New Zealand Department of Scientific and Industrial Research
GEOPHYSICS DIVISION

NEW ZEALAND SEISMOLOGICAL REPORT

1978

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SEISMOLOGICAL OBSERVATORY BULLETIN

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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.

Published in 1979

CONTENTS

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NADI

Observer: H.Kashyap.

RAOUL ISLAND

Observer: R.J.Humphries.

CAMPBELL ISLAND

Observer: N.McMillan (until March)
R.A.Brown (from March).

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INTRODUCTION

The changes in style and presentation introduced in the Report for 1977 have been retained, with only minor changes, in the current volume. The editor would like to thank those users who have offered comments and suggestions.

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 Seismologists urgently requiring unpublished New Zealand data may apply to the Observatory.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.

The death of Mr. R.H. Orr, Senior Technical Officer in charge of instrumentation, on July 8, has deprived the Observatory of a valued staff member. A short obituary appears at the end of this volume.

D. E. WARE
Editor

PRINCIPAL EARTHQUAKES IN 1978

No major seismic event occurred in the New Zealand region in 1978, that year and the preceding one being two of the quietest since modern instrumental coverage was achieved in the 1930s. Only two shocks were felt over wide areas, and no significant damage was reported. The only shock to reach magnitude 6 (Origin 78/393) was well to the north in the Kermadec Seismic Region, beyond the limits of our maps.

The largest shocks in the Main Seismic Region were those on January 18 and September 22 (Origins 78/037 and 78/515). The first of these was a shallow event felt over much of north Canterbury and Westland. Its epicentre lies a few kilometres south of Hanmer. The intensity of shaking was nowhere severe enough to cause damage or move goods. The shock on September 22 was a deep earthquake in the western Bay of Plenty, having a magnitude of 5·6 and a focal depth of 199 km. As is usual with shocks of this kind, the felt area was displaced to the east by the structural peculiarities of the North Island, and although the shock was reported over a large area that extended from Tolaga Bay to Blenheim, it was not felt at places near the epicentre. Surface intensities everywhere were low.

Minor damage followed the shock of magnitude 3·9 centred near Maungatauroto in Northland, which occurred on May 15 (Origin 78/252). A hopper at the Ruawai lime-works fell and hit an adjoining building, and in a few places where local soil conditions intensified the shaking, plaster and brickwork were slightly cracked. Several aftershocks were reported (Origins 78/253 to 78/259), all below magnitude 3. The extent of the damage from so small a shock, in an area which many members of the public believe to be free from earthquake risk, can plausibly be attributed to a very shallow origin, and the failure of local builders to consider the need for earthquake resistance.

A shock of unusual scientific interest occurred on July 1 (Origin 78/348). This was centred on the West Norfolk Ridge, some 350 km to the west of Cape Reinga and 400 km south of Norfolk Island. As the magnitude of the shock was only 4·7, it was difficult to place

accurately even with the help of Australian stations. Unfortunately the station on Norfolk Island, formerly maintained by the Australian Bureau of Mineral Resources, was closed a few years ago as an economy measure. From time to time shocks have been felt on the Island, and few have been well located. Most are believed to have been associated with the Norfolk Ridge, to the north of the present shock.

The quiescence of the Main Seismic Region has been paralleled in the Fiordland Region, the largest events being shocks near Mount Aspiring on January 30 (Origin 78/049) and west of Lake Te Anau on July 20 (Origin 78/391). These were shallow events of magnitude 5·0 and 5·3 respectively, both felt with moderate intensities near the epicentres. There were no large deep events in Fiordland during the year.

Minor activity occurred in several parts of the Central Region, including two shocks very close to Christchurch (Origins 78/227 and 78/341). The earlier and smaller event, of magnitude 3·8, occurred on May 6; and the latter, of magnitude 4·4, on June 29. The first shock produced only a single felt report, but the latter was felt in both Christchurch and Rangiora with an intensity of about MM IV, and in Ashburton where it reached MM V. Unverified press reports that goods were thrown from shelves suggest the possibility of a slightly higher intensity on bad ground. The location of three shocks close to Oamaru (Origins 78/150, 78/362 and 78/558), all of which were felt, is of interest because of historical reports that the town was damaged on two occasions last century. The origins of these shocks remain uncertain. The largest of the present group (Origin 78/362) occurred on July 7 and had a magnitude of only 4·2. The small shocks near Roxburgh (Origin 78/096) on February 21 and near Mataura on January 7 (Origin 78/019) are also of interest because of their occurrence in regions of less frequent activity.

On December 17 an earthquake of magnitude 4·6 occurred near Lake Pukaki (Origin 78/647). Its epicentre lies close to the Ostler Fault, on the western side of the lake, and it was felt at Twizel, Mahitahi and Albany. Lake Pukaki is a natural lake, but its level has twice been raised to provide water storage for electric power generation. The first occasion was in 1955, when it was raised 9 metres, giving a depth of 71·5 metres and a volume of some 5×10^9 m^3. More recently, on completion of the Pukaki High Dam in 1978, further filling began with the intention of adding a further 37 m to the depth and 5.5×10^9 m^3 to the volume. At the time of this

earthquake, inflow was proceeding rapidly and about 28 m of additional filling had taken place. No earthquakes of comparable size had occurred in the previous three and a half years, and the possibly exists that the shock was related to the filling of the dam. A fuller report is being prepared.

The Pukaki Network enables very small earthquakes in the neighbourhood of Lake Pukaki to be detected, and details of this activity are tabulated in a separate section of this Report. It shows that a well developed sequence of foreshocks and aftershocks accompanied the main event. In the three days preceding this earthquake eight foreshocks occurred, the largest (Origin 78/646) having a magnitude of 2·8. It was the only event of the sequence that could be located using the Standard Network, which illustrates the additional data provided by the Pukaki installation. In the following 24 hours nearly 400 small aftershocks were recorded.

Other events calling for notice are the shocks of magnitude 4·9 and 4·7 on June 12 and June 21 (Origins 78/321 and 78/331), in the upper reaches of the Acheron River. With these may be grouped two smaller shocks (Origins 78/386 and 78/506) on July 17 and September 15 respectively. A shock of magnitude 4·9 on May 4 (Origin 78/221) attracted general notice in Hawkes Bay. The shock on March 9 (Origin 78/120) should possibly be considered a foreshock, and there were several aftershocks (*e.g.* Origins 78/222, 78/223, 78/306 and 78/307).

A deep shock in western Cook Strait on August 14 (Origin 78/436, magnitude 4·6, focal depth 153 km), wakened a few light sleepers in Wellington, and a shallow shock of magnitude 4·2 south of Blenheim on November 30 (Origin 78/626) was also felt in the capital.

The volcanoes of the central North Island have been quiet throughout the year, but intermittent eruptions of steam and ash from White Island have continued.

THE INSTRUMENTAL NETWORKS

INTRODUCTION

The system of seismograph stations now under the scientific direction of the Seismological Observatory, Wellington, comprises a standard network of 36 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 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, where they remain available for research. They are not read for all events, but in appropriate cases their readings are listed and used with those of the standard network.

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 three stations operated for volcanological research, one on White Island operated by the Geology Department of the Victoria University of Wellington, and two 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 and are intermittent in operation, but their readings are available for inclusion in the local epicentre-location programme when this is helpful.

CHANGES TO THE NETWORKS IN 1978

During 1978 two stations of the standard network were closed and a new one established, one station of the Pukaki network was moved to a different site, and two stations were added to the Wellington network.

The station at Cashmere replaces the former stations at Christchurch and Gebbies Pass. The seismometer is sited on volcanic rocks on the Port Hills to the south-east of Christchurch city, and its output is recorded at the former Christchurch station in the Canterbury museum. Recording began on September 7. The station at Monowai ceased operation on November 26, when the operator retired. A new station is to be installed nearby. In June, the short-period vertical Willmore at Wellington was raised from its borehole and dismantled.

The equipment formerly at Gladstone Stream was transferred to Rhoboro Hills in April, because of roadworks which rendered the site permanently unsuitable.

The new stations of the Wellington network are at Moikau, in the eastern Wairarapa, and Kapiti Island, north of Wellington. Operation began at Moikau on January 31, and at Kapiti Island on April 10. The vertical seismometer from Wrights Hill and the horizontal seismometer at Wellington were interchanged on August 3.

INDEX OF STATION CODES

Throughout the tabular sections of this Report stations are identified by the international three-letter 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	Glacier Shelter	GSZ	Oban	OBZ
Apia	API	Great Barrier	GBZ	Onerahi	ONE
Auckland	AUC	Kaikoura West	KKY	Raoul Island	RAO
Campbell Island	CBZ	Kaimata	KAI	Rarotonga	RAR
Cape Reinga	CRZ	Karapiro	KRP	Roxburgh	ROX
Cashmere	CMZ	Mangahao	MNG	Scott Base	SBA
Castlepoint	CAZ	Milford Sound	MSZ	Taradale	TRZ
Chateau	CNZ	Monowai	MNW	Tarata	TNZ
Chatham Islands	CIZ	Mount John	MJZ	Tuai	TUA
Christchurch	CHR	Nadi	NDF	Wairakei	WNZ
Cobb River	COB	Ngauruhoe	NGZ	Wellington	WEL
East Cape	ECZ	Niue	NUE	Whakatane	WTZ
Gisborne	GNZ	Oamaru	OMZ	White Island	WIZ

PUKAKI NETWORK

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

WELLINGTON NETWORK

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

SEISMIC RESEARCH OBSERVATORY

South Karori	SNZO

GEOGRAPHICAL POSITIONS

STA	LATITUDE	LONGITUDE	ALT	GEOCENTRIC DIRECTION COSINES		
	d m s	d m s	m	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
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
CHR	43 31 58 S	172 37 36 E	8	-0.721 282	0.093 337	-0.686 324
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
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
GSP	44 08 01 S	170 01 05 E	840	-0.709 161	0.124 814	-0.693 911
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
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
MNW	45 46 49 S	167 37 07 E	155	-0.683 548	0.150 055	-0.714 315
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
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
SNZ	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

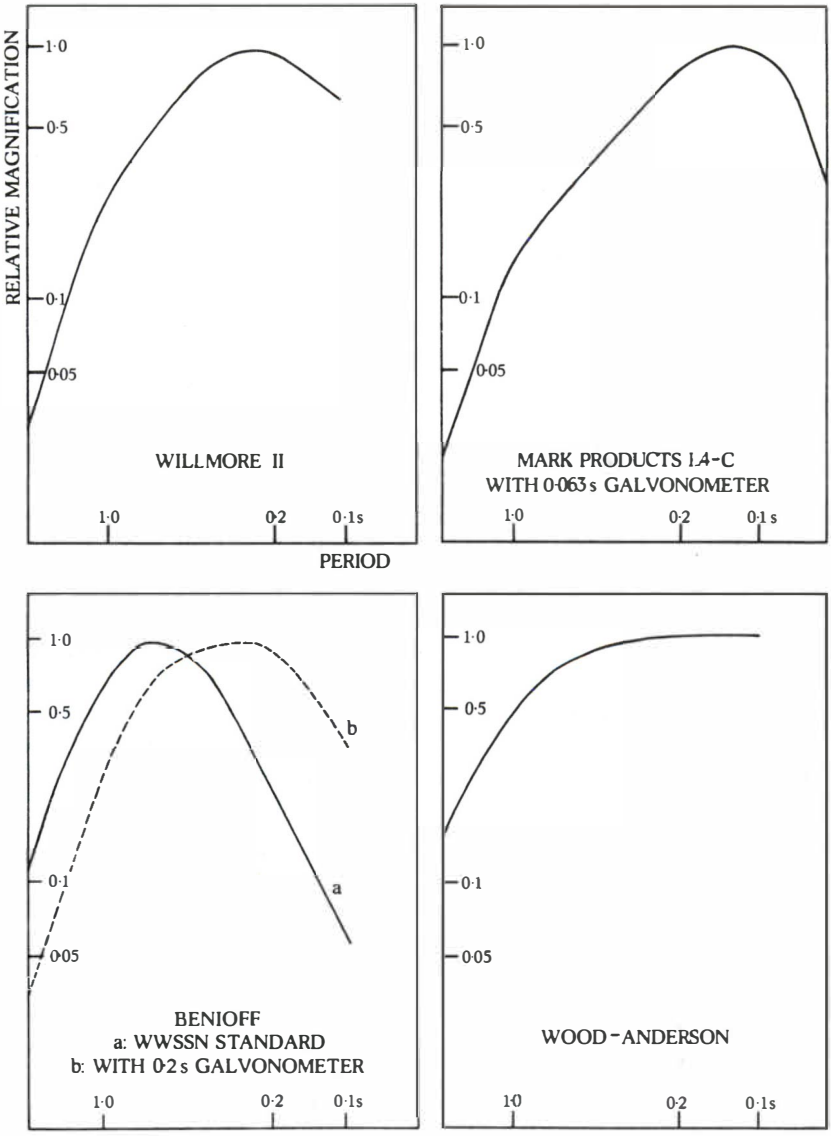
Stations are listed in the alphabetical order of their international three-letter code designations. Pendulum and galvanometer periods, T_o and T_g, are given in seconds. The damping of electromagnetic instruments, when not listed, may be assumed to be critical. Magnifications listed are for the period 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-and-ink recorder).					
		Z	1.0	1.0		7600 at 0.8s
CAZ	CASTLEPOINT					
	Foundation: Quaternary mudstone.					
	Willmore II (with Kinemetrics pen-and-ink recorder).					
		Z	1.0			Variable
	This station is on an exposed coast. The magnification is reduced when high seas are running.					
CBZ	CAMPBELL ISLAND					
	Foundation: Basalt.					
	Willmore II	Z	1.0	0.25		5000 at 0.25s
CHR	CHRISTCHURCH					
	Foundation: Alluvial sands, tills and gravels.					
	Willmore I (Photo-cell amplifier used with pen-and-ink recorder).					
		Z	1.0	0.25		4700 at .67s
	This station was closed on September 6.					
CIZ	CHATHAM ISLANDS					
	Foundation: Clay over basalt.					
	Willmore II	Z	1.0	0.25		4440 at 0.20s
		N	1.0	0.25		5110 at 0.20s
		E	1.0	0.25		4400 at 0.25s

