h53^m27^s.4 45°.68S 167°.07E 94 km M = 3.5
 ± 0.5 0.02 0.05 3 S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
BRZ	P	02 53		41.2		-0.5	100	0.34	108		
	i			42.0							
	S			52.9		0.2	100				
OBZ	P	02 53		53.0		0.2	100	1.42	150		3.4 3.8
	S			54 12.0		-0.1	100				
THP	P	02 54		04.4		0.2	100	2.29	61		
DNZ	iP	02 54		06.3		0.4	100	2.41	96		
RHP	P	02 54		09.0		-0.3	100	2.65	55		
	eS			41		0.4	100				
OMZ	eS	02 54		43		-0.5	100	2.77	79		3.3
AMPLITUDES:	BRZ		3.0 2.2	OBZ	0.8 4.5	THP	3.6				
	DNZ		1.6	RHP	10 2.3	OMZ	0.3				

80/ 801

DEC 30 02^h19^m27^s.0 40°.05S 176°.47E 47 km M = 3.4
 ± 1.0 0.04 0.06 14 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P W S
TRZ	P	02 19		37.8		-1.5	100	0.57	28		3.6
	S			48.8		0.4	100				
CAZ	i	02 19		49.4				0.87	192		
	iS			58.0		2.8	98				
	i			20 00.8							
MNG	P	02 19		42.0		-2.2	99	0.94	233		3.3 3.5
	i			43.0							
	S			56.0		-1.1	100				
NGZ	iP	02 19		46.0		-0.3	100	1.09	322		
	S			20 01.3		0.4	100				
CNZ	P	02 19		46.1		-0.5	100	1.11	320		

	S	20 01.3	0.1	100								
WEL						1.79	226	3.2				
TNZ	eP	02 19 58	1.4	100		1.84	298					
	eS	20 24	5.2									
GNZ	eS	02 20 18.7	-0.6	100		1.85	41					
WTZ	S-P	26.5	1.5	100		2.11	11			3.3	3.4	
KRP	eP	02 20 04	1.4	100		2.25	341			2.8*		
	e	07.0										
	e	11.8										
	e	41.3										
COB	e(P)	02 20 18	4.3			3.02	249					
	eS	45	-4.0									
AMPLITUDES:	TRZ	3.5	MNG	4.8	8.5	NGZ	16	25				
	CNZ	21	WEL	0.2		WTZ	0.3	0.5				
	KRP	0.5										

80/ 802
 DEC 30 10^h29^m44^s.0 31°.40S 179°.08E 403 km M = 4.9
 ± 1.1 0.16 0.36 36 S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	Sn-Pn		1	20.2		-0.3	100	6.79	194		5.2	4.9
GNZ	ePn	10 31	32.2			0.5	100	7.28	187		4.7	5.1
	eSn	32	56.5			-0.2	100					
TRZ	eSn	10 33	19.0			0.5	100	8.34	192			4.7
MNG	ePn	10 31	58.0			-0.9	99	9.65	197		5.0	4.6
	i	32	00.5									
	eSn	33	45			-0.8	99					
WEL	eSn	10 34	03			0.2	100	10.46	198	4.7		
COB	eSn	10 34	13			0.2	100	10.94	206			3.2*
AMPLITUDES:	WTZ	1.8	1.1	GNZ	0.6	2.5	TRZ	0.4				
	MNG	2.0	1.1	WEL	0.1		COB	0.3				

80/ 803
 DEC 31 05^h22^m02^s.5 45°.09S 170°.75E 5 km M = 3.5
 ± 0.3 0.02 0.03 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OMZ	iP*	05 22	04.0			-1.0	100	0.12	80			
DNZ	iP*	05 22	17.7			-0.1	100	0.79	192			
	S*		29.5			0.7	100					
THP	iP*	05 22	17.9			-0.4	100	0.82	311			
	S*		29.8			0.1	100					
RHP	P*	05 22	22.0			-1.1	100	1.10	334			
	i		23.2									
	S*		38.7			0.7	100					
CMZ	eP*	05 22	40			1.1	100	2.02	43		3.7	4.0
	S*		23 05.7			-0.1	100					
OBZ	eP*	05 22	50			1.6	99	2.58	224		3.4	3.1
	eS*		23 21			-1.4	99					
AMPLITUDES:	DNZ	13	8.0	THP	63	28	RHP	28	36			
	CMZ	0.8	2.7	OBZ	0.3	0.4						

FELT: Oamaru (136) MM IV

80/ 804
 DEC 31 12^h16^m04^s.7 39°.89S 175°.79E 12 km M = 3.6
 ± 0.3 0.01 0.03 R S.E. of RES. 1.3

SUMMARY OF ORIGIN AND MAGNITUDE DETERMINATIONS

STANDARD NETWORK

The following chronological list of origins of New Zealand earthquakes is a summary of the determinations presented earlier. The Reference Number given in the first column identifies the earthquake. The letter F following the magnitude indicates that the earthquake is known to have been felt. NUM OBS is the number of separate phase readings used, and NUM STN the number of stations at which the shock was read, whether the readings were used in the epicentral solution or not.

REF NUM		ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
001	JAN	01 18 28 11.0	37.63 S	176.38 E	210	4.2	1.4	8	5
002		01 20 20 54.0	40.29 S	173.43 E	212	4.5	1.6	25	13
003		02 18 24 15.4	38.48 S	176.75 E	5 R	3.4 F	0.9	12	9
004		04 01 28 26.6	36.66 S	177.45 E	221	4.8	0.7	14	14
005		04 02 29 14.6	38.71 S	175.94 E	138	4.0	0.7	11	12
006		05 12 15 15.3	46.69 S	165.62 E	12 R	3.9	0.9	6	6
007		05 19 10 01.9	38.70 S	175.61 E	146	3.6	0.8	11	9
008		05 22 34 09.5	37.52 S	177.06 E	12 R	4.0	0.8	12	10
009		07 06 34 12.4	38.69 S	175.83 E	136	4.8 F	0.5	14	17
010		09 02 43 32.5	46.78 S	165.49 E	12 R	4.2	0.8	11	10
011		09 07 05 02.6	37.72 S	179.02 E	12 R	4.1	1.0	12	17
012		09 11 20 27.2	36.55 S	177.35 E	255	3.9	0.5	10	11
013		09 11 49 16.8	40.84 S	172.51 E	0	3.6	1.2	15	15
014		09 15 22 03.5	38.55 S	176.80 E	33 R	4.3	1.1	12	18
015		09 16 55 38.6	33.62 S	179.82 W	254	4.6	1.8	6	9
016		09 21 30 04.6	46.73 S	165.43 E	12 R	3.9	1.1	9	10
017		13 08 03 10.6	45.00 S	167.72 E	91	3.5	0.6	9	8
018		13 10 50 34.1	31.58 S	179.44 W	33 R	4.5	0.9	7	9
019		13 20 07 03.6	46.78 S	165.40 E	12 R	3.9	0.5	7	8
020		14 06 31 58.9	45.17 S	167.54 E	75	4.3 F	1.1	15	14
021		15 02 49 13.9	48.23 S	165.06 E	12 R	4.2	0.9	9	7
022		15 08 20 39.0	38.79 S	175.27 E	227	3.7	1.2	12	11
023		15 10 51 26.9	36.77 S	177.23 E	232	3.6	1.0	5	7
024		15 15 45 31.8	40.15 S	174.93 E	12 R	3.8 F	1.2	16	12
025		16 00 09 51.8	37.59 S	178.30 E	12 R	4.1	1.2	9	10
026		17 06 31 17.9	37.48 S	178.47 E	33 R	3.9	0.7	13	11
027		17 11 27 05.7	39.31 S	174.46 E	260	3.8	1.0	15	12
028		20 09 28 22.3	38.26 S	176.11 E	167	3.5	1.7	12	7
029		21 15 08 19.9	39.29 S	175.10 E	12 R	4.1 F	1.2	23	15
030		22 01 51 59.7	45.23 S	166.76 E	12 R	3.8	0.7	9	4
031		23 08 56 53.8	39.05 S	174.90 E	193	3.9	1.4	18	10
032		23 23 28 48.8	39.09 S	174.86 E	214	4.0	1.6	17	9
033		24 10 15 50.3	44.97 S	167.71 E	119	5.2 F	1.5	16	9
034		26 07 44 41.9	44.96 S	167.62 E	97	3.6	1.5	16	9
035		28 07 33 40.4	39.14 S	175.86 E	71	3.7	1.4	18	11
036		28 11 34 08.1	41.61 S	174.80 E	24	3.7	1.1	18	15
037		28 12 30 57.9	45.19 S	167.63 E	92	5.4 F	1.3	16	10
038		29 13 55 23.3	32.74 S	179.90 W	504	4.8	2.1	12	8
039		30 00 03 33.4	34.03 S	179.49 E	236	4.7	1.7	15	11
040		31 05 59 38.7	39.51 S	174.32 E	221	4.2	1.1	21	11
041	FEB	01 02 27 02.0	40.22 S	175.04 E	103	3.5	1.6	12	7
042		01 18 05 43.4	32.96 S	179.56 E	234	4.5	2.0	9	7
043		02 02 43 50.7	37.43 S	176.56 E	221	4.0	0.9	12	8
044		02 12 40 27.9	38.02 S	176.26 E	190	3.6	1.5	18	10
045		02 13 12 26.8	40.96 S	175.48 E	12 R	3.7	1.4	15	7
046		02 15 26 23.0	32.28 S	179.54 W	475	4.7	1.5	12	8
047		02 19 56 11.4	40.91 S	175.63 E	7	3.7	0.7	21	14
048		03 02 04 11.1	38.88 S	174.59 E	12 R	3.4	1.3	11	5
049		04 20 59 02.1	31.91 S	179.93 W	493	5.1	2.3	17	13
050		05 04 12 30.1	38.14 S	175.94 E	187	4.0	1.3	19	11

REF NUM		ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
051	FEB	05 10 33 13.3	31.08 S	176.99 W	340	4.8	2.3	13	11
052		07 13 32 46.0	37.11 S	177.45 E	173	3.9	1.5	12	7
053		08 01 24 45.9	31.40 S	178.93 W	302	5.1	1.8	15	10
054		08 02 54 43.9	37.75 S	177.57 E	33 R	3.5	1.4	10	7
055		08 02 56 50.4	37.61 S	177.45 E	100	3.8	1.8	12	8
056		09 14 44 10.3	46.40 S	165.75 E	33 R	4.3	2.1	15	10
057		10 00 46 36.8	37.92 S	176.36 E	178	4.1	1.8	16	11
058		10 22 59 56.4	49.05 S	173.08 E	33 R	4.1	2.1	8	7
059		11 10 22 15.7	40.75 S	174.05 E	102	3.7	1.4	16	11
060		13 19 22 12.3	31.15 S	178.27 E	188	5.7	2.8	10	11
061		14 01 54 15.9	38.96 S	177.32 E	12 R	3.7	1.1	13	8
062		14 03 51 48.6	38.94 S	177.27 E	12 R	3.5	1.3	11	7
063		14 13 17 38.5	39.17 S	177.64 E	12 R	3.7	1.8	11	7
064		14 13 41 20.8	33.39 S	178.08 E	314	4.9	1.6	13	8
065		15 11 52 29.7	42.66 S	172.91 E	33 R	4.1	0.6	13	21
066		16 09 32 06.1	46.94 S	165.27 E	12 R	4.2	1.3	8	9
067		16 09 52 32.6	46.82 S	165.36 E	12 R	3.5	0.6	5	5
068		16 10 20 26.6	46.74 S	165.40 E	12 R	3.7	1.2	6	6
069		16 13 37 18.6	32.30 S	177.75 W	33 R	4.8	1.1	10	10
070		16 13 56 15.7	38.84 S	175.94 E	12 R	3.3	1.2	12	11
071		16 14 06 03.1	32.13 S	178.03 W	33 R	4.9	1.1	9	12
072		16 14 24 44.4	38.78 S	175.93 E	12 R	3.7	1.0	10	12
073		16 18 33 07.3	32.02 S	178.30 W	33 R	4.6	1.5	7	10
074		17 05 33 13.4	38.11 S	176.13 E	192	5.0 F	0.9	17	19
075		17 16 29 59.8	34.92 S	179.14 E	252	4.6	0.9	12	13
076		18 05 47 17.3	39.15 S	174.81 E	213	3.9	1.3	14	11
077		18 13 43 21.6	44.97 S	167.74 E	12 R	3.6	1.3	10	8
078		18 17 36 51.9	37.29 S	177.63 E	166	5.0	1.5	16	20
079		18 20 38 36.7	38.89 S	176.01 E	124	4.2	1.0	16	16
080		19 02 48 00.9	39.57 S	174.40 E	238	4.2	1.2	17	11
081		19 12 44 25.0	41.61 S	178.43 E	33 R	4.3	1.2	23	18
082		21 21 51 34.6	39.96 S	176.75 E	12 R	3.4 F	2.1	16	11
083		22 09 45 25.3	35.79 S	178.48 E	180	4.1	0.3	7	11
084		23 10 26 02.0	35.84 S	178.07 E	229	4.3	0.9	9	11
085		23 14 58 14.5	36.77 S	177.75 E	154	4.7	0.4	10	13
086		24 00 37 17.9	36.60 S	179.14 W	33 R	4.0	0.9	10	9
087		24 07 44 35.6	44.08 S	171.15 E	12 R	3.5 F	0.5	7	8
088		24 09 36 46.2	39.93 S	175.86 E	33 R	3.9 F	1.1	24	14
089		25 09 47 50.1	38.33 S	176.08 E	160	3.5	1.5	13	10
090		25 12 52 39.8	45.27 S	167.45 E	84	4.8	0.7	13	13
091		25 13 10 56.1	39.83 S	177.14 E	33 R	4.2 F	0.9	12	17
092		27 11 20 38.2	40.21 S	174.44 E	12 R	3.6	1.4	15	10
093		28 09 06 41.9	37.52 S	176.97 E	12 R	4.7 F	0.9	11	18
094		28 12 33 33.2	37.52 S	177.00 E	12 R	4.0	0.9	8	11
095		29 07 25 09.7	32.37 S	178.68 W	181	5.1	1.3	20	15
096		29 17 28 59.5	34.08 S	178.40 W	245	4.5	1.2	10	8
097	MAR	01 02 56 07.3	47.02 S	165.61 E	33 R	4.0	1.0	10	8
098		01 06 04 26.6	44.09 S	170.75 E	1	4.7 F	0.8	29	18
099		03 14 16 42.0	35.56 S	179.56 E	300	4.4	1.3	11	6
100		03 16 12 19.4	39.25 S	177.82 E	12 R	3.2	1.5	7	5

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
101	MAR 03 19 00 22.0	38.06 S	176.10 E	172	4.3	1.3	17	13
102	03 23 32 13.7	37.95 S	176.38 E	189	4.2	1.0	13	10
103	04 01 03 37.3	38.51 S	176.78 E	33 R	3.6	1.0	14	11
104	04 11 09 01.0	37.57 S	179.65 W	33 R	3.9	0.8	10	7
105	05 18 27 47.7	46.37 S	166.61 E	33 R	3.9	1.1	13	8
106	06 16 12 09.7	37.66 S	176.42 E	12 R	3.0	1.1	5	3
107	06 16 12 58.3	37.94 S	176.34 E	12 R	3.1 F	1.7	7	5
108	06 22 03 12.6	37.69 S	177.45 E	69	3.5	1.8	10	7
109	08 02 47 56.8	39.16 S	175.39 E	119	4.2	1.1	24	15
110	08 12 20 27.8	40.69 S	175.84 E	71	4.3 F	0.7	22	20
111	08 19 00 52.0	41.29 S	172.27 E	12 R	3.3 F	1.1	14	11
112	08 19 52 31.5	44.33 S	168.42 E	12 R	3.7	1.2	15	8
113	09 04 46 01.7	37.87 S	175.97 E	242	3.9	1.1	10	7
114	09 06 31 58.8	32.18 S	178.80 W	295	5.1	1.1	15	10
115	09 06 55 18.1	32.89 S	178.34 W	300	4.8	1.3	12	8
116	09 14 27 58.4	38.53 S	175.67 E	177	3.6	1.0	14	9
117	10 14 21 18.4	46.76 S	167.03 E	33 R	4.3 F	1.1	11	7
118	10 20 17 58.6	33.87 S	179.89 E	376	4.7	1.5	12	9
119	11 02 33 47.4	32.81 S	179.54 W	569	4.9	0.9	11	7
120	11 03 32 51.5	36.60 S	178.27 E	155	3.8	1.0	8	5
121	11 04 47 00.0	35.88 S	179.40 E	33 R	4.0	1.2	9	7
122	11 20 16 08.8	38.81 S	175.62 E	147	4.2	1.2	22	16
123	12 06 34 03.5	39.57 S	174.33 E	59	3.5	0.8	11	9
124	12 12 12 54.7	41.90 S	173.45 E	33 R	4.3	0.7	16	14
125	12 12 39 36.2	37.42 S	176.94 E	1 R	3.5	1.6	8	7
126	13 08 27 39.7	44.69 S	167.75 E	12 R	3.8	1.0	18	9
127	13 22 17 09.2	31.73 S	179.59 E	347	4.8	2.2	9	8
128	14 10 18 47.5	34.06 S	179.34 E	257	4.5	2.1	14	9
129	14 21 11 32.7	44.15 S	168.01 E	12 R	4.3	0.7	20	11
130	15 00 00 46.2	49.51 S	164.47 E	12 R	4.9	1.5	18	13
131	15 03 33 50.6	40.38 S	173.79 E	149	4.3 F	1.8	21	18
132	16 04 56 34.8	39.08 S	175.78 E	99	4.5	1.0	28	27
133	17 04 30 09.5	38.21 S	176.20 E	183	4.4	1.1	23	21
134	18 02 46 34.0	38.10 S	177.56 E	12 R	3.3	1.4	13	7
135	18 11 28 05.5	44.96 S	167.76 E	127	4.0	1.0	14	8
136	18 14 02 04.8	45.24 S	167.54 E	74	3.7	0.6	15	14
137	19 05 03 20.7	38.35 S	175.79 E	204	4.0	1.4	14	10
138	19 21 59 04.0	35.83 S	177.14 E	401	4.1	1.9	9	11
139	20 08 26 58.2	34.91 S	178.86 E	267	4.2	1.2	15	11
140	20 15 02 32.7	38.59 S	175.60 E	177	3.7	1.0	15	9
141	20 19 54 13.6	37.49 S	176.55 E	226	4.0	0.9	17	11
142	21 02 55 42.8	33.47 S	179.44 W	410	4.5	1.2	9	7
143	21 07 05 51.2	47.92 S	165.47 E	33 R	3.7	0.7	6	4
144	21 14 59 01.1	38.92 S	175.30 E	129	4.0	1.1	16	10
145	21 15 28 09.9	37.47 S	177.09 E	5 R	4.9 F	1.6	37	17
146	21 17 27 07.2	37.53 S	177.01 E	5 R	3.9	1.2	20	10
147	22 09 21 59.8	37.53 S	177.12 E	5 R	3.5	1.3	15	8
148	22 15 53 09.9	38.99 S	178.03 E	12 R	4.3 F	0.9	24	14
149	23 02 45 56.9	37.49 S	177.01 E	5 R	3.4	0.9	10	6
150	23 06 50 42.3	42.17 S	172.32 E	12 R	4.6 F	1.0	38	19

REF NUM		ORIGIN TIME			LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN	
		h	m	s								
151	MAR	23	11	19	03.3	32.74 S	179.57 W	471	5.2	1.4	15	10
152		23	20	03	08.4	37.19 S	179.51 E	33 R	3.8	0.6	8	5
153		23	21	31	44.2	33.11 S	179.62 E	361	5.3	1.5	14	12
154		24	04	58	30.7	33.90 S	178.68 W	247	4.8	1.1	13	9
155		25	20	39	51.0	40.42 S	174.80 E	12 R	4.2	0.9	24	9
156		27	20	57	49.9	33.40 S	179.64 W	259	5.6	1.0	17	17
157		27	21	33	10.2	46.51 S	165.81 E	33 R	3.6	1.1	9	5
158		31	13	53	41.7	45.12 S	167.54 E	104	3.9	0.6	12	9
159	APR	01	04	42	38.2	41.81 S	172.61 E	33 R	3.5	1.1	13	9
160		01	05	52	06.0	33.40 S	178.31 W	33 R	4.7	0.8	6	11
161		03	00	20	47.8	38.77 S	176.65 E	67	4.0	0.9	13	15
162		03	11	56	42.6	42.90 S	172.84 E	12 R	3.6	1.3	11	10
163		04	03	23	04.7	44.88 S	167.73 E	77	3.6	1.0	15	10
164		04	19	34	09.6	33.53 S	177.96 W	12 R	5.0	1.4	12	16
165		04	19	55	06.5	33.53 S	177.96 W	12 R	4.4	ND	0	7
166		04	20	00	58.0	35.37 S	178.08 E	12 R	4.4	1.6	7	7
167		04	21	17	36.1	41.33 S	175.14 E	33	2.0 ^F	0.4	10	8
168		05	03	32	57.7	33.33 S	178.03 W	33 R	4.5	1.2	6	6
169		05	04	34	14.2	35.00 S	178.60 E	33 R	4.7	1.6	11	13
170		05	08	38	27.7	33.49 S	178.35 W	33 R	4.2	1.4	8	9
171		06	00	03	46.7	45.24 S	166.73 E	12 R	3.6	1.4	12	10
172		06	13	47	38.2	46.00 S	167.04 E	85	3.5	0.7	14	9
173		06	15	48	17.0	46.82 S	165.55 E	12 R	4.4	1.2	13	11
174		07	19	28	25.7	46.74 S	166.12 E	12 R	3.9	0.7	6	9
175		08	09	53	05.4	45.90 S	170.30 E	12 R	3.7	1.1	14	8
176		08	14	22	14.7	37.46 S	176.64 E	183	4.3	0.6	13	14
177		08	15	28	17.9	44.04 S	167.60 E	12 R	4.0	1.0	9	10
178		08	19	03	58.8	39.78 S	174.11 E	177	3.9	1.1	10	11
179		09	14	59	49.0	37.03 S	177.78 E	88	4.4	0.8	14	19
180		09	20	46	14.6	36.92 S	179.12 E	33 R	4.3	1.2	14	14
181		10	15	27	30.5	33.49 S	177.82 W	12 R	5.1	0.8	13	14
182		11	05	47	09.4	37.03 S	177.10 E	215	4.0	1.1	11	8
183		11	13	44	30.3	39.59 S	173.54 E	12 R	3.5	0.8	12	6
184		13	00	31	38.2	33.19 S	178.81 E	335	5.4	2.4	19	15
185		13	06	17	10.6	34.47 S	179.26 E	250	4.2	1.8	11	8
186		14	03	15	05.5	34.81 S	179.80 W	33 R	4.5	1.7	15	11
187		14	22	51	13.2	37.14 S	177.37 E	218	5.1	1.2	25	15
188		15	14	34	21.9	33.55 S	178.39 W	282	4.8	1.9	16	11
189		16	03	30	42.7	33.50 S	178.44 W	274	4.5	1.3	10	7
190		16	11	45	43.4	37.45 S	177.50 E	88	3.8	1.5	15	11
191		16	23	07	01.6	38.91 S	175.85 E	132	4.4	1.3	22	12
192		17	01	08	45.4	43.23 S	171.63 E	12 R	3.7	1.5	17	7
193		17	01	41	34.6	35.25 S	179.78 W	33 R	4.8	1.7	17	14
194		17	07	21	52.3	43.35 S	171.97 E	12 R	3.6	1.4	18	9
195		17	09	10	38.4	40.19 S	176.54 E	12 R	3.7	1.6	18	9
196		18	10	18	16.6	46.30 S	166.10 E	12 R	3.6	1.3	8	6
197		18	17	32	09.3	37.22 S	176.82 E	231	4.2	1.5	20	12
198		18	18	35	15.9	38.52 S	176.04 E	115	3.7	1.8	14	11
199		19	03	33	41.7	37.89 S	176.14 E	212	4.7	1.3	21	17
200		19	05	40	28.2	37.30 S	176.79 E	12 R	3.8	1.7	6	5

REF NUM	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM	NUM
							OBS	STN
	h m s	deg	deg	km				
201	APR 19 07 47 23.4	37.50 S	176.94 E	12 R	4.6	2.1	14	12
202	19 07 55 51.3	37.39 S	176.94 E	33 R	4.3	1.4	11	10
203	19 19 22 38.9	33.62 S	179.62 W	307	4.3	1.6	11	8
204	19 23 11 09.1	37.56 S	177.00 E	12 R	4.5	1.0	14	12
205	20 14 50 35.6	33.15 S	179.74 W	394	4.5	1.0	11	8
206	20 17 43 58.6	42.32 S	171.25 E	12 R	3.8	1.3	13	11
207	21 01 03 47.8	41.75 S	174.29 E	90	4.5	1.5	40	26
208	21 02 54 38.0	34.60 S	178.89 W	193	4.8	1.9	22	17
209	21 03 00 08.6	34.65 S	178.98 W	196	4.8	1.8	19	16
210	21 04 25 02.8	35.31 S	179.00 W	255	4.2	1.4	12	10
211	22 00 01 32.1	37.44 S	177.16 E	12 R	4.1	0.9	12	14
212	22 11 15 55.5	34.98 S	178.89 W	257	4.3	1.3	17	12
213	23 14 57 45.2	41.86 S	172.75 E	94	4.3	1.5	28	17
214	24 08 59 40.9	46.68 S	164.43 E	33R	5.0 F	1.9	12	13
215	24 18 48 53.5	45.60 S	166.33 E	12 R	3.7	1.7	12	8
216	25 01 58 04.3	39.70 S	174.06 E	143	3.7	1.2	16	11
217	25 09 20 12.1	42.82 S	176.87 E	33 R	4.0	1.3	20	12
218	25 13 07 21.2	34.50 S	177.45 W	284	4.2	1.0	9	6
219	25 16 54 46.8	33.97 S	178.34 W	263	4.4	1.6	12	8
220	25 23 18 00.2	37.41 S	176.93 E	5 R	3.6	1.3	11	7
221	25 23 27 13.2	37.49 S	176.69 E	198	3.9	1.5	13	10
222	26 07 45 54.3	37.38 S	178.54 E	79	3.6	1.2	13	9
223	26 16 24 17.1	45.18 S	166.67 E	5 R	4.0	1.1	13	9
224	26 17 44 26.7	45.38 S	167.39 E	12 R	3.3	1.1	12	7
225	27 04 51 09.3	40.64 S	174.96 E	93	4.0	1.1	20	14
226	27 19 18 13.6	44.93 S	167.63 E	51	3.0	1.2	11	7
227	28 23 10 01.2	32.63 S	179.81 E	517	5.0	1.5	15	9
228	29 13 06 35.7	45.09 S	167.59 E	119	3.9	0.7	17	9
229	30 15 28 06.9	37.01 S	176.60 E	282	4.3	1.0	18	11
230	30 21 33 32.5	34.22 S	178.92 W	223	4.2	1.7	10	7
231	30 23 18 33.9	36.79 S	177.10 E	268	4.2	1.1	14	9
232	MAY 01 16 11 49.1	34.60 S	177.96 W	288	4.6	2.4	16	11
233	02 04 15 05.1	34.18 S	178.41 W	254	5.3	1.5	22	18
234	02 08 18 01.1	38.77 S	177.73 E	33 R	3.3	1.7	11	11
235	02 16 42 44.8	40.84 S	172.98 E	211	3.8	0.8	13	10
236	02 21 12 23.6	34.78 S	178.72 W	242	4.4	1.2	11	7
237	02 21 14 57.5	35.63 S	179.86 W	255	4.1	1.4	8	6
238	02 23 04 33.3	38.78 S	176.06 E	1 R	2.7	2.0	6	5
239	03 00 14 16.9	35.35 S	178.66 E	257	4.4	1.2	14	9
240	03 10 48 21.4	39.50 S	175.74 E	12 R	3.4 F	0.7	18	11
241	04 03 58 45.3	39.99 S	175.62 E	12 R	3.9 F	1.2	20	13
242	04 09 05 16.7	37.43 S	177.67 E	124	4.0	1.7	20	14
243	04 12 25 39.4	34.15 S	178.66 W	251	4.3	1.0	12	8
244	04 22 15 30.7	37.32 S	176.98 E	12 R	3.7	1.0	11	8
245	05 23 32 32.4	41.23 S	172.41 E	12 R	4.4 F	1.4	22	12
246	06 00 43 18.8	41.26 S	172.37 E	5 R	4.5 F	1.0	22	13
247	06 01 18 20.7	41.23 S	172.41 E	5 R	3.8	1.2	14	9
248	06 01 20 33.4	41.26 S	172.38 E	12 R	4.0	1.2	13	7
249	06 12 21 29.6	38.44 S	176.14 E	12 R	2.9	0.6	6	7
250	07 01 31 31.8	36.72 S	178.47 E	12 R	3.9	1.4	14	12

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
251	MAY 07 13 26 38.0	32.78 S	179.89 W	451	4.7	1.1	11	7
252	08 06 01 33.2	37.95 S	177.68 E	33 R	3.3	1.2	10	6
253	08 10 28 58.4	40.97 S	172.33 E	33 R	3.7	1.3	17	8
254	10 04 21 24.6	40.99 S	175.53 E	12 R	3.5	1.0	10	6
255	11 00 10 44.6	45.56 S	169.86 E	12 R	3.8	0.8	16	9
256	11 09 58 42.8	34.53 S	178.13 W	33 R	4.1	5.2	7	7
257	11 23 06 33.3	45.12 S	167.62 E	142	4.3	0.5	15	11
258	12 16 57 08.2	38.58 S	177.56 E	33 R	3.8	0.8	12	16
259	13 07 40 59.4	40.10 S	174.75 E	12 R	3.5	1.0	12	10
260	13 07 42 57.1	40.60 S	174.63 E	12 R	3.7 F	0.9	10	12
261	13 11 43 49.5	40.24 S	173.87 E	131	3.7	0.6	8	9
262	13 13 52 03.3	37.38 S	177.15 E	12 R	4.0	1.0	17	14
263	14 08 46 48.2	34.84 S	178.61 E	309	4.4	1.3	11	15
264	15 03 18 55.4	37.53 S	176.39 E	193	3.7	1.0	6	10
265	15 09 02 26.6	32.50 S	179.01 W	395	4.8	1.3	7	15
266	15 16 39 10.8	44.21 S	169.74 E	6	4.1 F	0.8	11	16
267	16 04 15 42.6	39.82 S	173.90 E	212	4.3	1.1	14	15
268	16 20 57 04.2	31.94 S	179.25 W	33 R	4.6	2.1	9	16
269	17 02 35 33.5	45.46 S	167.36 E	107	4.8	0.9	12	12
270	17 03 59 18.0	37.46 S	177.06 E	12 R	3.7	1.7	14	15
271	17 04 01 00.7	37.41 S	177.17 E	12 R	3.2	1.2	9	7
272	19 14 07 56.7	42.84 S	172.38 E	12 R	3.6	0.9	11	14
273	19 22 50 19.3	37.20 S	177.23 E	182	4.2	1.0	10	10
274	20 14 04 22.3	37.88 S	176.33 E	171	3.8	1.0	12	11
275	21 00 15 26.6	32.89 S	177.37 W	33 R	4.7	1.9	8	13
276	21 02 07 29.3	37.25 S	179.61 E	12 R	3.5	0.8	7	7
277	21 04 17 53.0	40.35 S	175.93 E	32	4.8 F	0.5	12	27
278	21 05 51 29.8	37.79 S	178.14 E	84	4.7	0.3	6	21
279	21 07 06 09.7	32.88 S	177.51 W	33 R	4.8	1.1	11	13
280	21 12 01 59.8	39.58 S	176.20 E	75	3.5	0.7	19	13
281	22 07 27 52.7	33.73 S	178.99 W	33 R	4.9	1.6	9	13
282	22 22 35 03.3	39.63 S	177.96 E	12 R	4.1 F	0.9	11	17
283	23 11 40 40.3	35.33 S	179.12 E	258	3.9	0.5	6	3
284	23 16 37 29.2	46.55 S	166.21 E	12 R	5.3 F	1.4	18	14
285	24 00 22 39.9	37.44 S	177.14 E	12 R	3.9	1.5	16	8
286	24 12 31 21.7	32.72 S	179.80 W	422	4.6	1.3	12	9
287	24 19 16 17.2	37.66 S	176.75 E	12	4.0	1.4	21	12
288	25 10 56 19.0	39.13 S	174.76 E	219	4.3	1.4	21	12
289	25 14 26 24.1	38.65 S	175.51 E	176	3.6	1.6	13	8
290	25 17 09 10.6	34.34 S	178.55 W	267	4.3	1.6	10	7
291	25 18 31 56.9	44.96 S	167.68 E	12 R	3.5	1.1	17	9
292	26 05 00 20.7	39.77 S	178.21 E	12 R	3.8	1.5	16	9
293	26 10 40 05.3	33.03 S	177.21 W	260	5.1	2.4	18	12
294	27 10 27 02.1	37.28 S	177.50 E	206	3.8	1.2	10	6
295	27 15 02 26.6	37.98 S	175.94 E	290	4.9	1.3	18	10
296	29 03 08 35.9	40.48 S	174.68 E	9	3.8	1.5	20	12
297	29 09 38 31.9	45.98 S	163.14 E	12 R	4.4	1.6	11	8
298	29 09 50 03.0	44.28 S	169.88 E	12 R	3.7 F	1.5	18	9
299	29 12 23 17.6	32.84 S	179.49 W	439	5.0	2.0	17	10
300	29 21 22 22.0	37.67 S	176.26 E	309	4.0	0.1	5	4

REF NUM		ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
301	MAY	31 07 26 57.4	34.29 S	179.58 E	373	4.3	1.0	8	5
302		31 22 10 27.7	33.57 S	179.91 W	349	4.7	2.3	14	10
303	JUN	01 02 33 25.7	46.41 S	165.89 E	12 R	3.7	1.4	12	6
304		01 11 29 26.5	41.35 S	172.84 E	153	4.1	1.3	23	15
305		01 17 39 32.3	38.24 S	179.03 E	12 R	3.8	1.4	19	10
306		01 23 58 21.3	36.73 S	177.39 E	253	3.8	1.5	12	8
307		02 20 32 57.9	39.46 S	175.52 E	2	3.8	1.4	20	11
308		05 02 22 03.1	34.48 S	179.09 W	293	4.6	2.6	8	6
309		05 11 55 36.4	33.55 S	179.72 E	340	4.8	2.0	16	11
310		06 17 03 59.6	37.03 S	176.91 E	200	3.7	1.1	7	8
311		07 17 33 15.3	38.57 S	175.99 E	169	4.3	1.5	11	8
312		08 02 00 46.6	44.84 S	167.60 E	73	3.7	0.7	11	7
313		08 03 08 49.1	48.73 S	164.52 E	33 R	4.6	0.7	12	7
314		08 04 03 38.8	48.81 S	164.41 E	33 R	4.3	1.1	11	8
315		08 12 45 48.1	34.21 S	179.25 W	260	4.4	1.3	11	8
316		09 15 44 36.8	39.96 S	177.30 E	12 R	3.5	0.1	6	5
317		10 16 27 51.9	32.54 S	178.19 W	373	4.9	1.2	8	5
318		10 22 29 45.8	47.48 S	165.72 E	33 R	4.2	0.9	9	5
319		11 08 23 10.7	48.81 S	164.47 E	33 R	4.9	1.2	13	9
320		11 23 52 09.9	45.06 S	167.65 E	94	3.7	0.9	13	7
321		12 03 20 33.4	46.92 S	165.70 E	33 R	4.1	0.7	7	5
322		12 07 52 03.6	33.74 S	179.33 W	219	4.8	1.4	12	8
323		13 21 04 47.9	38.77 S	174.60 E	5 R	3.5	1.4	11	7
324		14 12 32 27.3	32.56 S	179.21 W	309	4.4	1.2	10	7
325		16 05 07 39.5	38.07 S	176.41 E	170	4.9	1.3	17	10
326		16 05 51 58.5	38.00 S	177.10 E	0 R	3.0 F	0.9	3	2
327		16 08 14 30.1	35.17 S	178.66 E	260	4.3	1.9	14	10
328		16 12 26 07.3	39.48 S	177.08 E	33 R	4.4 F	0.6	12	13
329		16 13 36 42.3	36.79 S	176.89 E	261	3.8	1.6	10	6
330		16 20 30 40.5	39.49 S	177.28 E	33 R	3.6	0.6	7	4
331		18 15 50 08.2	34.22 S	179.69 E	271	4.3	1.4	10	8
332		19 09 58 39.5	31.53 S	179.47 W	388	5.3	2.2	9	7
333		19 17 38 27.4	40.44 S	174.28 E	97	3.8	0.7	20	14
334		20 15 57 36.0	37.30 S	176.52 E	231	4.0	1.2	9	13
335		21 08 09 25.6	35.81 S	178.91 E	33 R	3.9	0.1	5	9
336		21 10 48 37.1	38.99 S	178.32 E	33 R	3.9	1.4	11	13
337		22 04 28 16.4	36.84 S	176.82 E	322	4.0	1.1	5	9
338		22 05 11 39.1	37.94 S	176.41 E	164	3.7	0.6	8	9
339		22 13 17 57.5	32.74 S	179.94 W	392	5.5	2.2	15	18
340		23 04 19 16.4	41.47 S	173.09 E	110	4.1	1.5	13	14
341		23 15 45 28.4	40.69 S	174.08 E	98	3.4	1.0	14	10
342		23 16 45 19.4	39.90 S	175.62 E	88	5.5 F	0.6	14	26
343		23 17 22 09.5	39.93 S	175.55 E	12 R	3.4 F	1.3	20	11
344		23 17 23 54.6	39.90 S	175.58 E	12 R	3.0	1.4	16	10
345		23 21 19 36.6	39.90 S	175.65 E	33 R	3.8 F	0.5	12	16
346		23 22 29 56.1	42.55 S	174.07 E	22	3.8	0.8	11	11
347		24 09 49 47.2	36.24 S	178.00 E	294	4.0	0.7	8	9
348		25 12 20 15.5	42.80 S	174.54 E	33 R	3.5	1.2	13	12
349		25 17 59 28.8	32.40 S	178.79 W	33 R	4.4	2.7	7	10
350		26 05 21 38.2	41.99 S	174.35 E	33 R	3.8	0.5	8	10