	Instrument	Compt	T_o	T_g	Damping	Magnification
CMZ	CASHMERE					
	Foundation: Rhyolite.					
	Mark Products L-4C (Output telemetered to Kinemetrics VR-1 recorder at Canterbury Museum).					
		Z	1.0			24000 at 0.20s
	This station began operating on September 7.					
CNZ	CHATEAU					
	Foundation: Volcanic ash and lava.					
	Mark Products L-4C (Output telemetered to Kinemetrics VR-1 pen-and-ink recorder).					
		Z	1.0			Variable
	This station is operated by the Geophysical Survey, D.S.I.R., for volcanological research. The magnification is changed frequently.					
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
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		26700 at 0.25s
		E	1.0	0.25		25100 at 0.25s
GSZ	GLACIER SHELTER					
	Foundation: Recent andesite.					
	Mark Products L-4C (Output telemetered to Kinemetrics VR-1 pen-and-ink recorder).					
		Z	1.0			Variable
	This station is operated by the Geophysical Survey, D.S.I.R., for volcanological research. The magnification is changed frequently.					
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.					
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

	Instrument	Compt	T_o	T_g	Damping	Magnification
MJZ	MOUNT JOHN					
	Foundation: Greywacke.					
	Willmore II	Z	1.0	0.25		30500 at 0.25s
		N				43600 at 0.25s
		E				41100 at 0.25s
MNG	MANGAHAO					
	Foundation: Greywacke.					
	Willmore II	Z	1.0	0.25		52000 at 0.33s
MNW	MONOWAI					
	Foundation: Tertiary sandstone.					
	Willmore II	Z	1.0	0.25		29100 at 0.25s
	Wood-Anderson	N	0.80		crit.	2800
	This station was closed on November 26.					
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 Kinemetrics pen-and-ink recorder).					
		Z	1.0			Variable
	This station is operated by the Geophysical Survey, D.S.I.R. for volcanological research. The magnification is changed frequently.					
NUE	NIUE					
	Foundation: Hard coral.					
	Willmore II (with Kinemetrics VR-1 pen-and-ink recorder).					
		Z	1.0			17200 at 0.10s
OBZ	OBAN					
	Foundation: Weathered granite.					
	Mark Products L-4C (with Kinemetrics VR-1 pen-and-ink 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
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

	Instrument	Compt	T_o	T_g	Damping	Magnification
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.
SBA	SCOTT BASE					
	World-Wide Standard Station.					
	Foundation: Frozen basaltic debris resting on lava flows.					
	Benioff	ZNE	1.0	0.75		6250 (summer) at 1.0s 25000 (winter)
	Press-Ewing	ZNE	15	100		750 (summer) at 15s 1500 (winter)
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
	Willmore II	Z	1.0	0.25		22750 at 0.20s
	Wood-Anderson	NE	0.80		crit.	1400
		E	0.80		crit.	280
	Imamura	Z	1		5:1	2
		NE	4		5:1	2
	The Willmore Z instrument was dismantled in June. The Benioff vertical component operates both photographic and heated-stylus recorders. There is also a pen-and-ink recorder operated by a Willmore I seismometer.					
WIZ	WHITE ISLAND					
	Foundation: Recent andesite.					
	Mark Products L-4C (Output telemetered to Kinemetrics VR-1 pen-and-ink 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 a viewing screen, which magnifies the film twenty times.

	Station	Component	Magnification
BSP	Bush Stream	Z	1 500 000 at 0.10s
DMP	Diadem	Z	1 500 000 at 0.10s
GSP	Gladstone Stream	Z	1 500 000 at 0.10s
	Station closed on April 9.		
HGP	Huxley Gorge	Z	1 500 000 at 0.10s
HHP	Hogget Hill	Z	1 500 000 at 0.10s
MJP	Mt John Pukaki	Z	1 500 000 at 0.10s
MMP	Mount Mary	Z	1 500 000 at 0.10s
RHP	Rhoboro Hills	Z	1 500 000 at 0.10s
	Station installed on April 24.		
THP	Tara Hills	Z	1 500 000 at 0.10s
TMP	Tomahawk Gully	Z	1 500 000 at 0.10s
		N	200 000 at 0.20s
		E	200 000 at 0.20s

The equipment at Twizel includes a conventional pen-and-ink recorder, which can be connected to the output of any of several stations. It is normally used to record the output of the Rhoboro Hills (RHP) seismometer, providing a magnification 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 magnitudes determined at these stations with magnitudes determined at calibrated stations.

Station	Component	Magnification at 0.10s
BHW Baring Head	Z	(150 000)
CAW Cannon Point	Z	(510 000)
KIW Kapiti Island	Z	(320 000)
Station installed on April 10.		
MOW Moikau	Z	(300 000)
Station installed on January 31.		
MRW Makara Radio	Z	400 000
TCW Tory Channel	Z	(1 000 000)
WDW Wainui Dam	Z	(260 000)
WEL Wellington	Z	(1 500)
	N	(270 000)
replaced Aug 3 by	Z	110 000
WHW Wright's Hill	Z	310 000
replaced Aug 3 by	N	280 000

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

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. For seismological and civil purposes this may be regarded as the Mean Solar Time of the Greenwich meridian.

All permanent stations of the New Zealand networks have minute marks derived from reliable quartz crystal clocks of high stability. These are related to Universal Time by means of radio time-signals impressed directly on the records. 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. Their error seldom exceeds two milliseconds. Details appear elsewhere in this Report. In areas of bad reception the Australian station VNG is used.

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. Signals from a quartz clock are impressed on the records of the Wellington and Pukaki networks each second. At Wellington they are derived directly from the national time-service. At Pukaki one trace of the recorder carries a continuous record of the signals from VNG.

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 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 Island. Times observed elsewhere in the South Pacific are decided by the governments of the respective countries. Those affecting stations of the New Zealand network are:

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

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

INSTRUMENTAL DATA

INTRODUCTION

This section contains origin times, epicentres, focal depths, magnitudes, and station readings of those earthquakes in the New Zealand region that could be located from instrumental data. In general, origins are calculated for all shocks of magnitude 4·0 and greater within 10° of Wellington, together with those shocks of lower magnitude or at greater distances, that have been reported felt. A summary of the origins and magnitudes is given later in this section. The calculations are carried out by a PDP 11/34 digital computer using a FORTRAN programme developed 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).

DETERMINATION OF ORIGINS

The earthquake origins are determined using the phases P,Pn, P* and Pg, and the corresponding S phases. In computing travel times, 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 waves, which travel in the mantle, are calculated using mantle velocities of 8·1 km/s for Pn and 4·65 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, used in 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 in the interest of consistency with earlier reports.

In general, all four parameters 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 resultant solutions. The letter R (for 'restricted') after the depth indicates that the depth has been fixed at the given value.

In routine epicentre determinations sufficient stations are read to yield a satisfactory solution. The fact that no readings from a station have been reported is not necessarily an indication that the station did not record the shock.

In using the results in this section, it is essential to keep in mind that the positions of earthquakes whose epicentres lie 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 a laterally homogeneous model approximating average conditions in the New Zealand region. In fact, the structure beneath New Zealand is known to be asymmetrical, and in consequence of the associated systematic errors, the true origin could be very different from the one calculated. Great care should therefore be taken not to attach significance to an epicentre in an unusual place or a focus at an unusual depth, without further investigation of the solution.

MAGNITUDES

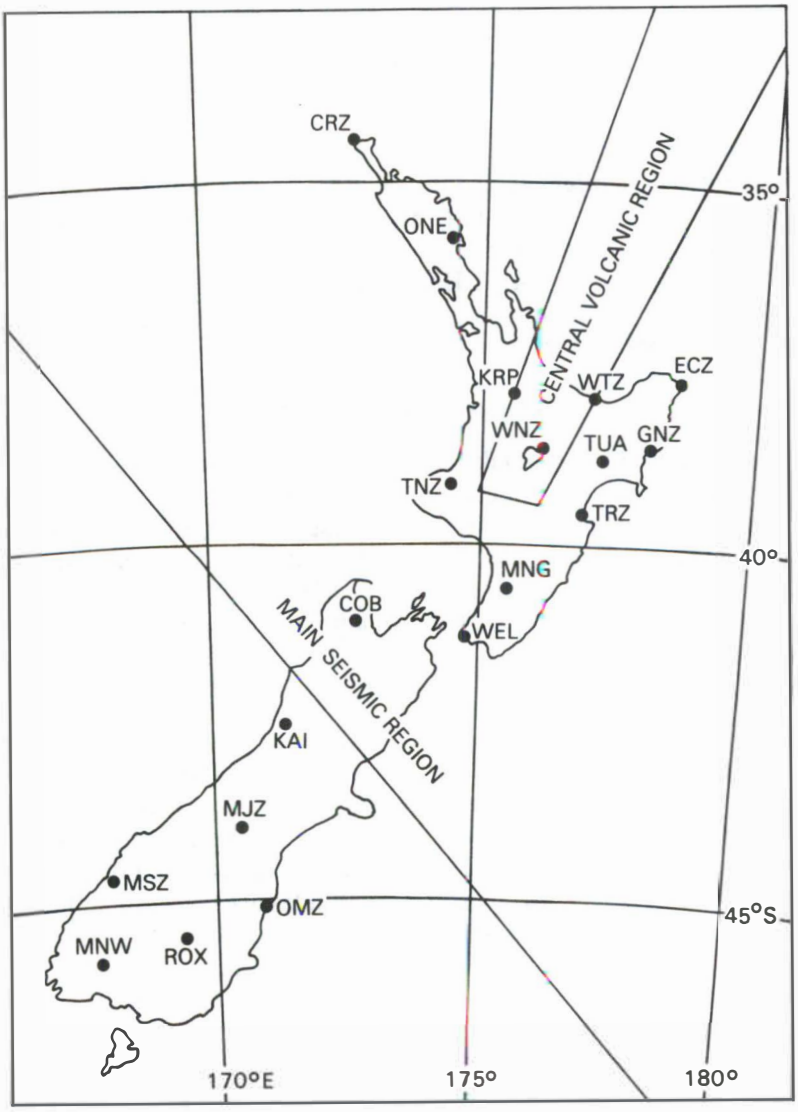
The magnitudes assigned to local earthquakes are intended to be values of M_L as originally defined by C. F. Richter (*Bull. Seism. Soc. Am. 25*: 1-32, 1935), but his procedure for performing the magnitude calculation at other than the standard distance of 100 km has been modified by A. J. Haines, to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

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

$$A = A_o R^{-n} \exp(-\alpha R)$$

has been found to be appropriate in all parts of the country, but the parameters vary. For crustal earthquakes n is 2 and α generally takes a value close to 0. This corresponds to head-wave propagation with no attenuation. R is the epicentral distance. 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. Amplitudes are therefore adjusted according to the distance travelled in the volcanic region. 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 amplitude formula can also be used, provided that (i) n takes the value 1 (*i.e.* body wave propagation), (ii) α increases with focal depth, and (iii) stations MNW and MSZ and those in the Main Seismic Region (apart from COB) are not used, because of the variation of coefficients n and α there.