REF NUM		ORIGIN TIME			LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN	
		h	m	s								
351	JUN	26	17	03	30.5	40.84 S	176.12 E	33 R	3.5	0.5	9	9
352		26	18	46	59.5	39.89 S	175.54 E	33 R	3.2	0.9	12	10
353		27	08	16	49.1	40.07 S	175.85 E	33 R	4.0F	0.9	16	13
354		28	18	28	35.2	37.81 S	176.32 E	242	4.6	1.6	11	12
355		29	15	56	28.9	39.89 S	175.54 E	33 R	3.8F	1.3	14	14
356		30	06	34	11.9	39.52 S	177.40 E	33 R	4.3F	0.9	10	15
357		30	11	20	53.4	35.32 S	178.61 E	240	5.5F	0.7	13	19
358		30	18	22	04.4	40.06 S	176.54 E	33 R	3.6F	0.8	17	14
359	JUL	01	05	23	19.9	36.64 S	177.42 E	12 R	4.0	1.7	12	12
360		01	06	51	36.8	39.93 S	175.66 E	33 R	3.7	0.9	14	12
361		01	15	44	28.2	41.49 S	174.10 E	12 R	3.7	0.6	10	19
362		01	20	47	17.6	37.92 S	176.17 E	194	3.8	1.6	9	10
363		02	02	36	29.0	46.51 S	165.57 E	12 R	4.3	0.7	11	9
364		03	01	48	16.3	40.52 S	176.89 E	33 R	3.6	0.6	9	11
365		03	01	48	38.6	40.44 S	176.93 E	33 R	5.2F	0.8	12	24
366		03	01	52	30.9	40.50 S	176.91 E	33 R	3.4	0.8	4	8
367		03	01	55	06.8	40.44 S	176.91 E	33 R	3.5	1.3	11	11
368		03	02	00	23.8	40.44 S	176.88 E	33 R	3.1	1.4	9	9
369		03	02	02	36.5	40.43 S	176.95 E	33 R	4.9F	0.5	12	24
370		03	02	11	09.9	40.48 S	176.90 E	33 R	3.5F	0.7	9	13
371		03	02	20	37.5	40.45 S	176.85 E	33 R	3.6	0.8	10	13
372		03	03	16	52.8	40.55 S	176.99 E	33 R	3.4	0.8	9	12
373		03	04	26	13.2	36.98 S	177.10 E	171	3.8	1.7	9	9
374		03	04	44	19.8	40.46 S	176.97 E	33 R	4.3	0.5	15	22
375		03	04	49	12.4	40.44 S	176.94 E	33 R	3.6	1.3	11	14
376		03	09	26	42.1	38.90 S	175.97 E	117	4.2	1.5	23	22
377		03	11	17	16.0	40.45 S	177.11 E	33 R	3.5	1.5	12	13
378		03	17	38	24.8	40.47 S	176.91 E	33 R	3.7F	0.5	15	15
379		03	20	36	55.5	40.56 S	176.95 E	33 R	3.4	1.0	11	12
380		03	20	38	12.8	40.45 S	176.91 E	33 R	3.7	1.4	12	15
381		03	21	28	48.7	40.49 S	176.86 E	33 R	4.5F	1.0	19	21
382		04	01	31	56.1	40.41 S	176.89 E	33 R	3.8	1.7	17	11
383		04	03	55	18.4	40.35 S	176.75 E	12 R	3.5F	1.5	18	10
384		04	15	29	27.1	40.48 S	177.00 E	22	4.5F	1.3	16	16
385		04	17	03	51.3	39.51 S	174.43 E	227	5.1F	1.4	21	18
386		04	17	33	36.2	40.34 S	176.74 E	33 R	3.8	1.5	24	11
387		04	18	49	14.7	40.36 S	176.92 E	33 R	3.7	1.7	19	11
388		05	04	56	11.5	40.37 S	177.06 E	33 R	3.5	1.3	15	11
389		05	05	16	15.8	40.37 S	176.95 E	33 R	3.9F	1.3	23	11
390		05	15	54	44.1	44.33 S	167.89 E	12 R	3.8	1.6	19	11
391		05	17	56	20.8	40.40 S	176.74 E	11	4.0	1.5	20	11
392		05	19	39	41.2	36.98 S	177.44 E	208	4.3	1.0	12	11
393		05	22	31	07.1	49.89 S	164.67 E	33 R	4.4	1.4	9	8
394		05	22	51	06.1	31.98 S	177.74 W	224	5.1	1.5	9	10
395		06	12	13	39.6	37.40 S	177.44 E	149	4.5	1.0	16	14
396		06	13	56	37.2	35.04 S	179.06 E	247	4.8	1.3	14	12
397		07	08	13	44.8	39.88 S	175.67 E	12 R	3.7	1.5	26	11
398		07	10	25	42.2	46.39 S	165.95 E	12 R	4.2	0.8	11	8
399		07	16	38	39.8	31.98 S	178.11 W	337	5.2	1.6	12	12
400		07	17	36	17.7	39.50 S	175.57 E	12 R	4.0F	1.3	20	11

REF NUM	ORIGIN TIME			LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN		
	h	m	s									
401	JUL	09	01	21	07.9	40.86 S	173.38 E	159	4.1	1.2	13	8
402		09	15	39	05.0	39.22 S	175.10 E	142	3.7	1.3	17	11
403		10	12	14	01.5	38.51 S	179.40 W	12 R	4.1	1.4	9	9
404		11	18	07	19.5	37.20 S	176.78 E	236	4.1	1.7	13	11
405		12	06	19	21.4	40.58 S	177.14 E	33 R	4.2	1.3	18	13
406		13	01	22	25.6	49.76 S	165.56 E	235	4.8	0.9	11	9
407		13	03	06	48.3	40.89 S	177.21 E	12 R	3.7	1.5	11	9
408		13	07	40	14.8	44.92 S	167.64 E	50	3.4	1.0	9	6
409		13	19	39	39.9	32.60 S	179.84 E	650	5.6	1.7	13	12
410		15	06	31	04.6	38.78 S	175.66 E	147	3.7	1.3	12	8
411		15	09	33	26.6	40.93 S	174.93 E	44	4.5 F	1.2	15	18
412		15	16	21	19.4	37.99 S	176.25 E	209	4.1	0.8	11	7
413		16	04	30	04.3	38.48 S	177.82 E	12 R	3.6	1.2	12	7
414		16	09	32	32.0	41.62 S	171.96 E	0 R	3.8	1.1	13	11
415		16	10	29	15.2	37.45 S	177.27 E	145	3.7	1.1	13	8
416		16	19	37	30.5	38.13 S	176.49 E	153	4.4	1.3	12	12
417		18	03	02	40.5	34.68 S	178.36 W	33 R	4.3	1.6	10	6
418		18	04	29	53.7	44.44 S	168.15 E	12 R	3.8	1.0	16	10
419		19	04	05	31.7	38.52 S	176.07 E	12 R	2.7	1.4	6	6
420		19	09	07	01.5	39.77 S	176.99 E	33 R	3.5	1.5	12	9
421		19	09	51	02.8	44.58 S	169.72 E	4 R	4.4 F	0.9	24	17
422		19	13	54	09.1	41.08 S	175.13 E	79	4.5 F	1.5	24	21
423		19	15	35	13.3	38.87 S	175.22 E	221	3.9	1.3	14	9
424		20	06	28	27.9	33.13 S	178.62 W	291	4.6	1.9	13	8
425		21	14	26	16.9	33.25 S	179.78 W	395	4.2	2.6	7	4
426		22	00	06	14.4	34.27 S	179.51 E	329	4.4	1.1	8	5
427		22	11	10	01.5	37.94 S	176.19 E	219	4.2	1.2	19	13
428		22	13	38	23.2	36.50 S	177.80 E	271	3.8	1.0	11	7
429		23	23	37	23.2	37.75 S	177.48 E	33 R	3.3	1.1	10	7
430		24	13	41	28.8	32.45 S	179.70 E	443	4.8	1.7	13	8
431		24	20	14	19.5	45.19 S	167.30 E	46	3.9 F	1.3	14	9
432		25	15	28	56.5	32.54 S	179.92 W	472	4.7	1.1	15	11
433		25	21	46	00.3	39.19 S	173.98 E	33 R	2.9	0.8	8	4
434		27	18	29	54.8	40.45 S	176.85 E	12 R	3.6	1.5	12	8
435		28	11	31	46.3	35.86 S	177.94 E	249	4.5	1.0	12	8
436		28	16	12	08.1	33.84 S	179.28 W	278	5.1	1.3	17	13
437		28	21	50	44.7	38.48 S	178.33 E	12 R	3.0 F	0.3	6	5
438		29	21	28	08.2	37.69 S	176.44 E	206	4.3	1.3	12	8
439		30	23	14	17.9	32.16 S	179.62 W	463	4.9	1.1	9	8
440		31	10	15	07.7	38.26 S	176.03 E	170	3.7	1.3	13	11
441		31	12	30	48.1	31.51 S	179.72 W	472	4.9	1.2	10	7
442	AUG	01	01	20	39.8	38.26 S	175.90 E	294	4.0	0.8	5	3
443		01	12	28	52.0	38.97 S	178.06 E	33 R	3.6	0.3	5	3
444		03	04	08	33.6	36.72 S	178.60 E	177	3.8	ND	4	3
445		03	10	34	05.0	38.81 S	177.94 E	43	3.9	0.1	8	6
446		03	15	36	33.1	37.43 S	177.65 E	94	3.8	1.0	11	8
447		04	14	55	12.8	35.07 S	179.20 E	377	4.9	0.8	9	8
448		04	20	18	02.2	42.80 S	174.41 E	12 R	4.1	0.5	6	6
449		05	14	26	35.0	33.99 S	178.75 W	280	4.8	1.5	10	9
450		05	18	02	52.4	37.71 S	176.14 E	204	3.7	ND	4	3

REF NUM	ORIGIN	TIME			LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN	
		h	m	s								
451	AUG	06	16	53	24.9	39.87 S	175.71 E	49	3.8	1.0	14	10
452		06	17	28	04.9	38.72 S	175.79 E	120	3.6	1.1	8	6
453		06	22	16	24.4	46.20 S	165.83 E	33 R	5.5 F	0.6	8	11
454		06	22	24	48.9	46.09 S	166.08 E	33 R	4.3	0.8	7	5
455		06	22	44	23.5	46.16 S	165.93 E	33 R	3.5	1.0	5	4
456		06	23	20	01.2	46.18 S	165.83 E	33 R	3.7	0.9	6	5
457		07	01	40	11.2	46.13 S	165.94 E	33 R	4.0	0.7	7	5
458		07	05	16	13.8	46.17 S	165.85 E	33 R	3.5	0.8	6	5
459		07	09	33	39.9	46.14 S	165.95 E	33 R	3.5	0.9	6	5
460		07	09	43	14.8	46.10 S	165.94 E	33 R	4.2	0.6	7	5
461		08	16	10	18.4	33.45 S	179.85 E	289	4.7	1.0	10	6
462		09	07	31	31.1	39.57 S	177.41 E	12 R	4.1 F	0.6	9	17
463		09	16	29	14.1	40.95 S	175.02 E	33 R	3.9 F	1.2	18	25
464		09	16	49	52.0	32.29 S	179.18 W	33 R	4.5	2.6	6	10
465		10	10	08	45.2	36.56 S	177.57 E	165	3.7	0.1	5	8
466		10	17	40	54.3	39.14 S	174.87 E	222	3.8	1.1	15	10
467		11	12	08	27.0	37.71 S	179.35 W	12 R	4.0	1.4	11	12
468		11	13	15	33.1	37.55 S	179.28 W	12 R	3.8	1.5	10	10
469		11	14	27	58.8	33.17 S	178.42 W	33 R	4.3	1.8	8	11
470		12	14	57	14.9	50.16 S	164.66 E	12 R	4.5	1.1	11	10
471		15	15	36	11.3	37.40 S	178.96 E	74	3.6	1.1	9	6
472		15	21	30	41.4	36.03 S	179.46 E	195	4.3	0.7	7	7
473		16	10	52	35.1	37.94 S	177.03 E	33 R	4.0	1.8	15	12
474		17	15	02	22.4	39.73 S	176.22 E	43	3.0	1.0	13	8
475		18	15	59	50.1	46.88 S	165.26 E	33 R	4.4	0.6	7	6
476		18	19	15	17.8	43.49 S	171.61 E	33 R	4.0 F	0.8	14	9
477		20	08	15	19.8	35.79 S	177.83 E	219	3.9	2.7	7	5
478		20	15	48	51.0	38.35 S	176.01 E	168	3.7	1.5	13	8
479		20	21	30	51.0	37.11 S	177.54 E	197	4.1	1.2	15	10
480		22	08	26	09.6	39.57 S	174.37 E	229	3.8	1.5	10	9
481		22	10	57	35.0	33.16 S	179.78 E	570	4.7	1.7	9	7
482		22	13	04	55.6	33.55 S	178.05 W	230	4.4	1.4	11	8
483		22	16	32	49.8	33.15 S	178.24 W	33 R	4.2	1.0	10	6
484		22	17	44	19.1	43.53 S	168.43 E	5 R	3.6	2.0	11	11
485		23	13	35	05.5	33.79 S	175.90 W	33 R	4.6	2.7	11	11
486		24	16	45	27.9	40.12 S	175.61 E	33 R	4.8 F	1.4	26	21
487		24	17	38	03.1	40.86 S	172.87 E	221	4.0	1.1	19	12
488		24	20	04	00.7	40.38 S	176.34 E	33 R	3.9	1.3	16	14
489		24	22	53	38.2	40.08 S	175.57 E	33 R	3.8	1.0	15	13
490		25	02	20	58.5	36.27 S	177.52 E	244	4.1	1.1	11	8
491		25	09	14	17.2	40.07 S	175.51 E	33 R	3.6	1.1	16	12
492		25	12	51	51.2	33.64 S	177.64 W	255	4.6	1.2	13	9
493		26	15	13	45.0	45.61 S	166.91 E	33 R	4.0	1.1	13	7
494		26	17	05	03.1	32.42 S	176.94 W	315	4.9	1.7	15	12
495		26	17	20	46.4	40.10 S	175.58 E	33 R	4.7 F	1.0	24	23
496		26	17	22	27.1	40.01 S	175.33 E	33 R	4.0	2.0	11	9
497		26	17	38	41.5	40.13 S	175.56 E	33 R	3.8 F	1.3	19	12
498		27	06	33	28.4	37.59 S	177.98 E	12 R	3.6	2.2	12	9
499		27	08	09	41.2	31.79 S	177.98 W	303	4.5	1.5	8	7
500		27	14	13	02.2	38.92 S	175.84 E	103	4.6	1.3	23	20

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
501	AUG 27 17 44 07.3	40.93 S	175.58 E	12 R	3.0	1.2	8	5
502	27 20 16 06.3	39.96 S	176.80 E	33 R	3.6	1.3	14	13
503	28 01 23 06.7	46.90 S	165.21 E	33 R	3.8	0.7	9	6
504	28 12 39 23.3	33.42 S	178.87 W	298	4.5	1.1	13	10
505	28 15 45 49.7	34.02 S	179.13 W	307	4.8	1.1	18	12
506	28 19 52 49.0	40.10 S	175.55 E	33 R	4.3 F	0.9	18	18
507	29 20 00 47.0	38.19 S	175.96 E	197	4.0	1.5	14	9
508	30 05 55 58.1	45.12 S	167.78 E	33 R	4.8 F	1.3	9	14
509	30 12 45 32.3	35.32 S	178.58 E	235	4.1	1.0	7	8
510	31 12 13 23.2	41.12 S	175.69 E	12 R	3.4	1.7	10	6
511	31 17 37 19.5	39.97 S	173.76 E	136	5.4 F	1.7	12	14
512	31 22 21 06.6	40.09 S	175.46 E	33 R	3.7	1.1	18	11
513	31 23 07 48.1	40.07 S	175.47 E	33 R	4.8 F	1.3	19	13
514	SEP 01 04 36 36.5	39.85 S	174.02 E	220	4.2	1.6	15	11
515	01 05 15 44.1	40.28 S	173.65 E	169	4.2	1.3	18	12
516	01 12 36 48.6	33.43 S	178.94 W	282	4.9	2.5	9	8
517	01 21 18 30.2	36.94 S	177.00 E	274	4.0	1.8	10	6
518	02 16 07 14.6	34.60 S	179.53 E	321	4.0	0.8	7	4
519	03 04 12 41.3	37.29 S	177.66 E	33 R	3.6	1.1	10	7
520	03 05 25 04.9	38.77 S	175.63 E	161	4.1	1.5	18	10
521	05 09 38 52.4	38.80 S	175.73 E	196	3.7	1.4	8	6
522	06 02 07 26.5	38.96 S	175.48 E	142	3.5	1.3	12	9
523	06 03 24 28.9	40.94 S	173.95 E	12 R	3.4	0.9	12	9
524	06 07 20 07.0	42.25 S	173.33 E	65	3.5	0.9	11	12
525	06 12 27 39.4	38.55 S	176.04 E	132	3.6	1.4	12	9
526	07 00 26 57.9	38.57 S	175.73 E	155	4.2	1.4	17	13
527	07 03 25 43.7	39.49 S	174.95 E	131	4.2	1.1	19	13
528	07 04 32 03.6	37.04 S	177.04 E	236	4.2	1.1	12	11
529	08 03 05 36.0	40.07 S	175.46 E	33 R	4.4 F	1.1	19	11
530	08 12 03 38.0	35.15 S	179.50 E	285	4.5	1.8	13	9
531	08 14 07 11.4	38.33 S	175.85 E	208	4.2	1.6	13	10
532	09 08 45 03.1	41.44 S	172.30 E	12 R	3.7	1.4	15	10
533	09 15 04 17.0	34.33 S	179.30 W	233	4.5	1.3	8	6
534	09 20 31 34.5	33.82 S	178.81 W	145	5.1	0.8	9	8
535	10 06 40 02.8	34.76 S	179.54 W	70	5.0	1.3	14	11
536	10 20 59 30.4	45.11 S	167.20 E	86	3.8	1.2	10	6
537	11 06 29 27.2	37.23 S	177.41 E	159	4.2	1.7	13	12
538	11 21 57 57.3	38.66 S	176.31 E	12 R	2.7 F	1.2	5	4
539	12 13 49 58.4	34.85 S	179.09 E	248	4.3	1.3	10	11
540	12 20 00 24.8	32.15 S	177.14 W	33 R	5.1	2.3	11	10
541	12 20 16 46.6	31.80 S	177.62 W	33 R	5.0	1.3	9	11
542	13 01 32 55.1	41.62 S	174.24 E	12 R	3.9	0.9	13	20
543	13 07 38 50.6	41.45 S	174.63 E	12 R	3.8	0.6	12	21
544	13 09 08 44.1	39.12 S	175.18 E	12 R	3.8	0.6	13	10
545	14 04 55 58.3	38.71 S	176.41 E	33 R	3.8	1.0	15	16
546	14 05 47 10.0	31.90 S	177.77 W	33 R	4.7	1.1	10	11
547	14 06 25 49.3	31.97 S	177.27 W	33 R	4.5	1.5	7	11
548	14 12 09 46.9	32.82 S	179.40 E	33 R	4.7	3.5	7	9
549	15 14 29 26.9	45.87 S	167.15 E	114	4.2	0.4	11	8
550	15 18 06 36.1	37.58 S	176.49 E	200	4.6	0.7	16	15

REF NUM	ORIGIN	TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN	
551	SEP	16 10 02	40.1	41.63 S	174.22 E	12 R	4.0	0.5	12	16
552		19 22 55	36.6	37.52 S	176.52 E	228	4.0	0.7	9	9
553		20 03 04	08.5	38.66 S	178.21 E	33 R	3.4	0.8	7	6
554		20 05 33	40.5	45.52 S	167.15 E	83	3.6	0.6	14	9
555		20 06 58	42.6	45.10 S	167.47 E	67	3.0	0.5	9	7
556		20 09 26	47.6	45.66 S	167.03 E	83	3.9	0.6	13	12
557		20 11 28	20.3	45.10 S	166.97 E	0	3.2	1.6	9	9
558		21 04 47	48.3	35.15 S	179.68 W	12 R	4.2	1.2	9	8
559		21 06 19	39.2	35.59 S	179.22 E	321	4.2	1.4	8	7
560		21 13 23	52.9	40.09 S	175.63 E	33 R	4.1 F	1.1	19	17
561		22 09 44	13.5	38.48 S	175.80 E	179	4.1	0.4	13	15
562		23 16 05	52.2	37.23 S	177.66 E	112	4.0	0.9	10	13
563		23 18 44	01.7	40.34 S	173.53 E	170	4.5	0.9	12	18
564		24 12 13	26.8	32.15 S	179.28 W	33 R	4.7	2.0	9	10
565		24 12 14	14.8	40.07 S	175.43 E	33 R	3.4	0.7	9	14
566		25 01 31	44.7	36.58 S	177.71 E	165	4.2	0.6	8	13
567		25 18 47	40.9	33.02 S	177.63 W	33 R	4.4	1.9	11	12
568		25 18 49	49.6	33.04 S	177.82 W	33 R	4.8	1.6	13	12
569		25 19 23	29.0	32.94 S	177.58 W	33 R	4.5	1.6	8	10
570		25 19 40	52.0	32.93 S	177.85 W	33 R	4.7	1.6	12	12
571		25 22 05	46.1	33.07 S	176.83 W	33 R	4.5	1.0	7	10
572		26 02 51	44.3	39.12 S	175.22 E	33 R	3.9	1.3	12	8
573		26 12 39	25.1	46.70 S	165.84 E	33 R	4.2	1.3	9	6
574		27 08 43	04.8	48.83 S	165.86 E	33 R	4.2	1.5	6	3
575		27 13 59	48.7	32.63 S	179.98 W	369	4.3	1.9	9	6
576		27 16 38	38.9	38.51 S	176.14 E	33 R	3.8	1.7	14	11
577		27 21 55	38.6	39.99 S	173.70 E	161	4.3	1.1	21	15
578		28 07 41	49.7	34.79 S	179.02 E	340	4.4	1.1	10	7
579		29 22 19	27.6	38.67 S	175.78 E	165	4.8	1.3	23	16
580		29 23 28	31.4	39.38 S	176.92 E	52	3.6	0.7	14	11
581		30 06 22	42.3	45.18 S	167.64 E	113	3.7	0.4	8	4
582		30 15 33	28.4	40.44 S	174.10 E	129	3.3	1.4	10	9
583		30 19 13	53.9	36.38 S	178.35 E	190	4.9	1.1	22	16
584	OCT	01 05 30	55.6	33.64 S	178.89 W	301	4.7	1.5	18	15
585		01 06 50	39.4	31.62 S	179.83 E	452	5.2	1.9	22	15
586		01 16 38	22.8	32.01 S	179.92 E	478	4.8	1.5	18	11
587		02 03 30	14.0	31.49 S	179.99 W	523	5.3	1.9	21	15
588		02 03 51	00.1	35.17 S	179.61 W	220	5.5	1.2	21	17
589		02 15 07	28.5	40.09 S	175.51 E	33 R	3.7	1.2	22	12
590		03 07 15	45.3	38.42 S	175.68 E	186	4.2	1.6	20	13
591		03 11 33	21.8	38.68 S	176.21 E	0 R	2.7 F	0.6	5	5
592		03 22 39	53.5	40.35 S	176.08 E	33 R	3.4	1.3	14	10
593		04 16 17	45.0	39.10 S	175.63 E	94	3.5	1.0	17	12
594		04 17 01	37.3	40.57 S	175.09 E	12 R	3.7	1.3	11	7
595		05 09 08	23.2	36.25 S	179.81 W	33 R	3.8	0.7	7	5
596		05 09 53	03.2	41.88 S	173.90 E	12 R	3.2	1.3	14	8
597		05 15 32	50.3	39.72 S	176.87 E	30	5.6 F	0.8	17	22
598		05 15 38	12.0	39.68 S	176.92 E	33 R	3.0	1.0	10	6
599		05 15 46	35.7	39.70 S	176.98 E	33 R	2.9	0.8	10	6
600		05 15 49	49.3	39.77 S	177.01 E	33 R	3.1	0.7	10	8

REF NUM	ORIGIN TIME	LATITUDE			LONGITUDE			DEPTH km	MAG	S.E.	NUM OBS	NUM STN
		h	m	s	deg	deg	deg					
601	OCT	05	15	50	31.8	39.77 S	176.95 E	33 R	3.7 F	0.7	10	8
602		05	16	11	05.3	39.90 S	176.93 E	33 R	3.0	1.4	8	5
603		05	16	24	43.8	39.75 S	176.90 E	33 R	3.5 F	1.0	12	10
604		05	16	27	28.5	38.36 S	176.98 E	53	3.1	0.7	6	3
605		05	16	37	25.9	38.35 S	177.10 E	47	3.0	0.1	7	4
606		05	16	43	54.0	39.75 S	176.91 E	33 R	2.9	0.3	8	6
607		05	21	17	22.4	39.67 S	176.93 E	33 R	3.3	0.6	11	7
608		06	03	31	18.8	39.73 S	176.99 E	33 R	3.3	1.3	8	6
609		06	04	55	02.1	38.04 S	177.68 E	33 R	5.0 F	1.4	21	16
610		06	05	32	07.6	46.75 S	168.74 E	12 R	2.6 F	0.9	8	4
611		06	06	59	16.2	39.68 S	176.94 E	33 R	3.5	0.9	13	8
612		06	15	53	36.0	37.76 S	177.27 E	136	3.2	0.8	8	5
613		07	12	48	37.5	37.14 S	176.57 E	210	3.8	1.3	13	7
614		07	18	30	49.1	36.78 S	177.22 E	225	4.1	1.4	11	6
615		08	05	44	13.2	39.82 S	176.95 E	33 R	3.9 F	1.3	14	10
616		08	08	35	22.7	33.49 S	177.69 W	33 R	4.5	1.6	9	5
617		08	09	34	40.1	33.75 S	177.72 W	33 R	4.2	1.7	7	5
618		08	14	36	30.6	45.19 S	167.49 E	66	4.0	0.6	16	9
619		08	20	56	57.7	39.46 S	176.27 E	33 R	3.4	1.4	18	9
620		09	05	51	54.9	36.64 S	177.59 E	239	3.9	1.8	12	8
621		09	06	38	14.8	38.98 S	178.62 E	33 R	3.5	0.8	8	5
622		09	10	43	09.9	36.20 S	177.93 E	263	3.9	0.6	7	5
623		09	10	51	36.5	37.45 S	176.82 E	219	4.0	1.0	11	7
624		10	00	59	19.7	39.37 S	175.95 E	67	3.4	1.7	12	7
625		10	03	59	56.5	38.23 S	177.51 E	47	3.4	0.9	15	9
626		10	09	13	09.8	36.09 S	179.19 W	191	5.0	1.8	20	18
627		10	12	36	19.9	38.23 S	175.89 E	185	3.7	1.2	16	14
628		10	13	03	57.2	36.92 S	177.17 E	207	4.0	0.8	14	11
629		11	02	26	16.9	39.42 S	175.83 E	80	4.1 F	0.9	21	16
630		12	15	45	20.1	34.07 S	179.49 E	347	4.5	1.9	13	9
631		12	22	23	14.9	37.17 S	177.46 E	172	5.1 F	2.0	14	17
632		12	22	25	37.4	38.14 S	176.29 E	207	4.0	1.4	12	9
633		13	09	52	55.0	39.15 S	174.80 E	33 R	3.0	0.6	10	7
634		13	13	15	54.7	37.74 S	176.29 E	213	3.9	1.0	16	13
635		13	14	32	56.5	45.00 S	167.70 E	96	3.5	0.4	10	6
636		14	12	27	34.8	39.17 S	177.95 E	33 R	5.0 F	1.1	20	23
637		14	12	53	33.2	38.98 S	177.82 E	33 R	3.6	1.8	10	11
638		14	14	22	55.5	39.02 S	177.87 E	33 R	3.5	1.8	13	11
639		14	16	14	08.3	39.11 S	177.79 E	33 R	4.2 F	0.9	12	17
640		14	17	54	22.2	39.04 S	177.84 E	33 R	3.6	1.6	8	9
641		14	18	21	37.9	39.23 S	178.19 E	33 R	4.0 F	1.4	13	13
642		14	19	04	43.8	39.16 S	177.93 E	33 R	4.0 F	1.1	13	14
643		14	21	29	33.0	39.06 S	177.85 E	33 R	3.6	1.9	9	8
644		15	03	18	53.1	39.18 S	178.00 E	33 R	3.9	1.4	12	13
645		15	03	49	16.1	39.52 S	177.34 E	33 R	3.6	0.7	14	12
646		15	04	09	22.3	32.58 S	179.56 W	492	4.7	2.0	13	9
647		16	04	57	31.9	39.20 S	178.02 E	33 R	4.0	1.3	13	14
648		16	17	58	36.5	37.89 S	176.20 E	231	4.0	1.6	13	11
649		17	03	08	42.8	39.78 S	176.84 E	33 R	3.7	0.8	16	11
650		17	19	49	02.6	38.36 S	176.83 E	33 R	3.8	1.2	15	13

REF NUM	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS	NUM STN
	h m s	deg	deg	km				
651	OCT 18 01 15 45.3	44.20 S	174.34 E	33 R	4.1	1.4	16	11
652	18 09 55 13.4	33.19 S	178.76 W	302	5.3	2.1	20	16
653	19 04 00 06.2	38.68 S	176.06 E	111	3.8	1.5	18	11
654	19 16 05 05.3	36.28 S	179.21 E	178	4.2	1.5	16	11
655	21 04 40 24.6	38.43 S	176.01 E	182	4.0	1.6	21	15
656	21 05 05 14.4	45.44 S	167.40 E	51	3.7	0.7	11	8
657	21 07 17 02.2	43.20 S	171.76 E	33 R	3.6	1.2	13	9
658	22 00 07 22.6	39.68 S	173.58 E	33 R	3.5	0.8	12	9
659	22 02 58 53.8	39.80 S	176.92 E	33 R	4.2 F	1.2	14	16
660	22 10 16 45.4	41.31 S	173.13 E	101	3.8	1.3	19	14
661	22 19 00 42.1	41.56 S	171.91 E	12 R	3.7 F	1.1	16	11
662	25 11 17 44.5	45.18 S	167.37 E	93	3.7	0.7	13	9
663	25 21 11 19.5	37.14 S	176.76 E	223	3.7	0.6	10	12
664	26 06 37 22.8	42.83 S	171.00 E	12 R	3.8 F	1.6	13	13
665	26 08 14 07.6	38.84 S	175.21 E	227	4.0	1.0	12	19
666	26 23 12 26.2	35.32 S	179.39 E	33 R	3.8	0.4	7	8
667	27 05 07 15.3	39.77 S	177.16 E	33 R	3.4 F	1.0	13	12
668	27 15 58 05.1	36.10 S	174.10 E	12 R	2.8 F	1.1	8	5
669	28 03 22 35.8	40.74 S	176.80 E	33 R	3.8	1.6	9	15
670	28 03 40 35.3	37.94 S	176.17 E	225	3.6	1.5	8	9
671	28 03 59 50.0	37.77 S	176.28 E	307	4.4	0.9	14	17
672	29 08 37 58.0	39.59 S	174.15 E	209	4.5	1.1	19	16
673	29 16 36 35.8	39.95 S	175.39 E	12 R	3.6	0.9	20	12
674	29 18 13 55.5	47.70 S	166.11 E	12 R	4.4 F	1.0	8	13
675	30 07 11 25.6	49.78 S	164.20 E	33 R	4.6	1.1	11	9
676	31 10 26 21.9	37.93 S	176.87 E	1	2.9 F	2.1	6	7
677	NOV 01 23 59 30.7	37.98 S	175.82 E	253	3.7	1.3	9	9
678	02 10 10 32.0	38.79 S	177.08 E	33 R	4.1 F	1.0	11	15
679	02 10 21 12.1	38.77 S	177.11 E	33 R	3.4	1.0	10	14
680	02 11 01 33.6	38.78 S	177.06 E	33 R	2.7	0.8	10	7
681	03 06 56 51.8	40.05 S	176.88 E	12 R	3.2	1.0	6	6
682	03 06 57 19.3	38.58 S	175.23 E	255	4.8	1.0	21	19
683	03 23 31 34.6	32.27 S	179.75 W	33 R	4.4	0.9	5	5
684	04 02 42 59.7	40.25 S	179.01 E	33 R	4.3	1.0	12	17
685	04 14 04 59.2	35.55 S	179.17 W	12 R	4.6	1.0	9	13
686	04 14 32 21.3	35.52 S	179.24 W	12 R	4.4	1.2	10	12
687	04 16 52 21.6	42.28 S	173.15 E	12 R	3.7	1.0	11	12
688	05 05 04 35.3	38.27 S	176.35 E	144	4.1	0.9	17	17
689	05 09 09 44.1	35.13 S	179.96 E	33 R	4.0	1.2	7	10
690	05 11 38 25.6	44.42 S	167.10 E	12 R	4.4 F	1.1	9	16
691	06 23 22 42.5	36.11 S	174.26 E	5 R	2.6 F	0.4	5	3
692	07 03 46 27.0	41.17 S	176.86 E	33 R	3.8	1.5	17	19
693	07 19 55 55.8	35.46 S	178.93 W	33 R	4.3	0.4	8	6
694	08 05 30 15.8	42.26 S	173.17 E	15	4.3	0.6	15	21
695	10 20 39 29.9	42.01 S	171.43 E	12 R	3.9	1.0	10	8
696	11 09 26 57.0	35.21 S	178.37 E	309	5.1	1.1	12	14
697	11 16 37 09.1	39.55 S	173.56 E	12 R	3.5	0.6	10	6
698	12 07 29 52.3	49.87 S	164.68 E	33 R	4.8	1.6	13	9
699	13 03 58 31.6	42.02 S	173.82 E	12 R	4.3	1.0	18	18
700	14 00 34 11.1	38.26 S	177.54 E	33 R	4.5 F	1.2	19	22

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
701	NOV 14 05 14 50.5	39.65 S	176.80 E	33 R	4.7 F	1.1	18	16
702	16 02 48 09.8	40.18 S	174.90 E	12 R	4.4 F	1.1	18	14
703	16 06 12 24.9	40.19 S	175.03 E	12 R	3.5	1.6	16	11
704	16 16 07 08.1	40.15 S	174.85 E	12 R	3.7	0.6	13	10
705	17 03 16 49.6	40.07 S	177.01 E	33 R	4.0	0.9	19	15
706	17 10 17 42.9	37.92 S	179.27 W	33 R	4.5	1.7	17	13
707	17 15 12 55.3	38.64 S	176.67 E	33 R	2.8	1.0	11	6
708	17 21 53 16.6	35.37 S	179.95 W	218	4.2	1.0	11	9
709	18 08 27 55.2	37.75 S	176.40 E	12 R	2.6 F	0.8	4	2
710	18 12 40 10.9	32.08 S	177.69 W	273	4.7	2.1	13	10
711	18 21 25 33.6	39.27 S	175.73 E	88	4.1	1.2	24	15
712	19 03 21 41.2	32.85 S	179.49 W	302	4.6	1.4	10	8
713	19 16 41 41.3	45.28 S	167.34 E	33 R	4.3 F	1.5	14	8
714	20 14 20 29.3	41.00 S	175.48 E	3 R	3.6 F	0.6	16	17
715	20 20 56 54.6	35.81 S	179.87 E	202	5.1	1.3	23	14
716	22 11 54 32.6	32.50 S	179.83 W	472	5.3	2.6	14	8
717	22 11 58 54.5	34.53 S	179.37 W	33 R	4.5	1.4	7	5
718	22 13 12 45.2	34.83 S	178.66 W	33 R	5.2	2.0	11	8
719	22 14 56 40.6	34.84 S	178.47 W	33 R	4.9	1.7	11	7
720	22 15 10 15.1	33.98 S	179.09 W	317	4.8	1.7	9	6
721	22 19 23 09.7	37.20 S	176.93 E	234	4.0	0.6	9	8
722	22 21 51 22.9	38.28 S	176.20 E	154	4.2	1.6	15	11
723	23 04 51 38.6	34.85 S	179.15 W	33 R	4.5	1.5	14	9
724	23 05 55 37.5	40.28 S	173.39 E	208	4.1	1.3	11	9
725	23 23 17 54.1	37.84 S	179.08 E	12 R	3.7	1.5	11	8
726	24 04 00 48.7	37.67 S	178.87 E	33 R	3.8 F	1.0	11	8
727	24 04 22 00.3	37.69 S	179.70 E	12 R	5.5 F	1.0	9	19
728	24 08 00 07.0	33.16 S	178.88 W	33 R	4.8	2.0	12	11
729	24 09 55 16.6	33.94 S	178.77 W	314	4.5	0.9	8	8
730	24 11 41 32.2	40.30 S	176.63 E	12 R	3.4	2.0	14	10
731	24 14 08 55.3	35.09 S	178.66 W	212	4.6	1.5	14	10
732	25 03 24 33.9	44.72 S	167.89 E	12 R	4.6	1.1	9	9
733	25 03 26 01.1	44.79 S	167.83 E	12 R	4.1	1.6	5	3
734	25 03 29 20.2	38.92 S	179.23 E	12 R	3.7	1.2	9	9
735	25 04 57 05.3	37.87 S	178.49 E	12 R	5.2 F	0.6	14	15
736	25 05 02 35.2	37.92 S	178.46 E	12 R	3.8	1.3	11	7
737	25 05 15 37.2	37.93 S	178.47 E	12 R	3.8	1.3	11	7
738	25 06 10 23.1	37.51 S	178.93 E	33 R	4.0	1.2	10	6
739	25 11 38 38.0	35.63 S	179.69 E	488	4.3	1.4	8	6
740	25 12 00 40.9	34.06 S	178.02 W	251	4.4	2.5	8	7
741	25 13 34 27.6	31.96 S	179.12 W	472	4.8	1.9	7	8
742	25 15 51 59.5	37.78 S	178.79 E	33 R	3.6	0.9	10	7
743	25 22 31 30.1	40.94 S	175.63 E	12 R	3.9	1.2	14	8
744	26 11 29 25.2	49.54 S	164.22 E	33 R	4.5	2.4	9	5
745	26 13 48 43.9	39.81 S	176.73 E	12 R	3.5 F	1.7	14	8
746	26 14 53 19.4	39.43 S	177.03 E	12 R	4.0 F	1.5	20	12
747	26 18 16 26.8	32.81 S	179.92 W	436	4.3	0.4	5	4
748	27 08 28 23.4	37.78 S	178.45 E	12 R	3.8	1.3	13	7
749	27 09 43 42.1	37.67 S	179.55 E	12 R	4.9 F	1.4	12	16
750	28 22 09 40.2	45.41 S	166.53 E	12 R	3.9	1.6	8	7

REF NUM		ORIGIN h m s	TIME	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
751	NOV	29 04 01	30.5	35.38 S	179.69 E	33 R	4.1	1.6	8	6
752		29 04 28	39.6	35.23 S	178.66 W	33 R	5.2	1.2	11	11
753		29 06 35	52.2	35.20 S	179.32 W	33 R	4.3	1.3	9	7
754		29 06 48	36.3	35.09 S	178.37 W	33 R	6.2	1.2	12	11
755		29 06 53	38.2	35.12 S	179.64 W	33 R	4.6	2.8	7	6
756		29 06 55	52.8	35.24 S	179.13 W	33 R	4.5	1.0	10	7
757		29 07 00	26.3	35.26 S	179.01 W	33 R	4.8	0.9	9	7
758		29 07 09	58.2	35.58 S	177.69 W	33 R	4.5	1.9	8	7
759		29 07 12	19.2	35.39 S	178.52 W	33 R	4.3	2.1	8	7
760		29 07 14	40.9	35.18 S	179.25 W	33 R	4.2	1.4	7	6
761		29 09 20	47.5	35.50 S	178.22 W	33 R	4.7	1.8	12	7
762		29 11 36	28.4	35.49 S	179.11 W	33 R	4.3	1.1	8	6
763		29 14 22	44.2	35.62 S	177.55 W	33 R	4.5	2.6	10	8
764		29 15 49	50.9	37.72 S	176.34 E	238	3.6	0.7	7	4
765		30 06 02	31.7	35.62 S	179.33 W	33 R	5.0	2.0	15	14
766		30 20 18	24.0	35.76 S	178.88 W	33 R	4.8	2.2	9	12
767		30 20 31	24.9	33.47 S	179.69 W	305	5.3	1.2	10	12
768		30 21 45	05.1	36.20 S	178.02 W	33 R	4.2	2.6	8	7
769	DEC	01 14 23	15.4	37.91 S	178.40 E	12 R	4.6F	1.0	10	13
770		01 20 47	07.8	37.86 S	179.02 E	12 R	3.9	1.4	9	6
771		02 01 04	53.8	33.11 S	178.31 W	295	5.0	1.2	10	9
772		02 07 37	14.2	39.68 S	174.52 E	167	3.7	1.3	12	9
773		02 08 25	11.4	36.99 S	177.36 E	261	4.4	1.2	14	9
774		03 17 44	12.7	38.39 S	179.21 E	12 R	4.0	1.1	10	9
775		03 19 07	33.9	35.05 S	178.85 W	214	4.3	1.0	8	6
776		03 20 35	40.3	39.97 S	176.72 E	60	3.8	1.5	19	12
777		04 08 18	35.7	33.11 S	177.48 W	411	4.7	2.3	11	8
778		08 03 58	25.9	37.53 S	179.06 E	33 R	4.2	0.9	13	13
779		09 05 07	34.6	42.92 S	171.40 E	12 R	3.8	0.7	9	7
780		12 23 13	25.7	35.33 S	179.20 W	12 R	4.3	0.9	6	12
781		13 09 41	04.9	32.50 S	177.14 W	12 R	4.6	2.2	9	10
782		14 16 09	16.0	37.00 S	176.73 E	340	4.5	1.0	15	13
783		15 05 48	04.9	42.38 S	173.34 E	33 R	4.4F	0.7	20	24
784		15 06 52	37.8	42.38 S	172.23 E	12 R	4.1F	1.2	17	21
785		15 13 08	23.3	37.46 S	176.45 E	236	3.6	1.4	12	9
786		15 16 28	18.4	36.91 S	176.79 E	281	3.8	0.6	8	9
787		15 22 45	59.7	39.94 S	176.83 E	33 R	3.9F	0.6	12	20
788		16 19 24	09.8	38.65 S	175.99 E	136	4.0	1.3	16	20
789		16 21 19	41.9	49.06 S	164.90 E	12 R	4.0	1.1	7	7
790		17 12 45	57.4	37.50 S	176.42 E	225	3.8	0.8	13	14
791		18 05 31	14.8	39.02 S	174.91 E	218	4.0	1.4	14	13
792		18 10 10	18.1	37.56 S	176.45 E	290	3.6	1.1	10	7
793		20 13 54	49.0	36.77 S	178.64 E	113	3.9	1.3	14	11
794		21 02 33	28.5	39.20 S	179.85 E	33 R	4.0	1.5	11	9
795		21 17 32	50.8	38.49 S	176.02 E	122	3.7	1.4	12	8
796		21 18 17	34.1	38.07 S	176.00 E	272	4.2	1.3	16	11
797		22 04 05	49.0	38.20 S	177.58 E	88	3.8	2.0	14	8
798		22 20 11	30.6	37.45 S	176.41 E	247	5.8F	1.6	18	21
799		25 00 34	31.9	34.11 S	179.45 W	231	5.0	2.0	15	13
800		29 02 53	27.4	45.68 S	167.07 E	94	3.5	0.5	9	6

REF NUM	ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM	
							h m s	deg
801 DEC	30 02 19 27.0	40.05 S	176.47 E	47	3.4	1.6	13	10
802	30 10 29 44.0	31.40 S	179.08 E	403	4.9	0.7	8	6
803	31 05 22 02.5	45.09 S	170.75 E	5 R	3.5 F	1.1	11	6
804	31 12 16 04.7	39.89 S	175.79 E	12 R	3.6	1.3	24	13
805	31 14 07 46.7	33.37 S	179.24 W	515	4.5	1.0	10	7

PUKAKI NETWORK

The origins listed in this section have been determined from data provided by the stations of the Pukaki network, details of which are given in an earlier section of the Report. For some large events, an alternative solution using stations of the standard network may also appear in the appropriate section. Because of the close spacing of the Pukaki network and the use of well-established velocities appropriate to the region, the origins given below are to be preferred for most studies of tectonic setting and structure, but for statistical work involving a larger part of the country, the results from the standard network will provide more homogeneous data.

The velocities and crustal thicknesses used in this section are:

Depth km	P-velocity km/s	S-velocity km/s
0 - 1.7	4.44	2.60
1.7 - 9.6	5.88	3.44
9.6 - 32	6.5	3.8
32 -	8.1	4.7

The origins have been determined using the same program as that used for the standard network, except that it uses the above crustal model and has more stringent convergence criteria.

The format of the list is the same as that for the data from the standard network, except that the epicentral coordinates and focal depths are given with greater precision.

REF NUM		ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
P 001	JAN	03 17 49 43.4	44.145 S	170.072 E	2.8	1.3	0.2	12
P 002		03 21 21 55.1	44.100 S	169.876 E	9.4	1.4	0.2	12
P 003		04 18 52 16.6	44.196 S	169.835 E	9.3	1.6	0.1	11
P 004		04 20 32 56.4	44.329 S	169.570 E	7.0	2.6	0.2	11
P 005		05 06 59 31.6	44.323 S	169.572 E	6.0	1.4	0.2	9
P 006		06 16 41 45.2	44.577 S	169.938 E	7.6	0.8	0.0	6
P 007		06 20 04 11.5	44.413 S	169.497 E	5.4	1.2	0.1	7
P 008		07 20 37 53.2	44.445 S	169.959 E	1.4	1.3	0.1	8
P 009		09 01 26 17.5	44.417 S	170.407 E	33.4	2.3	0.3	12
P 010		10 08 10 16.2	44.451 S	169.958 E	8.1	1.4	0.0	6
P 011		12 15 22 54.2	43.636 S	170.708 E	4.1	1.4	0.2	6
P 012		13 02 59 42.5	44.338 S	169.574 E	5.9	1.4	0.1	6
P 013		13 07 10 18.8	44.474 S	169.898 E	2.0 R	0.7	0.4	5
P 014		13 07 42 32.8	44.466 S	169.888 E	8.0	0.7	0.0	5
P 015		13 07 44 30.4	44.474 S	169.883 E	8.6	1.0	0.1	5
P 016		15 21 35 42.4	43.920 S	170.409 E	7.7	1.1	0.2	5
P 017		17 02 01 08.3	43.601 S	170.364 E	1.7 R	1.9	0.2	8
P 018		17 16 24 08.6	44.007 S	170.066 E	6.8	2.6	0.1	9
P 019		21 21 38 58.9	43.923 S	169.775 E	7.8	1.4	0.1	5
P 020		24 15 08 16.8	44.177 S	170.014 E	4.9	0.7	0.1	7
P 021		25 22 31 17.5	44.354 S	169.781 E	10.7	0.8	0.0	6
P 022		26 03 14 17.5	44.354 S	169.780 E	11.0	0.7	0.0	6
P 023		26 09 16 17.6	44.330 S	170.006 E	10.3	1.4	0.1	7
P 024		26 22 40 04.8	43.607 S	170.192 E	0.0 R	1.9	0.1	6
P 025		27 02 10 17.8	43.599 S	170.229 E	0.0 R	1.6	0.2	5
P 026		27 15 01 18.1	44.352 S	169.781 E	10.2	0.8	0.1	6
P 027		27 18 18 22.1	43.619 S	170.268 E	0.0 R	1.8	0.1	8
P 028		27 21 47 37.8	43.970 S	170.604 E	8.4	1.4	0.2	8
P 029		29 17 24 19.2	44.054 S	169.599 E	4.2	1.4	0.2	10
P 030		29 21 43 26.7	44.230 S	170.459 E	9.3	0.7	0.1	7
P 031	FEB	04 05 42 54.6	44.355 S	169.873 E	10.0 R	1.6	0.1	9
P 032		04 19 41 06.6	43.952 S	169.441 E	0.0 R	1.8	0.1	7
P 033		05 22 15 49.8	44.354 S	170.022 E	10.0 R	0.8	0.1	7
P 034		06 15 37 20.5	44.500 S	170.045 E	7.3	1.0	0.2	7
P 035		07 11 49 17.5	43.736 S	169.736 E	1.7 R	1.4	0.1	10
P 036		08 04 34 10.6	44.466 S	169.805 E	8.8	1.1	0.2	7
P 037		12 09 33 22.0	44.064 S	169.959 E	10.0 R	1.1	0.2	10
P 038		14 07 46 56.9	44.336 S	170.241 E	3.7	1.3	0.1	11
P 039		15 05 08 28.0	43.604 S	170.618 E	4.6	2.2	0.1	8
P 040		15 11 21 51.3	44.328 S	170.035 E	10.4	0.4	0.2	7
P 041		17 17 29 38.0	44.264 S	170.124 E	9.7	1.1	0.2	11
P 042		18 08 13 47.8	43.770 S	170.821 E	4.5	1.7	0.0	6
P 043		20 00 50 26.7	44.141 S	170.595 E	8.7	1.4	0.2	6
P 044		21 18 54 42.1	43.994 S	170.406 E	6.5	0.8	0.1	6
P 045		24 07 44 32.5	44.050 S	171.458 E	5.0 R	3.2	0.3	11
P 046		25 02 26 54.6	43.981 S	169.651 E	5.7	1.9	0.2	8
P 047		25 15 07 07.0	44.264 S	170.421 E	9.9	0.9	0.1	8
P 048		26 06 54 07.8	44.432 S	170.042 E	8.7	2.1	0.1	13
P 049		28 05 59 50.3	44.176 S	169.713 E	7.6	1.0	0.2	11
P 050	MAR	01 06 04 26.2	44.077 S	170.832 E	3.6		0.1	8

REF NUM	ORIGIN	TIME			LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	
		h	m	s							
P 051	MAR	01	06	10	26.4	44.078 S	170.683 E	6.4	2.6	0.2	10
P 052		01	06	44	47.6	44.087 S	170.648 E	2.2	2.2	0.2	9
P 053		01	07	07	47.4	44.082 S	170.697 E	5.5	1.0	0.1	8
P 054		01	07	10	60.0	44.082 S	170.736 E	6.5	1.0	0.1	6
P 055		01	07	20	00.4	44.070 S	170.823 E	4.1	1.2	0.1	6
P 056		01	07	21	02.4	44.077 S	170.748 E	5.5	1.2	0.0	6
P 057		01	08	38	48.3	44.075 S	170.757 E	5.1	1.2	0.1	6
P 058		01	08	41	50.0	44.081 S	170.685 E	6.9	1.3	0.1	8
P 059		01	10	58	50.1	44.096 S	170.725 E	7.6	1.5	0.2	8
P 060		01	11	11	31.8	44.085 S	170.695 E	7.0	1.6	0.2	9
P 061		01	16	34	12.0	44.080 S	170.756 E	2.5	2.2	0.2	9
P 062		02	22	39	38.1	44.089 S	170.667 E	7.7	1.4	0.2	7
P 063		03	15	12	47.3	44.089 S	170.705 E	2.8	1.2	0.3	6
P 064		03	15	45	58.7	44.080 S	170.727 E	5.9	1.3	0.1	7
P 065		03	15	46	17.7	44.077 S	170.706 E	8.3	1.5	0.2	9
P 066		04	04	23	44.4	44.154 S	170.580 E	8.0	1.0	0.1	6
P 067		04	14	37	06.2	44.199 S	169.807 E	8.0	0.5	0.1	5
P 068		04	20	13	15.5	44.078 S	170.731 E	6.1	1.0	0.0	6
P 069		05	00	28	11.8	44.284 S	169.787 E	13.1	0.9	0.2	8
P 070		05	17	42	23.0	44.085 S	170.691 E	2.7	2.6	0.1	9
P 071		05	20	22	41.0	44.123 S	170.343 E	7.1	0.6	0.0	5
P 072		05	21	38	29.5	44.086 S	170.731 E	1.7 R	0.7	0.1	5
P 073		06	03	38	32.9	43.773 S	169.759 E	5.2	1.2	0.3	7
P 074		06	06	47	10.1	44.083 S	170.692 E	6.1	1.2	0.1	7
P 075		06	14	06	32.1	44.799 S	169.952 E	0.2	1.5	0.1	9
P 076		07	12	34	14.7	44.081 S	170.714 E	5.9	1.1	0.1	7
P 077		07	13	11	43.7	44.078 S	170.720 E	6.0 R	1.0	0.1	6
P 078		10	01	03	43.7	44.079 S	169.954 E	10.0 R	0.8	0.1	8
P 079		10	21	56	56.7	44.120 S	169.956 E	7.0 R	0.9	0.2	5
P 080		11	06	11	32.2	44.062 S	169.955 E	10.0 R	0.9	0.1	12
P 081		11	12	41	58.1	43.961 S	169.580 E	4.0 R	1.2	0.3	8
P 082		11	14	50	46.4	44.082 S	170.681 E	3.9	1.4	0.1	9
P 083		16	05	39	39.1	43.829 S	169.588 E	4.0 R	1.7	0.2	7
P 084		19	06	34	18.2	44.074 S	170.686 E	2.9	2.0	0.2	15
P 085		23	00	42	12.1	44.283 S	170.004 E	9.7	1.0	0.1	9
P 086		23	04	08	01.4	44.334 S	170.425 E	6.3	0.7	0.1	5
P 087		23	20	39	40.1	44.074 S	170.692 E	9.3	1.3	0.2	9
P 088		24	01	13	18.0	43.682 S	170.638 E	4.0	1.4	0.2	8
P 089		24	02	43	03.0	44.091 S	170.667 E	2.3	1.5	0.2	10
P 090		24	17	41	30.4	43.560 S	170.549 E	4.3	1.3	0.1	8
P 091		27	08	09	12.1	43.982 S	170.357 E	3.8	1.7	0.2	13
P 092		28	07	07	16.0	43.943 S	169.710 E	3.4	1.1	0.3	7
P 093		31	18	00	45.4	44.366 S	169.530 E	10.0 R	1.3	0.3	9
P 094		31	19	02	37.1	44.184 S	170.028 E	5.5	1.1	0.1	10
P 095	APR	01	03	30	57.5	44.007 S	169.700 E	8.0 R	0.9	0.3	5
P 096		03	06	04	03.3	43.842 S	170.691 E	6.4	1.5	0.2	8
P 097		03	15	36	44.4	44.006 S	170.419 E	13.0	0.5	0.1	7
P 098		04	00	59	54.3	44.807 S	169.971 E	0.0 R	2.1	0.1	12
P 099		04	03	50	18.1	44.469 S	170.196 E	5.8	1.2	0.1	11
P 100		04	11	13	50.8	44.428 S	169.435 E	3.8 R	1.4	0.2	9

REF NUM		ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS	
		h m s	deg	deg	km				
P 101	APR	08 07 17	40.9	43.984 S	169.692 E	5.1	1.1	0.2	6
P 102		08 07 21	36.1	43.870 S	169.685 E	3.2	1.4	0.1	7
P 103		10 23 48	10.3	44.364 S	169.537 E	12.9	1.0	0.3	6
P 104		11 16 26	51.0	44.401 S	170.271 E	6.9	0.6	0.1	8
P 105		14 01 23	23.0	44.538 S	170.035 E	1.9	1.1	0.1	7
P 106		14 07 00	29.2	44.114 S	170.091 E	9.0 R	1.1	0.2	7
P 107		15 10 24	31.5	44.081 S	170.684 E	3.1	1.5	0.2	13
P 108		15 13 04	08.9	44.910 S	169.910 E	0.0 R	1.6	0.2	8
P 109		15 13 38	59.9	43.931 S	169.335 E	0.0 R	1.1	0.1	6
P 110		17 13 27	56.7	44.178 S	170.257 E	7.1	0.5	0.1	7
P 111		18 08 50	57.6	43.777 S	169.386 E	0.0 R	1.7	0.2	10
P 112		20 03 17	30.9	44.025 S	171.082 E	3.7	1.5	0.0	5
P 113		20 06 49	08.6	43.552 S	170.231 E	0.0 R	1.4	0.1	4
P 114		20 10 08	10.6	44.051 S	169.971 E	8.3	0.6	0.1	6
P 115		21 06 48	29.9	44.162 S	169.591 E	7.1	1.8	0.2	11
P 116		21 17 02	02.0	44.357 S	170.164 E	6.4	0.6	0.2	8
P 117		22 05 15	12.3	44.305 S	169.912 E	11.4	0.9	0.1	6
P 118		25 05 34	19.5	44.534 S	170.009 E	1.7 R	0.8	0.1	5
P 119		29 16 00	55.9	44.025 S	170.397 E	4.4	1.4	0.2	14
P 120		30 08 45	48.1	44.384 S	169.551 E	15.5	0.9	0.2	9
P 121	MAY	01 06 04	54.9	44.022 S	170.400 E	6.6	0.9	0.1	8
P 122		01 06 05	05.6	44.026 S	170.407 E	6.2	1.7	0.1	10
P 123		04 16 10	31.9	43.980 S	170.290 E	2.0	1.0	0.1	7
P 124		04 17 32	41.8	44.684 S	169.945 E	3.6	1.3	0.1	6
P 125		04 21 02	22.0	44.539 S	169.915 E	43.6	2.7	0.2	12
P 126		05 11 53	23.9	44.681 S	169.931 E	4.2	1.2	0.0	5
P 127		05 17 17	30.1	44.676 S	169.417 E	3.3	1.1	0.2	7
P 128		06 01 07	46.1	44.085 S	170.690 E	3.9	1.4	0.1	9
P 129		06 01 35	03.2	44.089 S	170.678 E	2.8	1.5	0.1	9
P 130		06 01 38	48.1	44.088 S	170.687 E	3.1	1.6	0.1	12
P 131		09 00 48	57.7	43.810 S	170.460 E	10.8	1.2	0.2	6
P 132		09 11 40	04.8	44.458 S	169.767 E	9.4	0.9	0.1	9
P 133		11 18 39	42.5	44.008 S	169.600 E	3.8	1.1	0.1	7
P 134		15 16 49	25.3	44.230 S	169.814 E	8.5 R	0.6	0.0	4
P 135		15 16 50	25.4	44.242 S	169.817 E	9.0	1.0	0.1	8
P 136		15 17 15	36.9	44.242 S	169.820 E	8.8	1.3	0.1	9
P 137		15 17 33	16.4	44.236 S	169.825 E	4.9	1.4	0.2	10
P 138		15 17 38	57.2	44.248 S	169.848 E	8.4 R	0.4	0.0	4
P 139		15 17 41	44.4	44.241 S	169.813 E	8.5	0.9	0.1	7
P 140		15 18 17	33.8	44.251 S	169.823 E	8.7	0.9	0.2	7
P 141		15 18 20	28.1	43.724 S	170.093 E	3.7	1.4	0.1	7
P 142		15 18 24	50.7	44.246 S	169.831 E	8.9	1.0	0.0	7
P 143		15 18 27	45.5	44.252 S	169.837 E	5.8	0.5	0.1	5
P 144		15 19 19	05.4	44.284 S	169.833 E	12.4	0.6	0.2	5
P 145		15 21 09	29.8	44.241 S	169.826 E	8.2	1.1	0.1	8
P 146		15 21 13	59.3	44.248 S	169.842 E	5.2 R	0.5	0.0	4
P 147		15 22 05	38.3	44.255 S	169.836 E	8.8	0.7	0.0	5
P 148		16 00 15	36.4	44.237 S	169.828 E	8.3	1.6	0.2	10
P 149		16 00 34	47.3	44.246 S	169.830 E	8.1	0.9	0.1	6
P 150		16 22 58	14.3	44.017 S	170.399 E	6.4	2.3	0.2	11

REF NUM		ORIGIN TIME			LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS	
		h	m	s	deg	deg	km				
P 151	MAY	17	15	08	09.6	44.238 S	169.829 E	2.0	1.0	0.2	7
P 152		17	21	26	58.6	44.234 S	169.828 E	3.1	1.1	0.1	11
P 153		18	17	09	17.0	43.541 S	170.002 E	23.0	1.3	0.2	6
P 154		19	05	58	11.2	43.688 S	170.084 E	0.9	1.1	0.1	6
P 155		19	09	27	35.3	44.229 S	169.814 E	7.6	1.3	0.1	13
P 156		19	11	00	16.6	44.087 S	170.682 E	2.8	1.3	0.1	9
P 157		19	13	02	51.2	43.967 S	170.018 E	10.0 R	1.4	0.1	8
P 158		20	19	10	27.2	44.437 S	170.039 E	9.1	1.1	0.1	8
P 159		23	05	25	00.5	44.236 S	169.827 E	5.0	1.2	0.2	10
P 160		23	06	00	02.4	44.239 S	169.832 E	7.3	1.1	0.2	9
P 161		24	03	22	38.6	44.422 S	169.325 E	3.9	1.9	0.0	6
P 162		25	21	41	38.6	44.237 S	169.825 E	7.1	1.4	0.2	9
P 163		26	22	32	09.6	44.235 S	169.813 E	9.4	0.9	0.1	6
P 164		26	22	55	10.4	44.232 S	169.825 E	8.4	1.3	0.2	10
P 165		28	00	06	07.9	44.396 S	170.262 E	8.8	1.7	0.1	11
P 166		29	05	02	05.7	43.942 S	170.014 E	3.3	1.4	0.2	8
P 167		29	09	50	01.6	44.234 S	169.815 E	4.3		0.2	10
P 168		29	09	59	07.1	44.243 S	169.838 E	5.9	1.1	0.2	12
P 169		29	10	20	21.6	44.244 S	169.819 E	9.1	0.8	0.1	8
P 170	JUN	01	21	20	42.5	44.336 S	169.537 E	5.3	1.3	0.2	8
P 171		02	08	48	29.8	44.240 S	169.829 E	8.3	1.7	0.1	11
P 172		02	08	57	03.2	44.247 S	169.845 E	1.4	1.0	0.2	9
P 173		03	18	47	30.3	43.932 S	170.373 E	5.0	1.4	0.2	7
P 174		05	07	48	01.6	44.376 S	169.552 E	12.6	1.6	0.1	11
P 175		05	09	33	40.0	43.990 S	170.507 E	4.7	1.3	0.2	11
P 176		05	12	21	38.9	44.080 S	170.719 E	1.5	1.1	0.2	7
P 177		05	15	23	35.5	44.078 S	170.709 E	4.3	1.2	0.1	8
P 178		06	20	35	38.6	44.345 S	169.490 E	5.3	1.6	0.1	6
P 179		07	02	26	03.3	44.093 S	170.722 E	3.3	1.4	0.2	7
P 180		07	15	26	40.6	44.688 S	169.860 E	5.0 R	1.1	0.1	6
P 181		07	21	00	58.2	44.349 S	169.531 E	7.4	1.3	0.2	10
P 182		08	01	29	41.0	43.676 S	170.743 E	6.7	1.5	0.0	6
P 183		08	08	32	16.2	44.354 S	169.528 E	9.0	1.4	0.2	10
P 184		08	21	33	25.4	43.964 S	170.015 E	11.0	1.6	0.1	8
P 185		08	23	43	24.1	44.342 S	169.534 E	7.4	1.6	0.2	7
P 186		10	08	37	04.7	43.989 S	170.358 E	3.8	1.0	0.2	8
P 187		10	17	08	15.8	44.263 S	170.033 E	9.3	0.8	0.1	9
P 188		11	14	23	24.6	44.417 S	169.767 E	1.2 R	0.4	0.1	6
P 189		12	02	32	57.5	44.010 S	169.583 E	5.0 R	1.0	0.2	5
P 190		13	04	57	33.6	44.126 S	170.099 E	4.3		0.1	10
P 191		13	11	25	57.1	44.373 S	169.547 E	13.5	1.1	0.1	9
P 192		13	17	13	40.4	44.229 S	169.945 E	8.2	1.2	0.1	10
P 193		15	16	42	12.7	44.008 S	170.417 E	12.8	0.9	0.2	13
P 194		17	23	45	57.2	44.140 S	169.940 E	4.5 R	0.9	0.1	7
P 195		18	12	27	14.2	44.115 S	169.930 E	11.1	1.1	0.1	8
P 196		18	15	01	40.1	44.384 S	169.551 E	15.1	0.8	0.1	5
P 197		18	22	27	48.4	44.180 S	169.923 E	3.0 R	0.6	0.1	6
P 198		19	05	14	34.2	44.285 S	170.088 E	3.8	0.8	0.2	9
P 199		20	01	45	43.2	43.835 S	169.330 E	2.2 R	2.0	0.2	7
P 200		20	04	50	47.1	43.893 S	169.415 E	1.9 R	1.5	0.2	9

REF NUM	ORIGIN TIME	LATTITUDE			LONGITUDE		DEPTH km	MAG	S.E.	NUM OBS	
		h	m	s	deg	deg					
P 201	JUN	20	18	30	18.1	44.456 S	169.576 E	7.7	1.2	0.1	7
P 202		20	23	25	24.4	43.872 S	169.425 E	5.5	1.7	0.2	6
P 203		20	23	25	41.2	43.850 S	169.350 E	2.2 R	2.0	0.2	7
P 204		21	14	06	05.0	44.472 S	169.446 E	7.5	1.0	0.0	5
P 205		21	16	07	23.6	44.465 S	169.476 E	7.6	1.1	0.1	5
P 206		21	18	45	42.6	44.472 S	169.456 E	7.2	1.3	0.1	5
P 207		21	21	37	47.2	44.440 S	169.584 E	5.6	1.7	0.2	10
P 208		25	16	07	57.4	43.553 S	170.230 E	3.0 R	1.7	0.2	7
P 209		26	02	28	24.4	44.134 S	169.922 E	10.0 R	0.6	0.1	6
P 210		27	17	38	17.4	44.489 S	169.985 E	2.6 R	1.1	0.1	9
P 211		30	16	08	10.4	44.341 S	169.520 E	9.1	1.1	0.2	6
P 212	JUL	02	04	33	19.4	44.127 S	170.099 E	3.2	1.9	0.1	13
P 213		02	06	07	49.7	43.674 S	169.871 E	2.4	1.8	0.2	9
P 214		06	03	23	35.1	43.662 S	169.645 E	5.0 R	2.4	0.2	11
P 215		06	22	48	57.4	43.919 S	170.301 E	5.5	1.1	0.2	6
P 216		09	10	43	41.2	44.160 S	169.921 E	10.0	1.4	0.1	11
P 217		09	16	59	20.0	44.143 S	170.231 E	7.7	1.0	0.1	6
P 218		14	15	45	38.1	43.633 S	169.946 E	3.1	1.8	0.1	9
P 219		15	09	47	23.3	43.642 S	169.777 E	49.3	1.6	0.1	6
P 220		15	12	23	08.6	44.374 S	169.550 E	10.0 R	1.3	0.1	8
P 221		19	09	51	04.8	44.521 S	169.800 E	4.0		0.1	8
P 222		19	09	55	00.1	44.522 S	169.808 E	0.8	2.3	0.1	9
P 223		19	10	08	15.8	44.522 S	169.807 E	2.0 R	2.6	0.1	9
P 224		19	10	09	03.9	44.538 S	169.782 E	5.6	1.4	0.1	7
P 225		19	12	55	35.0	44.533 S	169.808 E	5.9	1.0	0.1	8
P 226		19	15	58	06.8	44.538 S	169.809 E	6.5	1.6	0.2	9
P 227		19	21	16	03.5	44.518 S	169.804 E	3.1	0.9	0.1	6
P 228		20	05	09	35.9	44.533 S	169.807 E	5.8	1.0	0.1	7
P 229		20	07	34	27.6	44.001 S	170.475 E	4.5	1.6	0.1	7
P 230		20	07	41	18.8	44.382 S	169.637 E	44.0	2.5	0.1	11
P 231		22	05	50	10.2	44.533 S	169.803 E	5.9	1.4	0.1	10
P 232		22	09	03	29.9	44.515 S	169.815 E	3.8	0.8	0.1	6
P 233		23	18	05	27.6	44.531 S	169.796 E	6.4	1.3	0.1	9
P 234		25	00	38	28.9	44.529 S	169.811 E	5.8	1.0	0.0	7
P 235		26	09	33	22.7	44.519 S	169.820 E	3.3 R	1.3	0.1	9
P 236		28	00	22	05.7	43.748 S	170.137 E	1.3	1.8	0.1	12
P 237		28	09	36	41.1	44.140 S	170.544 E	5.5	1.4	0.2	9
P 238		28	13	19	46.6	44.541 S	169.799 E	5.5	2.2	0.1	9
P 239		29	02	22	42.7	44.543 S	169.813 E	6.3	1.0	0.1	7
P 240	AUG	02	10	48	59.3	44.506 S	170.113 E	1.4	1.3	0.1	7
P 241		02	20	41	38.7	44.544 S	169.786 E	5.7 R	1.0	0.1	6
P 242		02	22	07	40.3	44.545 S	169.782 E	5.6 R	1.2	0.1	6
P 243		03	00	27	45.6	44.549 S	169.798 E	6.4	1.0	0.1	6
P 244		03	05	03	54.1	44.535 S	169.801 E	4.4	0.8	0.0	5
P 245		04	12	31	13.3	44.239 S	170.065 E	9.2 R	1.2	0.1	11
P 246		06	19	12	31.2	43.500 S	170.664 E	10.0 R	1.9	0.1	8
P 247		07	05	49	01.3	44.381 S	169.571 E	9.3	2.1	0.2	10
P 248		07	05	49	24.8	44.387 S	169.550 E	13.2	1.7	0.1	10
P 249		09	11	34	21.9	44.039 S	169.878 E	6.5	1.5	0.2	6
P 250		09	11	57	37.9	44.357 S	169.519 E	11.3	1.3	0.2	6

REF NUM		ORIGIN TIME				LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
		h	m	s							
P 251	AUG	14	01	20	33.5	44.537 S	169.769 E	5.1 R	1.4	0.1	6
P 252		16	11	42	24.2	44.545 S	169.779 E	5.0 R	1.0	0.1	6
P 253		16	17	50	16.2	43.573 S	170.579 E	5.0 R	2.5	0.1	7
P 254		18	07	33	26.9	44.308 S	169.846 E	9.0	1.1	0.1	9
P 255		18	08	39	30.1	43.487 S	170.289 E	2.6	1.4	0.1	5
P 256		18	09	26	47.1	43.487 S	170.282 E	3.0	1.5	0.1	5
P 257		20	15	21	12.4	44.301 S	169.839 E	8.2	0.6	0.1	7
P 258		21	06	44	20.4	44.117 S	170.013 E	13.5	0.9	0.2	6
P 259		24	07	56	00.9	44.551 S	169.803 E	5.9	0.7	0.1	7
P 260		24	14	20	06.7	44.549 S	169.778 E	1.0	1.0	0.1	9
P 261		25	05	07	38.5	44.286 S	170.090 E	0.4	1.0	0.1	7
P 262		28	00	57	22.9	44.477 S	170.015 E	10.6	1.0	0.1	6
P 263		31	03	12	58.2	44.542 S	169.795 E	5.5	0.8	0.1	7
P 264	SEP	02	18	31	29.0	44.325 S	169.739 E	4.6	1.1	0.1	8
P 265		09	11	00	33.2	44.530 S	169.800 E	5.5	1.2	0.1	9
P 266		10	12	44	03.9	44.227 S	169.906 E	8.9	1.0	0.1	8
P 267		11	02	23	09.6	44.431 S	169.519 E	5.9	1.5	0.1	9
P 268		14	19	13	49.1	44.209 S	169.880 E	9.5	1.2	0.1	10
P 269		15	10	13	46.9	44.057 S	169.555 E	2.7	1.8	0.1	9
P 270		15	18	20	55.4	44.248 S	169.531 E	4.0	2.6	0.1	8
P 271		19	14	24	21.4	43.728 S	170.098 E	2.6	1.3	0.1	7
P 272		22	12	20	41.5	44.462 S	170.258 E	5.6	1.4	0.1	9
P 273		24	18	41	36.7	44.116 S	169.958 E	12.1	1.2	0.1	5
P 274		25	18	07	24.0	44.303 S	170.066 E	11.3	1.5	0.1	10
P 275		27	10	05	49.9	44.029 S	169.539 E	2.5	1.7	0.2	8
P 276	OCT	03	08	17	05.8	44.499 S	170.063 E	8.7	1.4	0.1	8
P 277		04	07	11	58.0	43.790 S	170.162 E	0.0 R	1.2	0.0	5
P 278		07	00	10	41.6	43.760 S	169.450 E	1.0 R	1.6	0.1	7
P 279		10	09	48	50.9	44.178 S	169.999 E	9.4	1.0	0.1	8
P 280		17	09	41	35.2	44.100 S	169.753 E	6.4	2.3	0.1	10
P 281		19	15	00	40.5	44.311 S	169.923 E	9.8	1.1	0.1	7
P 282		23	03	40	24.3	43.602 S	170.552 E	5.4	1.4	0.1	6
P 283		24	07	12	38.8	43.586 S	170.560 E	3.5	1.6	0.1	7
P 284		24	20	49	18.8	43.757 S	169.644 E	2.0 R	1.9	0.1	7
P 285		26	10	03	45.3	44.312 S	169.922 E	8.9	0.6	0.0	7
P 286		27	15	16	39.3	44.003 S	169.661 E	6.2	1.2	0.1	6
P 287		28	07	29	33.1	43.630 S	169.807 E	1.0 R	1.6	0.2	7
P 288		30	06	29	29.8	44.237 S	169.819 E	5.0 R	1.2	0.1	7
P 289	NOV	03	17	12	31.0	44.333 S	169.999 E	12.4	0.9	0.1	11
P 290		05	11	01	50.8	44.305 S	169.585 E	4.8	1.7	0.2	8
P 291		07	03	04	42.3	43.670 S	170.491 E	5.7	1.3	0.1	5
P 292		07	12	55	24.0	44.027 S	169.478 E	1.9	1.4	0.2	8
P 293		10	14	05	06.9	44.365 S	170.409 E	8.5	0.9	0.1	10
P 294		10	22	42	46.5	44.351 S	170.214 E	2.0 R	0.6	0.1	8
P 295		14	01	26	07.4	44.093 S	170.742 E	5.0 R	1.2	0.2	7
P 296		14	12	29	58.5	44.266 S	170.598 E	4.0	1.9	0.1	12
P 297		16	14	15	30.9	44.336 S	170.079 E	9.6	1.0	0.1	8
P 298		18	08	13	10.2	44.460 S	169.976 E	8.9	1.2	0.1	6
P 299		20	16	21	23.7	44.425 S	169.464 E	7.0	1.2	0.0	5
P 300		23	22	22	47.4	43.973 S	169.639 E	3.0 R	1.8	0.2	9

REF NUM	ORIGIN TIME	LATITUDE		LONGITUDE		DEPTH km	MAG	S.E.	NUM OBS	
		h	m	s	deg					deg
P 301	NOV 24 14 41 13.2	44.310	S	169.578	E	7.0	R	1.5	0.1	7
P 302	24 16 04 33.8	43.973	S	170.385	E	1.9		1.0	0.0	6
P 303	25 04 29 53.8	44.545	S	169.781	E	4.0	R	1.4	0.1	6
P 304	25 05 41 10.5	44.319	S	169.580	E	4.0	R	1.3	0.2	7
P 305	25 06 10 48.2	44.305	S	169.537	E	6.0	R	1.2	0.1	6
P 306	27 20 15 58.7	44.240	S	169.983	E	12.0		1.4	0.1	9
P 307	28 06 28 48.1	44.537	S	169.836	E	9.6		1.0	0.1	6
P 308	28 20 05 42.6	44.464	S	169.826	E	6.8		1.5	0.1	8
P 309	29 18 39 22.4	43.556	S	170.210	E	1.0	R	1.6	0.1	6
P 310	DEC 01 02 05 02.9	43.503	S	170.270	E	2.0	R	3.0	0.2	10
P 311	03 03 18 28.9	44.294	S	170.079	E	2.0	R	0.7	0.1	5
P 312	03 05 56 52.6	43.978	S	169.631	E	3.0	R	1.8	0.1	9
P 313	04 17 28 37.2	44.086	S	169.957	E	13.0	R	0.7	0.1	4
P 314	04 19 34 52.6	43.502	S	170.274	E	1.0	R	2.0	0.2	7
P 315	05 14 16 36.6	44.467	S	169.962	E	7.6		0.9	0.1	6
P 316	05 20 59 21.2	43.562	S	170.125	E	1.0	R	1.7	0.1	6
P 317	07 09 46 53.0	44.427	S	169.869	E	8.8		1.6	0.1	8
P 318	09 10 45 56.6	44.320	S	169.501	E	5.4		1.4	0.1	8
P 319	09 15 24 46.3	44.105	S	169.976	E	12.0		0.9	0.0	5
P 320	10 00 58 42.3	43.499	S	170.191	E	1.0	R	1.7	0.1	5
P 321	10 09 18 49.1	43.937	S	170.547	E	2.0	R	1.7	0.1	8
P 322	11 18 09 23.4	44.001	S	170.419	E	8.0	R	2.3	0.1	9
P 323	11 18 18 13.4	44.096	S	169.993	E	12.0		1.2	0.1	7
P 324	12 06 10 00.7	44.379	S	169.770	E	10.7		0.9	0.1	9
P 325	13 02 17 30.8	43.985	S	170.347	E	4.8		0.6	0.2	7
P 326	13 07 09 41.0	44.433	S	169.866	E	8.4		0.7	0.1	7
P 327	13 22 11 31.9	44.311	S	169.545	E	6.0	R	1.3	0.1	10
P 328	16 07 00 31.4	44.104	S	170.001	E	12.4		1.2	0.1	6
P 329	16 20 50 48.4	43.880	S	170.078	E	8.0	R	1.4	0.0	4
P 330	18 00 59 10.9	44.477	S	170.008	E	5.0	R	1.0	0.1	8
P 331	18 18 38 33.7	44.271	S	169.930	E	6.4		1.9	0.1	9
P 332	20 19 06 14.7	44.346	S	170.282	E	7.2		0.6	0.1	5
P 333	24 17 57 33.1	44.543	S	169.788	E	4.6		1.6	0.0	8
P 334	24 21 00 05.8	44.434	S	169.875	E	9.0	R	1.1	0.1	6
P 335	27 02 17 40.5	43.553	S	170.600	E	3.0	R	2.3	0.1	10

WELLINGTON NETWORK

The origins listed in this section have been determined from data provided by the stations of the Wellington network, details of which are given in an earlier section of the report. For some large events, an alternative solution using stations of the standard network may also exist, and the remarks given in the introduction to the Pukaki network results apply.

The velocities and crustal thicknesses used in this section are:

Depth km	P-velocity km/s	S-velocity km/s
0 - 0.4	4.40	2.55
0.4 - 4.9	5.40	3.12
4.9 - 13.1	6.21	3.59
13.1 - 35.7	6.46	3.73
35.7 -	8.04	4.64

The programme used for locating the origins is the same as is used for the standard network, except that it uses the above crustal model and has more stringent convergence criteria.

The format is identical with that of the Pukaki list.