Stations and Regions used in the Standard Magnitude Determination.

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
COB	0.15		−0.40			
CRZ	0.25		0.20			
ECZ	0.60	0.40	0.50	0.40		
GNZ	0.00	0.00	−0.20	−0.20		
KAI					0.30	
KRP	−0.25		−0.30			
MNG	−0.35	−0.40	−0.45	−0.50		
MNW	−0.05		−0.40		0.20	
MSZ	−0.25		−0.50			
OMZ	0.15		−0.15			
ONE					0.15	
ROX	0.15		−0.25			
TNZ	0.40		0.25			
TRZ	0.30	0.45	0.15	0.10		
TUA	0.40	0.40	0.35	0.40		
WEL					0.30	0.30
WNZ	0.95	1.20	0.75	1.35		
WTZ	−0.10	0.05	−0.05	0.00		

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. The 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. For deep earthquakes in Fiordland estimates obtained from MNW and MSZ, by taking $n = 2$, $\alpha = 0$ and applying a -0.1 correction, are assigned half-weight. Particular values not used in determining the mean for any of the above reasons, or if the station corrections are not known, are marked with an asterisk.

The trace amplitudes (mm) on which the individual estimates of magnitude are based are given, but not the actual ground motion. This is because (i) the magnifications listed in the instrumentation section of this report are at a variety of frequencies, (ii) Wood-Anderson and Willmore magnitude calculations use not the actual instrument magnifications but empirical station constants, selected for consistency among stations.

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

$$M_T = 0.54 + 2.33 \log_{10} T_i + C_i$$

$$M_A = \log_{10} A_i - 3.86 + 2.86 \log_{10} R_i + K_i$$

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	0.31	0.50
CAW	-0.22	-0.10
KIW	-0.10	0.00
MOW	0.25	0.00
MRW	0.00	0.00
TCW	-0.66	-0.15
WDW	0.08	0.30
WEL	2.30	0.00
WELl†	1.30	0.00
WELn†	0.06	0.00
WHW	0.00	0.00

† WELn was a horizontal instument at Wellington, and was replaced by WELl, a low gain vertical instrument.

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° = 111km), the azimuth of the station from the epicentre, in degrees east of north, and magnitudes computed as described below. 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.

78/ 001

JAN 01 $00^h46^m37^s.0$ 45°.10S 167°.48E 33 km M = 3.8

± 0.5 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
MNW	P	00	46	49.3		-0.6	100	0.68	172			
	S			59.7		0.3	100					
ROX	P	00	46	59.7		0.6	100	1.36	107		3.5	4.0
	S		47	16.2		0.7	100					
OBZ	P	00	47	05.4		-0.5	100	1.86	166			
	S			27.8		0.2	100					
GSP	P	00	47	08.8		0.2	100	2.06	63			
OMZ	eP	00	47	14.0		0.2	100	2.44	90		3.5	3.9
	S			40.3		-1.2	98					
KAI	eS	00	48	18		2.8		3.84	49	4.0		
COB	eP	00	47	56.8		0.3	100	5.56	46		4.2	3.7
	eS		48	56.5		-0.1	100					

AMPLITUDES: ROX 1.0 7.5 OBZ 2.0 3.2 OMZ 0.3 1.4
KAI 0.3 COB 0.3 0.3

78/ 002

JAN 01 $02^h23^m34^s.7$ 41°.52S 175°.13E 23 km M = 4.2

± 1.1 0.09 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
BHW	iP*	02	23	41.1		0.7	100	0.22	301			
KLH	P*	02	23	42.4		0.0	100	0.36	311			
WEL	P*	02	23	42.6		0.2	100	0.36	311	4.0		
	S*			47.5		-0.3	100					
WHW	iP*	02	23	42.8		0.3	100	0.37	308			
CPW	iP*	02	23	42.4		-0.9	100	0.41	354			
MRW	iP*	02	23	43.4		-0.1	100	0.43	312			
TCW	iP*	02	23	48.3		0.1	100	0.71	296			
CAZ	eP*	02	23	51.8		-1.8	98	1.03	54			
	eS*		24	09		1.4	99					
COB	Pn	02	24	05.0		0.5		1.85	283		4.4	3.7
	eP*			07.7		0.2						
	i			12.0								
	eSn			28		1.2						
GSZ	ePn	02	24	11.8		1.6		2.28	9			
	eP*			16.3		1.7						
TNZ	eP*	02	24	19		2.1		2.40	346			
	e			22.5								
	e			58								
KAI	e	02	24	34				2.94	249			
	eSn			53.5		0.4						
	e		25	11								
KRP	eP*	02	24	36		-1.4		3.61	5		4.4	4.6
	i			39.5								
	i			44.8								
	e		25	00.5								
WTZ	e(P*)	02	24	47		6.0		3.82	23			

AMPLITUDES: WEL 33 COB 3.8 3.2 KRP 1.0 1.0

FELT: Eastbourne (68), Waiorongomai (69) MM IV Adopted focal depth from Wellington network

78/ 003

JAN 01 $11^h25^m39^s.8$ 42°.71S 171°.73E 12 km M = 4.0

± 0.3 0.01 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
KAI	Pg	11	25	45.2		-1.0	100	0.30	307			
	Sg			49.8		-0.7	100					
CHR	Pg	11	25	59.3		-1.9	98	1.05	142			
	Sg		26	15.2		-0.2	100					
	i			20.3								
KKY	Pn	11	26	06.2		0.8	100	1.48	79			
	Pg			07.2		-2.5						
	Sg			29.4		-0.2	100					
	e			30.4								
MJZ	Pn	11	26	06.0		-0.8	100	1.58	215			
	iP*			08.0		0.1	100					
	Sg			32.2		-0.9	100					
COB	Pn	11	26	10.8		1.2	100	1.78	25		4.5	3.9
	i			11.9								
	i			12.8								
	eS*			35.8		0.9	100					
	iSg			38.8		-1.1	100					
GSP	ePn	11	26	12.0		0.8	100	1.90	221			
	i			13.0								
	Sg			44		0.2	100					
OMZ	P*	11	26	23.7		1.2	100	2.44	194			
WEL	eSn	11	26	56		2.7		2.67	59	3.5		
ROX	P*	11	26	37.2		0.4	100	3.28	211		4.3	
MSZ	ePn	11	26	30		-1.6		3.39	233			
	eP*			40		1.1	100					
KRP	ePn	11	27	04.0		2.4		5.60	33		3.9	
	eP*			23.7		7.3						
	eSn		28	06		2.4						

AMPLITUDES: KAI 11 COB 5.7 4.8 WEL 0.2
ROX 1.1 KRP 0.4

FELT: Inchbonnie (92) MM IV

78/ 004

JAN 01 $16^h26^m01^s.2$ 41°.39S 175°.17E 28 km M = 3.4

± 0.6 0.05 0.04 R S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BHW	iP*	16	26	07.4		0.0	100	0.22	266			
CPW	iP*	16	26	08.5		0.2	100	0.30	345			
WEL	P*	16	26	08.7		0.1	100	0.32	290	3.3		
	S*			13.7		-0.3	100					
WHW	P*	16	26	08.9		0.0	100	0.34	286			
MRW	P*	16	26	09.6		0.0	100	0.39	295			
TCW	iP*	16	26	13.5		-1.0	96	0.70	285			
COB	ePn	16	26	30.8		0.2	100	1.86	279		3.4	3.1
	eP*			34.2		0.0	100					
	Sn			53.5		0.8	99					
TNZ	e(P*)	16	26	46		4.6		2.29	344			3.4
	eSn		27	08		5.1						
KRP	e	16	27	07				3.48	5		3.7	
	e			53								

AMPLITUDES: WEL 7.1 COB 0.4 0.8 TNZ 0.2

KRP 0.2

Adopted focal depth from Wellington network

78/ 005

JAN 01 $16^h30^m13^s.7$ 41°.38S 175°.11E 27 km M = 3.6

± 0.3 0.02 0.02 2 S.E. of RES. 0.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WDW	P*	16	30	18.9		0.0	100	0.14	323			
BHW	iP*	16	30	19.3		0.0	100	0.18	261			
CPW	iP*	16	30	20.4		-0.0	100	0.27	354			
WEL	P*	16	30	20.1		-0.3	99	0.27	290			
	S*			25.2		0.0	100					
WHW	e	16	30	20.7				0.29	287			
MRW	P*	16	30	21.5		0.2	100	0.33	296			
TCW	iP*	16	30	26.2		0.0	100	0.65	285			
COB	Pn	16	30	42.8		0.3		1.82	279		3.7	3.4
	eP*			46.5		0.6						
	Sn		31	05.0		0.9						
CNZ	(P*)	16	30	56.5		4.0		2.20	9			
	i		31	00.6								
	e(S*)			24.5		3.0						
TNZ	eP*	16	30	53		-0.4		2.26	346			
	e(Sn)		31	19		4.1						
KRP	e	16	31	22				3.47	6		3.7	
	eS*		32	02		2.7						

AMPLITUDES: COB 0.8 1.5 KRP 0.2

FELT: About Wellington city (68) MM IV

78/ 006

JAN 02 $13^h07^m16^s.6$ 38°.19S 179°.74E 33 km M = 3.7

± 1.1 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	P	13	07	34.5		-0.2	100	1.06	297		3.5	3.9
	e			40.7								
	eS			48.0		-0.1	100					
GNZ	P	13	07	40.0		0.4	100	1.42	251			
	S			57.8		1.0	100					
WTZ	P	13	07	49.5		-0.4	100	2.18	274		3.4	4.0
	i		08	00.0								
	e			10.2								
	iS			12.1		-2.8						
TRZ	eP	13	07	57.7		1.3	99	2.65	238		3.7	3.8
	eS		08	27.6		1.2	99					
KRP	eP	13	08	05		-0.6	100	3.33	273		3.6	
	e			29								
	eS			39		-3.5						
MNG	P	13	08	16.0		-0.1	100	4.09	232		3.7	3.6
	S		09	00.5		-0.5	100					
WEL	eS	13	09	20		-1.0	100	4.93	229	4.1		
COB	eS	13	09	49		-1.0	100	6.14	240			3.6

AMPLITUDES: ECZ 0.6 1.7 WTZ 0.6 2.0 TRZ 0.3 0.5
KRP 0.2 MNG 0.6 0.6 WEL 0.2
COB 0.2

78/ 007

JAN 02 $17^h13^m56^s.1$ $40°.63$S $175°.69$E 12 km M = 3.5
± 0.3 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
MNG	iPg	17	14	00.7		0.7	100	0.16	274			
CAZ	Pg	17	14	05.4		-0.8	100	0.49	124			
	Sg			14.8		1.8	99					
WEL	eP*	17	14	12.5		-1.1	100	0.95	227	3.1		
	ePg			15		-0.6	100					
	eS*			27.0		0.5	100					
GSZ	Pn	17	14	19.7		-0.4	100	1.35	357			
	Sn			37.3		-0.7	100					
TRZ	eP*	17	14	21.5		0.6	100	1.39	39		3.3	3.2
	eSn			37		-1.7	99					
	eSg			45		2.2						
CNZ	Pn	17	14	20.0		-1.2	100	1.43	356			
	Sn			40.5		0.6	100					
TNZ	ePn	17	14	27.7		2.1	99	1.75	325		3.5	3.6
	Sn			49.0		1.3	100					
COB	eP*	17	14	36		-0.3	100	2.29	258		3.7	3.3
	ePg			40.0		-2.4	98					
	S*		15	07.8		1.4	100					
KRP	ePn	17	14	39.2		0.7	100	2.71	357		3.7	4.1
	(S*)		15	15.5		-3.4						