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W 001	JAN 01 07 04 05.4	41.298 S	175.240 E	29.3	2.6	0.2	13
W 002	01 07 06 53.1	41.316 S	175.304 E	25.6	1.3	0.1	6
W 003	01 09 27 03.7	40.530 S	174.663 E	81.2	3.2	0.1	11
W 004	01 11 05 37.3	41.052 S	174.650 E	60.5	1.7	0.1	6
W 005	01 20 59 41.3	41.494 S	174.365 E	18.1	2.0	0.2	7
W 006	02 04 54 12.0	41.300 S	174.869 E	29.8	1.9	0.1	10
W 007	02 18 08 33.6	41.101 S	175.375 E	4.1	1.6	0.1	8
W 008	02 21 28 55.1	41.262 S	175.254 E	27.4	2.0	0.1	9
W 009	04 01 21 40.8	40.896 S	175.257 E	28.5	2.5	0.1	7
W 010	04 01 38 39.9	40.823 S	174.841 E	40.7	2.0	0.1	6
W 011	04 06 43 21.4	40.983 S	175.143 E	31.8	1.9	0.2	5
W 012	04 10 20 53.4	41.655 S	174.194 E	23.8	3.4	0.2	13
W 013	04 22 43 00.3	41.006 S	174.832 E	47.9	1.7	0.1	7
W 014	05 08 51 13.0	41.259 S	175.071 E	21.7	1.6	0.1	7
W 015	05 09 02 28.0	41.383 S	175.088 E	28.9	1.5	0.1	7
W 016	05 13 55 14.1	40.935 S	174.946 E	32.4	1.5	0.1	6
W 017	05 22 20 42.7	41.255 S	175.186 E	26.0	2.3	0.1	12
W 018	06 01 25 45.8	40.969 S	175.626 E	32.4	2.2	0.2	9
W 019	06 09 18 01.4	41.346 S	174.950 E	30.3	1.5	0.1	8
W 020	06 12 30 41.4	41.152 S	174.569 E	59.7	2.3	0.1	8
W 021	06 18 40 00.7	41.439 S	175.038 E	26.7	1.9	0.2	8
W 022	06 20 17 43.6	40.587 S	174.692 E	31.8	2.5	0.1	9
W 023	07 00 20 29.2	41.493 S	174.455 E	16.5	1.7	0.1	7
W 024	07 03 08 42.8	40.759 S	175.089 E	39.8	1.9	0.0	5
W 025	07 03 22 05.3	41.103 S	174.595 E	58.8	2.5	0.0	7
W 026	07 05 54 24.9	40.788 S	175.102 E	34.9	1.6	0.0	5
W 027	07 08 44 02.8	40.971 S	174.846 E	62.5	3.4	0.1	9
W 028	07 09 25 35.0	41.276 S	175.245 E	23.9	1.3	0.1	7
W 029	07 09 27 59.0	41.074 S	174.642 E	38.6	1.8	0.1	7
W 030	07 09 40 47.0	41.072 S	175.330 E	23.0	1.3	0.2	6
W 031	07 19 44 41.3	41.265 S	174.326 E	62.0	1.8	0.1	6
W 032	08 02 38 58.6	41.047 S	174.869 E	54.8	2.5	0.1	10
W 033	08 03 01 06.5	41.176 S	174.086 E	48.2	2.4	0.2	8
W 034	09 14 56 22.8	41.630 S	174.650 E	31.2	1.6	0.1	6
W 035	09 15 17 03.9	41.110 S	175.406 E	28.0	1.4	0.2	6
W 036	09 15 43 35.5	40.685 S	175.235 E	33.1	2.1	0.1	7
W 037	09 16 26 43.0	40.653 S	174.685 E	23.7	1.7	0.1	6
W 038	09 19 52 23.8	41.287 S	175.203 E	30.0	1.8	0.2	10
W 039	09 23 04 40.4	41.023 S	174.545 E	41.5	1.8	0.1	7
W 040	09 23 13 00.4	40.974 S	175.435 E	34.0	1.9	0.1	7
W 041	10 05 25 43.1	41.009 S	175.606 E	31.6	2.6	0.2	11
W 042	10 09 09 58.7	41.002 S	174.870 E	30.5	1.5	0.2	6
W 043	10 17 13 01.6	40.446 S	174.868 E	9.8	1.9	0.2	8
W 044	11 13 36 23.5	41.176 S	174.667 E	10.9	1.6	0.2	10
W 045	11 14 52 05.9	41.625 S	174.662 E	29.2	1.8	0.1	8
W 046	11 16 14 18.0	40.830 S	174.725 E	17.2	2.6	0.1	8
W 047	11 18 59 01.4	40.958 S	175.109 E	45.7	1.7	0.1	7
W 048	11 22 04 31.2	40.949 S	174.892 E	49.0	1.4	0.0	5
W 049	12 05 21 34.6	41.200 S	175.063 E	20.4	1.2	0.0	5
W 050	12 05 22 16.3	40.965 S	175.169 E	35.0	1.6	0.2	6

REF NUM	ORIGIN TIME	LATITUDE		LONGITUDE		DEPTH	MAG	S.E.	NUM OBS		
		h	m	s	deg					deg	km
W 051	JAN	12	12	52	17.8	41.302 S	175.253 E	29.4	1.9	0.1	11
W 052		12	18	30	05.6	41.159 S	175.116 E	29.0	1.7	0.0	7
W 053		13	03	52	06.1	41.617 S	174.525 E	11.5	1.8	0.1	6
W 054		13	10	51	37.4	40.970 S	174.893 E	36.1	1.7	0.1	7
W 055		13	16	32	01.9	41.298 S	175.254 E	27.6	1.4	0.1	6
W 056		13	17	38	58.1	41.429 S	174.344 E	58.3	2.2	0.2	7
W 057		13	18	58	16.3	40.907 S	174.885 E	37.7	1.8	0.1	7
W 058		13	21	29	19.0	41.317 S	174.960 E	29.1	1.2	0.2	6
W 059		14	20	43	50.4	41.374 S	175.120 E	27.4	2.5	0.1	9
W 060		14	20	44	25.8	41.358 S	175.129 E	28.3	1.7	0.2	5
W 061		14	21	04	58.7	40.829 S	175.322 E	32.4	2.1	0.2	8
W 062		15	02	05	42.0	41.408 S	175.051 E	26.9	1.5	0.1	7
W 063		15	05	35	00.3	40.829 S	174.453 E	44.7	2.1	0.1	8
W 064		15	06	23	03.1	41.380 S	175.120 E	29.0	3.3	0.1	7
W 065		15	07	08	55.8	40.771 S	174.772 E	20.5	2.2	0.1	7
W 066		15	08	47	56.9	41.256 S	175.196 E	28.4	1.5	0.1	8
W 067		16	05	33	35.1	41.220 S	174.142 E	51.3	2.5	0.1	6
W 068		16	05	34	57.7	41.205 S	174.252 E	41.4	2.2	0.1	7
W 069		16	10	08	00.9	41.038 S	174.518 E	51.7	1.8	0.1	5
W 070		17	18	07	31.9	40.863 S	174.851 E	49.4	1.8	0.1	7
W 071		17	18	58	26.3	41.604 S	174.520 E	31.6	2.0	0.1	8
W 072		18	03	43	23.3	41.100 S	174.499 E	35.9	1.6	0.1	7
W 073		18	23	48	29.7	41.240 S	175.520 E	16.0	2.2	0.2	9
W 074		19	05	56	43.8	40.848 S	174.573 E	42.1	1.8	0.1	6
W 075		19	06	41	01.9	41.114 S	175.381 E	27.4	1.8	0.1	6
W 076		19	07	32	28.1	41.277 S	175.299 E	34.3	1.5	0.1	7
W 077		19	17	24	03.6	41.195 S	175.745 E	17.3	2.0	0.1	7
W 078		19	19	24	59.9	41.007 S	174.608 E	63.9	2.2	0.1	8
W 079		20	04	31	43.4	41.195 S	175.731 E	16.5	2.0	0.1	7
W 080		20	14	09	57.4	41.294 S	175.300 E	27.3	1.6	0.1	8
W 081		20	16	21	55.8	41.721 S	174.467 E	24.9	2.1	0.1	7
W 082		21	09	09	32.5	41.040 S	175.696 E	29.4	2.0	0.0	7
W 083		21	21	56	21.4	41.238 S	174.441 E	36.8	1.8	0.1	7
W 084		21	21	56	40.2	41.231 S	174.452 E	36.0	1.5	0.0	5
W 085		21	23	32	15.1	41.079 S	175.213 E	26.9	2.0	0.1	7
W 086		21	23	46	07.1	41.083 S	175.253 E	28.2	2.6	0.0	7
W 087		22	00	01	19.5	41.083 S	175.214 E	26.2	1.9	0.1	8
W 088		22	01	02	25.5	41.085 S	175.208 E	26.6	1.8	0.1	8
W 089		22	01	21	51.6	41.087 S	175.220 E	29.1	1.9	0.2	8
W 090		22	03	00	47.3	40.978 S	175.657 E	32.8	2.4	0.1	6
W 091		22	04	02	32.4	41.377 S	175.100 E	32.0	1.6	0.1	7
W 092		22	05	42	56.5	41.218 S	174.834 E	27.0	1.4	0.1	6
W 093		22	07	03	07.4	41.080 S	175.206 E	29.3	1.3	0.2	6
W 094		22	07	34	29.0	40.849 S	175.094 E	35.5	2.5	0.1	7
W 095		22	08	38	37.7	41.081 S	175.199 E	23.5	1.9	0.1	7
W 096		22	17	24	17.9	41.078 S	175.213 E	28.7	1.8	0.1	7
W 097		22	21	31	43.1	41.070 S	174.777 E	34.3	1.7	0.0	5
W 098		22	22	15	16.6	41.021 S	174.831 E	51.0	1.8	0.1	8
W 099		23	02	10	15.5	41.186 S	174.116 E	49.2	2.5	0.1	7
W 100		23	16	14	10.8	40.993 S	174.951 E	35.7	1.4	0.1	7

REF NUM	ORIGIN TIME	LATITUDE			LONGITUDE		DEPTH km	MAG	S.E.	NUM OBS	
		h	m	s	deg	deg					
W 101	JAN	23	16	36	31.1	40.754 S	175.238 E	37.2	1.8	0.0	5
W 102		23	16	38	33.1	40.895 S	175.119 E	36.0	2.4	0.1	9
W 103		24	04	09	04.6	41.180 S	175.114 E	30.3	1.5	0.1	5
W 104		24	06	49	57.7	41.578 S	174.120 E	17.2	2.3	0.1	8
W 105		24	13	38	58.0	41.422 S	174.994 E	28.1	1.5	0.2	6
W 106		25	01	59	12.0	41.641 S	174.373 E	21.2	2.2	0.2	7
W 107		25	07	54	15.5	41.661 S	174.380 E	10.5	3.1	0.2	7
W 108		25	08	59	49.1	41.666 S	174.338 E	22.3	2.2	0.2	7
W 109		25	10	03	21.1	41.256 S	174.608 E	52.5	2.1	0.1	6
W 110		25	11	31	38.8	41.174 S	175.066 E	27.8	1.5	0.2	8
W 111		25	19	33	29.3	40.572 S	174.754 E	31.3	1.9	0.1	6
W 112		26	03	16	37.7	41.199 S	174.637 E	59.0	2.0	0.1	7
W 113		26	09	31	39.2	40.744 S	174.603 E	5.0 R	2.1	0.3	6
W 114		26	18	20	02.8	40.803 S	175.207 E	37.7	1.8	0.2	6
W 115		26	19	24	43.4	41.086 S	174.509 E	33.9	2.2	0.1	7
W 116		27	03	46	28.2	41.083 S	174.503 E	36.0	1.5	0.1	7
W 117		27	12	20	53.1	41.198 S	173.914 E	59.1	2.3	0.2	8
W 118		27	23	37	53.3	40.741 S	175.329 E	33.2	2.0	0.1	7
W 119		28	00	46	02.2	40.873 S	174.985 E	56.8	2.4	0.1	8
W 120		28	11	34	07.8	41.665 S	174.749 E	23.5	3.7	0.0	7
W 121		28	13	14	54.8	41.662 S	174.751 E	23.2	1.5	0.1	7
W 122		28	14	00	57.8	41.698 S	174.751 E	24.3	2.3	0.1	6
W 123		28	14	38	53.7	41.702 S	174.748 E	24.2	2.2	0.0	6
W 124		28	19	16	32.0	41.157 S	174.685 E	57.7	2.1	0.1	7
W 125		29	02	08	19.2	41.249 S	175.228 E	28.8	1.4	0.1	8
W 126		29	02	44	04.7	40.966 S	175.589 E	31.3	2.5	0.1	7
W 127		29	09	11	28.6	40.830 S	174.747 E	15.2	1.6	0.0	8
W 128		29	22	51	46.4	41.306 S	174.577 E	34.6	1.4	0.1	7
W 129		30	00	58	32.4	41.296 S	174.848 E	31.6	1.3	0.1	5
W 130		30	02	06	55.2	41.355 S	174.708 E	38.1	1.6	0.2	6
W 131		30	07	54	32.4	41.324 S	174.551 E	32.5	1.4	0.1	6
W 132		30	08	06	51.8	40.975 S	175.708 E	29.2	2.0	0.1	7
W 133		30	08	07	49.1	40.957 S	175.718 E	26.7	1.6	0.1	5
W 134		30	09	46	46.8	41.125 S	174.182 E	53.7	1.8	0.1	6
W 135		30	10	31	15.9	41.087 S	175.089 E	30.0	2.0	0.1	8
W 136		30	11	58	38.0	40.880 S	174.691 E	10.2	1.3	0.2	6
W 137		30	16	53	51.9	41.549 S	174.524 E	23.2	1.5	0.0	5
W 138		30	21	18	26.6	41.333 S	175.492 E	10.8	1.6	0.1	7
W 139		30	23	49	25.4	41.675 S	174.749 E	24.2	3.2	0.1	10
W 140		31	01	00	23.1	41.701 S	174.754 E	25.1	2.3	0.0	9
W 141		31	07	54	25.4	41.235 S	175.025 E	17.9	1.3	0.1	7
W 142		31	08	11	08.2	41.510 S	174.188 E	22.0	2.5	0.2	7
W 143		31	08	18	35.6	40.891 S	174.903 E	38.6	1.7	0.1	6
W 144		31	09	05	32.9	41.554 S	175.252 E	24.6	1.5	0.2	8
W 145		31	21	03	26.6	40.953 S	174.944 E	35.9	2.3	0.1	8
W 146		31	21	16	53.8	40.887 S	174.919 E	38.8	1.9	0.1	10
W 147	FEB	01	02	18	22.6	41.284 S	175.008 E	26.7	2.3	0.1	9
W 148		01	04	38	57.0	41.083 S	175.239 E	27.2	1.4	0.1	5
W 149		01	10	44	59.5	41.127 S	174.691 E	36.2	1.7	0.1	7
W 150		01	10	52	54.6	40.972 S	175.527 E	24.3	1.7	0.3	7

REF NUM	ORIGIN TIME	LATITUDE		LONGITUDE		DEPTH km	MAG	S.E.	NUM OBS	
		h	m	s	deg					deg
W 151	FEB 01	17	43	33.0	40.970 S	175.190 E	32.5	1.9	0.1	8
W 152	01	18	50	47.1	41.366 S	174.133 E	35.5	1.6	0.2	6
W 153	01	20	44	04.0	40.604 S	174.653 E	83.2	2.1	0.2	7
W 154	01	20	53	46.4	41.464 S	174.263 E	14.5	2.2	0.1	8
W 155	02	03	30	48.8	40.950 S	175.020 E	27.9	2.0	0.1	10
W 156	02	13	12	24.9	40.911 S	175.571 E	30.6	3.6	0.3	10
W 157	02	14	32	48.0	41.184 S	175.290 E	24.7	1.8	0.1	9
W 158	02	15	33	24.5	41.184 S	175.295 E	26.1	1.8	0.1	11
W 159	02	16	18	58.9	41.192 S	175.295 E	24.3	1.4	0.1	5
W 160	02	18	55	24.2	41.035 S	175.180 E	42.6	1.8	0.1	6
W 161	02	19	56	09.5	40.888 S	175.830 E	33.9	3.4	0.2	11
W 162	02	19	59	50.6	40.925 S	175.751 E	30.8	1.9	0.2	6
W 163	02	20	23	14.2	40.444 S	174.878 E	11.6	2.6	0.2	8
W 164	03	00	06	34.8	41.210 S	174.880 E	16.3	1.4	0.1	9
W 165	03	07	54	35.3	41.255 S	174.460 E	57.6	1.8	0.2	6
W 166	03	09	18	33.8	41.264 S	175.334 E	23.2	1.8	0.1	6
W 167	03	12	39	59.7	40.907 S	174.593 E	5.0 R	1.5	0.1	7
W 168	03	20	07	21.3	41.276 S	175.361 E	31.5	1.8	0.2	9
W 169	04	12	28	15.5	41.142 S	175.068 E	30.7	1.6	0.2	6
W 170	04	15	34	53.4	41.632 S	174.489 E	50.8	2.2	0.1	7
W 171	04	15	48	41.4	41.399 S	174.169 E	33.9	1.6	0.2	6
W 172	04	16	32	00.3	41.286 S	175.037 E	22.0	1.7	0.1	7
W 173	04	21	28	12.4	41.101 S	174.093 E	56.3	2.0	0.2	6
W 174	05	00	24	48.4	41.580 S	175.256 E	31.3	2.9	0.2	9
W 175	05	07	36	40.1	40.853 S	175.201 E	34.6	2.9	0.1	7
W 176	05	08	21	09.6	41.655 S	174.362 E	9.1	2.6	0.2	8
W 177	05	19	03	48.3	40.679 S	174.766 E	42.7	2.3	0.2	7
W 178	05	19	34	47.9	41.594 S	174.384 E	28.7	1.7	0.2	6
W 179	06	10	25	13.6	41.370 S	175.127 E	28.8	1.7	0.2	6
W 180	06	10	43	42.7	40.871 S	175.184 E	35.0	1.9	0.1	8
W 181	06	11	03	16.4	41.454 S	175.023 E	27.3	1.4	0.1	5
W 182	06	15	13	59.9	40.966 S	175.183 E	45.7	2.0	0.1	6
W 183	06	17	57	00.1	41.386 S	175.117 E	29.0	1.8	0.1	9
W 184	07	06	43	23.9	41.102 S	175.512 E	32.1	2.5	0.2	12
W 185	07	13	33	18.6	41.543 S	175.275 E	24.8	1.6	0.1	5
W 186	07	14	16	54.8	41.738 S	174.494 E	34.7	2.4	0.1	10
W 187	07	14	45	34.1	41.035 S	174.681 E	63.7	2.1	0.1	11
W 188	07	16	17	59.1	41.313 S	175.288 E	32.3	2.7	0.2	12
W 189	08	03	56	11.4	41.424 S	173.857 E	57.5	2.2	0.1	6
W 190	08	12	33	53.2	40.936 S	175.104 E	31.4	1.5	0.1	7
W 191	08	15	05	53.5	41.437 S	174.412 E	17.2	1.5	0.2	7
W 192	08	23	51	53.6	41.347 S	174.873 E	32.6	1.5	0.1	6
W 193	09	14	44	09.1	41.505 S	174.008 E	34.2	2.1	0.1	6
W 194	10	09	19	51.5	41.110 S	175.200 E	23.4	1.2	0.1	6
W 195	10	09	27	38.1	41.176 S	175.506 E	14.5	2.0	0.2	9
W 196	10	09	46	54.7	41.117 S	175.205 E	24.3	1.3	0.1	6
W 197	10	11	31	48.9	41.102 S	174.433 E	45.5	1.9	0.1	6
W 198	10	13	55	19.6	41.065 S	174.737 E	30.7	1.6	0.2	8
W 199	10	15	25	28.2	40.811 S	175.258 E	30.8	1.8	0.1	7
W 200	11	06	14	28.8	41.591 S	174.253 E	71.6	2.9	0.2	10

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W 201	FEB 11 07 06 00.7	41.511 S	174.233 E	34.8	1.6	0.1	6
W 202	11 09 13 53.3	41.169 S	175.069 E	3.5	1.1	0.1	5
W 203	11 11 06 58.2	41.327 S	175.729 E	17.3	1.4	0.1	5
W 204	11 20 36 11.9	40.612 S	175.168 E	40.9	1.8	0.1	6
W 205	12 11 20 57.1	41.296 S	174.443 E	44.7	1.6	0.2	6
W 206	13 02 01 12.1	40.869 S	174.680 E	1.5	3.1	0.2	11
W 207	13 04 55 39.4	41.260 S	175.228 E	11.8	1.4	0.2	8
W 208	13 12 43 32.7	40.902 S	175.195 E	33.2	1.6	0.2	6
W 209	13 12 43 44.0	41.182 S	175.776 E	11.3	2.0	0.1	6
W 210	13 15 00 13.6	41.226 S	175.202 E	19.4	1.5	0.1	6
W 211	13 15 24 28.6	41.186 S	175.767 E	12.0	1.8	0.1	7
W 212	13 18 07 22.1	41.037 S	174.568 E	62.1	1.9	0.1	7
W 213	13 20 45 33.4	40.969 S	175.242 E	26.6	2.4	0.1	8
W 214	13 21 28 41.8	40.940 S	174.501 E	40.6	1.8	0.2	7
W 215	14 04 54 27.6	41.089 S	175.491 E	25.2	1.8	0.2	7
W 216	14 09 23 38.6	40.908 S	175.521 E	27.0	1.8	0.3	7
W 217	14 13 38 33.4	41.079 S	174.650 E	60.1	1.7	0.0	7
W 218	14 20 35 38.2	41.308 S	173.828 E	70.3	3.2	0.1	9
W 219	15 08 12 03.8	41.417 S	174.714 E	53.6	1.9	0.1	7
W 220	16 01 40 08.3	41.114 S	175.416 E	24.2	1.9	0.1	7
W 221	16 05 27 41.0	40.575 S	174.758 E	31.0	1.7	0.1	7
W 222	16 07 44 35.5	40.722 S	175.185 E	35.2	2.2	0.1	7
W 223	16 23 11 47.1	41.243 S	175.540 E	13.0	1.9	0.1	8
W 224	17 01 21 11.3	41.308 S	174.707 E	51.8	1.4	0.1	6
W 225	17 06 03 40.5	40.867 S	175.570 E	27.8	1.9	0.1	7
W 226	17 07 58 50.1	41.498 S	174.528 E	18.4	1.9	0.1	7
W 227	17 11 52 26.8	41.604 S	174.337 E	12.4	1.5	0.1	5
W 228	17 21 38 50.0	40.821 S	174.732 E	13.6	1.4	0.1	6
W 229	18 03 42 15.8	41.103 S	175.498 E	4.4	1.9	0.1	6
W 230	18 07 09 13.4	41.490 S	174.950 E	28.8	1.8	0.2	8
W 231	18 10 53 19.7	40.990 S	174.931 E	31.6	1.9	0.1	8
W 232	18 13 58 41.7	41.569 S	174.592 E	11.4	1.4	0.1	6
W 233	18 17 05 57.1	41.285 S	175.215 E	26.5	1.7	0.2	8
W 234	19 02 25 37.7	40.673 S	174.476 E	66.0	2.3	0.2	7
W 235	19 04 56 22.6	41.027 S	174.706 E	54.3	2.2	0.0	7
W 236	19 08 48 29.9	41.092 S	174.760 E	57.5	2.0	0.0	8
W 237	19 17 41 01.6	41.177 S	174.557 E	34.6	1.7	0.0	10
W 238	20 01 47 38.2	41.045 S	175.382 E	29.4	2.1	0.2	9
W 239	20 21 15 42.1	40.984 S	174.602 E	51.9	1.7	0.1	6
W 240	21 01 10 05.9	41.070 S	174.809 E	32.9	1.8	0.2	8
W 241	21 01 14 42.2	41.072 S	174.781 E	27.3	2.6	0.2	9
W 242	21 01 25 17.3	41.063 S	174.803 E	34.7	1.6	0.1	7
W 243	21 05 27 35.9	41.323 S	175.314 E	33.0	1.4	0.2	5
W 244	22 02 08 34.7	40.864 S	175.115 E	35.3	1.8	0.0	6
W 245	22 03 32 00.9	40.932 S	174.753 E	66.5	2.2	0.1	9
W 246	22 05 36 50.6	41.162 S	175.060 E	33.4	1.7	0.1	5
W 247	22 10 15 39.9	41.323 S	174.895 E	30.7	1.9	0.1	9
W 248	22 19 13 45.7	41.386 S	174.746 E	25.8	1.9	0.1	12
W 249	22 19 25 14.5	40.993 S	175.660 E	29.6	1.8	0.2	8
W 250	23 00 36 22.9	41.153 S	174.377 E	48.8	2.0	0.2	7

REF NUM	ORIGIN TIME	LATITUDE		LONGITUDE		DEPTH km	MAG	S.E.	NUM OBS
		h	m	s	deg				
W 251	FEB 23 02 23 59.9	41.664	S	174.737	E	28.9	2.1	0.1	7
W 252	23 05 09 29.2	41.371	S	175.093	E	24.2	1.7	0.1	7
W 253	24 03 16 44.0	40.708	S	174.751	E	40.1	1.9	0.2	7
W 254	24 04 12 53.7	41.382	S	175.122	E	27.7	2.3	0.1	8
W 255	24 08 56 03.5	41.018	S	175.007	E	44.7	2.4	0.1	11
W 256	24 13 22 15.3	41.299	S	174.054	E	40.4	2.2	0.1	9
W 257	24 19 21 23.2	41.575	S	174.660	E	26.0	1.7	0.2	8
W 258	24 22 01 27.5	41.080	S	175.211	E	29.3	1.8	0.2	6
W 259	24 22 42 14.5	40.792	S	175.091	E	36.3	1.8	0.2	5
W 260	25 23 38 06.3	40.968	S	174.900	E	37.0	1.8	0.0	7
W 261	26 14 41 45.4	40.979	S	175.048	E	42.7	1.6	0.2	7
W 262	26 22 02 34.7	41.046	S	173.813	E	65.2	2.6	0.3	6
W 263	27 02 05 03.1	41.300	S	175.302	E	25.3	1.8	0.1	7
W 264	27 07 32 50.4	41.253	S	175.175	E	25.7	1.8	0.1	12
W 265	27 10 54 53.2	40.588	S	174.658	E	30.6	2.9	0.2	12
W 266	27 13 50 38.1	41.278	S	175.214	E	26.7	1.7	0.1	8
W 267	27 21 24 48.6	40.855	S	174.939	E	35.9	2.0	0.2	7
W 268	28 00 21 25.2	41.009	S	175.468	E	22.7	1.4	0.0	5
W 269	28 01 45 03.4	41.266	S	173.907	E	65.4	2.3	0.2	6
W 270	28 23 29 15.6	40.837	S	174.731	E	13.7	1.7	0.1	7
W 271	29 00 42 48.1	41.241	S	173.936	E	59.6	2.1	0.1	6
W 272	29 15 19 07.0	41.410	S	175.000	E	26.3	2.3	0.1	6
W 273	29 15 52 48.5	41.428	S	175.013	E	27.5	1.6	0.1	8
W 274	29 17 04 35.0	40.931	S	175.737	E	31.5	2.0	0.1	6
W 275	MAR 01 16 47 57.2	41.385	S	175.120	E	28.1	1.7	0.1	7
W 276	02 03 29 42.6	41.293	S	175.312	E	32.4	1.8	0.2	8
W 277	02 03 51 52.6	41.297	S	175.290	E	28.1	1.5	0.2	5
W 278	02 17 36 19.0	41.002	S	175.560	E	27.2	1.8	0.2	6
W 279	02 17 51 24.1	41.603	S	174.658	E	31.0	1.7	0.1	6
W 280	03 01 44 22.9	41.058	S	174.772	E	33.3	1.4	0.1	6
W 281	03 04 05 11.0	41.009	S	174.385	E	44.8	1.8	0.1	6
W 282	03 05 02 06.4	40.849	S	174.692	E	16.6	1.8	0.2	6
W 283	03 12 13 11.3	41.180	S	175.238	E	30.1	1.8	0.1	7
W 284	03 13 36 44.2	41.282	S	175.214	E	25.7	1.6	0.0	6
W 285	04 06 36 42.5	41.213	S	174.212	E	39.9	1.4	0.2	5
W 286	04 19 31 14.4	40.907	S	175.919	E	32.9	2.3	0.2	8
W 287	05 04 40 09.9	41.068	S	174.769	E	35.1	1.6	0.1	8
W 288	05 06 43 23.9	41.289	S	174.501	E	34.8	1.7	0.1	6
W 289	05 13 50 07.3	41.007	S	175.410	E	31.3	1.7	0.1	8
W 290	05 16 35 23.9	41.578	S	174.501	E	15.9	2.8	0.2	8
W 291	05 19 56 44.0	41.278	S	175.205	E	26.4	2.0	0.0	8
W 292	06 01 00 44.3	41.464	S	174.105	E	23.6	1.9	0.2	6
W 293	06 20 40 47.3	40.769	S	174.762	E	20.2	1.8	0.1	6
W 294	07 03 42 10.3	40.821	S	174.532	E	52.5	2.9	0.1	7
W 295	07 14 11 38.2	41.263	S	175.189	E	27.4	2.0	0.1	5
W 296	08 05 22 13.1	41.697	S	174.486	E	30.8	1.8	0.1	7
W 297	08 09 57 21.1	41.620	S	174.248	E	25.1	1.8	0.2	7
W 298	09 06 08 04.3	41.162	S	174.298	E	68.9	1.6	0.0	5
W 299	09 08 59 31.3	41.424	S	174.471	E	53.9	2.2	0.2	6
W 300	09 18 09 54.2	41.296	S	174.782	E	27.6	1.6	0.1	6

REF NUM	ORIGIN TIME	LATITUDE		LONGITUDE		DEPTH km	MAG	S.E.	NUM OBS	
		h	m	s	deg					deg
W 301	MAR 10	00	32	36.0	41.400 S	174.640 E	31.4	2.3	0.1	7
W 302	10	16	06	02.6	41.356 S	174.900 E	30.5	1.3	0.1	6
W 303	10	18	04	48.0	41.095 S	174.990 E	29.6	1.8	0.1	6
W 304	10	23	09	08.1	41.559 S	175.206 E	24.0	1.8	0.2	7
W 305	10	23	11	40.1	40.966 S	174.590 E	53.3	1.8	0.1	7
W 306	11	07	09	11.8	41.576 S	173.901 E	34.0	2.2	0.1	7
W 307	11	20	11	37.1	41.138 S	174.201 E	49.4	2.5	0.1	9
W 308	11	23	35	04.2	40.896 S	175.030 E	34.5	1.9	0.1	6
W 309	12	20	09	16.2	41.297 S	175.167 E	30.9	1.8	0.1	6
W 310	13	02	17	22.0	41.322 S	174.380 E	59.2	2.4	0.2	8
W 311	13	02	30	18.0	41.052 S	174.680 E	35.5	1.9	0.1	6
W 312	13	06	36	06.7	41.332 S	174.786 E	8.9	1.8	0.1	8
W 313	13	15	48	32.4	41.462 S	175.076 E	22.3	1.5	0.2	7
W 314	13	16	44	55.5	41.439 S	175.021 E	22.9	1.4	0.1	7
W 315	13	20	21	05.1	41.390 S	173.829 E	54.9	2.5	0.2	7
W 316	14	01	51	55.9	41.160 S	175.145 E	18.3	1.4	0.1	7
W 317	14	02	03	30.9	41.173 S	174.319 E	34.7	2.1	0.1	6
W 318	14	09	10	24.6	41.381 S	173.741 E	40.8	1.9	0.2	6
W 319	14	13	14	27.7	40.927 S	174.933 E	47.2	1.9	0.1	7
W 320	14	13	28	55.0	40.904 S	174.765 E	11.4	1.4	0.2	6
W 321	14	18	20	02.9	40.994 S	175.160 E	31.3	1.8	0.2	5
W 322	15	05	13	35.0	41.409 S	175.051 E	27.1	1.6	0.2	7
W 323	15	11	20	55.1	41.138 S	174.803 E	30.5	1.7	0.2	11
W 324	15	11	51	13.5	40.884 S	174.726 E	9.5	1.6	0.1	6
W 325	15	14	33	39.2	41.659 S	174.157 E	9.9	2.2	0.1	7
W 326	15	17	27	28.3	40.865 S	175.607 E	29.2	2.2	0.2	8
W 327	15	21	15	14.7	41.066 S	174.466 E	53.4	1.8	0.1	8
W 328	16	04	10	35.1	41.346 S	174.265 E	31.3	1.4	0.0	5
W 329	16	09	17	58.6	40.985 S	174.321 E	48.7	2.2	0.1	7
W 330	16	11	03	08.2	41.018 S	173.894 E	39.2	2.0	0.1	6
W 331	16	11	11	08.5	41.716 S	175.070 E	20.5	1.8	0.1	6
W 332	16	13	53	26.5	41.321 S	173.817 E	61.0	2.7	0.2	8
W 333	16	16	57	24.3	41.044 S	175.516 E	31.3	2.6	0.2	11
W 334	16	19	38	01.3	40.956 S	174.585 E	44.2	2.5	0.0	8
W 335	17	10	11	07.0	41.239 S	175.064 E	9.9	1.4	0.2	8
W 336	17	10	11	34.8	41.062 S	174.791 E	29.3	2.9	0.1	8
W 337	17	14	21	35.2	41.068 S	174.805 E	26.6	2.5	0.1	9
W 338	18	07	36	47.9	41.083 S	175.246 E	25.5	2.0	0.2	7
W 339	18	08	13	42.3	40.848 S	174.805 E	15.3	2.0	0.1	7
W 340	18	17	54	04.6	41.243 S	175.094 E	6.6	1.6	0.1	6
W 341	19	05	12	36.7	41.371 S	175.010 E	29.1	1.5	0.2	7
W 342	19	19	00	09.4	40.988 S	174.713 E	45.3	2.3	0.1	8
W 343	20	02	33	06.2	41.603 S	174.512 E	45.2	2.1	0.0	5
W 344	20	03	00	26.3	41.012 S	174.358 E	62.2	1.8	0.1	5
W 345	20	18	25	43.1	41.262 S	175.305 E	16.4	1.5	0.2	6
W 346	20	21	33	36.3	40.843 S	174.672 E	5.0 R	1.9	0.2	6
W 347	20	21	34	57.5	40.841 S	174.675 E	5.0 R	2.8	0.3	7
W 348	21	07	59	10.0	41.123 S	174.712 E	31.2	2.6	0.1	9
W 349	21	09	09	55.4	41.140 S	174.617 E	58.3	2.0	0.0	9
W 350	21	15	15	22.7	41.256 S	174.248 E	36.6	2.0	0.2	7

REF NUM		ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W 351	MAR	21 15 34 16.9	41.382 S	175.136 E	7.2	1.1	0.2	8
W 352		22 05 12 10.8	41.356 S	174.976 E	24.7	1.8	0.0	7
W 353		22 05 12 41.8	40.816 S	174.881 E	22.9	2.7	0.2	7
W 354		22 13 28 14.8	41.036 S	174.563 E	57.6	1.4	0.0	5
W 355		22 15 59 54.6	41.123 S	174.704 E	29.6	1.2	0.1	6
W 356		22 22 44 12.7	40.724 S	174.375 E	54.0	2.3	0.2	6
W 357		23 08 02 32.4	40.884 S	174.728 E	11.0	1.2	0.1	6
W 358		23 10 52 40.6	40.990 S	174.055 E	20.8	1.7	0.3	5
W 359		23 11 10 33.3	41.208 S	174.371 E	36.3	1.6	0.1	6
W 360		23 12 31 40.5	40.846 S	174.922 E	51.3	2.1	0.1	8
W 361		23 14 20 18.3	40.942 S	175.542 E	19.1	1.6	0.0	5
W 362		23 14 21 55.5	40.893 S	175.644 E	25.0	2.3	0.2	7
W 363		23 14 32 45.1	40.897 S	175.610 E	24.7	1.7	0.3	6
W 364		23 20 32 18.3	41.234 S	175.240 E	17.8	1.4	0.1	7
W 365		23 23 50 41.4	41.234 S	175.196 E	19.0	1.5	0.1	10
W 366		24 01 35 13.8	40.834 S	175.287 E	31.2	1.8	0.2	7
W 367		24 02 02 10.3	41.190 S	175.110 E	29.0	1.2	0.2	7
W 368		24 05 57 19.3	41.150 S	174.080 E	70.4	2.7	0.2	8
W 369		24 09 15 32.0	41.554 S	174.328 E	17.5	2.6	0.2	14
W 370		24 14 22 38.7	40.653 S	174.808 E	17.7	2.6	0.1	9
W 371		24 16 00 55.4	41.415 S	175.060 E	24.2	2.8	0.1	12
W 372		24 16 42 11.7	41.423 S	175.073 E	26.8	1.6	0.1	10
W 373		24 21 10 16.9	41.402 S	175.038 E	38.5	1.9	0.1	9
W 374		25 04 24 59.6	41.287 S	174.140 E	38.4	1.6	0.2	5
W 375		25 10 15 36.0	41.710 S	174.578 E	54.0	2.1	0.2	8
W 376		25 12 09 58.7	41.374 S	175.111 E	25.7	1.5	0.1	11
W 377		25 14 26 03.1	41.132 S	175.603 E	14.8	1.8	0.2	8
W 378		26 13 12 02.6	41.425 S	174.904 E	12.5	1.6	0.2	9
W 379		26 14 58 25.1	40.873 S	174.744 E	14.5	1.9	0.0	6
W 380		26 17 38 20.9	41.375 S	175.107 E	31.2	2.1	0.2	8
W 381		26 20 48 18.0	40.870 S	174.544 E	5.0 R	1.7	0.2	6
W 382		27 04 19 29.9	40.953 S	175.642 E	25.8	3.2	0.3	11
W 383		27 04 41 19.2	41.017 S	175.554 E	16.2	2.2	0.0	8
W 384		27 13 35 18.6	40.964 S	174.165 E	56.0	1.8	0.2	6
W 385		27 18 37 28.9	41.381 S	175.112 E	27.0	2.0	0.1	12
W 386		27 20 50 05.9	41.238 S	174.488 E	58.1	1.9	0.1	7
W 387		28 08 48 54.7	41.390 S	175.140 E	23.6	1.4	0.1	9
W 388		28 12 05 57.9	40.761 S	174.478 E	77.6	2.4	0.1	7
W 389		28 12 24 53.5	41.363 S	174.498 E	36.7	1.6	0.1	8
W 390		28 14 50 11.2	41.433 S	174.249 E	59.3	2.1	0.1	9
W 391		28 22 07 15.4	40.990 S	175.579 E	23.0	1.8	0.2	8
W 392		29 05 13 00.6	41.592 S	174.362 E	9.9	1.7	0.1	6
W 393		29 19 23 10.8	41.066 S	174.691 E	65.9	2.2	0.2	7
W 394		29 20 03 51.9	41.100 S	175.019 E	24.8	2.2	0.2	7
W 395		30 15 03 41.4	41.320 S	174.290 E	35.2	1.9	0.0	5
W 396		31 19 34 34.9	41.626 S	174.672 E	27.8	2.5	0.1	9
W 397	APR	01 14 31 57.1	40.818 S	174.449 E	81.7	2.1	0.1	9
W 398		01 17 49 39.5	40.894 S	174.725 E	8.2	1.8	0.1	8
W 399		02 06 14 29.1	41.002 S	175.595 E	30.3	2.1	0.1	9
W 400		02 12 01 00.9	41.306 S	175.293 E	24.2	1.9	0.1	7