AMPLITUDES: WEL 0.5 TRZ 0.4 0.5 TNZ 0.3 0.6
COB 0.6 0.7 KRP 0.3 0.6

FELT: Palmerston North (62) MM III

78/ 008

JAN 02 $19^h41^m36^s.7$ $32°.20$S $179°.84$W 395 km M = 4.9
± 1.8 0.22 0.47 33 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	19	43	05.0		-0.8	100	5.64	193		4.6	4.7
	eS		44	14.0		-1.9	99					
WTZ	P	19	43	16.0		2.5	99	6.34	203		5.0	4.8
	eS		44	29.0		-0.6	100					
GNZ	eP	19	43	17		-0.2	100	6.67	195			
	S		44	37		0.6	100					
TRZ	iS	19	45	03		2.9	98	7.83	199			5.3
	i			05.5								
MNG	P	19	43	46.1		-0.4	100	9.22	203		5.1	4.9
	S		45	28		-1.1	100					
WEL	eS	19	45	47		0.2	100	10.05	204	4.7		
COB	eP	19	44	03		-0.8	100	10.69	212		3.7*	3.3*
	eS		46	00		-0.3	100					

AMPLITUDES: ECZ 0.3 0.4 WTZ 1.5 1.1 TRZ 1.7
MNG 2.7 2.3 WEL 0.2 COB 0.3 0.4

78/ 009

JAN 03 $17^h46^m58^s.6$ $37°.89$S $176°.72$E 5 km M = 3.6
± 0.4 0.04 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
WTZ	iPg	17	47	01.8		-1.6	99	0.23	114			
KRP	P*	17	47	16.2		-0.2	100	0.94	268		3.3	3.4
	S*			29.5		0.2	100					

TUA	eP*	17	47	16		-1.1	100	0.98	160			
GNZ	P*	17	47	23.0		0.8	100	1.28	127			
	eSg			42.5		1.0	100					
ECZ	P*	17	47	25.0		-0.4	100	1.47	83		3.8	
	ePg			28.1		-0.1	100					
TRZ	P*	17	47	31.2		2.3	98	1.66	177		3.9	
GBZ	eP*	17	47	34.0		0.4	100	1.94	329			
MNG	eP*	17	47	50		0.2	100	2.89	199		3.4	
	ePg			55.3		-1.7	99					

AMPLITUDES: KRP 1.6 1.7 ECZ 0.5 TRZ 0.8
GBZ 0.7 MNG 0.4

78/ 010

JAN 03 $18^h42^m43^s.1$ 38°.05S 178°.29E 81 km M = 3.5
± 0.9 0.05 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
ECZ	P	18	42	57.5		0.9	100	0.41	30		3.2	
	e		43	03.3								
GNZ	P	18	42	58.2		-0.3	100	0.63	199			
	S		43	10.0		-0.1	100					
WTZ	eP	18	43	02.0		-1.0	100	1.03	273		3.1	3.6
	e			09.0								
	eS			18.0		0.1	100					
TRZ	eP	18	43	15		0.9	100	1.89	217		3.9	3.5
	e(S)			43		5.9						
MNG	P	18	43	33.2		-1.5	99	3.37	219		4.0	3.6
	S		44	13.4		-0.2	100					
COB	P	18	44	00.7		-0.2	100	5.26	233		3.6*	2.8*
	S		45	02.0		1.3	99					

AMPLITUDES: ECZ 1.3 WTZ 0.7 2.6 TRZ 0.6 0.5
MNG 1.6 0.8 COB 0.5 0.3

78/ 011

JAN 03 $21^h17^m47^s.6$ 36°.46S 179°.96E 33 km M = 4.0
± 1.9 0.09 0.16 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	21	18	16.0		1.9	100	1.67	222		3.8	4.0
	eS			34.0		0.1	100					
	e			39.0								
GNZ	P	21	18	28.7		1.0	100	2.67	215			
	S			59.8		1.9	100					
WTZ	P	21	18	28.8		-0.9	100	2.83	236		3.9	4.1
	e			58.0								
	S		19	01.5		0.0	100					
GBZ	P	21	18	40.5		-0.2	100	3.63	272			
KRP	P	21	18	43.5		0.1	100	3.82	246		4.0	
	S		19	26.5		0.9	100					
TRZ	S	21	19	31.2		2.3	99	3.97	218			4.3
MNG	eP	21	19	03.5		-2.0	100	5.44	219		3.5	4.1
	S		20	02.5		-1.9	100					
WEL	eS	21	20	21.8		-3.3	98	6.30	218	4.5		

AMPLITUDES: ECZ 0.5 1.0 WTZ 1.1 1.3 KRP 0.3
TRZ 0.7 MNG 0.2 0.9 WEL 0.3

78/ 012

JAN 03 $22^h43^m41^s.6$ $36°.81$S $177°.78$E 187 km M = 4.7

± 1.1 0.06 0.10 10 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	22	44	11.0		0.3	100	1.07	145		4.5	4.5
	i			14.1								
	e			45								
WTZ	P	22	44	12.0		-0.8	100	1.33	208		4.6	
	eS			37.0		0.1	100					
GNZ	P	22	44	18.0		0.3	100	1.84	174			
	S			44.0		-1.6	100					
GBZ	iP	22	44	16.8		-2.0	99	1.94	287			
KRP	P	22	44	21.2		0.7	100	2.11	237		3.9*	3.3*
	i			23.2								
	eS			51.0		0.4	100					
WNZ	P	22	44	23.2		1.0	100	2.25	216		4.7	
TRZ	P	22	44	29.2		0.0	100	2.84	195		4.7	4.8
	e			35.0								
	S		45	08.5		2.6	99					
	e			22.5								
CNZ	P	22	44	32.0		1.3	100	2.97	216			
	i			34.8								
GSZ	P	22	44	33.4		2.2	99	3.01	214			
	i			35.4								
TNZ	(P)	22	44	42.5		4.2		3.58	227			
MNG	P	22	44	44.5		-1.8	100	4.20	205		4.7	4.8
	i			47.2								
	S		45	32.5		-3.6	96					
	e			50								
CRZ	P	22	44	53.8		0.1	100	4.79	298		3.6*	
WEL	eP	22	44	57		0.0	100	5.05	207	4.8		
	eS		45	55.8		0.3	100					

AMPLITUDES:									
ECZ	3.5	3.6	WTZ	7.5		KRP	5.6	1.3
WNZ	0.3		TRZ	1.5	3.8	MNG	5.5	7.5
CRZ	0.4		WEL	0.8				

78/ 013

JAN 04 $11^h22^m01^s.3$ $37°.73$S $179°.78$W 33 km M = 3.9

± 1.3 0.06 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
ECZ	P	11	22	23.2		0.2	100	1.33	271		3.9	3.9
	e			32								
	iS			39.2		0.0	100					
	e			41.5								
GNZ	P	11	22	32.8		1.2	100	1.96	241			
	eS			55		0.6	100					
	e			58.0								
	e		23	01								
WTZ	P	11	22	39.8		-0.1	100	2.57	263		3.9	
TRZ	eP	11	22	50		1.1	100	3.23	235		3.9	4.0
	eS		23	26		1.2	100					
KRP	eP	11	22	54.2		-1.4	100	3.72	266		3.9	
	e			58.8								
	e		23	12								
GBZ	eP	11	23	00.7		0.1	100	4.09	290			
MNG	P	11	23	07.8		-0.9	100	4.68	230		3.6	3.6

	eS			57.8		-2.0	99						
WEL	eS	11	24	17		-2.8		5.52	228	4.2			

AMPLITUDES: ECZ 0.9 1.2 WTZ 1.3 TRZ 0.3 0.6
KRP 0.3 MNG 0.3 0.4 WEL 0.2

78/ 014

JAN 04 $11^h29^m46^s.2$ 37°.72S 179°.65W 33 km M = 3.9
± 1.7 0.08 0.14 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	11	30	09.0		-0.4	100	1.43	271		3.9	4.0
	e			21.8								
	iS			26.0		-0.7	100					
GNZ	P	11	30	19.9		2.0	99	2.06	243			
	S			43.0		1.4	100					
	i			48.0								
WTZ	P	11	30	26.3		-0.1	100	2.68	263		4.0	
	e			32.3								
TRZ	eP	11	30	36		0.9	100	3.32	235		3.9	
	eS		31	13		1.0	100					
KRP	eP	11	30	40		-1.9	99	3.82	265		3.9	
	e			44								
	e		31	19								
	eS			21.5		-2.5						
CNZ	P	11	30	44		-1.1	100	4.05	247			
GBZ	eP	11	30	48.0		1.1	100	4.18	290			
MNG	P	11	30	53.8		-1.1	100	4.77	231		3.9	3.7
	eS		31	44.5		-2.3	99					
WEL	eS	11	32	05		-1.8		5.60	229	4.2		

AMPLITUDES: ECZ 0.8 1.2 WTZ 1.4 TRZ 0.3
KRP 0.3 MNG 0.6 0.5 WEL 0.2

78/ 015

JAN 04 $11^h46^m09^s.1$ 37°.80S 179°.87W 33 km M = 3.7
± 1.4 0.06 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
ECZ	eP	11	46	29.2		-0.6	100	1.26	274		3.4	3.6
	e			38.0								
	iS			45.5		0.2	100					
GNZ	eP	11	46	39.8		1.8	99	1.86	242			
	eS		47	00.5		0.7	100					
	e			04.0								
WTZ	P	11	46	46.5		-0.1	100	2.49	265		3.6	
TRZ	eP	11	46	56		0.7	100	3.12	235		3.9	
	eS		47	31		0.8	100					
KRP	eP	11	47	01		-1.3	100	3.64	267		3.7	
MNG	P	11	47	15.0		-0.1	100	4.58	231		3.7	3.6
	eS		48	05		-0.1	100					
WEL	eS	11	48	23		-2.1	98	5.42	228	4.2		

AMPLITUDES: ECZ 0.3 0.7 WTZ 0.6 TRZ 0.3
KRP 0.2 MNG 0.4 0.4 WEL 0.2

78/ 016

JAN 04 $19^h11^m53^s.9$ 37°.32S 179°.43E 127 km M = 4.1
± 1.7 0.08 0.16 9 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	19	12	13.0		-1.8	99	0.80	242		3.5	4.3

	i			23.2									
	i			27.0									
	iS			29.8		-1.0	100						
GNZ	P	19	12	26.0		1.2	100	1.73	220				
	S			49.9		1.7	99						
WTZ	P	19	12	29.2		0.5	100	2.05	250		4.2	4.1	
	eS			55.5		0.5	100						
TRZ	eP	19	12	42		0.4	100	3.03	222		4.1		
KRP	eP	19	12	44.0		0.7	100	3.15	258		2.9*		
GBZ	P	19	12	45.8		-0.3	100	3.36	288				
WEL	eS	19	14	12		-2.1	99	5.36	221	4.3			

AMPLITUDES: ECZ 0.8 4.8 WTZ 2.2 2.0 TRZ 0.4
KRP 0.4 WEL 0.2

78/ 017

JAN 05 $04^h33^m59^s.4$ $37°.53S$ $178°.96W$ 33 km M = 4.4
± 1.2 0.07 0.09 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	04	34	31.0		0.9	100	1.99	265		4.5	4.4
	i			33.7								
	S			51.7		-1.4	99					
GNZ	P	04	34	39.0		0.1	100	2.63	244			
	S		35	07.8		-0.7	100					
WTZ	P	04	34	46.8		-0.4	100	3.25	261		4.6	4.5
	e(S)		35	18.5		-4.8						
TRZ	eP	04	34	56.0		0.1	100	3.88	237		4.2	4.3
	S		35	39		0.4	100					
KRP	eP	04	35	02.0		-0.8	100	4.38	263		4.1	
	e			45.3								
	eS			52.5		1.8	98					
GBZ	P	04	35	06.2		-0.2	100	4.65	285			
MNG	iP	04	35	14.2		-1.3		5.32	233		4.5	4.3
	i			21.9								
	S		36	08.6		-4.5						
WEL	eS	04	36	28		-4.9		6.14	230	4.4		
COB	eP	04	35	41		-2.4		7.36	239		4.4	4.0
	e			49								
	e		36	53								

AMPLITUDES: ECZ 1.7 1.6 WTZ 3.5 2.6 TRZ 0.4 0.8
KRP 0.4 MNG 2.2 1.8 WEL 0.3
COB 0.3 0.4

78/ 018

JAN 06 $09^h51^m47^s.8$ $38°.04S$ $176°.17E$ 199 km M = 3.8
± 1.1 0.04 0.05 10 S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	iP	09	52	14.8	U	-0.2	100	0.51	283		2.9*	
GNZ	P	09	52	22.2		-0.2	100	1.57	113		3.8	3.6
	eS			49		-0.1	100					
TRZ	eP	09	52	23.5		1.0	98	1.59	162		3.8	3.5
	e			28.5								
	e(S)			55		5.7						
MNG	P	09	52	33.0		-0.5	100	2.63	191		3.8	3.9
	eS		53	09		0.1	100					
WEL	eS	09	53	25		-0.6	100	3.42	198	4.0		
COB	S	09	53	39.7		0.4	100	4.04	220			2.9*

AMPLITUDES: KRP 0.8 GNZ 1.2 1.0 TRZ 0.4 0.4
MNG 1.3 2.2 WEL 0.3 COB 0.4

78/ 019

JAN 07 $02^h55^m42^s.4$ 46°.25S 169°.02E 12 km M = 3.7
± 0.5 0.04 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
ROX	P*	02	55	56.8		-0.5	100	0.80	16		3.4	3.6
	S*		56	07.0		-1.1	100					
OBZ	iP*	02	55	58.3	D	-0.8	100	0.91	223			
	eS*		56	10.5		-0.7	100					
MNW	P*	02	56	02.3		0.2	100	1.08	295	3.8	3.7	3.8
	eS*			17		0.5	100					
OMZ	Pn	02	56	13.9		1.7	100	1.78	49		4.1	3.5
	P*			15.2		1.2	100					
	Pg			17.0		-1.4	100					
	S*			37		-0.4	100					
GSP	Pn	02	56	19.7		1.3	100	2.23	19			
	P*			23.5		1.8	99					
	eSn			43.5		-1.9	99					
MJZ	eP*	02	56	27		1.0	100	2.48	25			
	eSn			49		-2.5	99					
	eS*		57	00		1.4	100					

AMPLITUDES: ROX 2.1 9.0 MNW 2.6 4.2 12 OMZ 2.2 1.1

78/ 020

JAN 07 $14^h12^m27^s.1$ 42°.63S 177°.33E 33 km M = 3.8
± 2.0 0.10 0.10 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WEL	eSn	14	13	27		-2.2	99	2.34	304	3.6		
MNG	iPn	14	13	02.9	D	-1.0	100	2.44	325		3.6	4.0
	Sn			30.2		-1.5	100					
TRZ	Pn	14	13	12.2		-0.7	100	3.10	353		4.1	3.9
	eSn			49		1.5	100					
COB	ePn	14	13	24		2.0	99	3.76	293		4.0	3.5
	eSn		14	04		0.5	100					
GNZ	Pn	14	13	25.1		-0.3	100	4.01	8		4.0	3.7
	eSn		14	09		-0.6	100					
TNZ	eSn	14	14	14		2.4	99	4.10	326			

AMPLITUDES: WEL 0.3 MNG 1.3 4.2 TRZ 0.6 0.5
COB 0.4 0.5 GNZ 0.5 0.4

78/ 021

JAN 08 $17^h05^m59^s.4$ 47°.04S 165°.31E 33 km M = 4.0
± 2.4 0.11 0.19 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	Pn	17	06	30.4		1.1	100	1.93	87			
	eSn			51		-0.7	100					
MNW	Pn	17	06	31.2		0.4	100	2.03	52	3.9	4.1	3.9
	eSn			56		1.6	100					
ROX	Pn	17	06	47.5		0.9	100	3.19	62		4.1	3.9
	eSn		07	22		-0.2	100					
GSP	e?	17	07	30				4.41	50			
	eSn			52		0.7	100					
	e		08	10								
MJZ	eP*?	17	07	18		-3.5	95	4.74	52			

	eSn			59		-0.4	100						
AMPLITUDES:	MNW	1.0	2.5	4.0	ROX		0.7	1.1					

78/ 022

JAN 09 $03^h20^m48^s.3$ 45°.10S 167°.57E 100 km M = 3.3

± 0.8 0.03 0.06 5 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	iP	03	21	04.9	U	0.7	100	0.50	30		2.8	3.3
	S			16.4		0.0	100					
MNW	iP	03	21	05.9	U	0.2	100	0.67	177	3.4	3.3	3.3
	S			18.0		-0.9	100					
ROX	iP	03	21	13.2	D	0.8	100	1.30	107		3.7	3.2
	eS			31		0.3	100					
OBZ	e?	03	21	12				1.84	168			
	eS			42.5		0.1	100					
GSP	iP	03	21	21.4	U	0.1	100	2.01	62			
	S			47		1.1	99					
MJZ	P	03	21	25.3		-0.9	100	2.36	63			
	eS			53		-1.4	99					
OMZ	P	03	21	26.2		-0.2	100	2.38	90		3.5	

AMPLITUDES:	MSZ	2.1	9.7	MNW	2.2	2.5	6.2	ROX			1.2	1.0	
	OMZ	0.3											

78/ 023

JAN 09 $22^h34^m17^s.6$ 40°.34S 176°.46E 12 km M = 3.9

± 0.5 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
CAZ	P*	22	34	29.9		1.1	100	0.58	197			
	eS*			35.5		-1.4	100					
	e			47.5								
TRZ	P*	22	34	32.7		-0.4	100	0.84	20		3.8	
	eS*			43		-1.4	100					
GSZ	iPg	22	34	42.0	U	-1.1	100	1.26	328			
	eSg		35	02		1.8	99					
WEL	ePg	22	34	49.5		-0.3	100	1.59	233	3.5		
	eSn		35	05		-0.2	100					
	e(Sg)			16		4.7						
WNZ	ePg	22	34	51.5		-1.2	100	1.74	351		4.5	4.3
	e			58.5								
	eSg		35	16		-0.1	100					
GNZ	ePg	22	35	02		2.2	99	2.09	36		4.0	3.4
	e			09.0								
	e			42								
WTZ	e(Pg)	22	35	02.5		-3.5		2.39	10		3.9	3.8
	eSg			38		-0.3	100					
KRP	eP*	22	35	02.2		0.4	100	2.52	343		4.3	4.2
	eSg			42		-0.6	100					
COB	e(P*)	22	35	13		4.3		2.92	254		4.0	3.6
	ePg			19.5		2.7	98					
	eSg			55		-1.2	100					
	e		36	09.5								

AMPLITUDES:	TRZ	3.5		WEL	0.5			WNZ			0.6	0.5	
	GNZ	1.7	0.8	WTZ		1.4	1.0	KRP			1.3	0.9	
	COB	0.7	1.0										

78/ 024

JAN 09 $23^h30^m44^s.7$ 40°.33S 176°.63E 12 km M = 3.9
± 0.6 0.02 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
CAZ	P*	23	30	57.1		0.2	100	0.65	208			
	(S*)		31	03.5		-2.2						
	e			13.5								
TRZ	iP*	23	30	59.0	U	-0.4	100	0.79	11		3.8	
	eSg		31	12		0.3	100					
GSZ	eP*	23	31	08		-0.5	100	1.32	322			
	eSg			29		-0.5	100					
WEL	eP*	23	31	16.5		1.6	100	1.70	235	3.5		
	eSn			32		-3.0	97					
	eSg			43		0.8	100					
	e			54								
WNZ	eP*	23	31	16.5		0.8	100	1.75	346		4.4	4.3
	e			26								
	eSn			36		-0.1	100					
	eS*			40		1.2	100					
GNZ	ePg	23	31	26		0.7	100	2.01	33		3.7	
	eSn			39.5		-2.7	98					
	e		32	00.5								
	e			09								
WTZ	eP*	23	31	28		1.8	99	2.37	7		3.6	3.6
	eS*			57.5		0.3	100					
KRP	eP*	23	31	29		-0.4	100	2.56	340		4.2	4.1
	eSg		32	10		-0.7	100					
COB	eP*	23	31	40		2.0	99	3.06	254		3.9	3.6
	ePg			45		-1.5	100					
	e(Sg)		32	35		7.3						
	e			48								

AMPLITUDES: TRZ 4.0 WEL 0.4 WNZ 0.5 0.5
GNZ 1.1 WTZ 0.8 0.6 KRP 1.1 0.7
COB 0.5 0.9

FELT: Porangahau (64) MM IV

78/ 025

JAN 09 $23^h52^m27^s.7$ 40°.38S 176°.77E 12 km M = 4.0
± 0.7 0.03 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*	23	52	42.7	U	2.3	99	0.67	218			
	eS*			48.7		-0.8	100					
	e			56.3								
TRZ	iP*	23	52	44.6	U	1.7	100	0.82	3			
GSZ	Pn	23	52	53.2		0.5	100	1.43	320			
	eS*		53	13.5		1.3	100					
WEL	ePg	23	53	02		-1.6	100	1.77	238	3.6		
	e			10								
	eSn			18		-1.7	100					
	eSg			26		-1.5	100					
	e			40								
WNZ	eP*	23	53	02		2.1	100	1.82	343		4.4	4.4
	e			11.8								
	e			38.5								
GNZ	ePn	23	52	59		-1.3	100	1.98	30		3.9	3.8
	ePg		53	08		0.1	100					

	e			18								
	eS*			29		0.2	100					
WTZ	Pn	23	53	05.0		-0.9	100	2.39	4		3.7	3.9
	(Pg)			13.0		-3.2						
	e			19								
	eSn			32		-2.6	99					
KRP	ePn	23	53	11		1.9	100	2.63	338		4.4	4.3
	e(P*)			16		2.2						
	eSg			54		-2.4	99					
COB	eP*	23	53	24		1.3	100	3.15	256		4.1	3.8
	ePg			30.5		-0.9	100					
	eS*		54	06		2.1	100					

AMPLITUDES:									
WEL	0.5		WNZ	0.5	0.7	GNZ	1.5	2.3
WTZ	1.0	1.4	KRP	1.6	1.0	COB	0.7	1.2

FELT: Porangahau (64) MM IV

78/ 026

JAN 10 $00^h 11^m 47^s.4$ $40°.40S$ $177°.21E$ 12 km M = 4.4

± 0.8 0.04 0.07 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CAZ	iP*	00	12	05.0	D	1.0	100	0.90	236			
	e			10.5								
	eS*			16		-0.1	100					
TRZ	P*	00	12	06.0		2.1	99	0.90	340			
	Pg			06.6		0.9	100					
GSZ	iPn	00	12	16.2	U	0.3	100	1.68	311			
	eSn			36		-1.2	100					
GNZ	e?	00	12	05				1.86	20		3.8	4.1
	ePn			18		-0.3	100					
	eP*			22		1.6	100					
	e			34								
	eSn			40		-1.5	100					
	eSg			49		-1.3	100					
WNZ	Pg	00	12	24.5		-2.7	99	1.97	334		4.9	4.9
	e			33								
	eSn			44		-0.0	100					
WEL	Pn	00	12	18		-2.9	98	2.05	244	4.1		
	eP*			24		0.4	100					
	e			40								
	eS*			51.5		0.8	100					
WTZ	iPn	00	12	27.2	D	1.3	100	2.42	356		4.2	4.4
	ePg			36		-0.4	100					
	eSn			56		1.0	100					
	e		13	16								
KRP	ePn	00	12	31		-0.1	100	2.80	332		4.8	4.7
	P*			38.1		1.8	100					
	eS*?		13	16		3.1						
COB	Pn	00	12	39.0		-1.3	100	3.47	257		4.6	4.2
	e(Pg)			53		-4.6						
	e(S*)		13	28		-5.2						

AMPLITUDES:									
GNZ	1.6	4.5	WNZ	1.4	1.8	WEL	1.2		
WTZ	3.0	3.7	KRP	3.9	3.0	COB		2.0	3.0

FELT: Porangahau (64) MM IV, Kairakau Beach (60) MM III and Napier (52).