REF NUM	ORIGIN TIME	LATITUDE			LONGITUDE		DEPTH km	MAG	S.E.	NUM OBS
		h	m	s	deg	deg				
W 401	APR 02 23 24 40.1	40.867 S	174.726 E	14.1	1.6	0.1	8			
W 402	03 08 41 20.9	40.939 S	175.168 E	32.6	1.7	0.1	6			
W 403	03 22 22 55.6	41.384 S	174.676 E	19.6	2.0	0.2	9			
W 404	04 00 52 43.5	41.221 S	174.622 E	48.7	1.8	0.1	6			
W 405	04 01 12 56.6	40.921 S	175.496 E	29.0	2.0	0.1	6			
W 406	04 21 17 35.8	41.348 S	175.147 E	38.3	2.1	0.2	7			
W 407	04 22 46 55.9	41.005 S	174.711 E	60.9	1.6	0.1	7			
W 408	05 05 09 47.8	40.876 S	174.740 E	14.5	1.9	0.1	8			
W 409	05 15 37 35.2	41.214 S	175.352 E	27.5	1.6	0.1	8			
W 410	05 16 36 13.3	41.074 S	174.689 E	32.1	1.4	0.1	6			
W 411	05 17 02 04.8	40.665 S	174.687 E	53.2	2.4	0.2	10			
W 412	05 22 41 05.4	41.026 S	174.638 E	37.3	1.8	0.1	8			
W 413	06 00 03 14.7	41.425 S	175.016 E	28.5	1.8	0.1	12			
W 414	06 02 16 26.5	40.946 S	174.869 E	15.5	1.4	0.1	8			
W 415	06 08 10 50.7	41.141 S	175.386 E	20.8	1.7	0.1	7			
W 416	06 15 44 44.7	40.810 S	174.400 E	13.6	1.9	0.1	9			
W 417	06 17 39 37.8	41.628 S	174.680 E	24.3	1.7	0.2	9			
W 418	07 04 38 44.7	41.270 S	175.130 E	27.2	1.5	0.2	6			
W 419	07 05 15 11.4	41.273 S	175.153 E	27.4	1.5	0.1	6			
W 420	07 05 29 10.1	41.492 S	175.023 E	22.6	1.6	0.1	8			
W 421	07 15 02 05.1	41.360 S	174.832 E	22.0	1.5	0.1	7			
W 422	08 03 33 59.5	40.915 S	175.033 E	38.2	2.2	0.1	7			
W 423	08 19 08 24.0	41.313 S	175.192 E	24.5	2.3	0.1	11			
W 424	08 21 56 36.9	41.190 S	174.695 E	36.0	2.0	0.2	7			
W 425	09 06 00 45.4	41.360 S	175.135 E	28.2	2.2	0.1	11			
W 426	09 08 26 54.5	40.885 S	175.600 E	23.0	2.0	0.2	9			
W 427	09 16 00 37.1	41.614 S	174.298 E	35.6	2.1	0.1	7			
W 428	10 04 19 43.9	40.943 S	174.289 E	77.0	2.4	0.0	6			
W 429	10 13 37 22.9	41.643 S	174.697 E	22.1	1.6	0.1	6			
W 430	10 18 02 37.6	40.892 S	175.357 E	41.3	2.0	0.2	5			
W 431	11 05 59 24.4	40.733 S	174.610 E	41.2	2.2	0.1	6			
W 432	11 19 29 12.0	40.951 S	175.111 E	33.5	1.8	0.2	6			
W 433	12 04 33 58.9	41.318 S	174.874 E	27.6	1.6	0.1	7			
W 434	12 10 35 27.3	40.960 S	175.454 E	22.6	2.6	0.0	7			
W 435	12 11 24 37.1	41.356 S	174.984 E	26.2	1.8	0.2	8			
W 436	13 01 58 06.4	41.277 S	175.158 E	25.5	1.5	0.0	5			
W 437	13 05 40 30.3	41.253 S	174.255 E	37.2	1.5	0.2	6			
W 438	13 06 10 32.3	41.331 S	175.037 E	30.4	1.4	0.1	6			
W 439	13 14 26 13.8	40.678 S	175.046 E	35.5	2.6	0.1	12			
W 440	13 16 20 15.2	40.904 S	174.685 E	64.5	2.3	0.1	10			
W 441	14 11 27 08.9	40.673 S	174.939 E	43.4	2.1	0.1	6			
W 442	14 19 05 25.9	41.293 S	175.311 E	31.1	1.8	0.2	7			
W 443	14 23 48 12.1	41.541 S	175.208 E	28.8	2.0	0.2	8			
W 444	15 10 44 54.0	41.256 S	173.886 E	70.2	2.0	0.2	6			
W 445	15 11 26 20.1	41.604 S	174.651 E	35.2	1.9	0.1	11			
W 446	15 12 03 06.6	40.895 S	175.112 E	34.8	2.0	0.1	8			
W 447	15 20 48 28.0	40.914 S	175.863 E	34.7	2.3	0.2	7			
W 448	16 19 17 47.5	40.986 S	175.478 E	20.2	2.4	0.2	9			
W 449	16 19 32 06.0	40.982 S	175.484 E	22.5	2.2	0.2	9			
W 450	16 21 46 04.9	41.077 S	174.571 E	42.2	1.6	0.2	7			

REF NUM	ORIGIN TIME	LATITUDE			LONGITUDE		DEPTH km	MAG	S.E.	NUM OBS
		h	m	s	deg	deg				
W 451	APR 17	06	46	53.1	41.354 S	174.381 E	33.0	1.5	0.1	6
W 452	17	09	47	10.8	41.619 S	174.709 E	28.9	1.6	0.2	7
W 453	18	23	59	37.5	41.322 S	175.121 E	28.2	1.5	0.1	9
W 454	19	02	41	50.5	41.298 S	175.265 E	28.6	1.9	0.1	9
W 455	19	15	35	43.5	41.496 S	174.507 E	20.0	2.8	0.2	9
W 456	19	15	38	13.8	41.410 S	174.365 E	30.5	1.7	0.1	5
W 457	19	16	44	42.2	41.458 S	175.082 E	27.5	1.8	0.1	9
W 458	20	06	33	28.5	41.441 S	174.716 E	26.7	2.2	0.2	13
W 459	20	09	45	05.5	41.026 S	174.838 E	33.4	1.5	0.1	7
W 460	20	17	34	46.7	41.211 S	175.189 E	25.7	1.6	0.1	8
W 461	20	17	35	23.8	41.207 S	175.186 E	25.4	1.5	0.1	7
W 462	21	04	51	35.8	41.298 S	175.127 E	17.8	1.8	0.1	7
W 463	21	09	17	17.4	41.192 S	174.731 E	32.8	1.6	0.1	7
W 464	21	12	58	47.3	41.163 S	175.364 E	28.7	1.5	0.2	7
W 465	21	14	19	15.1	40.874 S	174.565 E	45.4	2.2	0.2	7
W 466	21	14	19	33.7	41.453 S	174.227 E	14.5	1.7	0.2	6
W 467	21	20	30	06.7	41.205 S	175.064 E	31.6	1.5	0.1	5
W 468	22	13	28	22.0	41.360 S	175.136 E	28.7	2.5	0.1	9
W 469	24	00	17	31.8	41.099 S	175.311 E	22.1	1.2	0.1	5
W 470	24	00	19	31.4	41.428 S	174.683 E	19.5	1.9	0.1	8
W 471	24	06	06	31.4	41.007 S	175.165 E	59.0	2.7	0.1	10
W 472	24	19	26	39.0	41.051 S	175.283 E	25.7	1.8	0.1	9
W 473	24	21	41	19.1	41.655 S	174.717 E	21.8	1.9	0.0	6
W 474	25	05	34	27.1	41.248 S	175.350 E	13.1	1.8	0.1	8
W 475	25	10	16	35.8	41.366 S	175.112 E	27.3	2.1	0.1	11
W 476	25	10	20	27.6	41.065 S	175.366 E	33.0	1.7	0.1	6
W 477	25	11	24	13.0	41.248 S	175.151 E	20.7	1.3	0.1	8
W 478	25	18	17	28.1	41.222 S	175.012 E	21.7	2.1	0.1	12
W 479	25	19	11	44.1	41.098 S	173.927 E	69.9	2.5	0.1	7
W 480	26	06	47	29.2	41.401 S	174.667 E	22.7	2.0	0.2	8
W 481	26	11	53	23.4	41.269 S	174.321 E	35.6	1.6	0.1	6
W 482	26	13	29	37.0	41.001 S	174.308 E	48.6	2.6	0.1	7
W 483	26	18	27	01.8	41.425 S	174.988 E	27.1	2.0	0.2	7
W 484	27	01	24	52.3	40.994 S	175.482 E	26.7	1.6	0.0	5
W 485	27	13	26	21.3	40.924 S	174.852 E	19.8	2.2	0.1	9
W 486	27	17	00	43.9	41.067 S	174.830 E	35.5	1.5	0.1	8
W 487	27	18	20	28.6	40.925 S	175.679 E	30.1	2.0	0.2	10
W 488	27	19	22	01.3	40.821 S	175.757 E	27.2	1.8	0.2	7
W 489	28	13	27	07.2	41.237 S	174.649 E	34.8	1.8	0.2	7
W 490	28	13	51	42.6	41.638 S	174.609 E	31.5	2.1	0.0	7
W 491	28	18	12	50.8	41.372 S	175.108 E	25.9	1.7	0.1	7
W 492	28	19	15	59.2	41.646 S	175.112 E	24.7	2.0	0.1	6
W 493	29	04	06	23.8	41.448 S	173.776 E	53.7	3.3	0.2	8
W 494	29	04	09	19.7	41.037 S	175.271 E	24.2	2.5	0.2	10
W 495	29	04	09	49.1	41.058 S	175.264 E	31.7	2.0	0.2	6
W 496	29	10	32	09.8	41.564 S	174.948 E	33.6	2.0	0.1	8
W 497	29	18	55	44.2	40.751 S	174.612 E	41.4	1.8	0.1	6
W 498	30	17	31	50.5	41.023 S	175.526 E	20.6	2.1	0.2	7
W 499	30	23	40	48.4	41.028 S	174.779 E	33.1	1.7	0.0	8
W 500	MAY 01	03	21	08.8	41.493 S	174.478 E	57.7	1.8	0.1	5

REF NUM	ORIGIN TIME	LATITUDE		LONGITUDE		DEPTH km	MAG	S.E.	NUM OBS	
		h	m	s	deg					deg
W 501	MAY 01	06	12	53.2	41.269 S	175.331 E	29.2	1.4	0.1	8
W 502	01	11	23	03.3	40.831 S	174.750 E	15.0	1.4	0.1	5
W 503	01	15	36	18.7	40.910 S	174.979 E	60.3	2.1	0.1	8
W 504	02	02	03	51.2	41.207 S	174.337 E	35.0	2.3	0.1	7
W 505	02	04	07	07.2	41.568 S	174.403 E	10.8	1.6	0.0	6
W 506	02	09	41	10.1	40.979 S	175.111 E	26.4	1.9	0.2	8
W 507	02	19	43	17.4	40.837 S	174.716 E	11.2	1.8	0.2	7
W 508	03	10	37	02.6	41.066 S	175.471 E	28.6	1.7	0.1	5
W 509	03	12	12	10.9	41.656 S	174.561 E	30.2	2.1	0.1	7
W 510	03	15	32	30.0	40.985 S	175.468 E	27.0	1.8	0.1	5
W 511	03	15	32	44.4	41.450 S	175.050 E	17.8	1.7	0.1	6
W 512	04	07	33	17.3	41.189 S	174.297 E	38.5	2.2	0.1	7
W 513	04	13	48	04.0	41.009 S	175.377 E	25.1	1.7	0.1	6
W 514	04	18	06	49.0	41.173 S	175.120 E	26.9	1.3	0.1	6
W 515	04	19	01	14.4	41.050 S	174.450 E	39.6	2.0	0.1	8
W 516	05	06	09	08.4	40.531 S	174.886 E	15.0	1.8	0.1	7
W 517	06	04	06	33.6	40.824 S	174.758 E	16.4	2.3	0.2	9
W 518	07	04	31	30.3	41.665 S	174.540 E	31.2	2.3	0.2	10
W 519	07	14	08	10.1	41.163 S	174.640 E	35.4	1.7	0.1	10
W 520	07	16	03	01.6	41.152 S	175.010 E	52.1	1.8	0.1	12
W 521	07	20	21	30.0	41.304 S	175.304 E	40.0	1.9	0.2	9
W 522	07	20	55	01.8	41.015 S	175.340 E	2.5	2.5	0.2	11
W 523	08	06	32	49.3	40.990 S	174.123 E	61.4	2.5	0.2	6
W 524	08	14	11	21.3	41.268 S	174.855 E	32.3	1.8	0.0	7
W 525	08	18	42	03.4	40.723 S	174.732 E	2.5	1.7	0.2	7
W 526	08	20	03	54.4	40.885 S	174.955 E	37.1	1.9	0.1	7
W 527	09	06	41	34.3	41.029 S	175.613 E	24.3	2.7	0.1	8
W 528	09	13	06	44.8	40.962 S	174.565 E	14.3	2.4	0.2	8
W 529	09	15	00	38.3	41.247 S	174.080 E	47.3	3.0	0.1	7
W 530	09	17	05	03.4	41.643 S	174.642 E	32.0	2.2	0.0	7
W 531	10	00	43	36.1	40.887 S	174.886 E	19.0	1.8	0.1	8
W 532	10	04	21	23.2	41.030 S	175.613 E	31.4	3.8	0.2	9
W 533	10	07	53	47.9	41.149 S	174.716 E	35.9	2.0	0.0	8
W 534	10	09	04	18.4	41.500 S	174.080 E	34.4	3.6	0.1	7
W 535	10	09	10	02.4	40.782 S	175.020 E	41.5	1.9	0.1	8
W 536	10	15	13	06.5	40.948 S	174.644 E	5.2	1.3	0.1	8
W 537	10	16	30	28.4	40.963 S	175.705 E	40.6	1.7	0.2	5
W 538	10	18	49	30.4	41.117 S	174.230 E	50.9	1.8	0.1	7
W 539	10	21	27	50.4	41.546 S	174.867 E	23.5	2.0	0.1	9
W 540	10	23	22	25.5	41.125 S	174.238 E	50.0	1.7	0.1	6
W 541	11	02	21	43.1	41.696 S	174.488 E	27.8	2.3	0.1	7
W 542	11	03	23	43.4	41.675 S	174.496 E	31.6	2.5	0.1	7
W 543	11	07	24	00.1	41.278 S	174.109 E	46.6	2.5	0.2	8
W 544	12	01	15	04.8	40.992 S	175.618 E	32.0	2.0	0.1	7
W 545	12	04	41	14.0	41.366 S	174.310 E	32.9	1.8	0.1	6
W 546	12	07	16	36.7	40.969 S	175.171 E	35.6	1.5	0.0	5
W 547	12	10	34	52.8	40.947 S	174.555 E	11.6	2.7	0.1	7
W 548	12	14	08	00.8	40.926 S	174.539 E	22.9	1.6	0.1	6
W 549	13	07	28	00.9	41.142 S	175.166 E	4.7	0.8	0.1	5
W 550	13	07	42	54.6	40.476 S	174.708 E	55.4	3.7	0.1	8

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W 551	MAY 13 08 52 43.8	41.690 S	174.485 E	30.0	1.9	0.1	7
W 552	13 11 27 39.9	41.380 S	175.110 E	28.0	1.5	0.1	8
W 553	13 13 28 30.1	41.024 S	174.490 E	65.0	2.0	0.0	7
W 554	13 18 29 52.7	41.419 S	175.505 E	18.5	1.8	0.2	8
W 555	13 23 16 19.5	41.144 S	174.686 E	33.7	1.6	0.1	9
W 556	14 02 57 38.4	41.165 S	175.000 E	7.6	1.6	0.2	8
W 557	14 12 41 27.0	41.120 S	174.988 E	28.5	1.7	0.1	7
W 558	15 08 42 09.6	41.099 S	174.923 E	35.5	1.7	0.1	7
W 559	15 21 21 01.8	41.205 S	174.877 E	17.6	1.5	0.1	7
W 560	16 18 05 30.4	41.281 S	174.834 E	26.5	2.6	0.2	10
W 561	16 20 16 57.8	41.319 S	174.400 E	18.2	2.1	0.1	8
W 562	17 01 02 07.4	40.946 S	175.184 E	28.1	1.7	0.1	5
W 563	17 02 31 08.7	40.878 S	175.621 E	25.2	2.9	0.3	11
W 564	17 04 19 14.5	41.063 S	174.700 E	53.8	1.8	0.2	6
W 565	17 15 45 04.7	41.126 S	174.096 E	50.0	2.2	0.2	8
W 566	18 15 08 03.9	41.023 S	174.808 E	10.3	2.2	0.1	6
W 567	18 18 13 52.9	40.970 S	175.480 E	34.2	1.7	0.2	7
W 568	18 22 37 22.3	41.393 S	173.742 E	55.4	3.0	0.1	7
W 569	18 22 41 11.0	41.378 S	175.128 E	26.3	1.6	0.1	6
W 570	19 10 47 20.4	41.370 S	175.642 E	9.5	2.1	0.1	7
W 571	19 10 49 10.8	41.355 S	175.622 E	11.6	2.4	0.1	8
W 572	19 19 21 47.8	40.948 S	174.551 E	18.4	1.7	0.2	6
W 573	20 09 45 41.4	41.007 S	175.630 E	31.5	2.9	0.2	10
W 574	20 15 59 52.9	41.292 S	175.224 E	20.0	1.9	0.1	9
W 575	20 17 58 43.4	41.634 S	174.511 E	48.0	2.4	0.2	6
W 576	21 10 52 15.4	41.063 S	174.141 E	72.0	2.4	0.1	7
W 577	21 14 45 10.1	41.000 S	175.383 E	36.0	1.7	0.2	5
W 578	21 20 15 21.0	41.595 S	174.425 E	11.2	3.0	0.2	11
W 579	22 02 34 41.7	41.109 S	174.626 E	32.1	1.9	0.1	7
W 580	23 10 19 40.0	40.988 S	174.181 E	50.6	2.5	0.1	7
W 581	23 23 21 34.5	40.972 S	175.755 E	33.1	2.2	0.1	7
W 582	24 11 04 53.9	41.389 S	175.328 E	13.0	1.4	0.1	5
W 583	24 15 01 42.1	41.362 S	174.140 E	44.2	2.6	0.0	7
W 584	25 01 16 49.7	41.365 S	174.188 E	34.4	2.2	0.2	7
W 585	25 09 41 44.8	41.387 S	175.114 E	28.0	2.0	0.1	7
W 586	25 21 59 42.9	41.530 S	174.752 E	18.9	1.6	0.1	5
W 587	25 23 47 42.6	40.922 S	175.510 E	31.6	2.9	0.1	7
W 588	26 00 40 26.5	40.922 S	175.513 E	34.3	1.6	0.1	5
W 589	26 14 17 43.4	40.913 S	175.486 E	21.1	1.6	0.1	5
W 590	27 07 36 33.7	41.558 S	174.071 E	33.0	3.0	0.2	9
W 591	27 11 12 46.2	41.530 S	174.113 E	33.3	3.4	0.1	9
W 592	27 13 55 48.6	41.582 S	174.170 E	10.8	1.9	0.2	8
W 593	28 04 13 56.5	40.996 S	174.379 E	48.0	2.1	0.2	7
W 594	28 13 32 58.5	40.872 S	174.726 E	13.5	1.5	0.1	5
W 595	28 15 07 51.3	40.971 S	175.621 E	28.7	1.7	0.2	6
W 596	28 18 24 14.0	40.889 S	174.947 E	34.9	2.5	0.1	8
W 597	29 00 03 42.5	41.229 S	175.059 E	6.7	2.2	0.1	7
W 598	29 05 53 30.7	41.271 S	174.956 E	28.2	1.5	0.1	7
W 599	29 10 02 38.8	41.479 S	174.528 E	20.1	1.8	0.1	8
W 600	29 10 27 57.0	41.201 S	174.245 E	40.0	1.6	0.2	6

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W 601	MAY 29 11 49 15.7	41.235 S	174.333 E	37.8	2.7	0.1	8
W 602	30 11 14 47.8	40.991 S	173.990 E	50.5	1.8	0.2	5
W 603	31 01 13 29.1	41.251 S	175.074 E	21.8	1.3	0.0	5
W 604	31 06 16 56.4	41.067 S	176.008 E	33.0	2.1	0.1	5
W 605	31 17 03 36.7	41.645 S	174.604 E	29.8	1.7	0.0	5
W 606	JUN 03 04 24 40.7	41.177 S	174.589 E	36.0	2.3	0.1	8
W 607	03 15 47 28.5	41.327 S	175.305 E	38.9	2.1	0.1	9
W 608	04 00 04 03.4	40.892 S	174.801 E	51.9	2.1	0.0	7
W 609	04 05 48 25.9	40.974 S	175.662 E	32.2	2.0	0.2	9
W 610	04 06 42 08.0	40.998 S	175.631 E	28.3	1.8	0.1	6
W 611	04 09 17 21.7	41.372 S	175.147 E	27.4	2.1	0.1	9
W 612	04 09 44 54.1	41.014 S	174.228 E	56.6	2.0	0.2	6
W 613	04 10 59 20.0	41.068 S	174.797 E	32.7	2.2	0.0	8
W 614	04 12 23 20.5	41.111 S	175.384 E	26.6	1.4	0.1	6
W 615	04 16 09 12.6	41.110 S	175.392 E	22.0	1.3	0.1	5
W 616	04 17 18 35.0	41.112 S	175.030 E	25.2	1.4	0.1	6
W 617	05 02 07 05.6	41.392 S	174.249 E	33.4	2.6	0.2	8
W 618	06 02 39 14.6	41.547 S	174.490 E	15.7	1.7	0.1	6
W 619	06 09 18 43.5	40.931 S	175.453 E	30.0	1.9	0.2	7
W 620	06 14 08 57.1	41.309 S	175.282 E	27.8	1.8	0.1	9
W 621	07 06 21 16.0	41.664 S	174.235 E	17.8	1.8	0.1	7
W 622	07 17 09 42.4	41.294 S	175.328 E	26.1	1.5	0.1	7
W 623	08 04 40 36.6	41.597 S	174.546 E	30.7	1.7	0.0	6
W 624	08 12 22 37.5	41.002 S	174.664 E	38.2	1.7	0.1	7
W 625	08 13 24 43.5	41.093 S	175.241 E	19.6	1.5	0.1	6
W 626	08 16 43 31.6	41.385 S	175.115 E	27.4	1.9	0.1	8
W 627	10 00 07 28.4	41.118 S	175.380 E	28.5	1.9	0.1	8
W 628	10 01 09 25.0	41.046 S	174.421 E	11.5	1.6	0.1	9
W 629	10 12 53 07.2	40.961 S	175.124 E	35.5	2.0	0.1	5
W 630	10 13 36 03.5	41.258 S	174.141 E	46.6	2.6	0.1	6
W 631	11 15 51 48.0	40.964 S	175.607 E	17.4	1.8	0.2	7
W 632	11 23 54 34.9	41.423 S	174.213 E	22.5	1.9	0.1	6
W 633	12 00 02 50.4	41.424 S	174.221 E	21.8	1.6	0.1	6
W 634	12 02 31 49.6	41.476 S	174.388 E	19.6	1.8	0.0	5
W 635	12 14 09 28.5	41.553 S	174.513 E	51.9	2.5	0.1	10
W 636	12 15 05 59.6	41.383 S	175.127 E	28.5	1.7	0.1	7
W 637	13 07 09 51.5	41.324 S	173.823 E	54.5	2.3	0.2	6
W 638	13 09 30 14.7	41.104 S	175.377 E	26.4	1.7	0.1	5
W 639	13 09 49 40.4	41.506 S	174.110 E	33.5	2.0	0.0	6
W 640	13 19 32 46.8	41.252 S	175.018 E	36.2	1.8	0.2	5
W 641	14 04 10 44.1	41.109 S	175.379 E	27.1	1.7	0.1	6
W 642	15 21 36 48.7	40.834 S	175.260 E	33.5	2.2	0.1	7
W 643	16 09 59 37.3	41.046 S	174.233 E	49.6	2.1	0.1	6
W 644	17 10 19 22.7	40.900 S	174.099 E	46.7	1.9	0.3	5
W 645	17 16 03 19.8	41.111 S	175.433 E	26.6	1.6	0.3	6
W 646	17 16 54 44.0	41.373 S	175.171 E	12.4	1.5	0.1	8
W 647	17 17 24 05.7	41.384 S	175.113 E	28.5	1.7	0.2	9
W 648	17 21 51 43.3	40.860 S	174.519 E	42.9	2.3	0.1	5
W 649	18 04 58 43.9	41.241 S	175.232 E	26.0	1.4	0.1	5
W 650	18 05 14 39.1	41.491 S	174.237 E	11.5	2.2	0.1	6

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W 651	JUN 19 07 39 16.3	41.518 S	174.367 E	60.5	2.7	0.1	8
W 652	19 09 13 51.8	41.208 S	174.916 E	21.0	1.4	0.0	6
W 653	19 19 10 04.1	41.433 S	175.039 E	29.6	1.9	0.2	8
W 654	19 19 11 53.9	41.431 S	175.058 E	28.5	1.6	0.1	8
W 655	20 04 35 03.1	41.199 S	174.908 E	33.9	1.5	0.2	8
W 656	20 12 16 52.0	41.422 S	174.640 E	28.0	1.9	0.1	6
W 657	20 13 18 27.9	41.515 S	175.593 E	21.2	1.8	0.1	7
W 658	21 12 47 54.4	41.348 S	174.894 E	29.2	1.8	0.2	8
W 659	21 18 31 02.9	41.025 S	174.751 E	35.1	2.2	0.1	8
W 660	22 09 10 58.5	41.320 S	175.294 E	26.0	1.7	0.1	9
W 661	22 12 12 55.1	41.161 S	174.690 E	34.2	1.6	0.1	6
W 662	22 15 45 55.8	41.275 S	174.978 E	30.0	1.6	0.1	10
W 663	23 00 53 23.8	40.830 S	174.804 E	19.3	1.6	0.0	6
W 664	23 04 38 08.0	40.778 S	174.699 E	5.0 R	2.1	0.1	6
W 665	23 18 51 15.3	41.059 S	174.441 E	10.0 R	1.5	0.2	5
W 666	24 05 54 33.3	40.868 S	175.570 E	28.8	2.2	0.3	8
W 667	24 10 56 49.3	40.900 S	174.676 E	14.2	2.0	0.1	7
W 668	24 11 48 54.7	41.453 S	174.628 E	61.0	2.8	0.0	8
W 669	24 12 10 31.2	40.890 S	175.236 E	26.2	1.4	0.2	5
W 670	24 14 10 56.1	40.924 S	175.432 E	27.9	1.8	0.2	7
W 671	24 16 34 49.2	41.268 S	174.117 E	41.5	3.1	0.1	8
W 672	25 03 39 43.2	41.375 S	174.760 E	6.8	1.5	0.1	7
W 673	25 06 15 24.8	40.997 S	175.349 E	29.9	1.9	0.2	7
W 674	26 19 19 39.3	41.209 S	174.014 E	54.5	2.5	0.2	6
W 675	26 19 43 38.1	41.220 S	173.992 E	53.6	2.3	0.2	6
W 676	28 02 21 08.4	41.154 S	174.605 E	36.2	3.0	0.1	8
W 677	28 03 26 00.6	41.094 S	174.412 E	35.0	1.9	0.1	6
W 678	28 09 09 38.5	41.746 S	174.468 E	33.6	2.3	0.2	8
W 679	28 17 26 35.8	41.491 S	174.715 E	35.8	2.1	0.2	7
W 680	28 22 06 01.2	40.904 S	175.092 E	35.2	2.1	0.1	6
W 681	28 22 12 29.4	41.454 S	174.059 E	34.6	2.2	0.0	7
W 682	29 02 54 22.0	41.046 S	174.280 E	46.7	1.8	0.1	6
W 683	29 06 48 44.3	40.961 S	174.132 E	59.4	1.8	0.1	5
W 684	29 07 11 47.0	41.415 S	175.133 E	27.2	2.1	0.1	8
W 685	29 13 16 35.6	40.952 S	174.045 E	59.4	2.3	0.1	7
W 686	29 18 56 26.3	41.546 S	175.652 E	31.3	2.2	0.0	8
W 687	29 19 33 56.4	41.011 S	175.607 E	29.1	1.8	0.0	7
W 688	30 00 01 28.3	40.952 S	175.475 E	33.5	2.2	0.1	7
W 689	30 08 31 55.3	40.708 S	174.823 E	27.1	1.5	0.1	6
W 690	JUL 01 05 58 16.4	41.119 S	174.404 E	38.4	2.2	0.1	7
W 691	01 07 20 12.7	41.248 S	174.627 E	34.8	1.4	0.1	6
W 692	01 13 49 47.2	40.937 S	175.443 E	32.0	2.0	0.2	9
W 693	01 13 50 42.1	41.324 S	174.286 E	13.8	1.4	0.2	5
W 694	01 15 44 26.4	41.599 S	174.016 E	10.0 R	3.8	0.2	9
W 695	01 17 55 10.1	41.599 S	173.990 E	12.7	2.3	0.1	7
W 696	01 17 59 09.8	41.613 S	173.990 E	10.0 R	2.2	0.1	6
W 697	03 12 13 10.2	40.883 S	174.257 E	53.1	1.8	0.2	5
W 698	04 13 11 21.4	41.276 S	175.193 E	3.5	1.4	0.1	7
W 699	04 18 12 17.6	40.918 S	174.657 E	65.8	2.4	0.1	8
W 700	04 19 05 51.7	41.049 S	175.332 E	25.7	1.8	0.1	6

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W 701 JUL	05 10 29 42.6	41.225 S	174.617 E	35.1	2.2	0.1	10
W 702	05 11 13 00.9	40.829 S	174.714 E	11.9	2.3	0.1	8
W 703	05 19 58 30.8	41.236 S	174.389 E	62.0	2.3	0.1	10
W 704	06 07 54 56.3	41.234 S	175.213 E	29.1	1.5	0.2	7
W 705	06 18 52 04.9	41.377 S	175.027 E	25.3	1.5	0.1	7
W 706	06 21 08 51.3	41.406 S	174.538 E	31.1	1.4	0.1	6
W 707	07 10 02 37.7	41.014 S	175.601 E	27.3	1.8	0.1	6
W 708	07 11 42 55.0	40.970 S	175.320 E	23.9	1.5	0.1	6
W 709	08 03 34 00.1	41.160 S	174.975 E	3.3	1.3	0.1	7
W 710	08 12 38 52.0	41.505 S	173.982 E	37.0	2.6	0.2	7
W 711	09 06 58 03.8	41.659 S	174.194 E	17.3	2.0	0.1	7
W 712	09 08 18 25.9	41.527 S	174.117 E	33.8	2.5	0.1	6
W 713	09 12 09 20.6	41.182 S	174.760 E	31.8	1.6	0.2	7
W 714	09 18 34 42.9	41.102 S	175.198 E	23.7	2.2	0.1	8
W 715	10 07 06 28.0	41.784 S	174.545 E	33.2	2.0	0.2	8
W 716	10 14 09 05.7	41.481 S	174.448 E	15.9	1.6	0.1	6
W 717	10 15 22 04.8	40.912 S	175.229 E	29.7	1.7	0.1	5
W 718	11 01 07 24.6	41.344 S	175.384 E	9.6	1.8	0.2	9
W 719	11 08 11 16.8	41.398 S	175.095 E	17.0	2.4	0.1	8
W 720	11 11 15 22.2	41.384 S	175.124 E	17.9	1.5	0.2	5
W 721	12 02 12 46.6	41.658 S	174.610 E	26.5	2.0	0.1	7
W 722	12 18 08 48.7	41.613 S	174.677 E	28.6	1.8	0.2	7
W 723	12 19 51 08.3	41.386 S	174.260 E	33.3	2.3	0.1	6
W 724	13 00 40 27.9	41.351 S	174.835 E	31.1	1.4	0.1	7
W 725	13 04 52 16.3	41.666 S	174.261 E	9.9	1.9	0.0	6
W 726	13 13 48 54.6	41.428 S	174.990 E	24.1	1.7	0.1	6
W 727	14 08 36 44.9	40.933 S	174.633 E	45.9	2.9	0.1	10
W 728	14 16 25 15.2	41.409 S	175.096 E	20.8	3.0	0.2	10
W 729	14 16 34 31.3	41.406 S	175.089 E	17.7	1.7	0.1	7
W 730	14 17 23 33.8	41.358 S	174.860 E	31.8	1.3	0.1	6
W 731	14 17 31 21.8	41.400 S	175.087 E	17.6	1.4	0.2	6
W 732	14 23 29 33.6	41.414 S	175.102 E	20.9	2.1	0.2	10
W 733	14 23 29 48.6	41.415 S	175.110 E	20.9	1.5	0.2	8
W 734	15 08 58 39.6	41.085 S	174.691 E	53.4	3.0	0.1	11
W 735	15 09 33 26.6	40.897 S	174.930 E	49.4	4.7	0.2	11
W 736	15 09 44 26.2	40.862 S	174.945 E	41.5	1.7	0.1	7
W 737	15 10 47 38.8	41.467 S	174.190 E	10.9	1.5	0.0	5
W 738	15 11 18 12.3	40.635 S	174.704 E	10.0 R	1.6	0.1	7
W 739	16 09 32 06.3	41.074 S	175.970 E	31.5	1.9	0.2	5
W 740	16 13 25 37.9	41.180 S	174.587 E	21.8	1.0	0.0	5
W 741	16 23 01 34.8	40.833 S	175.060 E	33.7	2.1	0.2	7
W 742	17 04 01 51.2	41.072 S	175.100 E	20.9	1.4	0.1	6
W 743	17 09 41 42.1	40.896 S	175.079 E	48.7	2.3	0.2	7
W 744	17 09 47 58.6	41.291 S	175.274 E	30.2	2.4	0.1	9
W 745	17 10 27 18.0	41.279 S	175.275 E	27.3	1.9	0.1	8
W 746	17 18 00 04.2	40.631 S	174.862 E	38.2	2.0	0.1	6
W 747	17 21 36 39.4	41.449 S	174.531 E	26.6	2.6	0.0	7
W 748	17 22 56 24.7	41.561 S	174.988 E	22.1	1.9	0.1	8
W 749	19 03 39 51.4	40.991 S	174.601 E	56.8	1.6	0.1	5
W 750	19 13 06 38.8	41.173 S	174.747 E	34.2	2.4	0.1	10

REF NUM	ORIGIN TIME	LATITUDE		LONGITUDE		DEPTH km	MAG	S.E.	NUM OBS
		h	m	s	deg				
W 751	JUL 19 13 54 12.6	40.895	S	174.931	E	41.3	4.7	0.1	10
W 752	19 14 34 08.7	40.860	S	174.947	E	43.3	1.6	0.1	7
W 753	19 15 27 29.3	40.848	S	174.953	E	47.3	1.6	0.1	7
W 754	19 15 35 03.5	40.867	S	174.935	E	44.7	1.5	0.1	6
W 755	19 15 39 36.1	40.852	S	174.943	E	45.9	1.8	0.1	7
W 756	19 20 23 36.6	41.007	S	175.731	E	34.3	1.6	0.2	5
W 757	20 12 38 26.2	40.829	S	175.008	E	38.0	1.8	0.2	5
W 758	20 17 01 58.7	41.697	S	174.472	E	29.9	2.4	0.1	8
W 759	20 17 45 13.6	41.227	S	175.243	E	21.6	1.5	0.2	6
W 760	20 19 17 35.3	41.331	S	175.010	E	28.6	2.1	0.1	9
W 761	20 20 24 12.2	40.849	S	174.930	E	45.5	2.1	0.1	9
W 762	21 07 02 32.2	41.122	S	174.593	E	20.8	1.6	0.2	8
W 763	21 15 42 57.8	40.962	S	175.551	E	28.8	2.4	0.2	9
W 764	22 04 22 44.1	41.106	S	174.849	E	32.0	1.8	0.2	7
W 765	22 09 26 25.0	40.857	S	174.953	E	44.7	2.2	0.1	7
W 766	22 15 28 58.8	40.865	S	174.937	E	45.2	1.9	0.1	7
W 767	22 15 52 37.9	41.686	S	174.783	E	24.2	2.2	0.1	8
W 768	23 00 23 33.6	41.120	S	174.589	E	54.2	2.3	0.0	6
W 769	23 17 24 18.4	40.862	S	174.753	E	16.5	1.3	0.1	5
W 770	23 18 22 50.0	41.455	S	174.448	E	17.4	1.7	0.0	6
W 771	23 18 26 57.2	41.447	S	174.448	E	19.1	2.0	0.1	6
W 772	23 20 25 21.1	41.039	S	175.554	E	11.9	1.8	0.1	6
W 773	24 15 54 59.6	41.472	S	175.310	E	16.7	1.7	0.2	9
W 774	24 20 33 47.9	41.007	S	174.622	E	59.1	1.8	0.0	6
W 775	25 00 30 17.4	41.264	S	174.331	E	37.1	2.0	0.1	6
W 776	25 07 36 33.0	41.270	S	173.852	E	56.0	2.3	0.0	5
W 777	25 12 41 56.4	40.988	S	174.915	E	31.9	1.9	0.1	7
W 778	26 14 35 43.9	41.032	S	174.534	E	63.3	2.1	0.1	10
W 779	26 23 03 14.4	40.935	S	175.516	E	28.2	1.8	0.0	6
W 780	27 04 44 22.6	41.263	S	175.031	E	19.0	1.6	0.2	7
W 781	27 12 05 11.1	41.587	S	174.945	E	23.9	1.8	0.0	7
W 782	27 20 31 10.3	41.044	S	175.232	E	34.5	1.7	0.2	6
W 783	28 04 52 20.2	41.285	S	175.280	E	17.6	1.3	0.2	5
W 784	28 16 45 19.8	41.067	S	173.929	E	63.5	1.8	0.2	6
W 785	29 02 20 27.5	41.302	S	174.534	E	55.4	2.2	0.1	7
W 786	30 09 03 14.5	41.106	S	175.636	E	13.1	1.7	0.1	5
W 787	31 00 31 00.5	41.419	S	175.105	E	22.3	2.1	0.2	9
W 788	31 01 42 04.6	41.365	S	175.253	E	17.5	1.8	0.1	7
W 789	31 07 53 44.8	40.846	S	174.519	E	23.5	1.8	0.0	6
W 790	31 11 57 38.2	40.783	S	175.132	E	22.8	1.9	0.0	5
W 791	AUG 01 02 18 16.7	41.592	S	174.340	E	51.6	2.0	0.1	6
W 792	01 02 18 21.9	41.149	S	175.302	E	32.9	1.7	0.1	6
W 793	01 16 15 18.6	41.308	S	174.037	E	42.5	2.0	0.2	7
W 794	01 20 16 55.5	41.255	S	175.263	E	24.6	1.4	0.1	6
W 795	01 21 11 34.0	41.003	S	174.581	E	60.5	1.9	0.0	6
W 796	02 02 29 29.4	40.941	S	175.146	E	33.0	1.7	0.2	5
W 797	02 12 22 53.3	41.012	S	174.743	E	69.6	2.7	0.1	8
W 798	02 12 45 55.1	40.924	S	175.217	E	32.0	2.0	0.1	6
W 799	02 21 55 19.3	41.092	S	174.638	E	56.5	2.0	0.0	6
W 800	03 17 42 22.2	40.993	S	175.679	E	26.8	1.9	0.1	6