78/ 027

JAN 10 $01^h 17^m 59^s.6$ 40°.35S 176°.67E 12 km M = 4.0
± 0.6 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
CAZ	iP*	01	18	14.0	D	2.2	99	0.65	211			
	S*			20.2		-0.5	100					
	e			25								
TRZ	iP*	01	18	15.2	D	0.7	100	0.80	8		3.8	
	eS*			26		0.6	100					
GSZ	P*	01	18	25.8		1.8	99	1.36	322			
	eSg			45		-0.5	100					
WEL	ePg	01	18	33		-1.4	100	1.72	236	3.8		
	Sn			49.7		-0.6	100					
	eSg			59		1.3	100					
WNZ	Pg	01	18	33.7		-1.8	100	1.77	345		4.4	4.5
	e			40								
	eSn			53		1.4	100					
	e		19	04								
GNZ	Pn	01	18	31.0		-1.4	100	2.00	32		3.6	3.7
	e			50								
	eSn			58		1.0	100					
WTZ	ePg	01	18	47		-0.7	100	2.38	6		3.7	3.8
	eSn		19	04		-2.1	99					
	eS*			14		1.5	100					
KRP	eP*	01	18	43		-1.8	100	2.58	340		4.6	4.3
	e			48.9								
	e		19	21								
COB	ePn	01	18	47.5		0.3	100	3.09	255		4.3	4.0
	e			56								
	e		19	37								

AMPLITUDES: TRZ 4.0 WEL 0.8 WNZ 0.5 0.8
GNZ 0.8 1.5 WTZ 1.0 1.0 KRP 2.5 1.2
COB 1.3 2.0

FELT: Porangahau (64) MM IV

78/ 028

JAN 10 $05^h 19^m 34^s.0$ 40°.35S 176°.76E 12 km M = 3.9
± 0.6 0.03 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
CAZ	iP*	05	19	49.3	D	2.4	99	0.68	216			
	eS*			55		-1.2	100					
	e		20	01								
TRZ	iP*	05	19	50.3	D	1.5	100	0.80	3		3.8	
	e		20	04								
GSZ	Pg	05	20	01.4		-1.0	100	1.40	319			
	eSg			20		-1.3	100					
WEL	ePg	05	20	09		-1.0	100	1.78	238	3.7		
	eSn			25		-1.1	100					
	eSg			34		0.0	100					
	e			40								
WNZ	Pg	05	20	09.3		-0.9	100	1.79	343		4.3	4.3
	e			16.5								
	e			38								
GNZ	ePn	05	20	06		-0.3	100	1.96	30		3.6	3.5
	e			22								
	eSn			30		-0.6	100					

WTZ	ePn	05	20	11.5		-0.3	100	2.37	4		3.7	
	ePg			23		1.1	100					
KRP	ePn	05	20	16		1.0	100	2.60	338		4.3	4.2
	Pg			24.2		-2.4	99					
	e			30.5								
	eS*			56		2.3	99					
COB	ePn	05	20	22		-0.5	100	3.15	255		4.1	3.8
	e			32								
	eS*		21	13		2.9	98					

AMPLITUDES: TRZ 4.5 WEL 0.6 WNZ 0.4 0.5
GNZ 0.8 1.1 WTZ 0.8 KRP 1.5 0.8
COB 0.7 1.3

FELT: Porangahau (64) MM IV

78/ 029

JAN 10 $06^h29^m48^s.0$ $31°.60$S $179°.81$W 479 km M = 4.9
± 2.4 0.14 0.31 32 S.E. of RES. 2.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	(S-P)		1	29.5		11.4		6.24	192		4.9	4.9
WTZ	P	06	31	33.8		0.3	100	6.89	202		5.2	4.7
	eS		32	55		-2.1	100					
CRZ	eP?	06	31	32		-1.7	100	6.91	244			
GNZ	eP	06	31	38		0.7	100	7.25	194		5.3	4.6
	eS		33	02		-1.8	100					
KRP	eP	06	31	39		0.3	100	7.39	210		3.3*	
	eS		33	10		3.7	97					
TRZ	eP	06	31	50		0.6	100	8.41	198		4.8	4.7
	eS		33	26		0.1	100					
COB	e?	06	32	07				11.21	210		3.9*	3.2*
	eS		34	20		-1.0	100					

AMPLITUDES: ECZ 0.5 0.5 WTZ 1.7 0.6 GNZ 2.2 0.7
KRP 0.4 TRZ 0.2 0.4 COB 0.4 0.3

78/ 030

JAN 10 $07^h24^m18^s.4$ $40°.41$S $177°.07$E 12 km M = 4.0
± 0.6 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
CAZ	iP*	07	24	33.8	D	0.5	100	0.81	232			
	e			39.7								
	e			49								
TRZ	iP*	07	24	34.9	D	0.4	100	0.87	348		4.0	
	eS*			46		-0.2	100					
GSZ	iPn	07	24	46.1	D	0.3	100	1.60	314			
	eSn		25	05		-1.3	100					
GNZ	Pn	07	24	50.6		0.6	100	1.91	23		3.6	3.5
	eS*		25	17.5		0.2	100					
	e			44								
WNZ	ePg	07	24	57.5		0.2	100	1.93	337		4.4	4.4
	eSg		25	23.5		0.2	100					
WEL	e?	07	24	47				1.95	243	3.9		
	e		25	09.2								
	eS*			19		0.5	100					
	eSg			25		0.8	100					
WTZ	Pn	07	24	56.2		-0.7	100	2.42	359		3.7	4.0
	ePg		25	07		-0.3	100					
	eSn			25		-0.9	100					

	eSg			39		-1.0	100				
KRP	e(Pn)	07	25	05		3.6		2.75	334	4.3	4.2
	P*			09.0		2.5	94				
	eS*			44		1.5	99				
COB	ePn	07	25	08.5		-1.2	100	3.37	257	4.3	4.0
	P*			16.4		-0.5	100				
	eSn			47		-1.5	99				

AMPLITUDES: TRZ 5.5 GNZ 0.8 1.2 WNZ 0.4 0.6
WEL 0.9 WTZ 0.9 1.7 KRP 1.5 0.9
COB 1.0 1.9

78/ 031

JAN 11 $08^h32^m38^s.7$ $43°.33S$ $170°.90E$ 12 km M = 3.6
± 0.3 0.03 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
MJZ	iP*	08	32	50.8	USW	-1.5	100	0.73	205			
	Pg			54.8		1.2	100					
	eS*		33	01		-1.2	100					
	eSg			06		2.5	98					
KAI	eP*	08	32	54		-1.0	100	0.89	25	3.7		
	eS*		33	07		0.1	100					
GSP	iP*	08	32	55.4	U	-2.0	99	1.03	218			
	eS*		33	11		-0.1	100					
OMZ	ePn	08	33	08		0.0	100	1.75	180		3.3	3.1
	eSn			31		1.1	100					
ROX	ePn	08	33	16		-1.3	100	2.43	207		3.9	3.5
	eP*			21		-0.3	100					
	eSn			47		0.6	100					
	eSg			59		-1.5	100					
MSZ	Pn	08	33	18.8		-0.0	100	2.54	237		3.5	3.6
	eSn			51		2.0	99					
COB	Pn	08	33	19.2		-0.8	100	2.63	32		3.9	3.4
	eP*			26		1.4	100					
	Sn			50.8		-0.3	100					
	eS*		34	00		1.0	100					
MNW	eP*	08	33	38		0.2	100	3.39	223		3.9	

AMPLITUDES: KAI 2.4 OMZ 0.4 0.5 ROX 0.8 0.7
MSZ 0.7 1.7 COB 0.7 0.7 MNW 0.6

78/ 032

JAN 14 $08^h16^m51^s.1$ $38°.54S$ $175°.84E$ 152 km M = 3.6
± 1.3 0.04 0.06 10 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	iP	08	17	13.2	U	-0.4	100	0.66	339		2.8*	2.3*
	eS			31		0.2	100					
WTZ	eP	08	17	17		0.4	100	1.06	59			
TRZ	P	08	17	19.7		1.0	100	1.28	143		3.6	3.3
	eS			41.5		1.6	99					
GNZ	eP	08	17	24		0.6	100	1.72	94			3.2
	e			43.5								
	eS			46		-2.2	98					
MNG	iP	08	17	27.7	D	-0.1	100	2.10	187		4.2	3.6
	eS			55		-1.0	100					
COB	eS	08	18	27		-0.4	100	3.49	222			2.8*

AMPLITUDES: KRP 0.8 0.3 TRZ 0.4 0.5 GNZ 0.5
MNG 5.9 2.0 COB 0.4

78/ 033

JAN 16 $03^h07^m23^s.6$ 37°.83S 176°.42E 93 km M = 3.4
± 2.6 0.15 0.06 17 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	03	07	38.0	U	-0.7	100	0.47	109		2.9	2.9
	eS			51		0.7	100					
KRP	P	03	07	42.3		1.5	99	0.71	262		2.2*	2.6*
	e			50.5								
	eS			52.5		-1.1	100					
GNZ	e(P)	03	07	56		6.0		1.49	123			
	eS		08	10		0.1	100					
MNG	iP	03	08	07.3	U	-1.2	100	2.88	194		3.9	3.8
	e(S)			51		8.6						
COB	S	03	09	19.0		0.8	100	4.33	220			3.1*

AMPLITUDES: WTZ 1.2 1.3 KRP 0.3 0.9 MNG 2.0 1.8
COB 0.6

78/ 034

JAN 16 $20^h01^m18^s.4$ 34°.02S 179°.56W 360 km M = 4.9
± 1.4 0.11 0.14 26 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	S-P			54		-0.8	100	3.98	202		5.1	5.0
WTZ	eP	20	02	36		-1.4	100	4.85	214		5.0	4.9
	eS		03	40		0.7	100					
GNZ	P	20	02	38.8		-0.4	100	5.01	202			
	e		03	37.0								
	eS			43		0.5	100					
ONE	eP	20	02	40		-2.2	99	5.30	249	3.5*		
	eS		03	50		1.9	99					
KRP	eP	20	02	47.0		1.7	99	5.57	224		3.5*	3.2*
	e(S)		04	10		16.5						
TRZ	eP	20	02	54		1.1	100	6.25	207		4.9	4.8
	e(S)		04	14.5		7.2						
CRZ	eP	20	02	55		-0.3	100	6.44	264		3.7*	3.6*
	eS		04	11		-0.5	100					
TNZ	e(P)	20	03	08		5.1		7.10	222		3.8*	3.5*
	e		04	10								
MNG	eP	20	03	11		1.2	100	7.69	209		4.4	5.0
	eS		04	36		-1.4	100					
	e		05	19								

AMPLITUDES: ECZ 1.5 1.2 WTZ 2.2 2.2 ONE 0.3
KRP 0.9 0.5 TRZ 0.5 0.8 CRZ 0.4 0.3
TNZ 0.3 0.2 MNG 0.8 3.5

78/ 035

JAN 16 $20^h23^m37^s.6$ 41°.80S 172°.20E 12 km M = 2.7
± R R R R S.E. of RES. 0.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	P*	20	23	52.5		-0.2	100	0.82	30		2.9	2.5
	eS*		24	04		0.2	100					

AMPLITUDES: COB 0.7 1.0

FELT: Murchison (80) MM IV

78/ 036

JAN 16 $20^h50^m02^s.2$ $41°.73S$ $172°.17E$ 12 km M = 3.4
± 0.5 0.05 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
COB	iP*	20	50	16.0	D	-0.5	100	0.77	34		3.8	3.1
	S*			28.0		1.1	100					
KAI	eP*	20	50	19		-1.0	100	0.98	215	3.7		
	eS*			32.0		-1.1	100					
WEL	eS*	20	51	03.5		-0.3	100	2.00	78	3.4		
MJZ	eP*	20	50	48		0.6	100	2.58	209			
	eSn		51	15		1.4	100					
	eS*			22		0.8	100					
MNG	eP*	20	50	48		-2.0	99	2.74	67		3.4	3.4
	eS*		51	27		1.1	100					

AMPLITUDES: COB 5.5 4.0 KAI 2.3 WEL 0.2
MNG 0.6 0.7

FELT: Murchison (80) MM IV

78/ 037

JAN 18 $09^h54^m31^s.1$ $42°.65S$ $172°.74E$ 33 km M = 5.7
± 0.3 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
KKY	Pn	09	54	43.6		-1.1	100	0.74	72			
CHR	Pn	09	54	46.8		0.1	100	0.88	185			
	eS*		55	01		1.0	100					
KAI	Pn	09	54	45.7		-2.5	99	0.99	277			
WEL	Pn	09	55	02.3		-0.1	100	2.03	49	5.7		
	eS*			35		0.9	100					
MJZ	iPn	09	55	03.3	USW	-0.4	100	2.13	230			
GSP	iPn	09	55	08.0	U	-0.5	100	2.47	232			
MNG	iPn	09	55	12.8		-1.3	100	2.89	46			
CAZ	Pn	09	55	16.6		-0.9	100	3.14	57			
	eP*			28		2.1	99					
TNZ	Pn	09	55	26.8		1.9	99	3.68	20		5.8	6.1
	eSn		56	04		-1.5	100					
GSZ	Pn	09	55	31.0		1.7	100	4.00	34			
	eP*			39.5		-1.0	100					
	e(Sn)		56	18		4.8						
MSZ	Pn	09	55	27.8		-2.0	99	4.04	238		5.7	5.4
	eP*			42		0.8	100					
	eSn		56	16		1.8	100					
TRZ	ePn	09	55	32		-2.3	99	4.37	46		5.7	5.8
	P*			46.0		-0.8	100					
	e			55								
MNW	Pn	09	55	39.9		-0.7	100	4.83	228	5.6	5.6	
	e		56	00								
	eSn			34		0.8	100					
	e		57	10								
KRP	iPn	09	55	46.0	DSW	0.6	100	5.18	25		5.9	
OBZ	ePn	09	55	47		-1.1	100	5.38	216			
	eSn		56	48		1.6	100					
GNZ	ePn	09	55	50		-2.1	99	5.68	47		5.8	5.6
	eP*		56	11		2.0	99					
	eSn			54		0.6	100					
WTZ	ePn	09	55	50		-2.2	99	5.69	36		6.0	6.1
	e			59								

	eP*		56	08		-1.1	100					
	eSn			54		0.4	100					
ECZ	Sn-Pn		1	12		0.5	100	6.66	44		5.7	5.7
GBZ	ePn	09	56	08		0.9	100	6.77	19			
	eSn		57	21		1.2	100					
	e			41								
ONE	ePn	09	56	12		2.0	99	6.98	11	5.7		
	eSn		57	27		2.1	99					
CRZ	ePn	09	56	26		-0.7	100	8.22	360		5.3	5.2
	eSn		57	54		-0.4	100					

AMPLITUDES:											
WEL	46		TNZ		15	41	MSZ		43	41
TRZ	9.6	18	MNW	8.0	14		KRP		39	
GNZ	14	16	WTZ		11	7.9	ECZ		2.5	3.0
GBZ	6.0	8.5	ONE	5.5			CRZ		1.3	1.1

FELT: Widely in Westland and North Canterbury. Maximum intensity MM IV.

78/ 038

JAN 18 $10^h05^m44^s.5$ 42°.62S 172°.60E 12 km M = 4.0

± 0.4 0.04 0.05 R S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KKY	P*	10	05	58.6		-1.2	100	0.83	76			
	S*		06	12.4		1.4	100					
KAI	P*	10	06	01.0		0.2	100	0.89	276	3.9		
	S*			12		-0.7	100					
CHR	P*	10	06	02.3		1.0	100	0.92	179			
	e(Sg)			20		4.5						
MJZ	Pn	10	06	18.0		-0.3	100	2.08	228			
	eSn			41		-2.7	99					
WEL	ePn	10	06	20		1.4	100	2.10	51	3.8		
	eSg			53		-2.1	100					
GSP	Pn	10	06	23.9		0.9	100	2.42	230			
	ePg			33		-0.4	100					
	eSn			55		3.0	99					
MNG	Pn	10	06	27.2		-3.0	99	2.94	48		4.4	
	e			32								
TNZ	ePn	10	06	42		1.7	100	3.69	22		4.2	4.1
	ePg			59		0.0	100					
	e(Sg)		07	45.5		-3.2						
	e		08	00								
MSZ	e?	10	06	40				3.98	237		4.1	3.7
	ePn			43		-1.2	100					
	e			59								
	eSn		07	29		-0.3	100					
	e(Sg)		08	03		4.7						
TRZ	eP*	10	07	03		1.8	100	4.43	48			3.8
KRP	Pn	10	07	01.4		0.4	100	5.20	27		4.0	3.8
	eSn		08	01.5		2.6	99					
GNZ	ePg	10	07	40		-0.2	100	5.72	48			
	eSn		08	09		-2.5	99					

AMPLITUDES:											
KAI	4.6		WEL	0.5			MNG		4.8	
TNZ	0.4	0.4	MSZ		1.1	0.8	TRZ			0.2
KRP	0.6	0.4								

78/ 039

JAN 18 $19^h07^m19^s.7$ 34°.11S 179°.32W 257 km M = 5.3

± 1.8 0.08 0.24 28 S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	S-P			48		-2.1	100	3.98	205		5.4	5.5
GBZ	iP	19	08	31.2	U	-2.0	100	4.75	242			
WTZ	eP	19	08	32		-2.9	99	4.89	217		5.5	5.4
	i			34.9								
	eS		09	36		2.4	100					
GNZ	P	19	08	35.0		-1.3	100	5.01	205		5.5	5.0
	eS		09	35		-1.2	100					
ONE	P	19	08	42.2		0.4	100	5.45	250	4.4*		
KRP	iP	19	08	45.0	D	0.8	100	5.64	226		4.3*	3.8*
	e(S)		09	57		6.8						
TRZ	eP	19	08	51.3		-0.5	100	6.25	209		5.3	5.3
	eS		10	07		3.2	99					
GSZ	eP	19	08	58.5		2.6	99	6.59	217			
	e		09	56								
CRZ	eP	19	08	56		-0.5	100	6.63	265		4.6*	
TNZ	eP	19	09	05		1.8	100	7.16	223		4.3*	3.9*
	e			12								
	e		10	47								
CAZ	eP	19	09	10		0.7	100	7.65	206			
	eS		10	36		0.7	100					
MNG	eP	19	09	08.5		-1.5	100	7.70	211		5.0	5.2
	eS		10	35		-1.5	100					
WEL	eP	19	09	21		0.1	100	8.56	211	4.9		
	eS		10	53		-2.8	99					
	e		11	39								

AMPLITUDES:									
ECZ	3.9	5.3	GBZ	6.8		WTZ	8.0	7.2
GNZ	9.6	4.8	ONE	2.8		KRP	4.8	2.1
TRZ	1.3	2.8	CRZ	3.0		TNZ	0.9	0.6
MNG	3.2	6.3	WEL	0.4				

78/ 040

JAN 19 $01^h 20^m 25^s.4$ 37°.90S 179°.76E 60 km M = 4.0

± 2.4 0.14 0.16 36 S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	01	20	44		0.3	100	0.98	282		4.0	4.2
	S			57.4		-0.0	100					
GNZ	eP	01	20	49		-2.4	99	1.56	241			
	e		21	17								
WTZ	iP	01	21	00.8	U	0.5	100	2.20	267		4.2	4.0
	eS			27		0.8	100					
KRP	P	01	21	15.7		-0.8	100	3.34	268		2.9*	2.7*
	e			50								
MNG	P	01	21	32.0		2.1	99	4.29	229		3.4	3.8
	eS		22	21		1.9	100					
WEL	eS	01	22	40		-0.2	100	5.13	227	4.3		
COB	eS	01	23	07		-2.4	99	6.30	237			

AMPLITUDES:									
ECZ	2.9	4.8	WTZ	2.2	1.5	KRP	0.4	0.3
MNG	0.3	0.8	WEL	0.3				

78/ 041

JAN 19 $04^h 38^m 26^s.1$ 32°.25S 179°.52E 543 km M = 5.0

± 1.6 0.07 0.21 16 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GBZ	iP	04	39	57.2	U	-0.6	100	5.18	219			
ECZ	eP	04	40	02		1.5	99	5.49	188		4.9	5.2
	eS		41	15		-0.4	100					
ONE	eP	04	40	02.5		1.5	99	5.54	229	3.5*		

WTZ	P	04	40	05.3		-0.6	100	6.09	199	5.1	5.2
	eS		41	24		-1.2	100				
CRZ	eP	04	40	06		-0.3	100	6.13	247	3.8*	
KRP	eP	04	40	10		-0.2	100	6.54	209	3.3*	
	e			53							
TRZ	eS	04	41	52.5		0.6	100	7.61	196		5.0
MNG	eP	04	40	33		-1.2	100	8.96	200	4.7	5.0
	e			34.3							
	e		42	10							
	eS			18		1.6	99				
WEL	eS	04	42	31		-0.8	100	9.79	202	4.9	

AMPLITUDES: GBZ 0.5 ECZ 0.5 0.9 ONE 0.3
WTZ 1.7 2.0 CRZ 0.4 KRP 0.4
TRZ 0.8 MNG 1.0 2.3 WEL 0.2

78/ 042

JAN 21 $00^h32^m56^s.3$ $40°.80$S $173°.88$E 33 km M = 3.7
± 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
WEL	P*	00	33	13		1.0	100	0.83	126	3.2		
	S*			24.5		1.0	100					
COB	P*	00	33	14.0	D	0.5	100	0.92	251		3.8	3.5
	S*			27		0.8	100					
MNG	iP*	00	33	17.8	D	-0.8	100	1.22	82		3.5	3.9
	S*			34		-1.2	100					
KKY	P*	00	33	23.5		-1.8	99	1.63	185			
	Sn			41.5		0.2	100					
TNZ	P*	00	33	25.1	U	-0.7	100	1.66	13		3.7	3.7
	S*			47		-0.8	100					
CNZ	Pn	00	33	30		2.3	98	2.04	39			
	eSn			52		0.6	100					
KAI	Sn	00	34	02		-1.1	100	2.54	226	3.7		
TRZ	Sn	00	34	09		5.0		2.57	62			3.8
KRP	Pn	00	33	44.8		2.1		3.15	25			
	Sn		34	22		4.2						
GNZ	Sn	00	34	35.5		0.7		3.85	57			4.2
MJZ	Pn	00	33	54		-1.4		4.07	217			
	Sn		34	38		-2.0						

AMPLITUDES: WEL 0.8 COB 4.1 7.3 MNG 3.7 12
TNZ 0.6 0.9 KAI 0.3 TRZ 0.6
GNZ 1.3

78/ 043

JAN 21 $12^h36^m57^s.8$ $41°.34$S $172°.40$E 0 km M = 4.0
± 0.5 0.02 0.03 3 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	iPg	12	37	05.0	U	0.1	100	0.35	46		3.9	3.4
	(Sg)			10		0.3						
KAI	P*	12	37	24		0.0	100	1.40	212	4.4		
	Sg			45		0.1	100					
KKY	P*	12	37	25.5	D	0.6	100	1.45	139			
	Sg			47		0.4	100					
WEL	Pn	12	37	30		0.8	100	1.78	89	3.7		
	P*			32		1.4						
	Sn			53.5		0.9	100					
MNG	ePn	12	37	39.5		1.3	99	2.44	74		4.4	4.3
	iP*			40.5	D	-1.3	99					

	S*		38	13.5		-0.8	100						
TNZ	ePn	12	37	41		0.3	100	2.63	36		4.0	4.3	
	P*			47		2.0							
	Pg			50		-0.8							
	S*		38	21		1.1	99						
	Sg			26		-0.3							
MJZ	Pn	12	37	46		0.0	100	3.01	208				
	Pg			58		-0.6							
	Sn		38	22.5		0.5	100						
GSP	iPn	12	37	50.8	U	0.8		3.30	211				
TRZ								3.82	64		3.6	3.7	
OMZ								3.89	196		4.4	3.7	
KRP	Pn	12	38	02		0.1		4.18	36				
	P*			14		2.5							
	Sn			52		1.8							
	S*		39	13		6.6							
MSZ	Pn	12	38	08		-0.8		4.69	223		4.2	4.2	
	Sn		39	01		-1.2							
ROX								4.71	207		4.2	4.0	
WTZ								4.88	48		4.0		
CIZ	Sn	12	40	35		-0.1		8.55	112				

AMPLITUDES:

COB	35	45	KAI	5.0			WEL	0.6	
MNG	7.5	8.0	TNZ		0.5	1.3	TRZ	0.1	0.2
OMZ	0.9	0.4	MSZ		1.1	2.0	ROX	0.4	0.7
WTZ	0.1								

78/ 044

JAN 22 $10^h58^m41^s.4$ 38°.00S 178°.62E 12 km M = 4.0
± 1.2 0.04 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
ECZ	iPg	10	58	47.8	U	-0.2	100	0.31	349			
GNZ	Pg	10	58	58.3	U	0.6	100	0.80	216			
WTZ	Pn	10	59	03.0	D	-1.5	100	1.29	270		4.3	4.4
	Sn			20.5		-1.3	100					
WNZ	ePg	10	59	22		-1.5		2.08	252		4.1	4.2
TRZ	Pn	10	59	16		0.5	100	2.10	222		4.0	3.9
	ePg			24		0.2						
	S*			45.5		-0.4	100					
KRP	Pn	10	59	19		-1.2	100	2.44	271			
	P*			25		0.8						
	Sn			50		0.6	100					
CNZ	Pn	10	59	25		1.4	100	2.69	243			
	P*			31		2.5	99					
TNZ	Pn	10	59	37		1.9		3.53	249		4.0	
MNG	Pn	10	59	33		-2.7	99	3.58	222		3.8	3.8
	P*			40		-3.6						
	Pg			54.5		0.8						
	Sn	11	00	18		1.3	100					
ONE	Pn	10	59	44		1.5	100	4.08	302			
	ePg	11	00	05		1.3						
WEL	Sn	11	00	36		-1.3	100	4.44	221	3.7		
COB	P*	11	00	15		-1.4		5.50	234			3.5
	Sn		01	03		0.1						
CRZ	Pn	11	00	10		1.5		5.98	305			
CIZ	Sn	11	01	45		6.5		6.98	150			