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W 801	AUG 03 18 11 55.2	40.994 S	174.475 E	46.0	2.0	0.0	6
W 802	04 05 45 50.8	41.601 S	174.658 E	30.8	1.7	0.1	5
W 803	04 12 09 22.4	41.334 S	175.153 E	22.2	1.8	0.2	7
W 804	04 12 17 09.8	41.148 S	174.826 E	30.1	1.8	0.1	7
W 805	05 05 36 26.9	41.061 S	174.775 E	36.0	2.3	0.1	7
W 806	05 22 21 56.2	41.005 S	175.600 E	37.7	2.4	0.2	7
W 807	06 01 09 49.5	41.181 S	175.429 E	14.6	1.7	0.2	7
W 808	06 08 39 20.5	40.560 S	174.956 E	34.9	1.9	0.1	5
W 809	06 11 17 46.5	41.436 S	174.627 E	21.6	2.0	0.1	8
W 810	06 18 15 22.6	41.287 S	174.367 E	33.2	2.1	0.1	7
W 811	06 18 29 10.2	41.194 S	174.455 E	44.6	1.7	0.1	7
W 812	07 05 16 31.6	40.959 S	174.598 E	49.7	2.2	0.1	6
W 813	08 12 44 08.5	40.917 S	174.578 E	45.6	1.6	0.1	5
W 814	08 12 47 24.8	41.280 S	174.730 E	33.0	2.4	0.2	8
W 815	08 16 56 53.6	40.906 S	174.988 E	36.8	1.9	0.1	6
W 816	08 20 33 41.6	40.780 S	175.673 E	25.7	2.0	0.1	5
W 817	09 16 29 12.9	40.878 S	174.943 E	44.4	4.1	0.1	11
W 818	10 02 27 03.8	41.302 S	175.262 E	29.2	2.5	0.2	9
W 819	10 06 26 03.8	41.592 S	174.680 E	27.8	2.1	0.1	8
W 820	10 12 54 04.9	41.225 S	174.614 E	36.9	2.0	0.1	8
W 821	11 02 59 28.2	41.621 S	174.647 E	28.7	1.7	0.1	5
W 822	11 03 33 19.5	41.147 S	174.450 E	64.3	2.2	0.1	6
W 823	11 19 57 36.1	41.233 S	175.417 E	19.6	2.2	0.1	7
W 824	11 20 42 23.5	41.263 S	175.431 E	20.5	1.8	0.1	7
W 825	12 08 24 32.1	41.240 S	175.417 E	19.3	2.8	0.1	9
W 826	12 10 19 38.5	41.245 S	175.442 E	22.8	2.5	0.2	9
W 827	12 15 11 53.2	41.088 S	175.473 E	8.4	1.9	0.1	6
W 828	13 14 12 20.5	40.886 S	175.119 E	35.5	2.9	0.1	7
W 829	13 14 50 12.9	40.881 S	175.122 E	34.0	1.8	0.1	7
W 830	14 09 11 23.6	41.230 S	175.410 E	18.3	1.6	0.2	6
W 831	14 13 00 31.0	40.987 S	175.759 E	27.3	2.0	0.2	9
W 832	14 19 29 52.1	40.763 S	174.718 E	49.2	2.1	0.1	7
W 833	15 02 43 13.5	41.238 S	174.125 E	46.5	1.9	0.1	7
W 834	16 10 37 36.6	40.959 S	175.679 E	32.8	2.7	0.2	8
W 835	16 14 18 27.8	40.836 S	174.533 E	33.6	1.5	0.0	5
W 836	16 18 59 55.6	41.707 S	174.533 E	49.2	2.5	0.1	7
W 837	17 10 28 09.9	41.250 S	173.902 E	62.7	2.0	0.1	5
W 838	18 01 31 02.4	41.368 S	174.786 E	21.3	1.4	0.2	8
W 839	18 02 56 10.1	41.406 S	174.950 E	29.5	2.1	0.2	11
W 840	18 04 22 24.9	41.140 S	174.717 E	56.8	2.7	0.1	10
W 841	18 06 05 26.0	40.959 S	174.597 E	40.7	1.7	0.0	8
W 842	18 09 56 02.4	41.285 S	175.184 E	23.5	1.2	0.1	7
W 843	18 23 04 45.2	41.102 S	175.405 E	30.1	1.6	0.2	5
W 844	19 01 45 37.2	41.334 S	174.838 E	30.6	1.7	0.2	8
W 845	21 13 09 39.6	41.025 S	175.176 E	29.3	1.3	0.0	5
W 846	21 13 29 33.3	41.109 S	174.691 E	31.2	1.4	0.2	6
W 847	21 16 54 17.5	41.244 S	175.195 E	26.4	1.8	0.2	7
W 848	21 20 22 33.3	41.431 S	174.725 E	25.4	2.1	0.2	7
W 849	21 21 26 34.2	41.393 S	174.102 E	34.0	1.8	0.2	5
W 850	22 11 40 35.2	40.960 S	175.751 E	27.9	2.1	0.2	8

REF NUM		ORIGIN TIME			LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS	
		h	m	s	deg	deg	km				
W 851	AUG	22	12	05	19.9	40.893 S	174.314 E	43.8	1.8	0.0	6
W 852		23	10	59	36.0	40.536 S	174.965 E	5.0 R	1.9	0.2	5
W 853		23	13	19	57.1	41.216 S	174.610 E	57.0	1.9	0.1	7
W 854		23	14	59	02.5	41.584 S	175.682 E	9.1	2.1	0.2	9
W 855		24	00	37	14.6	40.950 S	175.193 E	30.5	2.3	0.2	7
W 856		24	02	38	33.3	40.785 S	174.554 E	50.0	3.0	0.2	7
W 857		24	06	21	20.5	41.319 S	173.943 E	54.3	2.2	0.2	6
W 858		24	15	53	15.0	41.421 S	175.055 E	24.2	1.7	0.1	8
W 859		24	18	48	57.7	41.214 S	175.098 E	16.9	1.1	0.0	5
W 860		24	19	51	53.7	41.643 S	175.636 E	10.0 R	2.0	0.0	5
W 861		25	00	49	48.0	40.955 S	174.666 E	9.0	1.7	0.1	8
W 862		25	11	36	44.2	41.506 S	174.361 E	13.8	2.0	0.2	7
W 863		25	21	20	49.1	41.035 S	174.624 E	36.9	2.4	0.2	7
W 864		26	05	39	19.3	40.799 S	174.722 E	44.4	2.1	0.1	7
W 865		26	11	16	00.5	40.421 S	174.857 E	21.2	2.7	0.1	9
W 866		27	01	24	40.9	41.451 S	174.203 E	22.4	2.0	0.1	7
W 867		28	00	00	39.2	40.908 S	175.065 E	33.8	2.0	0.1	6
W 868		28	06	59	02.0	41.561 S	175.361 E	12.1	2.4	0.2	11
W 869		28	07	08	40.4	41.626 S	174.118 E	31.0	2.0	0.2	6
W 870		29	00	08	30.4	41.675 S	174.598 E	32.0	2.2	0.1	7
W 871		29	01	47	56.5	40.861 S	174.926 E	43.8	2.9	0.1	8
W 872		29	02	11	02.8	40.928 S	174.991 E	55.9	2.2	0.2	8
W 873		29	09	00	56.2	41.317 S	174.886 E	21.5	1.3	0.1	7
W 874		30	17	51	09.8	41.271 S	174.996 E	8.3	1.5	0.1	6
W 875		30	23	14	43.8	41.147 S	174.054 E	56.5	3.0	0.1	8
W 876		31	06	15	01.3	41.336 S	173.792 E	63.4	1.9	0.2	5
W 877		31	19	39	58.2	40.892 S	175.226 E	30.9	1.9	0.2	7
W 878	SEP	01	00	53	31.0	41.562 S	175.187 E	28.4	2.0	0.2	9
W 879		01	02	02	00.9	40.977 S	175.527 E	27.4	1.7	0.1	5
W 880		02	11	18	48.7	40.559 S	175.082 E	35.4	2.1	0.1	5
W 881		02	12	16	51.9	40.780 S	175.067 E	43.4	2.8	0.1	6
W 882		03	06	17	43.2	41.362 S	174.765 E	42.3	1.7	0.1	8
W 883		03	19	41	22.1	41.033 S	174.428 E	61.4	2.1	0.1	7
W 884		03	23	10	46.1	41.290 S	175.212 E	30.9	2.0	0.1	8
W 885		04	12	27	34.2	41.547 S	174.054 E	33.5	2.6	0.2	7
W 886		04	22	09	35.7	41.050 S	175.367 E	23.6	1.6	0.1	6
W 887		05	10	43	57.2	40.441 S	174.980 E	12.9	1.7	0.1	6
W 888		05	11	26	58.9	41.387 S	174.952 E	27.1	1.7	0.1	10
W 889		05	11	35	50.1	41.160 S	173.902 E	62.4	3.3	0.2	9
W 890		05	12	05	04.3	41.102 S	173.894 E	53.2	2.0	0.2	7
W 891		05	14	48	29.5	41.362 S	174.140 E	35.9	1.7	0.3	7
W 892		05	23	40	22.1	41.146 S	174.301 E	42.8	2.0	0.0	6
W 893		06	03	24	28.5	41.139 S	173.916 E	58.2	3.4	0.0	7
W 894		06	19	38	36.3	41.000 S	175.478 E	23.6	1.8	0.1	6
W 895		06	20	09	59.0	40.905 S	174.872 E	37.4	2.0	0.0	7
W 896		07	04	30	09.9	41.088 S	175.215 E	29.0	2.3	0.2	8
W 897		07	13	08	15.6	41.391 S	174.068 E	38.0	2.4	0.2	9
W 898		07	17	02	26.5	41.561 S	175.185 E	23.9	1.8	0.0	7
W 899		08	06	36	32.9	40.770 S	174.666 E	26.8	1.7	0.0	5
W 900		08	11	42	49.7	41.018 S	174.939 E	10.6	1.6	0.1	6

REF NUM	ORIGIN TIME			LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	
	h	m	s							
W 901 SEP	08	23	08	05.3	41.459 S	175.017 E	26.3	1.8	0.2	9
W 902	08	23	44	11.3	41.337 S	174.247 E	16.3	2.3	0.2	7
W 903	09	02	10	30.4	41.103 S	174.460 E	38.1	2.0	0.0	7
W 904	09	03	32	28.1	41.540 S	174.024 E	39.9	2.2	0.2	7
W 905	10	14	01	35.2	41.309 S	174.177 E	39.2	1.7	0.2	6
W 906	10	16	55	12.0	41.379 S	175.030 E	28.2	1.4	0.1	6
W 907	11	03	36	46.3	41.198 S	174.526 E	62.9	2.0	0.1	7
W 908	11	08	59	10.7	40.865 S	175.581 E	30.9	2.4	0.3	8
W 909	11	13	46	16.5	40.972 S	175.111 E	32.6	1.9	0.2	8
W 910	11	14	59	25.6	40.794 S	174.728 E	17.6	1.7	0.1	7
W 911	11	17	37	26.5	41.358 S	175.001 E	30.7	1.5	0.1	6
W 912	11	22	02	19.5	41.047 S	174.877 E	59.9	2.5	0.1	9
W 913	12	05	18	05.0	41.036 S	175.323 E	9.6	2.5	0.3	8
W 914	12	20	55	56.4	41.318 S	175.159 E	25.9	2.2	0.1	9
W 915	13	00	14	52.2	41.416 S	174.276 E	58.5	2.0	0.0	5
W 916	13	01	32	53.5	41.689 S	174.159 E	22.1	4.0	0.2	9
W 917	13	05	02	36.6	41.573 S	174.320 E	15.2	1.8	0.1	8
W 918	13	05	08	31.8	41.563 S	174.330 E	14.3	1.6	0.1	7
W 919	13	07	38	50.9	41.389 S	174.630 E	19.1	3.8	0.2	9
W 920	13	10	23	36.7	41.270 S	175.232 E	18.4	1.5	0.0	9
W 921	13	15	19	26.7	41.014 S	174.165 E	51.9	2.1	0.2	7
W 922	13	21	41	47.9	41.400 S	174.627 E	20.7	1.9	0.2	9
W 923	15	00	02	25.4	40.752 S	174.471 E	43.1	2.3	0.1	6
W 924	15	05	45	33.4	41.292 S	175.212 E	20.1	1.4	0.1	5
W 925	15	08	27	56.2	41.378 S	174.817 E	13.4	1.5	0.2	8
W 926	15	09	05	12.5	41.196 S	174.133 E	43.5	2.0	0.1	6
W 927	15	11	50	34.1	41.004 S	174.489 E	39.0	2.1	0.1	11
W 928	15	13	26	08.6	41.339 S	174.802 E	29.3	1.7	0.1	9
W 929	15	16	07	53.3	41.160 S	174.549 E	34.6	1.9	0.1	9
W 930	16	10	02	39.2	41.702 S	174.186 E	12.5	3.8	0.1	7
W 931	16	13	28	02.2	41.691 S	174.195 E	12.2	2.7	0.1	7
W 932	18	00	21	59.6	41.396 S	174.801 E	19.5	1.9	0.2	9
W 933	18	00	22	09.5	41.395 S	174.804 E	19.4	1.6	0.2	8
W 934	18	01	18	22.9	40.927 S	175.320 E	28.4	2.5	0.2	9
W 935	18	23	20	37.0	41.215 S	174.533 E	36.6	1.7	0.2	7
W 936	19	03	26	44.2	41.273 S	175.348 E	14.2	2.2	0.2	8
W 937	19	07	06	50.4	41.032 S	175.306 E	28.2	1.9	0.2	8
W 938	19	10	10	38.7	41.633 S	174.485 E	46.6	1.8	0.3	7
W 939	19	23	58	28.0	41.366 S	175.116 E	31.1	1.4	0.2	6
W 940	20	08	27	05.2	40.925 S	174.336 E	46.0	2.6	0.1	7
W 941	20	10	17	34.2	41.293 S	175.333 E	33.1	1.9	0.2	9
W 942	20	23	26	16.2	40.840 S	175.329 E	39.0	2.5	0.3	6
W 943	21	00	51	03.8	41.378 S	175.111 E	30.7	1.5	0.3	6
W 944	21	15	36	48.9	41.136 S	175.226 E	32.1	1.6	0.2	6
W 945	21	16	25	51.1	41.086 S	174.645 E	59.2	1.8	0.1	6
W 946	21	22	17	33.0	41.051 S	174.474 E	51.5	1.7	0.1	5
W 947	22	02	57	21.8	41.467 S	175.075 E	23.7	2.0	0.1	8
W 948	22	09	50	04.3	41.463 S	174.212 E	28.2	1.9	0.1	7
W 949	22	13	32	34.3	40.994 S	174.469 E	63.8	2.0	0.1	9
W 950	22	17	29	06.3	41.377 S	175.119 E	28.9	1.5	0.1	7

REF NUM	ORIGIN	TIME			LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	
		h	m	s							
W 951	SEP	23	07	33	50.9	40.653 S	174.986 E	46.5	2.0	0.1	5
W 952		23	10	42	01.6	40.892 S	175.672 E	22.8	2.0	0.1	8
W 953		23	21	34	59.5	41.473 S	174.163 E	32.7	2.1	0.1	5
W 954		24	13	11	33.2	41.055 S	174.001 E	61.5	3.1	0.2	7
W 955		24	20	48	50.4	40.910 S	175.010 E	36.9	1.9	0.2	6
W 956		25	15	26	56.5	41.321 S	174.219 E	35.1	1.9	0.2	6
W 957		26	15	11	33.6	41.303 S	174.291 E	34.6	2.0	0.2	7
W 958		27	05	13	18.7	41.021 S	175.418 E	28.6	2.1	0.1	7
W 959		28	02	47	27.5	41.042 S	175.471 E	20.4	1.6	0.2	5
W 960		29	08	24	59.5	40.949 S	175.816 E	32.0	1.9	0.1	6
W 961		29	10	28	57.3	41.241 S	174.130 E	46.7	2.2	0.1	7
W 962		29	19	07	07.9	40.996 S	174.414 E	61.4	1.8	0.1	6
W 963		29	19	34	50.2	41.085 S	174.945 E	29.9	2.5	0.1	8
W 964		30	02	16	21.4	41.462 S	175.075 E	21.6	1.9	0.2	8
W 965		30	02	24	19.5	41.138 S	173.923 E	69.3	2.6	0.1	7
W 966		30	05	56	47.4	41.186 S	175.107 E	6.8	1.2	0.1	6
W 967		30	13	00	21.4	40.774 S	174.468 E	74.5	2.8	0.1	10
W 968		30	15	53	43.1	41.273 S	175.371 E	26.3	1.7	0.2	6
W 969		30	17	07	01.0	41.161 S	175.136 E	21.2	1.4	0.2	8
W 970		30	17	13	49.0	41.164 S	175.135 E	21.1	1.4	0.2	9
W 971		30	17	37	50.4	41.364 S	174.862 E	30.2	1.5	0.1	10
W 972		30	18	50	06.9	41.156 S	175.123 E	21.4	1.6	0.2	10
W 973		30	23	23	37.7	41.055 S	174.723 E	61.9	1.8	0.0	5
W 974	OCT	01	09	06	16.0	41.397 S	173.800 E	58.7	2.7	0.2	7
W 975		01	19	55	54.6	41.235 S	175.015 E	22.5	1.8	0.2	6
W 976		01	21	46	42.8	40.847 S	174.532 E	68.9	2.6	0.2	7
W 977		02	16	32	24.7	41.559 S	174.498 E	14.6	2.0	0.1	7
W 978		03	01	21	56.1	41.007 S	174.724 E	34.9	2.5	0.1	8
W 979		03	02	56	59.5	41.555 S	173.965 E	22.4	2.2	0.1	7
W 980		04	01	10	17.2	41.000 S	175.247 E	53.7	2.1	0.0	6
W 981		04	13	57	03.5	40.995 S	174.862 E	35.5	1.7	0.0	5
W 982		04	17	01	36.3	40.490 S	174.934 E	5.0 R	3.3	0.2	8
W 983		05	23	41	19.3	40.739 S	175.375 E	32.3	2.3	0.2	8
W 984		06	05	28	43.9	41.667 S	174.575 E	28.5	1.7	0.1	6
W 985		06	09	41	36.0	41.109 S	175.376 E	26.5	1.6	0.1	6
W 986		06	17	33	53.7	41.551 S	174.215 E	19.8	1.9	0.1	7
W 987		07	05	24	57.2	40.913 S	175.095 E	36.6	1.6	0.1	5
W 988		07	07	41	39.9	41.007 S	175.735 E	31.5	2.3	0.1	7
W 989		07	13	42	01.8	41.189 S	175.443 E	24.9	1.9	0.1	8
W 990		07	19	19	58.3	41.434 S	174.874 E	12.8	1.5	0.2	7
W 991		07	19	46	11.4	40.922 S	174.924 E	36.1	1.6	0.1	6
W 992		07	21	50	48.0	41.689 S	174.515 E	34.1	2.9	0.2	8
W 993		08	12	06	48.0	41.139 S	175.006 E	33.9	1.6	0.1	8
W 994		09	00	46	39.4	41.050 S	174.802 E	32.4	2.2	0.2	8
W 995		09	15	28	54.0	41.716 S	174.455 E	30.4	2.5	0.1	8
W 996		11	03	24	33.2	41.566 S	174.792 E	30.3	1.6	0.1	9
W 997		12	03	04	50.4	41.330 S	174.226 E	33.9	1.9	0.1	7
W 998		12	10	10	46.8	41.093 S	175.210 E	26.6	1.6	0.1	6
W 999		12	23	50	56.2	40.844 S	175.177 E	43.0	2.0	0.1	5
W1000		13	05	33	45.6	40.863 S	175.201 E	31.6	2.0	0.1	6

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W1001	OCT 13 15 43 20.3	40.510 S	174.603 E	28.4	2.1	0.2	7
W1002	13 18 45 27.5	41.230 S	175.415 E	19.9	1.4	0.3	6
W1003	13 18 54 28.6	41.227 S	175.413 E	18.4	1.6	0.2	7
W1004	14 02 56 05.2	41.022 S	175.216 E	30.3	1.7	0.2	6
W1005	15 01 51 59.1	40.691 S	174.489 E	16.2	1.5	0.0	5
W1006	15 08 12 33.0	41.591 S	174.999 E	5.0 R	1.6	0.1	5
W1007	15 13 01 42.9	41.164 S	173.951 E	59.7	2.1	0.1	5
W1008	15 14 46 30.2	41.020 S	174.817 E	52.0	1.6	0.0	5
W1009	17 15 41 14.1	41.556 S	174.719 E	23.4	1.8	0.2	6
W1010	17 16 04 24.2	40.775 S	175.332 E	33.3	2.1	0.1	7
W1011	18 07 13 41.1	40.941 S	175.676 E	16.5	1.7	0.0	5
W1012	18 15 37 34.0	41.372 S	175.119 E	28.3	1.8	0.1	7
W1013	18 18 22 51.9	41.042 S	174.569 E	60.6	2.2	0.1	9
W1014	18 18 38 56.5	41.102 S	174.493 E	34.4	1.4	0.0	6
W1015	19 03 21 31.1	40.912 S	174.898 E	65.3	1.9	0.0	7
W1016	19 08 44 26.6	41.521 S	173.984 E	22.2	2.4	0.1	8
W1017	20 01 42 24.9	41.399 S	175.038 E	25.4	1.5	0.1	6
W1018	21 00 35 49.2	41.412 S	175.069 E	26.0	1.4	0.2	5
W1019	21 03 04 40.5	41.728 S	174.448 E	49.5	2.9	0.2	9
W1020	21 19 13 46.2	41.278 S	175.201 E	2.5	1.5	0.2	7
W1021	21 19 27 56.1	41.274 S	175.199 E	2.3	1.4	0.1	8
W1022	22 04 14 10.5	41.127 S	174.806 E	31.0	1.2	0.0	6
W1023	22 09 56 37.4	41.716 S	174.489 E	33.1	1.9	0.1	6
W1024	22 20 31 53.8	41.041 S	174.855 E	52.0	2.0	0.0	6
W1025	23 07 58 17.4	41.347 S	175.066 E	38.6	1.7	0.1	7
W1026	23 08 42 31.8	41.360 S	174.967 E	28.5	1.8	0.1	9
W1027	23 08 53 12.9	40.845 S	174.752 E	12.6	2.1	0.0	6
W1028	23 09 19 43.5	41.054 S	174.796 E	35.1	1.6	0.1	6
W1029	24 01 26 03.1	41.134 S	174.610 E	35.4	1.7	0.1	9
W1030	24 02 08 12.8	41.254 S	174.639 E	30.0	2.0	0.1	9
W1031	24 02 47 03.7	41.089 S	175.145 E	32.6	1.6	0.1	7
W1032	24 11 32 34.5	40.737 S	174.736 E	36.8	1.8	0.1	5
W1033	24 17 07 59.9	41.577 S	174.926 E	26.7	1.7	0.2	7
W1034	24 17 46 54.9	40.745 S	174.887 E	37.4	1.7	0.0	5
W1035	25 00 33 59.1	40.763 S	175.371 E	33.2	2.4	0.1	6
W1036	25 15 38 10.1	40.877 S	174.930 E	47.3	2.1	0.1	7
W1037	26 01 36 08.3	41.368 S	175.125 E	27.2	1.7	0.1	6
W1038	26 03 05 49.0	41.374 S	175.128 E	28.2	1.4	0.1	6
W1039	26 03 44 50.9	40.542 S	174.660 E	51.0	2.8	0.1	7
W1040	26 06 39 59.8	41.244 S	175.188 E	24.5	1.4	0.1	8
W1041	26 14 05 21.5	41.266 S	174.382 E	35.9	1.6	0.1	6
W1042	26 17 01 15.0	41.070 S	175.346 E	27.7	1.6	0.1	8
W1043	27 03 13 59.1	41.058 S	174.432 E	9.9	1.2	0.1	5
W1044	27 03 24 16.8	41.408 S	174.865 E	36.9	1.5	0.2	6
W1045	27 03 30 43.7	41.015 S	175.620 E	30.1	2.3	0.1	7
W1046	27 13 45 15.6	40.715 S	175.372 E	33.5	2.0	0.0	5
W1047	27 23 52 39.8	41.465 S	175.469 E	41.9	2.1	0.1	6
W1048	28 05 38 54.5	41.654 S	174.198 E	34.1	1.8	0.2	5
W1049	28 13 44 32.9	41.575 S	174.647 E	28.9	1.9	0.1	8
W1050	28 15 11 49.2	41.351 S	175.171 E	26.2	1.6	0.1	5

REF NUM		ORIGIN TIME	LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS
		h m s	deg	deg	km			
W1051	OCT	28 15 21 54.3	41.351 S	175.174 E	24.4	1.8	0.1	8
W1052		28 20 00 13.9	41.338 S	175.162 E	27.7	1.6	0.2	7
W1053		29 00 41 36.8	41.535 S	175.662 E	23.3	2.3	0.1	9
W1054		29 11 47 13.1	41.111 S	174.611 E	35.6	2.0	0.1	8
W1055		29 14 56 38.5	41.547 S	174.286 E	32.1	1.9	0.2	7
W1056		29 17 30 18.1	41.297 S	175.061 E	22.3	1.4	0.1	7
W1057		30 03 52 56.8	40.826 S	174.880 E	39.0	1.9	0.1	6
W1058		30 10 02 42.9	40.833 S	175.363 E	30.9	1.8	0.1	6
W1059		30 14 54 51.3	41.101 S	175.555 E	30.7	1.7	0.1	8
W1060		31 05 22 22.9	41.289 S	175.254 E	27.7	1.8	0.1	9
W1061		31 18 23 40.5	41.179 S	175.101 E	4.1	1.1	0.1	6
W1062		31 21 44 34.6	41.231 S	174.901 E	20.1	1.6	0.1	6
W1063	NOV	01 06 47 10.7	41.472 S	175.315 E	14.5	1.5	0.1	7
W1064		01 07 26 35.1	41.858 S	174.760 E	28.7	2.1	0.1	10
W1065		01 13 53 28.0	41.286 S	175.684 E	12.6	2.0	0.0	6
W1066		01 17 22 03.1	41.092 S	174.695 E	31.9	1.4	0.2	5
W1067		02 23 53 27.2	41.189 S	175.830 E	17.2	2.1	0.0	7
W1068		03 01 46 05.7	41.074 S	175.207 E	28.7	1.6	0.2	7
W1069		03 09 38 31.5	41.451 S	175.447 E	18.2	1.5	0.2	6
W1070		03 19 15 45.2	41.742 S	174.503 E	35.5	3.0	0.1	8
W1071		04 12 02 17.5	41.070 S	174.426 E	40.4	2.3	0.0	7
W1072		04 14 24 24.9	41.440 S	175.001 E	26.9	1.7	0.2	7
W1073		04 21 37 43.5	40.836 S	175.069 E	45.4	2.0	0.0	5
W1074		04 23 58 37.1	41.363 S	175.099 E	23.9	1.9	0.1	8
W1075		05 02 53 43.2	41.163 S	175.173 E	8.3	1.5	ND	4
W1076		05 04 35 00.7	41.121 S	175.739 E	13.0	2.0	0.3	7
W1077		05 08 22 49.6	41.601 S	174.086 E	62.2	2.1	0.3	6
W1078		05 15 32 33.6	41.518 S	174.499 E	27.2	1.5	0.2	6
W1079		05 15 59 05.5	40.772 S	174.643 E	46.6	1.6	0.1	6
W1080		05 21 37 21.4	41.623 S	174.247 E	21.9	2.3	0.2	7
W1081		06 10 03 56.8	40.926 S	175.564 E	33.5	2.3	0.2	8
W1082		06 10 57 45.7	41.226 S	174.964 E	29.2	1.4	0.1	5
W1083		06 13 21 15.7	41.218 S	174.958 E	29.1	1.4	0.0	5
W1084		06 15 03 46.3	40.771 S	174.527 E	26.8	1.7	0.1	5
W1085		06 23 04 38.6	40.964 S	174.392 E	46.4	2.3	0.1	6
W1086		07 02 56 44.5	41.256 S	174.126 E	43.9	2.1	0.2	7
W1087		07 03 09 52.9	40.871 S	175.164 E	37.4	2.1	0.1	7
W1088		07 05 32 33.2	41.046 S	174.717 E	55.0	2.3	0.1	10
W1089		07 08 22 54.8	40.928 S	175.164 E	36.2	1.9	0.2	5
W1090		07 10 08 08.5	40.838 S	175.265 E	29.8	1.8	0.2	6
W1091		07 13 07 14.3	41.397 S	174.055 E	37.7	2.0	0.2	6
W1092		07 15 36 04.2	40.904 S	175.540 E	32.8	2.6	0.1	7
W1093		07 18 35 13.8	41.299 S	175.260 E	26.7	1.7	0.1	9
W1094		07 21 32 37.9	41.220 S	174.962 E	31.4	1.4	0.1	6
W1095		08 02 06 57.9	41.340 S	174.409 E	13.5	1.3	0.2	5
W1096		08 06 01 13.9	40.991 S	175.602 E	27.1	3.1	0.2	10
W1097		08 17 08 46.4	41.614 S	174.708 E	24.6	2.3	0.1	9
W1098		09 08 45 43.2	40.916 S	174.394 E	51.7	1.8	0.2	7
W1099		09 20 36 32.9	41.349 S	174.425 E	35.3	1.8	0.1	6
W1100		10 07 12 39.6	40.891 S	174.718 E	54.6	2.1	0.1	8

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W1101	NOV 10 07 51 44.0	40.456 S	174.895 E	16.4	2.1	0.0	5
W1102	10 07 53 33.3	41.635 S	174.716 E	23.5	2.0	0.1	10
W1103	10 11 17 56.7	40.869 S	175.164 E	34.2	2.7	0.2	9
W1104	10 13 49 58.2	41.083 S	174.659 E	58.6	2.3	0.1	10
W1105	10 23 11 51.3	41.320 S	174.898 E	30.0	1.7	0.2	8
W1106	11 16 42 43.7	40.877 S	175.141 E	37.3	1.6	0.1	5
W1107	11 23 20 45.7	41.039 S	174.895 E	30.8	1.7	0.2	7
W1108	12 13 59 17.8	41.363 S	174.654 E	47.4	1.7	0.1	5
W1109	12 16 01 25.6	41.645 S	174.762 E	27.6	2.1	0.2	8
W1110	12 21 15 29.8	41.424 S	174.562 E	26.9	1.9	0.1	6
W1111	12 23 03 22.0	41.044 S	175.478 E	35.1	1.7	0.2	5
W1112	13 04 21 19.8	41.307 S	175.219 E	21.6	1.4	0.1	6
W1113	15 01 16 50.8	41.235 S	175.297 E	23.9	1.4	0.2	7
W1114	15 15 17 40.9	41.636 S	174.186 E	29.1	2.0	0.2	7
W1115	15 15 28 35.8	41.027 S	174.399 E	47.9	2.2	0.1	9
W1116	15 15 52 05.8	41.456 S	174.364 E	28.4	1.7	0.1	6
W1117	15 18 23 31.1	41.127 S	174.013 E	64.0	1.8	0.1	5
W1118	15 19 19 27.2	41.158 S	175.077 E	21.7	2.0	0.2	9
W1119	15 20 29 27.3	41.173 S	175.097 E	24.0	1.4	0.1	5
W1120	15 20 42 41.2	41.149 S	175.113 E	19.6	1.2	0.2	5
W1121	16 03 52 48.8	40.991 S	175.404 E	30.0 R	1.9	0.1	4
W1122	17 13 00 09.0	41.624 S	175.404 E	31.2	2.0	0.2	9
W1123	18 05 39 15.6	41.858 S	174.755 E	32.5	2.5	0.1	10
W1124	18 12 26 34.6	41.375 S	175.124 E	28.8	1.8	0.1	8
W1125	19 06 00 02.9	40.995 S	174.682 E	40.9	1.7	0.1	7
W1126	19 08 08 51.0	41.026 S	175.660 E	10.7	2.1	0.1	6
W1127	19 13 01 31.8	40.921 S	175.528 E	24.2	2.6	0.1	7
W1128	19 18 21 20.0	41.375 S	175.117 E	29.7	1.9	0.1	5
W1129	19 22 09 06.1	41.127 S	174.144 E	50.6	2.2	0.1	7
W1130	20 04 59 39.5	41.048 S	175.506 E	1.9	2.6	0.1	9
W1131	20 09 58 50.5	41.098 S	174.705 E	32.9	1.5	0.2	6
W1132	20 11 17 33.1	41.022 S	175.657 E	10.7	1.7	0.0	5
W1133	20 13 14 47.3	41.021 S	175.612 E	8.3	3.3	0.1	9
W1134	20 13 21 35.8	41.508 S	174.087 E	32.2	1.8	0.1	5
W1135	20 13 34 18.5	41.018 S	175.620 E	8.1	3.4	0.1	9
W1136	20 13 40 09.0	41.022 S	175.632 E	10.2	1.9	0.0	6
W1137	20 14 20 29.1	41.034 S	175.562 E	3.0	3.5	0.0	9
W1138	20 14 34 40.0	41.031 S	175.630 E	12.4	1.7	0.0	5
W1139	20 19 47 12.8	40.887 S	175.601 E	13.0	2.1	0.0	8
W1140	21 02 20 15.8	40.965 S	175.541 E	31.7	2.1	0.1	6
W1141	21 03 01 44.5	41.253 S	173.954 E	46.3	2.3	0.2	8
W1142	21 19 11 15.5	41.380 S	175.119 E	28.8	1.9	0.1	9
W1143	21 22 39 13.4	41.021 S	175.647 E	10.6	1.9	0.1	6
W1144	22 00 36 05.1	40.935 S	175.018 E	33.0	1.9	0.1	6
W1145	22 01 31 43.5	41.026 S	175.634 E	10.1	2.0	0.0	7
W1146	22 11 18 17.1	41.573 S	174.475 E	10.8	1.9	0.2	8
W1147	22 16 38 54.7	41.048 S	174.668 E	57.2	2.1	0.1	8
W1148	22 17 08 29.6	41.380 S	174.701 E	47.6	2.3	0.2	8
W1149	22 20 16 01.5	41.134 S	175.858 E	30.2	2.1	0.2	8
W1150	23 00 33 09.3	41.727 S	174.461 E	30.6	2.1	0.0	5

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W1151	NOV 23 12 58 11.3	40.751 S	174.434 E	24.6	1.8	0.1	7
W1152	23 13 42 41.5	41.034 S	174.172 E	52.3	2.2	0.2	7
W1153	23 18 04 51.3	41.259 S	174.856 E	34.3	1.6	0.1	7
W1154	23 23 02 07.4	41.438 S	174.989 E	26.9	2.1	0.1	10
W1155	24 00 07 49.4	41.520 S	174.483 E	31.2	1.8	0.1	8
W1156	24 16 23 30.6	41.207 S	175.073 E	7.6	2.1	0.2	9
W1157	24 23 37 13.8	40.853 S	174.254 E	55.9	2.8	0.2	7
W1158	25 01 19 51.6	40.938 S	174.227 E	53.3	2.0	0.2	7
W1159	25 01 42 54.0	40.582 S	174.681 E	31.1	1.9	0.1	7
W1160	25 07 45 17.1	41.106 S	174.714 E	38.0	1.6	0.1	6
W1161	25 19 25 15.7	41.077 S	174.968 E	33.1	3.2	0.1	8
W1162	25 19 32 24.7	41.152 S	174.801 E	31.7	1.6	0.1	6
W1163	25 21 20 31.9	41.375 S	174.799 E	47.5	2.1	0.1	7
W1164	25 21 51 00.2	40.995 S	175.633 E	21.0	2.0	0.1	5
W1165	26 21 00 42.9	41.114 S	174.651 E	35.6	1.8	0.2	6
W1166	27 07 47 53.1	41.508 S	173.914 E	15.5	2.7	0.2	8
W1167	27 22 18 56.4	41.478 S	174.484 E	29.5	2.2	0.2	8
W1168	27 23 12 19.7	40.855 S	174.716 E	17.6	1.6	0.0	6
W1169	28 00 02 20.2	40.959 S	174.626 E	30.8	2.0	0.0	5
W1170	28 01 48 01.6	40.945 S	175.820 E	33.7	2.3	0.2	7
W1171	28 20 57 04.2	41.380 S	174.933 E	26.8	1.8	0.1	7
W1172	28 23 55 11.1	40.611 S	174.918 E	36.2	1.9	0.2	6
W1173	29 14 20 17.6	41.102 S	173.942 E	69.2	2.7	0.1	6
W1174	29 15 43 26.2	41.232 S	174.618 E	35.5	2.2	0.1	9
W1175	30 06 13 27.8	40.658 S	174.865 E	37.4	1.9	0.2	5
W1176	30 10 17 10.1	41.408 S	174.265 E	55.6	1.7	ND	4
W1177	30 10 58 14.8	41.405 S	174.553 E	29.6	1.8	0.1	7
W1178	30 23 07 08.5	41.377 S	175.126 E	27.6	1.7	0.1	8
W1179	DEC 01 11 16 53.2	41.020 S	174.962 E	59.3	2.3	0.1	9
W1180	02 06 07 37.5	41.124 S	174.287 E	66.8	1.8	0.0	6
W1181	02 13 48 10.7	41.423 S	174.159 E	61.9	1.9	0.1	6
W1182	04 09 07 17.3	41.417 S	173.958 E	35.7	2.2	0.2	7
W1183	04 19 04 56.2	41.397 S	174.575 E	29.3	2.3	0.1	11
W1184	05 00 15 22.5	40.880 S	174.849 E	5.0 R	1.5	0.2	4
W1185	05 00 19 57.4	41.649 S	174.586 E	28.6	1.8	0.1	7
W1186	05 02 34 44.4	41.256 S	175.300 E	28.7	1.6	0.2	5
W1187	05 04 00 18.3	41.376 S	175.113 E	28.1	2.0	0.1	7
W1188	05 05 23 30.7	40.852 S	175.208 E	31.7	1.6	ND	4
W1189	05 12 16 26.1	40.575 S	174.665 E	31.9	1.8	0.0	5
W1190	05 16 44 45.8	41.437 S	174.987 E	24.4	1.7	0.1	8
W1191	05 18 01 54.9	41.663 S	174.426 E	53.9	2.3	0.2	11
W1192	05 20 21 40.4	40.957 S	175.600 E	33.2	1.6	ND	4
W1193	05 21 21 10.7	41.409 S	175.470 E	15.9	2.2	0.1	9
W1194	05 22 58 40.3	41.381 S	175.433 E	11.5	2.0	0.2	9
W1195	06 03 33 39.9	40.838 S	174.603 E	57.2	2.7	0.1	9
W1196	06 07 22 16.1	41.111 S	174.121 E	51.4	1.9	0.1	5
W1197	06 09 40 38.4	41.116 S	175.470 E	23.3	1.4	0.1	5
W1198	06 11 28 55.4	40.887 S	174.944 E	63.0	1.8	0.1	6
W1199	06 13 30 14.0	40.831 S	175.912 E	41.6	2.4	0.1	7
W1200	06 18 49 41.7	40.755 S	175.068 E	35.8	1.8	0.1	5

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W1201	DEC 06 19 36 48.0	41.159 S	174.841 E	38.6	1.3	0.1	6
W1202	06 21 01 55.0	40.935 S	175.557 E	28.6	1.5	0.0	5
W1203	06 21 35 39.8	40.838 S	174.742 E	16.9	1.4	0.1	6
W1204	07 01 08 16.3	41.528 S	173.932 E	17.6	2.8	0.2	10
W1205	07 14 07 36.2	40.992 S	174.665 E	62.8	2.4	0.0	7
W1206	08 12 56 45.7	40.753 S	175.125 E	34.8	2.5	0.2	9
W1207	08 14 47 40.9	41.588 S	174.415 E	23.7	2.4	0.2	8
W1208	08 17 04 08.9	40.626 S	174.592 E	5.0 R	1.9	0.2	7
W1209	08 17 54 52.6	41.219 S	174.602 E	59.2	1.8	0.1	5
W1210	08 22 17 24.9	41.065 S	175.336 E	15.3	1.3	0.1	6
W1211	10 06 00 56.5	41.174 S	174.543 E	34.2	1.4	0.0	5
W1212	10 10 39 35.4	40.910 S	174.811 E	39.7	2.2	0.0	8
W1213	10 16 30 30.1	41.728 S	174.486 E	35.0	2.0	0.1	8
W1214	11 07 42 28.2	41.116 S	173.819 E	70.3	2.1	0.1	7
W1215	11 12 56 47.9	41.317 S	174.323 E	42.3	3.0	0.1	8
W1216	11 17 14 18.0	41.401 S	174.042 E	41.1	1.8	0.2	5
W1217	11 22 01 08.7	41.243 S	174.499 E	34.8	1.7	0.1	8
W1218	12 04 17 04.7	41.278 S	175.592 E	23.7	2.8	0.2	10
W1219	12 12 23 36.5	40.985 S	174.850 E	37.2	2.0	0.0	8
W1220	13 08 52 14.8	41.118 S	174.693 E	33.1	2.0	0.1	11
W1221	13 12 56 24.0	41.013 S	174.836 E	30.2	1.4	0.0	5
W1222	14 00 01 15.4	41.261 S	174.690 E	29.3	1.6	0.1	6
W1223	14 00 28 30.0	41.522 S	174.446 E	11.4	1.8	0.1	6
W1224	15 00 53 17.5	41.019 S	174.914 E	50.7	2.1	0.1	6
W1225	15 12 40 00.4	40.769 S	175.060 E	37.4	2.0	0.1	5
W1226	17 00 29 47.3	40.985 S	175.627 E	29.3	1.9	0.1	6
W1227	17 04 34 09.7	41.309 S	175.293 E	30.4	1.8	0.2	8
W1228	18 10 43 45.9	41.011 S	175.708 E	36.5	2.4	0.1	7
W1229	19 06 04 28.2	41.160 S	174.578 E	37.9	1.4	0.1	6
W1230	19 10 16 34.9	41.040 S	175.637 E	27.4	2.0	0.0	5
W1231	19 13 16 27.5	41.308 S	175.126 E	19.7	1.4	0.1	8
W1232	19 16 29 02.0	41.184 S	174.320 E	65.2	2.4	0.1	9
W1233	19 20 55 24.5	41.008 S	174.551 E	59.6	2.0	0.1	9
W1234	20 03 27 29.5	41.262 S	175.312 E	25.3	1.5	0.1	8
W1235	20 08 55 31.1	40.916 S	175.077 E	33.2	2.1	0.1	8
W1236	20 21 42 22.2	41.248 S	175.758 E	12.5	2.2	0.2	8
W1237	21 08 54 54.0	41.727 S	174.453 E	29.8	2.1	0.1	7
W1238	21 15 05 44.3	40.526 S	174.603 E	26.1	2.4	0.1	5
W1239	21 20 07 10.6	41.228 S	174.909 E	20.4	2.7	0.1	8
W1240	22 00 47 13.4	41.676 S	174.561 E	31.5	2.4	0.1	8
W1241	22 09 09 22.6	40.586 S	174.745 E	31.2	2.2	0.2	7
W1242	22 13 08 48.5	41.332 S	174.815 E	27.4	1.9	0.1	11
W1243	22 21 00 40.6	41.453 S	174.480 E	27.7	2.0	0.1	9
W1244	23 04 17 38.5	41.385 S	174.632 E	18.5	1.9	0.2	7
W1245	23 15 07 55.6	41.434 S	175.013 E	27.8	1.8	0.1	6
W1246	23 15 38 38.8	40.864 S	174.741 E	16.5	1.6	0.1	5
W1247	24 11 48 32.1	41.121 S	175.829 E	27.4	2.2	0.1	6
W1248	25 17 20 08.9	41.088 S	175.437 E	19.1	1.5	0.2	6
W1249	26 12 55 13.6	41.677 S	174.439 E	16.7	2.1	0.1	8
W1250	27 03 34 39.3	41.074 S	175.238 E	29.3	2.1	0.2	6

REF NUM		ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W1251	DEC	28 08 03 07.2	40.579 S	175.212 E	38.6	2.3	0.1	7
W1252		28 18 24 22.0	41.329 S	173.845 E	51.0	2.4	0.3	7
W1253		29 05 49 24.8	40.997 S	174.250 E	9.7	1.8	0.2	5
W1254		29 16 44 11.1	41.625 S	175.163 E	17.4	1.8	0.0	6
W1255		30 00 28 56.1	41.040 S	174.813 E	55.1	1.8	0.0	6
W1256		30 20 15 30.0	41.533 S	174.539 E	13.2	1.3	0.1	6
W1257		30 23 35 47.2	41.195 S	175.052 E	16.9	1.4	0.1	7
W1258		31 02 03 47.7	41.475 S	175.024 E	28.0	1.6	0.2	5
W1259		31 04 18 19.8	40.976 S	175.710 E	22.5	1.8	0.0	5
W1260		31 09 14 07.9	41.579 S	174.458 E	52.7	2.0	0.2	7
W1261		31 10 28 23.0	41.579 S	174.482 E	50.3	2.4	0.2	8
W1262		31 20 18 45.9	41.829 S	174.730 E	48.4	2.7	0.1	9

NON-INSTRUMENTAL DATA

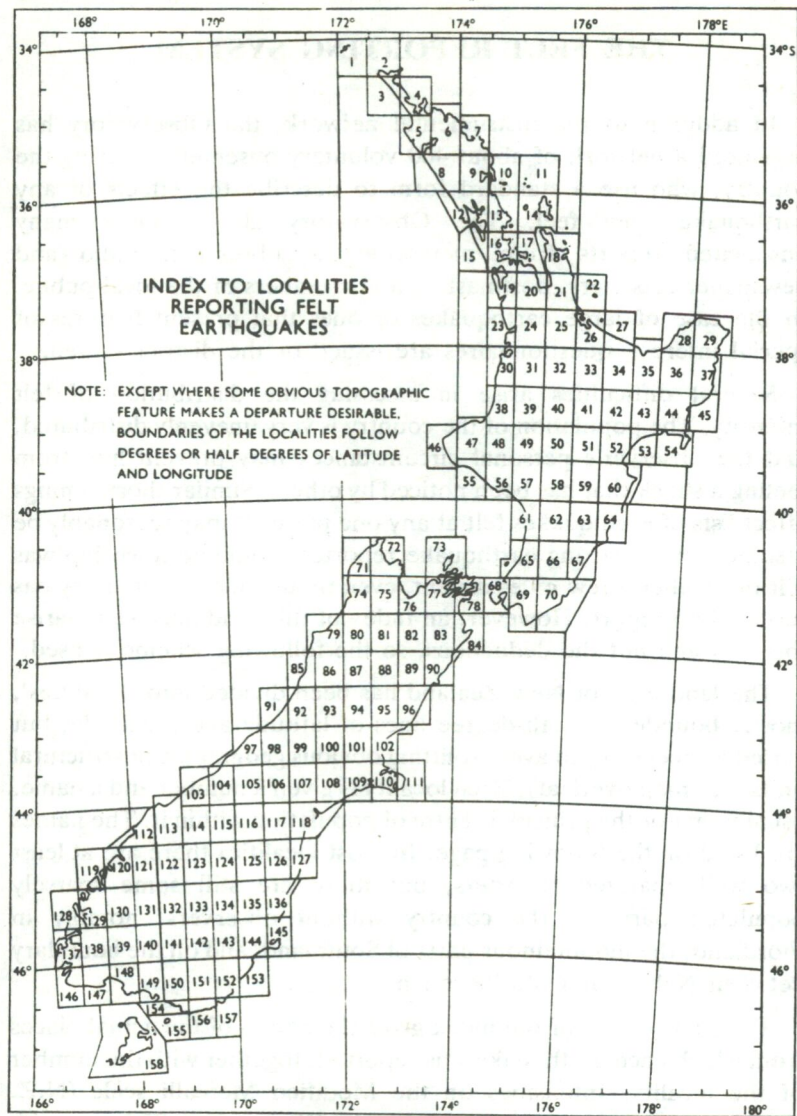
THE FELT REPORTING SYSTEM

In addition to the instrumental network, the Observatory has organised a network of about 400 voluntary observers covering the country, who use a standard form to describe the effects of any earthquake they feel. The Observatory also receives many unsolicited reports from meteorological observers, radio and newspaper reporters, postmasters and members of the local public. In the case of large earthquakes or ones that present features of special interest, questionnaires are issued or the district visited.

Several difficulties arise in assessing the distribution of felt intensity. The population of the country is very unevenly distributed, and the observer's personal circumstances may prevent him from feeling a shock that has been noticed by others. Similar shortcomings affect lists of earthquakes felt at any one place. It may reasonably be assumed that a strong earthquake reported from one township was felt in another a few miles distant, even though the Observatory has received no report. However, an index of this kind must summarise the data and not the deductions, so the following scheme is used.

The land area of New Zealand has been divided into 'localities', mostly bounded by half-degree lines of latitude and longitude, but varied as necessary to avoid splitting obvious geographic or structural units (see map overleaf). Each locality is given a number and a name, usually that of the principal centre of population within it. The names are listed on the following page. In most localities there are at least two well-separated reporters, but there are still some sparsely populated parts of the country without observers, notably in Fiordland, the mountainous parts of Southland, and on the boundary between Nelson and Marlborough.

The first section of the index gives the names of the actual places from which each earthquake was reported, together with the number of the locality. Intensities on the Modified Mercalli scale (N.Z. version, 1965) have been assigned at the Observatory. This intensity scale is set out in the *N.Z. Journal of Geology and Geophysics*, 9: 122-9 (1966). A query (?) indicates that no information is available beyond the fact that the shock was felt, or that the description is too imprecise to allow an intensity to be assigned.



In the second section, localities reporting shocks during the year are listed in alphabetical order, followed by the number of the shock in the list of origins and the maximum intensity reported within that locality. By comparing the reports in neighbouring localities, it is possible to form a truer estimate of the incidence of felt earthquakes than would be possible from a simple list of places reporting each shock.

Finally, reported shocks that cannot be confirmed, and reports from places in the south-west Pacific not collected elsewhere are listed.

STANDARD REPORTING LOCALITIES

1 Three Kings	41 Taupo	81 Glenhope	121 Glenorchy
2 Te Reinga	42 Te Whaiti	82 Wairau	122 Arrowtown
3 Ninety Mile Beach	43 Tuai	83 Awatere	123 Wanaka
4 Doubtless Bay	44 Whakapanaki	84 Cape Campbell	124 St Bathans
5 Kaitia	45 Gisborne	85 Greymouth	125 Kurow
6 Kaikohe	46 Cape Egmont	86 Reefton	126 Duntroon
7 Bay of Islands	47 New Plymouth	87 Maruia	127 Waimate
8 Dargaville	48 Whangamomona	88 Hanmer	128 Secretary Is.
9 Whangarei	49 Ohakune	89 Clarence	129 Doubtful Sound
10 Bream Head	50 Chateau	90 Kaikoura	130 Te Anau
11 Moko Hinau	51 Kaweka	91 Hokitika	131 Livingstone Mts
12 Kaipara	52 Napier	92 Kumara	132 Kingston
13 Warkworth	53 Wairoa	93 Arthur's Pass	133 Alexandra
14 Barrier Islands	54 Mahia	94 Lake Sumner	134 Poolburn
15 Helensville	55 Hawera	95 Culverden	135 Ranfurly
16 Auckland	56 Waverley	96 Cheviot	136 Oamaru
17 Waiheke	57 Wanganui	97 Franz Josef	137 Resolution Is.
18 Coromandel	58 Taihape	98 Hari Hari	138 Pillans Pass
19 Pukekohe	59 Ruahine	99 Whitcombe Pass	139 Monowai
20 Mercer	60 Hastings	100 Lake Coleridge	140 Mossburn
21 Thames	61 Bulls	101 Oxford	141 Waikaia
22 Mayor Is.	62 Palmerston North	102 Rangiora	142 Roxburgh
23 Raglan	63 Dannevirke	103 Haast	143 Lawrence
24 Hamilton	64 Porangahau	104 Bruce Bay	144 Outram
25 Matamata	65 Otaki	105 Mount Cook	145 Dunedin
26 Tauranga	66 Masterton	106 Tekapo	146 Puysegur Point
27 Whakatane	67 Castlepoint	107 Mount Somers	147 Poteretere
28 Te Kaha	68 Wellington	108 Ashburton	148 Tuatapere
29 East Cape	69 Featherston	109 Rakaia	149 Invercargill
30 Kawhia	70 Martinborough	110 Christchurch	150 Gore
31 Te Kuiti	71 Mount Stevens	111 Akaroa	151 Clinton
32 Tokoroa	72 Takaka	112 Big Bay	152 Balclutha
33 Rotorua	73 D'Urville Is.	113 Jackson's Bay	153 Waiholo
34 Murupara	74 Karamea	114 Makarora	154 Bluff
35 Opotiki	75 Motueka	115 Lake Ohau	155 Ruapuke
36 Motu	76 Nelson	116 Pukaki	156 Tahakopa
37 Tolaga Bay	77 Blenheim	117 Fairlie	157 Owaka
38 Mokau	78 Picton	118 Timaru	158 Stewart Is.
39 Taumarunui	79 Westport	119 George Sound	159 Chatham Islands
40 Tokaanu	80 Murchison	120 Milford	

PLACES REPORTING FELT EARTHQUAKES

- 80/2 *Jan 2 18h 24m*
MM 4 Murupara (34).
- 80/9 *Jan 7 06h 34m*
MM 3 Ngaio (68).
- 80/20 *Jan 14 06h 31m*
MM 4 Lake Te Anau (120).
- 80/24 *Jan 15 15h 45m*
MM 4 Wanganui (57).
- 80/29 *Jan 21 15h 08m*
MM 5 Ohakune (49);
MM 4 Horopito, Ohakune, Pokaka (49);
MM 3 Chateau Observatory (50);
'sharp' Taumarunui (39).
- 80/33 *Jan 24 10h 15m*
? Manapouri (139).
- 80/37 *Jan 28 12h 30m*
MM 5 Cromwell (133);
MM 4 Earnslaw Station (121); Clyde, Cromwell (133); Manapouri (139); Lumsden (140); Centre Island (148); Gummies Bush, Winton (149); Gore (150); Awarua Radio (154);
'force 5' Green Island (144);
'force 3' Dunedin Airport (144);
'moderate' Queenstown (132);
? Tara Hills (124); Cromwell (133); Manapouri, 'The Keys' (139); Murray Creek (140); Mandeville (141); Centre Island (148).
- 80/74 *Feb 17 05h 33m*
'light' Mahia (54).
- 80/82 *Feb 21 21h 51m*
MM 3 Waipawa (60).
- 80/87 *Feb 24 07h 44m*
MM 4 Geraldine (118).
- 80/88 *Feb 24 09h 36m*
MM 4 Kimbolton (62).
- 80/91 *Feb 25 13h 10m*
MM 3 Hastings (60).
- 80/93 *Feb 28 09h 06m*
'slight' Elstow (25);
'force 1' Ohope (35);
? Pikowai (27).

- 80/98 *Mar 1 06h 04m*
 MM 5 Te Ngawai (117);
 MM 4 Erewhon (107); Burkes Pass, Hakataramea Valley (117);
 'force 4'
 ? Riverview (117);
 Kimbell (117).
- 80/107 *Mar 6 16h 12m*
 MM 4 Maketu (26).
- 80/110 *Mar 8 12h 20m*
 MM 4 Wanganui (57); Palmerston North (62).
- 80/111 *Mar 8 19h 00m*
 ? Arapito (74).
- 80/117 *Mar 10 14h 21m*
 MM 4 Awarua Radio (154).
- 80/131 *Mar 15 03h 33m*
 MM 3 Stratford Mountain House (47).
- 80/145 *Mar 21 15h 28m*
 ? Elstow (25).
- 80/148 *Mar 22 15h 53m*
 ? Mahia Beach (54).
- 80/150 *Mar 23 06h 50m*
 MM 4 Murchison (80); Maruia (87);
 ? Arapito (74).
- 80/167 *Apr 4 21h 17m*
 MM 1 Kelburn (68).
- 80/214 *Apr 24 08h 59m*
 MM 4 Butterfields Beach, Halfmoon Bay (158).
- 80/240 *May 3 10h 48m*
 MM 4 Moawhango (58).
- 80/241 *May 4 03h 58m*
 MM 4 Kimbolton (62).
- 80/245 *May 5 23h 32m*
 MM 4 Tadmor (75);
 ? Westport (79).
- 80/246 *May 6 00h 43m*
 MM 4 Tadmor (75).
- 80/260 *May 13 07h 42m*
 MM 4 Plimmerton (68).
- 80/266 *May 15 16h 39m*
 MM 4 Lake Ohau (115).

- 80/277 *May 21 04h 17m*
 MM 4 Okoia (57); Mt Vernon, Waipawa (60); Kimbolton,
 Palmerston North (62); Ekatahuna (66);
 'force 5' Mangamutu (62); Kopua (63);
 ? Ohingaiti (58); Dannevirke (63).
- 80/282 *May 22 22h 35m*
 ? Mahia Beach (54).
- 80/284 *May 23 16h 37m*
 MM 4 Lake Ohau (115).
- 80/298 *May 29 09h 50m*
 MM 4 Lake Ohau (115); Twizel (116).
- 80/326 *Jun 16 05h 52m*
 MM 4 Whakatane (27).
- 80/328 *Jun 16 12h 26m*
 MM 5 Hastings (60);
 MM 4 Clive, Hastings, Waipawa (60);
 MM 3 Te Awanga (60).
- 80/342 *Jun 23 16h 45m*
 MM 5 Waitahanui (41); Inglewood, New Plymouth, Stratford
 Mountain House (47); Ohakune, Lower Retaruke (49);
 Ruapehu (50); Patoka (52); Hunterville, Moawhango,
 Taihape (58); Foxton (61); Palmerston North (62); Levin
 (65); Ekatahuna (66); Eastbourne (68); Collingwood (72);
 MM 4 Awakino, Uruti (38); Stratford (47); Napier (52);
 Normanby (55); Castlecliff, Makakaho (56); Okoia (57);
 Ongaonga (59); Hastings, Waipawa (60); Tataramoia (63);
 Tinui (67); Khandallah, Lower Hutt, Naenae, Wellington
 (68); Waiorongomai (69);
 MM 3 Te Kuiti (31); Te Awanga (60); Naenae (68);
 MM 1 Te Aroha (25);
 'very heavy' Mangamako (58);
 '5-6 inten.' Taumarunui (39);
 'force 5-6' Elstow (23);
 'severe' Upper Mangorei (47);
 'strong' Okiawa (55);
 'mod-severe' Orautoha (49);
 'sharp' Levin (65);
 'force 4' Waiouru (50);
 'force 3' Taumarunui (39); Ohakea (61); Mangamutu (62); Kopua
 (63);
 'slight' Ongarue (39); Kelburn (68);
 ? Uruti (38); Wairakei (41); Maui platform (46); Brook-
 lands, Stratford (47); Apiti, Ohingaiti (58); Palmerston
 North, Feilding (62); Dannevirke (63); Eastbourne,
 Kelburn, Stokes Valley (68); Blenheim (77); Waitaria
 (78).

- 80/343 *Jun 23 17h 22m*
MM 4 Moawhango (58).
- 80/345 *Jun 23 21h 20m*
MM 4 Moawhango (58);
MM 3 Ohakune (49).
- 80/353 *Jun 27 08h 17m*
MM 4 Ohakune (49); Palmerston North (62);
MM 3 Waikawa Beach (65);
'light' Ohingaiti (58).
- 80/355 *Jun 29 15h 56m*
MM 4 Wanganui (57)
- 80/356 *Jun 30 06h 34m*
MM 4 Patoka (52).
- 80/357 *Jun 30 11h 21m*
MM 3 Ormond (44).
- 80/358 *Jun 30 18h 22m*
MM 5 Makaretu (59).
- 80/365 *Jul 3 01h 49m*
MM 5 Hastings (60); Porangahau (64);
MM 4 Napier (52); Ongaonga (59); Mount Vernon, Waipawa
(60); Tataramoa (63); Aramoana (64); Tinui (67);
MM 3 Palmerston North (62).
- 80/369 *Jul 3 02h 03m*
? Napier (52); Wanganui (57); Hastings (60); Wellington
(68).
- 80/370 *Jul 3 02h 11m*
MM 4 Hastings (60).
- 80/378 *Jul 3 17h 38m*
MM 4 Mount Vernon (60).
- 80/381 *Jul 3 21h 29m*
MM 4 Mount Vernon (60);
? Waipawa (60).
- 80/383 *Jul 4 03h 55m*
MM 3 Okoia (57).
- 80/384 *Jul 4 15h 29m*
MM 4 Wanganui (57);
'force 4' Taradale (64);
'force 2' Opapa (60).
- 80/385 *Jul 4 17h 04m*
MM 4 Wanganui (57);
MM 3 Mount Vernon (60).

- 80/389 *Jul 5 05h 16m*
 'force 2' Taradale (64).
- 80/400 *Jul 7 17h 36m*
 MM 4 Ohakune (49); Moawhango (58);
 'force 3' Waiouru (50).
- 80/411 *Jul 15 09h 33m*
 MM 5 Eastbourne, Epuni, Seatoun (68);
 MM 4 Wanganui (57); Masterton, Mauriceville (66); Eastbourne,
 Karori, Kelburn, Khandallah, Lower Hutt, Pukerua Bay,
 Tawa, Trentham, Wellington (68); Palliser Bay, Waiorongomai (69); Brothers Island, Collingwood (72);
 MM 3 Inglewood (47); Okoia (57); Waikawa Beach (65);
 'strong' Titahi Bay (68);
 'force 4' Kelburn (68);
 'force 3-4' Manaroa (69);
 'slight' Wellington Airport (68);
 ? Waitaria Bay (78); Blenheim (83).
- 80/421 *Jul 19 09h 51m*
 MM 4 Wanaka (123);
 'force 4' Wanaka (123).
- 80/422 *Jul 19 13h 54m*
 MM 5 Levin (65); Lower Hutt, Pukerua Bay, Tawa (68);
 MM 4 Wanganui (57); Palmerston North (62); Masterton (66);
 Khandallah, Kelburn, Lower Hutt, Upper Hutt, Wellington (68); Waiorongomai (69); Blenheim (77);
 'force 4-5' Kelburn (68);
 'slight' Hillwood (56);
 ? Opapa (60); Waitaria Bay (78).
- 80/431 *Jul 24 20h 14m*
 MM 4 Manapouri (139).
- 80/437 *Jul 28 21h 50m*
 MM 3 Gisborne (45).
- 80/453 *Aug 06 22h 16m*
 MM 4 Puysegur Point (146);
 MM 3 West Arm (138); Manapouri (139);
 'light sway' Manapouri (139).
- 80/462 *Aug 09 07h 31m*
 MM 4 Patoka (52); Mount Vernon (60).
- 80/463 *Aug 09 16h 29m*
 MM 5 Tararuas (65); Whitby (68);
 MM 4 Levin (65); Eastbourne, Lower Hutt, Pukerua Bay (68).
- 80/476 *Aug 18 19h 15m*
 MM 4 Lake Coleridge (100).

- 80/486 *Aug 23 16h 45m*
 MM 5 Waitotara (56), Okoia (57); Fielding (62);
 MM 4 Ohakune (49); Hawera (55); Castlecliff (56); Hihitahi,
 Moawhango, Taihape (58); Palmerston North (62);
 Tataramoa (63); Waikawa Beach (65); Eketahuna (66);
 'heavy' Ohingaiti (58);
 'force 5' Marton (61);
 'moderate' Hillwood (66);
 'light' Okiawa (55);
 ? Opapa (60).
- 80/495 *Aug 26 17h 20m*
 MM 4 Ohakune (49); Okoia (57); Moawhango, Taihape (58);
 Fielding, Palmerston North (62); Levin, Waikawa Beach
 (65); Eketahuna (66); Eastbourne (68); Collingwood (72);
 MM 3 Stratford Mountain House (47); Castlecliff (56);
 Tataramoa (63); Miramar (68); Waorongomai (69);
 ? Ohingaiti (58); Marton (61);
 'light' Marton (61);
 'slight' Bunnythorpe (62);
 'slight' Hillwood (66).
- 80/497 *Aug 26 17h 38m*
 MM 4 Okoia (57); Fielding (62);
 ? Marton (61).
- 80/506 *Aug 28 19h 52m*
 MM 4 Okoia (57); Fielding (62);
 MM 3 Makakaho (56);
 'small' Ohingaiti (58).
- 80/508 *Aug 30 05h 55m*
 ? Queenstown (132); Manapouri (139).
- 80/511 *Aug 31 17h 37m*
 MM 4 Ohakune (49); Hawera (55); Makakaho (56); Moawhango
 (58); Murchison (80); Little River (110);
 MM 3 Stratford Mountain House (47); Okoia (57); Waikawa
 Beach (65); Pukerua Bay (68); Collingwood (72);
 'sharp' Nelson Airport (76);
 'force 4' Ohakea (61); Totaranui (72);
 'light' Marton (61);
 ? Okiawa (55); Blenheim (77).
- 80/513 *Aug 31 23h 07m*
 MM 4 Ohakune (49); Fielding (62);
 MM 3 Okoia (57); Waikawa Beach (65);
 'force 5' Ohakea (61);
 'force 4-5' Marton (61);
 'force 3' Wanganui (57);
 'mild' Palmerston North (62);
 ? Ohingaiti (58).
- 80/529 *Sep 08 03h 05m*
 MM 4 Moawhango (58);
 ? Ohingaiti (58).

- 80/538 *Sep 11 21h 57m*
 'slight' Wairakei (41).
- 80/560 *Sep 21 13h 23m*
 MM 4 Wanganui (57);
 'force 3' Ohakea (61);
 'light' Marton (61).
- 80/591 *Oct 03 11h 33m*
 'moderate' Wairakei (41).
- 80/597 *Oct 05 15h 32m*
 MM 8 Napier (52), Taradale (60);
 MM 7 Napier (52), Taradale (60);
 MM 6 Napier (52), Hastings, Taradale, Waipawa (60);
 MM 5 Taupo (41); Gisborne (44); Napier, Patoka (52);
 Waipukurau (60); Aramoana (64);
 MM 4 Opotiki (35); Amori (40); Aratiatia, Taupo (41); Ormond
 (44); Ohakune (49); Patoka (52); Kotemaori (53); Hawera
 (55); Ngamotopouri (56); Parapara Okeori, Wanganui
 (57); Moawhango, Taihape (58); Ongaonga (59); Te
 Awanga (60); Foxton (61); Palmerston North (62);
 Tataramoa (63); Eastbourne (68);
 MM 3 Okoia (57);
 'severe' Waimaramara (60);
 'strong' Wairakei (41);
 'big' Te Katata (59);
 'sharp' Opapa (60);
 'force 5' Porangahau (64);
 'force 4' Kairanga (62);
 'rolling' New Plymouth (47);
 ? Galatea (34); Mahia Valley, Tuhira Valley (54); Ohingaiti
 (58); Rotowai (64). In the Napier area, reports indicating
 MM8 were numerous in Napier South and extended from
 Westshore in the north to Taradale and Awatoto in the
 south.
- 80/601 *Oct 05 15h 50m*
 'slight' Patoka (52).
- 80/603 *Oct 05 16h 24m*
 MM 4 Patoka (52).
- 80/609 *Oct 06 04h 55m*
 MM 4 Opotiki (35); Ormond (44).
- 80/610 *Oct 06 05h 32m*
 MM 4 Awarua Radio (154).
- 80/615 *Oct 08 05h 44m*
 MM 4 Patoka (52); Hastings (60).
- 80/629 *Oct 11 02h 26m*
 MM 4 Ohakune (49)); Moawhango (58).
- 80/631 *Oct 12 22h 23m*
 MM 4 Opotiki (35).

- 80/636 *Oct 14 12h 27m*
 MM 4 Ormond (44); Gisborne (45); Wairoa (53);
 'felt' Gisborne (45); Napier (52); Wairoa (53);
 ? Mahia Valley (54).
- 80/639 *Oct 14 16h 14m*
 MM 4 Wairoa (53).
- 80/641 *Oct 14 18h 22m*
 MM 4 Wairoa (53).
- 80/642 *Oct 14 19h 04m*
 MM 4 Wairoa (53).
- 80/659 *Oct 22 02h 52m*
 MM 4 Napier (52); Hastings (60).
- 80/661 *Oct 22 19h 00m*
 MM 4 Granity, Westport (79).
- 80/664 *Oct 26 06h 37m*
 MM 4 Ross (91).
- 80/667 *Oct 27 05h 07m*
 MM 4 Patoka (52).
- 80/668 *Oct 27 15h 58m*
 MM 5 Paparoa (12);
 ? Paparoa (12).
- 80/674 *Oct 29 18h 13m*
 MM 3 Halfmoon Bay, Stewart Island (158).
- 80/676 *Oct 31 10h 26m*
 MM 3 Whakatane (27).
- 80/678 *Nov 02 10h 10m*
 MM 3 Wairoa (53).
- 80/690 *Nov 05 11h 38m*
 MM 4 Te Anau Downs (130).
- 80/691 *Nov 06 23h 22m*
 MM 5 Paparoa (12);
 ? Paparoa (12).
- 80/700 *Nov 14 00h 34m*
 MM 4 Opotiki (35).
- 80/701 *Nov 14 05h 14m*
 MM 4 Hastings, Waipawa (60).
- 80/702 *Nov 15 02h 48m*
 MM 4 Wanganui (57);
 MM 3 Waikawa Beach (65); Wellington (68);
 'force 2' Wellington (68).

- 80/709 Nov 18 08h 27m
MM 4 Maketu (26).
- 80/713 Nov 19 16h 41m
MM 4 Te Anau Downs (130).
- 80/714 Nov 20 14h 20m
MM 4 Masterton (66).
- 80/726 Nov 24 04h 00m
MM 4 East Cape (29).
- 80/727 Nov 24 04h 22m
MM 5 Tokomaru Bay (37);
MM 4 Opotiki (35); Te Puia Springs (37); Gisborne (45);
MM 3 Cape Runaway (28); Ormond (44).
- 80/735 Nov 25 04h 57m
MM 5 Cape Runaway (28); East Cape (29);
MM 4 Te Araroa (29); Opotiki (35); Tokomaru Bay (37);
Gisborne (45);
MM 3 Ormond (44).
- 80/745 Nov 26 13h 48m
MM 4 Hastings (60).
- 80/746 Nov 26 14h 53m
MM 4 Patoka (52); Kotemaori (53); Hastings (60).
- 80/749 Nov 27 09h 43m
MM 4 East Cape (29); Tokomaru Bay (37).
- 80/769 Dec 01 14h 23m
MM 4 Tokomaru Bay (37).
- 80/783 Dec 15 05h 48m
MM 4 Greta Valley (95); Waiau (96).
- 80/784 Dec 15 06h 52m
MM 3 Maruia (87);
'force 4' Springs Junction (87).
- 80/787 Dec 15 22h 45m
MM 4 Waipawa (60).
- 80/798 Dec 22 20h 11m
MM 4 Tokomaru Bay (37); Ormond (44); Patoka (52); Waipawa
(60);
MM 3 Gisborne (45); Kelburn (68);
'small' Tongoio (52);
'light' Levin (65).
- 80/803 Dec 31 05h 22m
MM 4 Oamaru (136).

EARTHQUAKES FELT IN STANDARD LOCALITIES

Localities within which earthquakes were felt are listed in alphabetical order, each preceded by its number on the reference map. The figure following the name of the locality is the number of the epicentre followed by the maximum intensity (in brackets) reported within the district covered by the locality name. An asterisk (*) indicates that the particular intensity was not evaluated from the standard questionnaire. The instrumental magnitude may be found from the epicentre list, and places that actually reported the shock from the table of 'Places Reporting Felt Earthquakes'.

133 Alexandra	37 (5).				
83 Awatere	411 (?).				
77 Blenheim	342 (?),	422 (4),	511 (?).		
154 Bluff	37 (4),	117 (4),	610 (4).		
61 Bulls	342 (5),	486(5*),	495 (?),	497 (?),	511(4*),
	513(5*),	560(4*),	597 (4).		
46 Cape Egmont	342 (?).				
67 Castlepoint	342 (4),	365 (4).			
50 Chateau	29 (3),	342 (5),	400(4*).		
96 Cheviot	783 (4).				
110 Christchurch	511 (4).				
95 Culverden	783 (4).				
63 Dannevirke	277(5*),	342 (4),	365 (4),	486 (4),	495 (3),
	597 (4).				
29 East Cape	726 (4),	735 (5),	749 (4).		
117 Fairlie	98 (5).				
69 Featherston	342 (4),	411 (4),	422 (4),	495 (3).	
45 Gisborne	437 (3),	636 (4),	727 (4),	735 (4),	798 (3).
121 Glenorchy	37 (4).				
150 Gore	37 (4).				
60 Hastings	82 (3),	91 (3),	277 (4),	328 (5),	342 (4),
	365 (5),	369 (?),	370 (4),	378 (4),	381 (4),
	384(3*),	385 (3),	422 (?),	462 (4),	486 (?),
	597 (8),	615 (4),	659 (4),	701 (4),	745 (4),
	746 (4),	787 (4),	798 (4).		
55 Hawera	342 (4),	486 (4),	511 (4),	597 (4).	
91 Hokitika	664 (4).				
149 Invercargill	37 (4).				
12 Kaipara	668 (5),	691 (5).			
74 Karamea	111 (?),	150 (?).			
132 Kingston	37(4*),	508 (?).			
100 Lake Coleridge	476 (4).				
115 Lake Ohau	266 (4),	284 (4),	298 (4).		
54 Mahia	74(3*),	148 (?),	282 (?),	597 (?),	636 (?).

87 Maruia	150 (4),	784 (3).			
66 Masterton	277 (4),	342 (5),	411 (4),	422 (4),	486 (4),
	495 (4),	714 (4).			
25 Matamata	93(3*),	145 (?),	342 (1).		
120 Milford	20 (4).				
38 Mokau	342 (4).				
139 Monowai	33 (?),	37 (4),	431 (4),	453 (3),	508 (?).
140 Mossburn	37 (4).				
75 Motueka	245 (4),	246 (4).			
107 Mount Somers	98 (4).				
80 Murchison	150 (4),	511 (4).			
34 Murupara	2 (4),	597 (?).			
52 Napier	342 (5),	356 (4),	365 (4),	369 (?),	462 (4),
	597 (8),	601(3*),	603 (4),	615 (4),	636(4*),
	659 (4),	667 (4),	746 (4),	798 (4).	
76 Nelson	511(5*).				
47 New Plymouth	131 (3),	342 (5),	411 (3),	495 (3),	511 (3),
	597(5*).				
49 Ohakune	29 (5),	342 (5),	345 (3),	353 (4),	400 (4),
	486 (4),	495 (4),	511 (4),	513 (4),	597 (4),
	629 (4).				
35 Opotiki	93(2*),	597 (4),	609 (4),	631 (4),	700 (4),
	727 (4).				
65 Otaki	342 (5),	353 (3),	411 (3),	422 (5),	463 (5),
	486 (4),	495 (4),	511 (3),	513 (3),	702 (3),
	798(3*).				
144 Outram	37(5*).				
62 Palmerston North	88 (4),	110 (4),	241 (4),	277 (4),	342 (5),
	353 (4),	365 (3),	422 (4),	486 (5),	495 (4),
	497 (4),	506 (4),	513 (4),	597 (4).	
78 Picton	342 (?),	411 (?),	422 (?).		
138 Pillans Pass	453 (3).				
64 Porangahau	365 (5),	384(4*),	389(3*),	597 (5).	
116 Pukaki	298 (4).				
146 Puysegur Point	453 (4).				
23 Raglan	342(5*).				
59 Ruahine	342 (4),	358 (5),	365 (4),	597 (4).	
124 St Bathans	37 (?).				
158 Stewart Is.	214 (4),	674 (3).			
58 Taihape	240 (4),	277 (?),	342 (5),	343 (4),	345 (4),
	353(3*),	400 (4),	486 (4),	495 (4),	506(3*),
	511 (4),	513 (?),	529 (4),	597 (4),	629 (4).
72 Takaka	342 (5),	411 (4),	495 (4),	511 (3).	
39 Taumarunui	29(5*),	342(5*).			
41 Taupo	342 (5),	538(3*),	591(4*),	597 (5).	
26 Tauranga	98 (4),	709 (4).			
130 Te Anau	690 (4),	713 (4).			
28 Te Kaha	727 (3),	735 (5).			

31 Te Kuiti	342 (3).				
118 Timaru	87 (4).				
40 Tokaanu	597 (4).				
37 Tolaga Bay	727 (5),	749 (4),	769 (4),	798 (4).	
148 Tuatapere	37 (4).				
141 Waikaia	37 (?).				
53 Wairoa	597 (4),	636 (4),	639 (4),	641 (4),	642 (4),
	678 (3),	746 (4).			
123 Wanaka	421 (4).				
57 Wanganui	24 (4),	110 (4),	277 (4),	342 (4),	355 (4),
	369 (?),	383 (3),	384 (4),	385 (4),	411 (4),
	422 (4),	486 (5),	495 (4),	497 (4),	506 (4),
	511 (3),	513 (3),	560 (4),	597 (4),	702 (4).
56 Waverley	342 (4),	422(3*),	486 (5),	495 (3),	506 (3),
	511 (4),	597 (4).			
68 Wellington	9 (3),	167 (1),	260 (4),	342 (5),	369 (?),
	411 (5),	422 (5),	463 (5),	495 (4),	511 (3),
	597 (4),	702 (3),	798 (3).		
79 Westport	245 (?),	661 (4).			
44 Whakapunaki	357 (3),	597 (5),	609 (4),	636 (4),	727 (3),
	735 (3),	798 (4).			
27 Whakatane	93 (?),	326 (4),	676 (3).		

UNCONFIRMED REPORTS

The following shocks reported to the Observatory as having been felt cannot be confirmed either by an instrumental record or by an independent report.

Jan	1	10h 18m	Paradise (121)	MM 4
	9	03h 05m	Hinemaiaia Dam (41)	?
	9	11h 30m	Bainham (72)	?
	13	12h 30m	'The Branches' (122)	?
Mar	1	10h 30m	Waitaria (69)	?
	9	00h 30m	Manamutu (62)	'force 2.5'
Apr	16	19h 55m	Wairakei (41)	'slight'
	19	-	Oratia (16)	MM 4
	21	23h	Oratia (16)	MM 1
May	21	06h 29m	Okaiawa(55)	?
	25	04h 45m	Stewart Island (158)	MM 4
Jun	15	09h 45m	Tadmor (75)	MM 4
	16	16h 45m	Mount Vernon (60)	MM 4
	23	17h 00m	Pikowai (27)	?
	25	00h 45m	Inchbonnie (92)	MM 3

<i>Jul</i>	3	-	Taradale (64)	'force 3'
	3	-	Opapa (60)	'force 2'
	3	-	Opapa (60)	'force 2'
	20	-	Titahi Bay (68)	'force 6'
<i>Aug</i>	2	16h 48m	Eastbourne (68)	MM 4
	12	15h 19m	Eketahuna (66)	MM 4
	18	19h 15m	Lake Coleridge (100)	MM 4
	23	15h 23m	Stratford (47)	MM 4
	31	12h 49m	Pukerua Bay (68)	MM 4
<i>Sep</i>	27	09h 35m	Maui Platform (46)	MM 4
	30	15h 33m	Hinemaiaia (41)	?
<i>Oct</i>	5	16h 22m	Picton (78)	'light'
	5	20h 59m	Harihari (98)	MM 4
	20	04h 03m	Reefton (86)	MM 4
	23	18h 45m	Rotorua (33)	'felt'
	27	17h 06m	Paparoa (12)	MM 5
<i>Nov</i>	2	14h 10m	Patoka (52)	MM 4
	17	15h 25m	Morere (44)	MM 3
	26	00h 50m	Morere (44)	MM 4

REPORTS FROM OUTSIDE NEW ZEALAND

The Observatory sometimes receives reports of earthquakes felt on islands of the south-west Pacific and at other places beyond the limits of its systematic reporting network. The intensities are those given by the observers, and not those assigned by the Observatory. This year the following reports were received:

<i>Jan</i>	25	16h 15m	Raoul Island	'force 3'
<i>Feb</i>	15	19h 15m	Raoul Island	'force 4'
	21	11h 14m	Raoul Island	'force 4-5'
	21	14h 24m	Raoul Island	'force 4'
	21	14h 29m	Raoul Island	'force 3'
	21	14h 31m	Raoul Island	'force 2'
	21	14h 41m	Raoul Island	'force 2'
	21	18h 29m	Raoul Island	?
	21	18h 55m	Raoul Island	?
	21	19h 22m	Raoul Island	?
	21	19h 38m	Raoul Island	?
<i>Apr</i>	07	08h 16m	Raoul Island	?
<i>Jul</i>	13	22h 06m	Raoul Island	'force 4'
	14	16h 15m	Raoul Island	?
	14	16h 30m	Raoul Island	?
	14	16h 34m	Raoul Island	?
	14	16h 39m	Raoul Island	?

	15			
or	16	-	Raoul Island	'force 3'
	19	08h 32m	Raoul Island	'force 5'
	19	23h 35m	Raoul Island	'force 5'
	21	03h 07m	Raoul Island	'force 3'
	23	20h 30m	Raoul Island	'force 3'
	23	21h 05m	Raoul Island	'force 3'
	25	12h 12m	Raoul Island	'force 3'
	25	14h 29m	Raoul Island	'force 2'
	26	12h 25m	Raoul Island	'force 2'
Oct	19	17h 33m	Raoul Island	'force 5'
	24	08h 59m	Raoul Island	'force 2'

PUBLICATIONS BY STAFF MEMBERS

During 1980 the following papers by members of the Seismological Observatory staff were published:

S-255 SMITH, W.D.: Free oscillations of a laterally homogeneous earth: a finite element approach to elastic modelling.

Phys. Earth Planet. Inter. 21 : 75-82.

The Finite Element method is particularly adaptable to inhomogeneous modelling, because each element of the model is treated independently. The eigenvalue problem is formulated in terms of stiffness and mass matrices, an eigenvector, and gravity and rotation vectors. If the unperturbed (i.e. laterally homogeneous) solution is assumed for the eigenvector, an approximate solution for the eigenfrequency can be found directly, and Rayleigh's Principle guarantees that errors are of second order. Thus the change in eigenfrequency when lateral inhomogeneities are introduced can be estimated rather easily without attempting the full solution of the eigenvalue problem. Modelling the Earth with elements of the order of 100 km in size is well within the capability of present-day computers. Examples of the technique include some low-order torsional modes, in both a spherical and an ellipsoidal Earth model.

S-257 HATHERTON, T.: Shallow seismicity in New Zealand 1956-1975.

J. Roy. Soc. N.Z. 10 : 19-25.

The pattern of 20 years of shallow seismic activity indicates that the boundary between the Pacific and Indian plates in the New Zealand region is characterised by Eiby's three major seismic regions. The Main Seismic Region overlies subducted Pacific Plate and covers much of the North Island and the northern part of the South Island but smaller groupings can be distinguished within it and a major break in seismicity may be associated with a serpentinite belt. The Central Region, through which the Alpine fault passes and which represents the appressing of two continental regions is only mildly seismic, requiring the expectation of a large event or that the deformation is mainly aseismic. The Fiordland Region, which lies over a small sliver of subducted Indian Plate, is the most active seismic area in New Zealand, but epicentral intensities are remarkably low.

- S-258 EIBY, G.A.: The Marlborough Earthquake of 1848.

New Zealand D.S.I.R. Bull. 225 : 82p.

Historical records show the Marlborough earthquakes of 1848 to have been centred in the lower Wairau Valley. The principal earthquake, of estimated magnitude 7.1, occurred at 1.40 a.m. local time on Monday October 16 and was followed by a long and well-documented sequence of aftershocks. The shocks produced substantial damage to buildings in Wellington and Nelson, and ground subsidence and faulting in the Wairau. Earlier appraisals suggesting that the earthquakes were associated with movements of the Awatere Fault are based upon faulty historical information. Unpublished historical material is reviewed and presented, together with maps and present-day photographs of the region affected.

- S-259 ARABASZ, W.J., LOWRY, M.A.: Microseismicity in the Tararua-Wairarapa area: depth-varying stresses and shallow seismicity in the southern North Island, New Zealand.

N.Z. J. Geol. Geophys. 23 : 141-54.

Results from previously unpublished microearthquake field studies in the Tararua-Wairarapa area during 1970-72 demonstrate important differences between crustal seismicity shallower than 20km and intense, regionally extensive, underlying seismicity in the 20-40 km depth range. As earlier observed in the Marlborough region, and more recently in the southernmost North Island, composite focal mechanisms in the Tararua-Wairarapa area indicate markedly different stress orientations above and below 20km. Compressional transcurrent faulting in the upper crust contrasts with extensional normal faulting at depths of 20-40km. The layer 20-40km deep appears to be far more seismically active than the upper crust and is interpreted to mark the uppermost part of the subducted Pacific plate. Accordingly, the data here provide valuable control for locating the plate interface, for modelling elastic deformation at a convergent plate boundary, and for assessing fault activity and shallow seismicity in the southern North Island.

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- EIBY, G.A.: Earthquakes.

Heinemann Educational Books, Auckland : 209p.

This is a new edition of an earlier book, completely revised and rewritten. It is a popular account which covers many aspects of seismology, including instrumentation, procedures for locating earthquakes, geophysical prospecting, seismicity, macroseismic effects and earthquake prediction. Examples emphasize New Zealand earthquakes but also draw widely on overseas experience.

— HAINES, A.J.: Differences in time terms between New Zealand seismograph stations and implications for crustal structure.

N.Z. J. Geol. Geophys. 23 : 541-9.

Differences between time terms roughly equal to the crustal contributions to Pn and Sn travel times have been calculated for pairs of stations of the New Zealand seismograph network. The maximum differences found between two stations are 2.6s for P-waves and 6.8s for S-waves. These differences reflect major differences in crustal structure and, although they cannot be interpreted unambiguously in terms of crustal thickness and/or crustal seismic wave velocities, they provide important constraints on structure not evident from surface geology. The results will ultimately be important in improving the accuracy of local earthquake locations.

E-161 New Zealand Seismological Report, 1979.

OBSERVATORY SERVICES

EXCHANGE AGREEMENTS

The Seismological Observatory issues the following series of publications:

1. *E-bulletins*. These consist of the 'New Zealand Seismological Reports', containing a detailed summary of all standard measurements made at stations of the N.Z. network, lists of epicentres, felt intensity data, and a brief account of the principal earthquakes of the year.
2. *S-bulletins*. These are mostly reprints of papers by members of the Observatory staff, but occasionally they have included material not published elsewhere, such as the Eiby-Muir near earthquake tables, and a descriptive account of the Observatory and its work issued to conference delegates.
3. *A-bulletins*. These are typewritten sheets giving preliminary readings from Wellington and a small selection of well distributed outstations. They are issued fortnightly to observatories and data centres needing rapid access to New Zealand readings, and are not intended to have a wide circulation.
4. *P-bulletins*. These are listings of microearthquakes located by the Pukaki network. They are issued monthly to people needing rapid access to these data, and are not intended to have a wide circulation.

The Observatory will be pleased to consider exchange agreements for any of this material.

COMPUTER FILE

The Observatory has a master file of some 20,000 earthquake origins and associated information stored on magnetic tape. From this, lists of earthquakes within particular geographical areas of New Zealand or in categories defined in other ways can be made available to geologists, and others engaged in research. Full details have been published elsewhere (W.D. Smith, 1976: 'A Computer File of New Zealand Earthquakes'; *Bull. N.Z. Natl. Soc. Earthq. Eng.*, Vol.9, No.2, pp.136-7, or *N.Z. J. Geol. Geophys.*, Vol.19, No.3, pp.393-4). Limits that may be specified are dates, magnitudes, focal depths, and regions bounded in a number of different ways. Because of the dangers inherent in the use of incompletely assessed data, users are asked to discuss their search criteria with the Observatory.

THE NEW ZEALAND TIME SERVICE

The Seismological Observatory is administratively responsible for the New Zealand Time Service, which distributes accurate time for civil and scientific purposes, both by radio and by land-line. The Time Service has three Hewlett-Packard double-oven quartz-crystal oscillators, with a measured stability exceeding two parts in 10^{11} . From these suitable signals for wider distribution are generated by electronic subdivision. Stand-by power supplies and duplicated equipment ensure that failures are rare.

At present, the most accurate source of time in New Zealand is the caesium beam primary frequency standard at the Physics and Engineering Laboratory at Lower Hutt, which is periodically compared by flying clock with the standards at the U.S. National Bureau of Standards and other time-keeping observatories. The Time Service clocks are kept in close agreement with the P.E.L. standard by daily comparison, followed, if necessary, by correction. (The comparison is made indirectly by comparing both the P.E.L. standard and the Time Service clocks with a synchronisation pulse transmitted by the national television network TV One. Details of the method may be found in P.E.L. Report No.600 "Frequency and Time in New Zealand via the T.V. Sync. Pulses".) As a further check, errors are also determined by comparing the Time Service clocks with short-wave signals transmitted by observatories co-operating with the Bureau International de l'Heure, appropriate allowances being made for propagation times.

The signals transmitted from the Observatory are an approximation (to the accuracy specified below) to Coordinated Universal Time (UTC), which is basically atomically kept time, but adjusted when necessary by one second steps (leap seconds) to keep it in near agreement with the astronomically determined time known as UT1. These adjustments are normally made at the end of June or December.

The error of the signals seldom exceeds 100 microseconds, on leaving the Observatory, but delays are introduced by the circuits between the Observatory and the individual radio transmitters. A typical delay (that for station 2YA) is 1.8 milliseconds.

A formal discussion of time-scales is to be found in the Time Service Reports, Series 11, of the U.S. Naval Observatory. To the precision required for the great majority of civil purposes the distinctions between them are of no consequence.

The most widely used signals from the Time Service are the six 'pips' transmitted by those stations of the Broadcasting Corporation of New Zealand that carry the National Programme. The beginnings of the pips mark the 55th to 60th seconds of a particular minute, and each consists of 150 ms of 1 kHz tone, except when the pip indicates an exact hour and its length is doubled. Signals are normally transmitted on each hour and at 22^h 58^m and 22^h 59^m U.T.

Time-pips originating at the Time Service are also transmitted by some commercial stations of the Broadcasting Corporation of New Zealand, and by Radio Windy (Wellington) on 891 kHz, but signals from other private stations are not under Observatory control, and cannot be recommended for navigational or scientific purposes.

A signal intended for navigational purposes and other uses calling for a more extended transmission is provided by Wellington Radio on 417.5 kHz using the call sign ZMO. Details are as follows:

22^h 54^m 00^s U.T. to Call Sign, ZMO (- - - - -)

22^h 54^m 55^s

22^h 55^m 00^s U.T. to

23^h 00^m 00^s

A series of dots commencing on each exact second. They each consist of 150 ms of 1 kHz tone, except for those marking an exact minute, which are lengthened to 300 ms.

In addition to the radio signals, hourly signals are sent to the New Zealand Railways by land-line.

LIST OF MAPS 1980

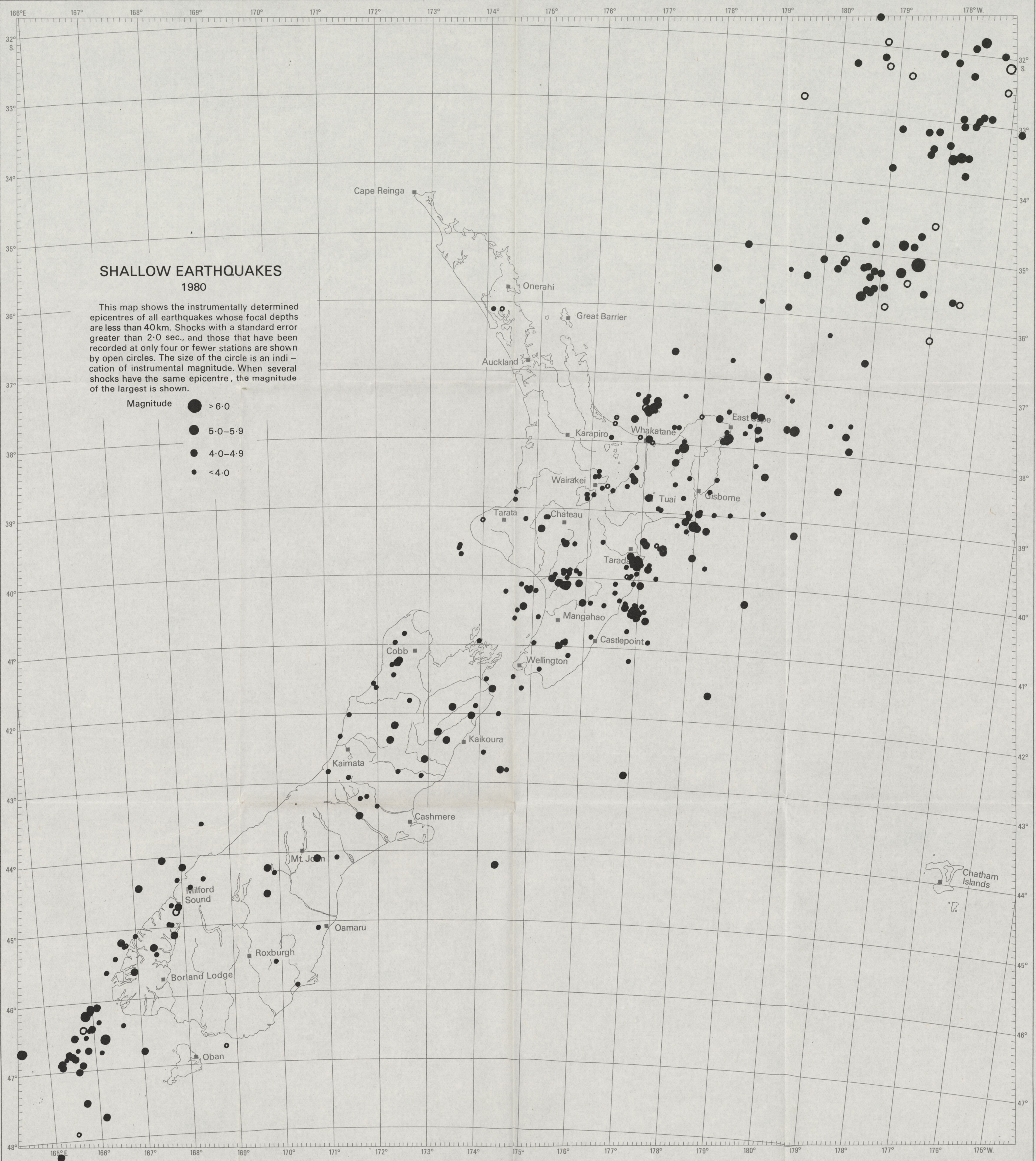
(In pocket inside back cover.)

Epicentres from the Standard Network

1. Normal Focus.
2. Deep Focus.

Epicentres of Microearthquakes

3. Pukaki Network.
4. Wellington Network: depth ≤ 20 km.
5. Wellington Network: depth 20 - 40 km.
6. Wellington Network: depth > 40 km.



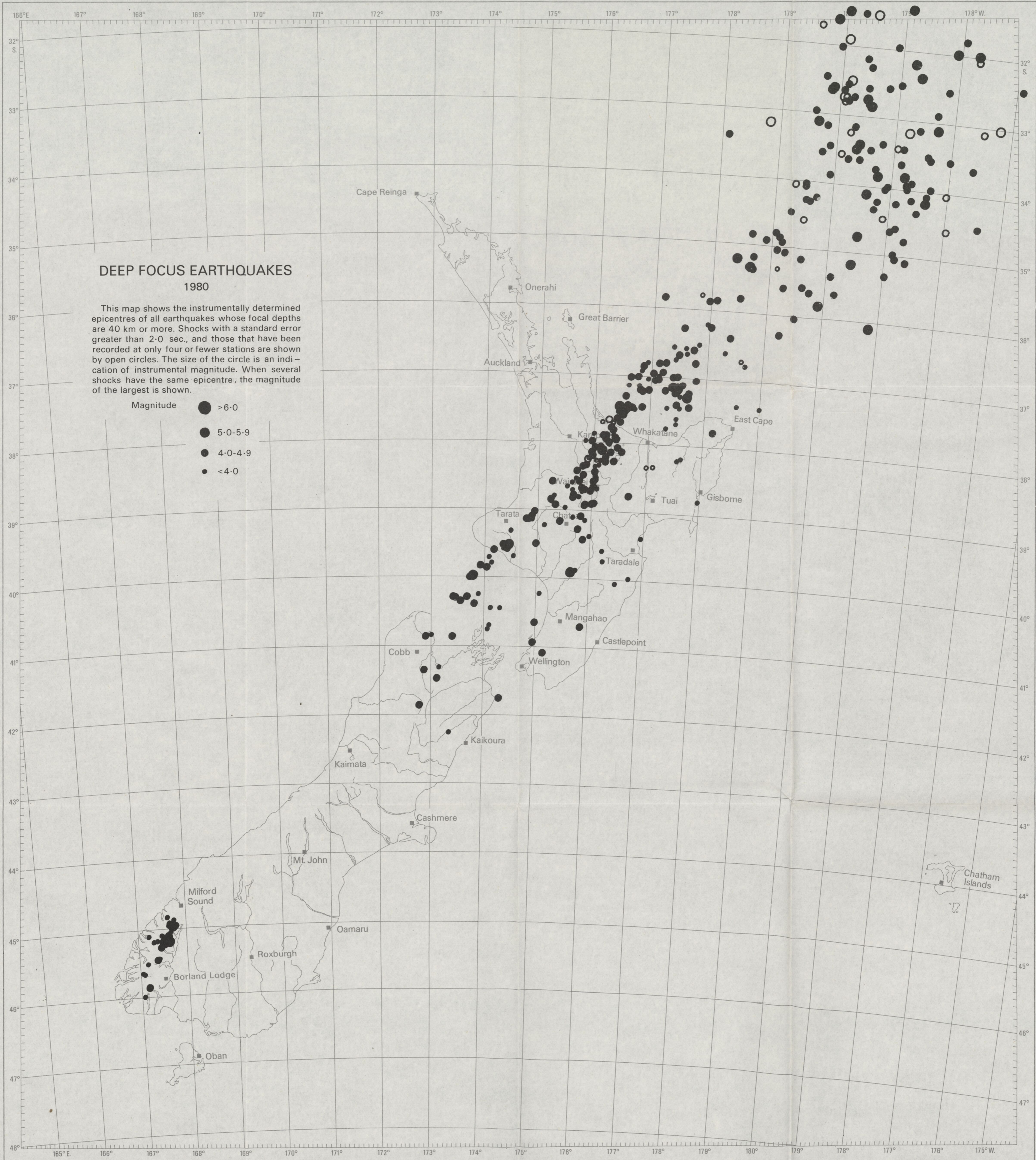
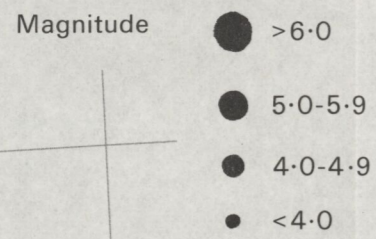
SHALLOW EARTHQUAKES 1980

This map shows the instrumentally determined epicentres of all earthquakes whose focal depths are less than 40 km. Shocks with a standard error greater than 2.0 sec., and those that have been recorded at only four or fewer stations are shown by open circles. The size of the circle is an indication of instrumental magnitude. When several shocks have the same epicentre, the magnitude of the largest is shown.

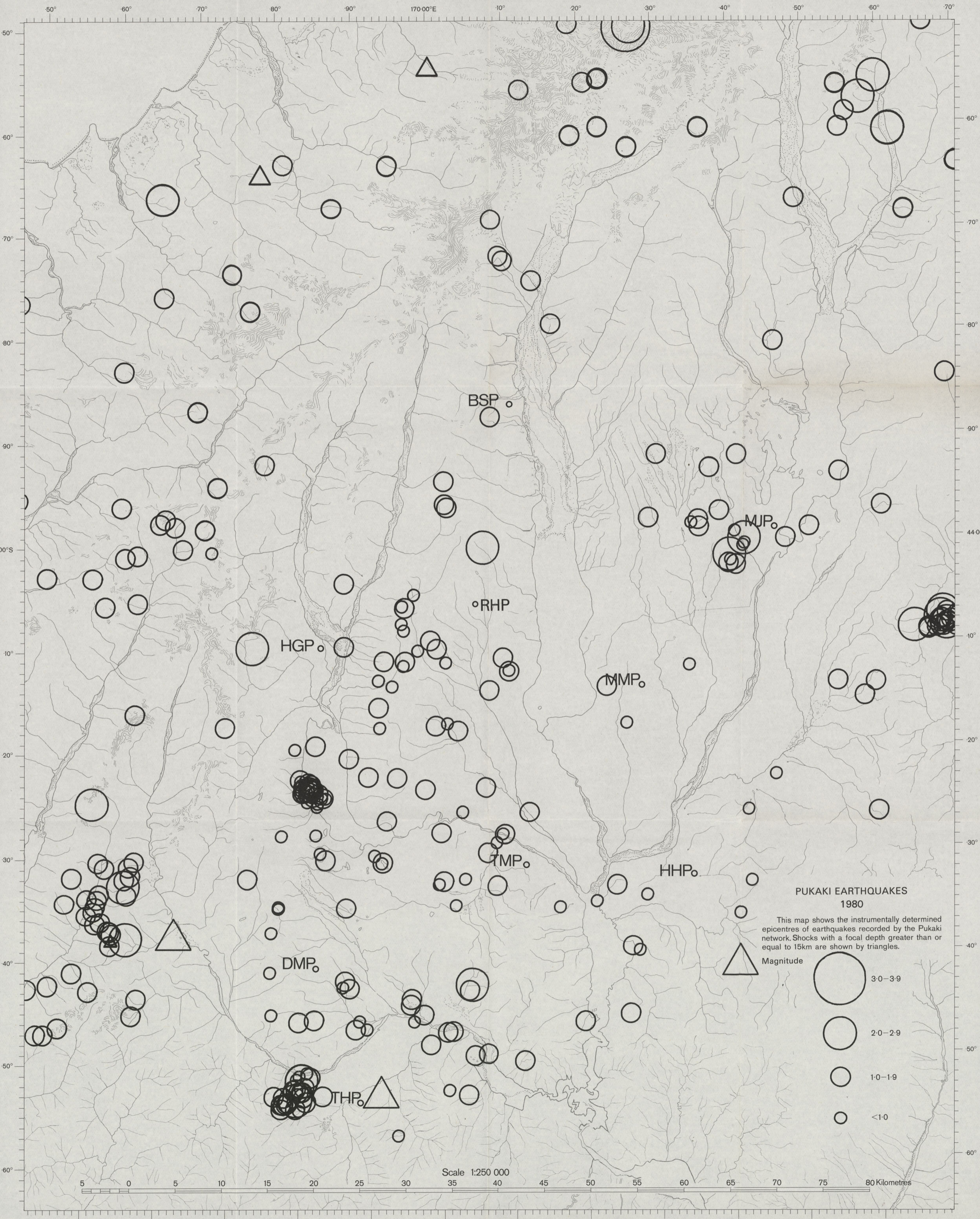
- Magnitude
- > 6.0
 - 5.0-5.9
 - 4.0-4.9
 - < 4.0

DEEP FOCUS EARTHQUAKES 1980

This map shows the instrumentally determined epicentres of all earthquakes whose focal depths are 40 km or more. Shocks with a standard error greater than 2.0 sec., and those that have been recorded at only four or fewer stations are shown by open circles. The size of the circle is an indication of instrumental magnitude. When several shocks have the same epicentre, the magnitude of the largest is shown.

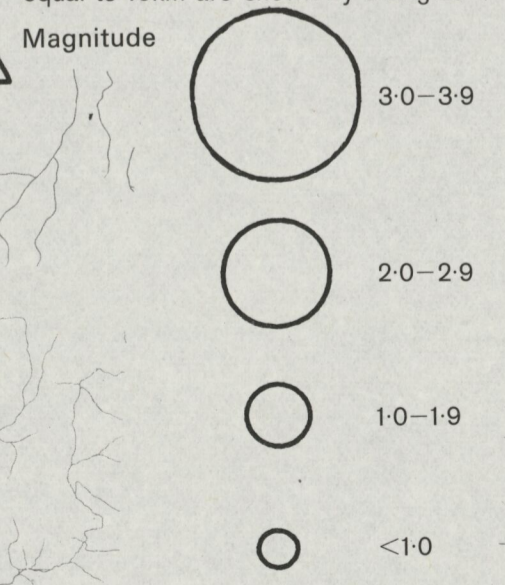


PUKAKI NETWORK

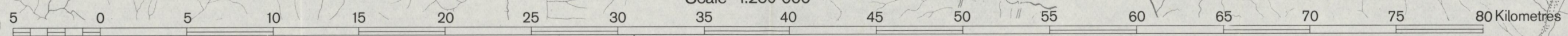


PUKAKI EARTHQUAKES 1980

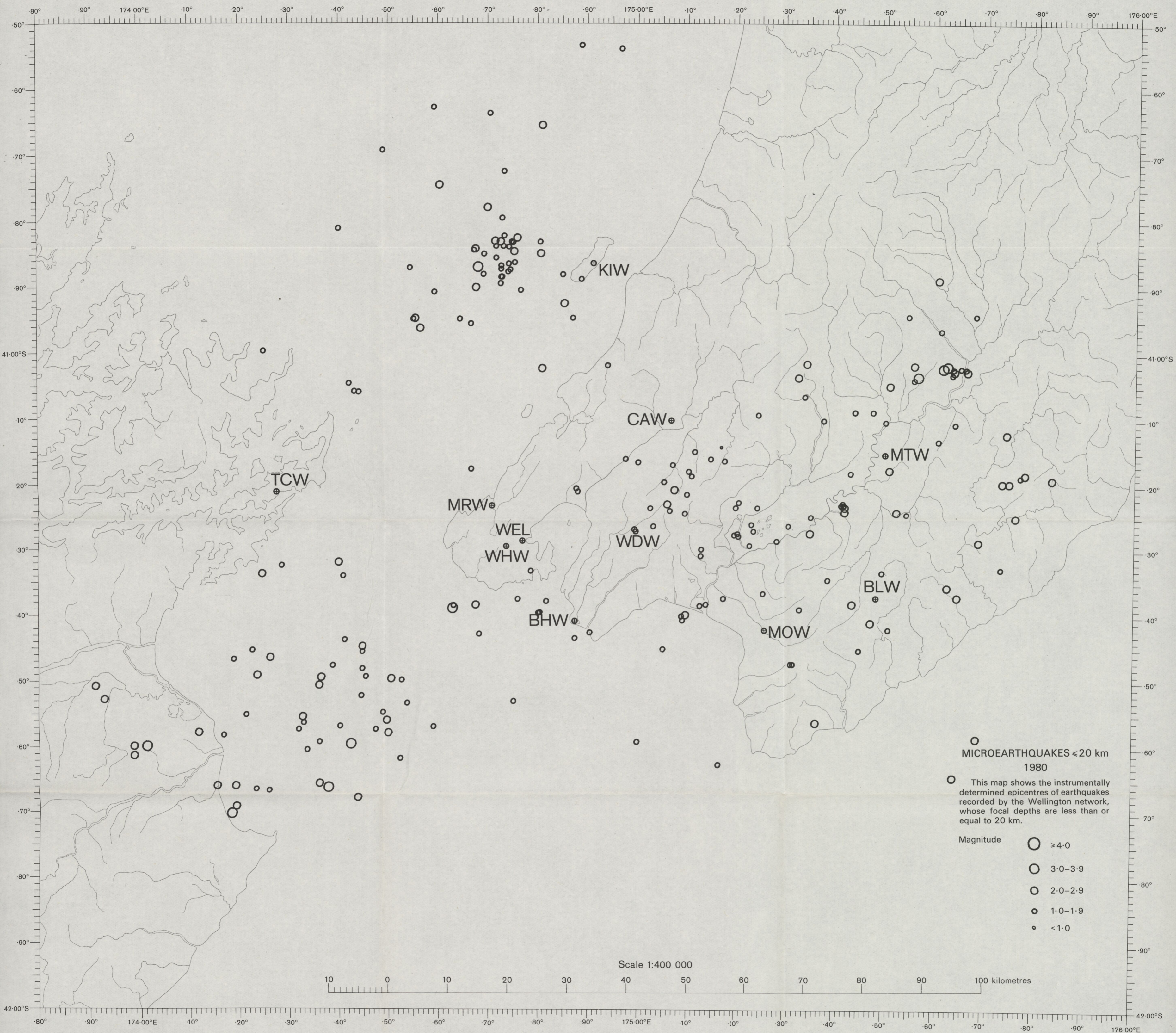
This map shows the instrumentally determined epicentres of earthquakes recorded by the Pukaki network. Shocks with a focal depth greater than or equal to 15km are shown by triangles.



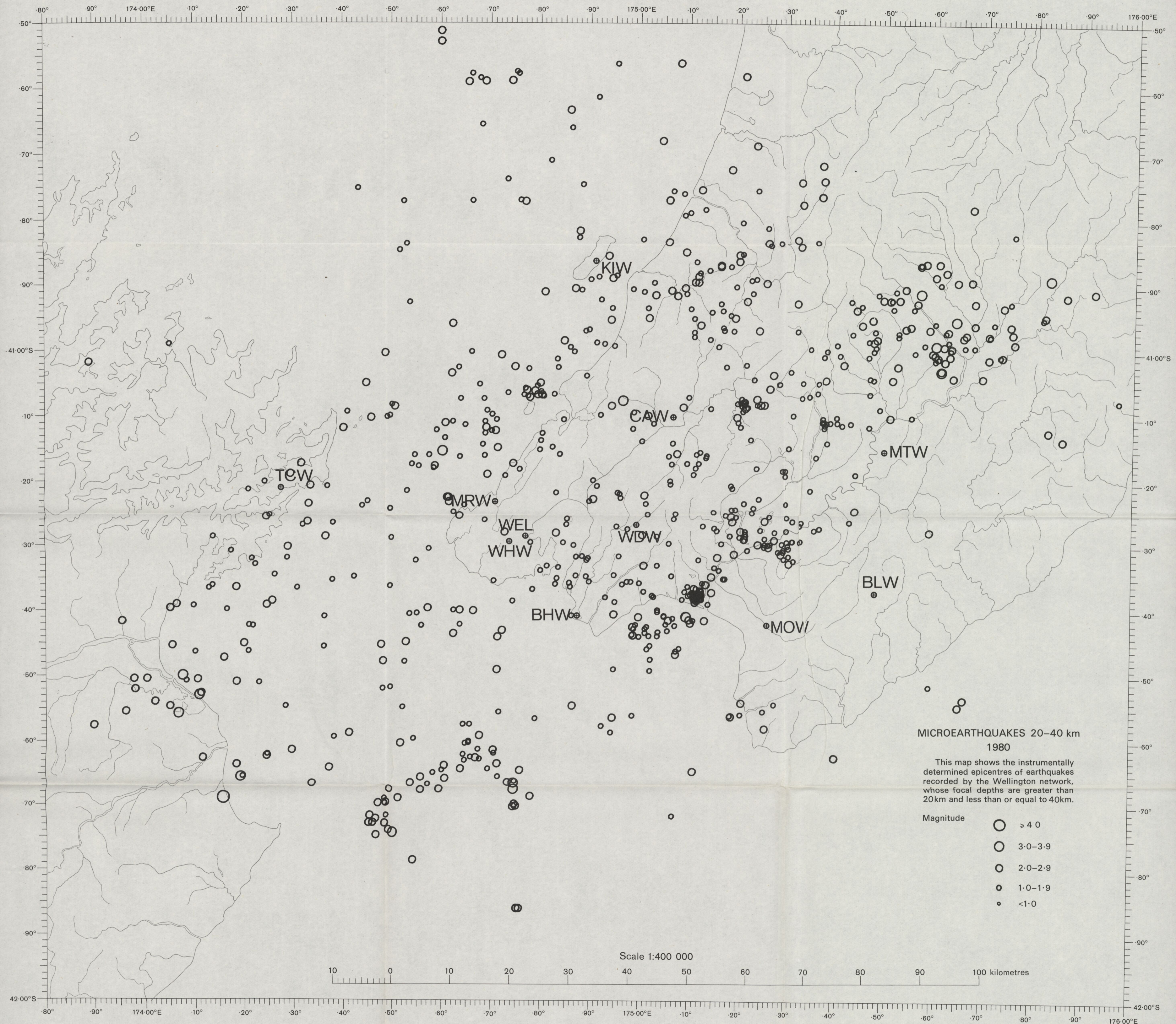
Scale 1:250 000



WELLINGTON NETWORK



WELLINGTON NETWORK

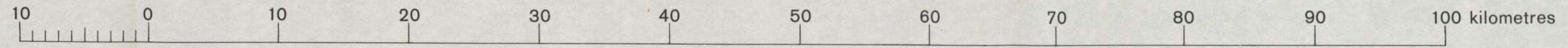


**MICROEARTHQUAKES 20-40 km
1980**

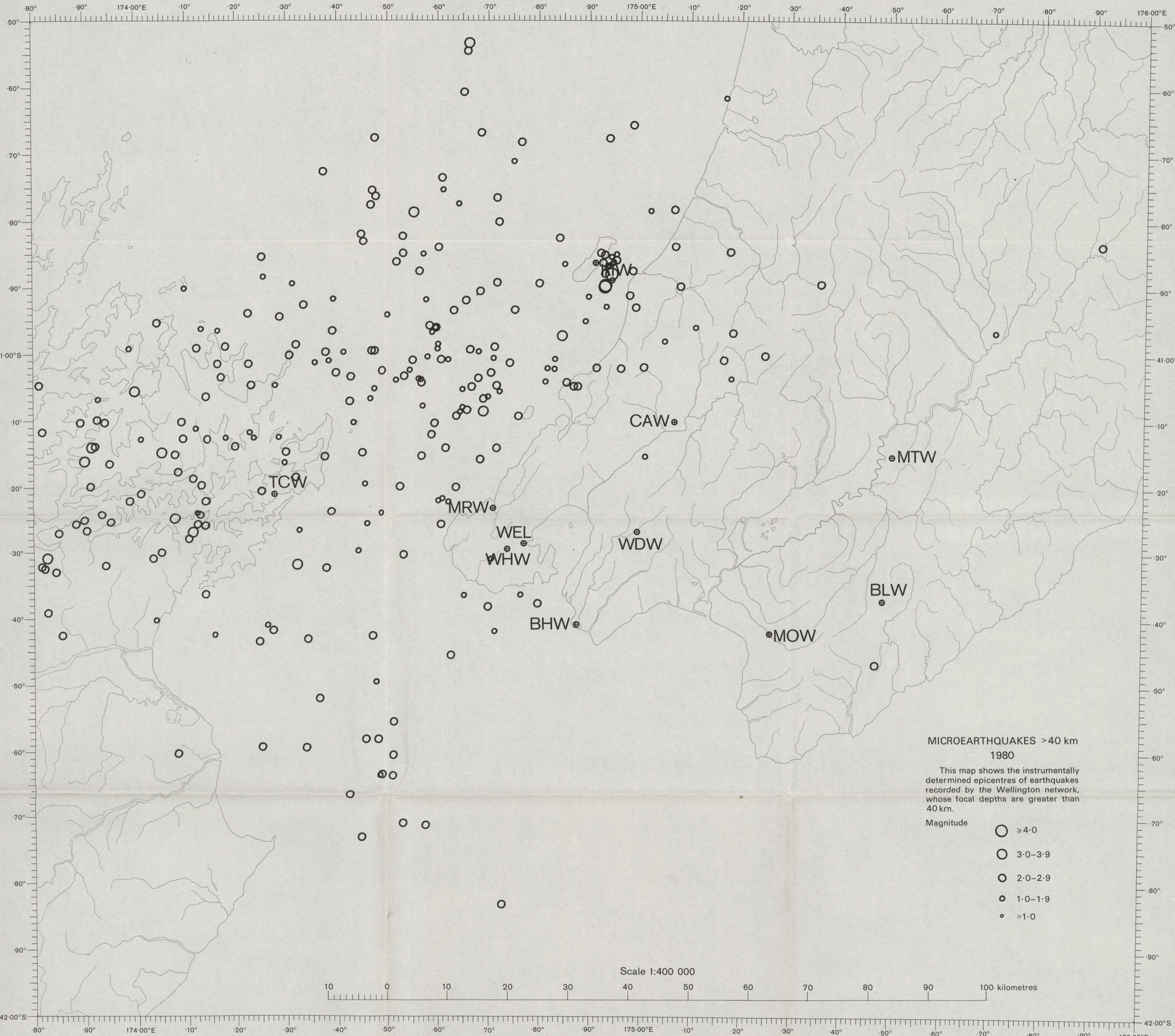
This map shows the instrumentally determined epicentres of earthquakes recorded by the Wellington network, whose focal depths are greater than 20km and less than or equal to 40km.

- Magnitude
- ≥ 4.0
 - 3.0-3.9
 - 2.0-2.9
 - 1.0-1.9
 - <1.0

Scale 1:400 000



WELLINGTON NETWORK



MICROEARTHQUAKES > 40 km 1980

This map shows the instrumentally determined epicentres of earthquakes recorded by the Wellington network, whose focal depths are greater than 40 km.

- Magnitude
- ≥ 4.0
 - 3.0-3.9
 - 2.0-2.9
 - 1.0-1.9
 - > 1.0