AMPLITUDES:

WTZ	11	15	WNZ		0.2	0.3	TRZ	0.9	1.0
TNZ	0.1		MNG		0.9	1.1	WEL	0.1	

COB 0.2

78/ 045

JAN 22 $18^h46^m53^s.5$ 38°.12S 176°.29E 12 km M = 2.6
± 0.8 0.07 0.04 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	Pg?	18	47	04.5		0.1	100	0.53	196		3.1	3.0
WTZ	ePg?	18	47	04		-1.3	99	0.57	76		2.0	2.4
	eSg?			14		0.9	100					
KRP	(Sg)	18	47	15		0.2	100	0.62	288			

AMPLITUDES: WNZ 0.3 0.3 WTZ 0.2 0.4

FELT: Rotorua (33) MM IV

78/ 046

JAN 25 $12^h23^m54^s.8$ 37°.40S 177°.40E 133 km M = 4.4
± 0.8 0.04 0.05 9 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	24	15.1	D	-0.2	100	0.67	209			
ECZ	iP	12	24	18.7	U	1.0	100	0.96	108		4.9	4.6
GNZ	iP	12	24	21.8	S	0.2	100	1.34	159			
	S			42		-0.1	100					
TUA	P	12	24	22		-0.5	100	1.42	188		4.2	4.5
	e(S)			43		-0.8						
KRP	iP	12	24	24.6	DNE	0.4	100	1.57	250			
	S			47		0.4	100					
WNZ	eP	12	24	25.5		0.9	100	1.60	219		4.2	4.3
GBZ	iP	12	24	27.3	D	-1.2	99	1.93	307			
	e			38								
TRZ	P	12	24	30.7		-1.1	100	2.20	192		4.3	4.4
	S			59		-0.9	100					
CNZ	P	12	24	33		-0.3	100	2.32	218			
ONE	P	12	24	41		-0.5	100	2.93	303			
TNZ	P	12	24	44		2.0	97	2.98	232		3.4*	3.1*
MNG	P	12	24	45.7	D	-3.9		3.55	204		4.3	4.6
	S		25	27		-4.4						
WEL								4.39	207	4.7		
KAI								6.88	220	3.7*		
CIZ	S	12	27	12.5		-6.2		8.00	147			
MSZ								10.21	222		3.3*	3.3*

AMPLITUDES: ECZ 13 8.0 TUA 1.7 3.5 WNZ 0.2 0.2
GBZ 7.1 TRZ 1.0 3.0 TNZ 0.3 0.2
MNG 2.9 7.8 WEL 0.9 KAI 0.3
MSZ 0.3 0.6

78/ 047

JAN 25 $17^h01^m32^s.1$ 36°.77S 178°.22E 33 km M = 4.9
± 0.8 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
ECZ	iP*	17	01	51.5	D	1.5	99	0.96	164		4.8	
WTZ	iPn	17	01	57.6	D	0.6	100	1.56	219			
GNZ	Pn	17	02	01.2	D	-0.1	100	1.88	185			
	(Sn)			27		3.8						
TUA	Pn	17	02	04.5		-1.2	100	2.20	202		4.9	4.9
	S*			41		1.0						
GBZ	iPn	17	02	05.5	U	-1.2	100	2.28	283			
KRP	iPn	17	02	09.4	NE	0.6	100	2.43	241			

	Sn			38.5		2.0	99						
WNZ	Pn	17	02	10.5		0.6	100	2.50	221		4.9	4.8	
TRZ	Pn	17	02	14.9	D	-1.6	99	2.99	201				
CNZ	Pn	17	02	19		-0.6	100	3.22	220				
	S*		03	09		-1.3	100						
ONE	Pn	17	02	20.5		0.2	100	3.28	287				
TNZ	Pn	17	02	29		0.4	100	3.88	230		5.4	5.6	
MNG	Pn	17	02	31.3	D	-4.4		4.40	208		5.0	5.2	
	eP*			43.5		-4.8							
	Sn		03	22		-1.8							
	S*			46.5		0.9							
CAZ	Pn	17	02	32		-3.9		4.42	200				
CRZ	Pn	17	02	45		-0.0		5.08	296		4.8		
WEL	Pn	17	02	44		-3.3		5.26	210	5.0			
	eP*		03	00		-2.8							
	Sn			40		-4.3							
	S*		04	07		-4.1							
COB	Pn	17	02	54		-4.6		6.07	223		4.6	4.7	
	Sn		04	03		-1.1							
KAI								7.79	220	4.9			
CIZ	Pn	17	03	26		-1.7		8.21	153				
	Sn		04	53		-2.3							
MSZ								11.11	222		4.4	4.6	

AMPLITUDES:

ECZ		14		TUA		5.0	6.5	GBZ		4.3	
WNZ		0.7	0.7	TNZ		1.2	1.9	MNG		9.0	21
CRZ		0.4		WEL	1.5			COB		0.7	2.7
KAI	0.5			MSZ		0.3	0.8				

78/ 048

JAN 29 $03^h27^m46^s.7$ $40°.87S$ $174°.04E$ 12 km M = 3.9

± 0.3 0.02 0.02 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TCW	iPg	03	27	56.4	D	1.6	99	0.39	153			
WEL	iPg	03	27	59.8	UE	-0.9	100	0.68	127	3.8		
	Sg		28	09.5		-0.6	100					
COB	iPg	03	28	07.3	U	-0.0	100	1.02	257		4.0	3.7
	Sg			22		0.9	100					
MNG	iP*	03	28	07.0	D	0.0	100	1.13	77		4.1	4.2
	Pg			08.5		-1.0						
	S*			23.5		1.5	99					
	Sg			25		0.3						
KKY	P*	03	28	14.1	U	-0.5	100	1.57	190			
	Sg			39		-0.7	100					
CAZ	e(P*)	03	28	20		3.9		1.66	92			
	Pg			22.5		2.3						
TNZ	Pg	03	28	20		-1.2	100	1.70	9		3.4	3.8
	Sg			44		-0.2	100					
CNZ	P*	03	28	23		0.5		2.03	35			
	(Pg)			32.5		4.7						
	e(Sg)			56		0.8						
KAI								2.57	229	3.9		
KRP	P*	03	28	38.5		-3.3		3.17	22			
	Pg			47		-3.6						
	eSg		29	32		-1.3						
WTZ	e(P*)	03	28	52		1.4		3.68	39			
GNZ	Sn	03	29	27		-0.1		3.79	55			3.9
MSZ	Pn	03	29	13		0.3		5.89	228		4.1	4.1
	Sn		30	18		0.2						

AMPLITUDES:	WEL	5.8		COB	6.0	11	MNG	20	28
	TNZ	0.3	0.9	KAI	0.5		GNZ	0.7	
	MSZ	0.5	0.9						

78/ 049

JAN 30 $19^h35^m40^s.8$ $44°.24$S $168°.83$E 12 km M = 5.0

± 0.6 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
MSZ	iP*	19	35	54.5	U	-0.8	100	0.78	236			
	e(Pg)			59.5		2.8						
GSP	iP*	19	35	56.0	U	-0.7	100	0.86	83			
MJZ	P*	19	36	02.0	U	-0.6	100	1.21	78			
OMZ	Pn	19	36	10.5		0.9	100	1.71	120			
	P*			12.3		1.2						
MNW	(P*)	19	36	12.5		0.5	100	1.76	209	4.7		
	e			14								
	Sg			40		-0.2	100					
KAI	eP*?	19	36	23		-2.5		2.55	49	5.2		
	(Pg)			29		-3.4						
	S*			59		0.1	100					
OBZ	Pn	19	36	25		1.7	98	2.71	190			
	P*			29		0.7						
	S*		37	03		-0.7	100					
COB	Pn	19	36	42		-2.6		4.27	44		5.3	4.9
	Sn		37	34		1.1						
	e(S*)			52.5		1.9						
WEL	Sn	19	38	04		6.9		5.28	58	4.3		
MNG	Pn	19	37	06		-3.8		6.12	56			4.9
	i			12								
	Sn		38	23		5.8						
TNZ	Pn	19	37	13.5		-2.1		6.54	41		5.0	5.0
	Sn		38	27.5		0.1						
	Sg		39	23		1.8						
CNZ	Pn	19	37	24.5		1.0		7.12	47			
KRP	Pn	19	37	34		-2.8		8.10	41			
WTZ								8.78	47			5.2
ONE	Pn	19	37	54		-1.5		9.47	29	4.7		
	eSn		39	37		-0.7						
CRZ	Pn	19	38	04.4		-1.8		10.25	18		5.4	
	(Sn)		39	52		-4.4						

AMPLITUDES:	MNW	9.2		KAI	9.5		COB	5.9	9.5
	WEL	0.3		MNG		4.8	TNZ	0.7	1.0
	WTZ		0.3	ONE	0.3		CRZ	1.1	

FELT: Lake Wanaka district. Maximum intensity MM V at Mahitahi (104)

78/ 050

FEB 01 $00^h02^m16^s.4$ $32°.68$S $178°.21$W 33 km M = 4.8

± 1.9 0.09 0.14 R S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	Pn	00	03	38		0.7	100	5.66	207		5.1	4.9
	Sn		04	41		2.5	99					
GBZ	Pn	00	03	46		0.1	100	6.30	234			
WTZ	Pn	00	03	48.5		-1.4	100	6.59	215		5.0	4.8
	Sn		04	58		-2.7	99					
GNZ	Pn	00	03	51		-0.3	100	6.70	206		4.9	4.7
	Sn		05	01		-2.3	99					

	S*			43		4.5							
ONE	Pn	00	03	55		1.1	100	6.88	241				
KRP	Pn	00	03	59.5	U	-0.3	100	7.32	223				
	Sn		05	20.5		2.3	99						
CRZ	Pn	00	04	06		-0.5	100	7.80	255		5.2		
	Sn		05	29		-0.9	100						
CNZ	Pn	00	04	11		-1.4		8.24	216				
MNG	Pn	00	04	23		-5.3		9.40	211		4.6	4.7	
	Sn		06	01		-7.4							
	S*			40		-19.6							
WEL	Sn	00	06	19		-10.0		10.26	211	4.8			
COB	Sn	00	06	39.5		-9.3		11.09	218			4.3	
CIZ	Sn	00	06	52		-2.8		11.34	174				

AMPLITUDES:										
ECZ	0.8	0.7	GBZ	1.4	WTZ	2.2	1.2			
GNZ	1.5	1.3	CRZ	0.2	MNG	0.8	1.3			
WEL	0.2		COB	0.3	CIZ	0.8				

78/ 051

FEB 01 $08^h24^m21^s.4$ 38°.49S 175°.77E 173 km M = 3.8

± 1.0 0.04 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
KRP	iP	08	24	45.0	DE	-0.9	100	0.59	342			
	S		25	05		0.2	100					
CNZ	P	08	24	48		1.4	99	0.73	193			
WTZ	P	08	24	48		-1.2	99	1.09	63		3.1	3.4
	e(S)		25	10.5		-0.1	100					
TNZ	P	08	24	51.8	D	0.9	100	1.29	237		3.4*	
TRZ	P	08	24	52.5		1.0	100	1.34	143		3.8	3.9
	S		25	20.5		5.8						
GNZ	P	08	24	55.5		-0.3	100	1.77	96		3.8	3.8
	S		25	22		-0.4	100					
MNG	P	08	24	59.3	U	-0.6	100	2.14	186		3.9	4.1
	S		25	29		-0.6	100					
ECZ	(P)	08	25	02		-0.1	100	2.33	71		3.8	3.8
	S			35		1.5	99					
WEL	S	08	25	46.5		0.8		2.90	195	3.9		
COB	P	08	25	14		-2.5		3.49	221		3.4*	3.1*
	S			56.5		-2.5						
MJZ	S	08	27	10.5		-5.7		6.79	214			

AMPLITUDES:										
WTZ	0.3	0.8	TNZ	0.5	TRZ	0.6	1.5			
GNZ	1.2	1.9	MNG	2.5	5.3	ECZ	0.3	0.3		
WEL	0.2		COB	0.4	0.7					

78/ 052

FEB 02 $19^h19^m00^s.6$ 38°.39S 177°.98E 12 km M = 3.8

± 0.6 0.03 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
GNZ	ePg	19	19	07		0.8	100	0.25	173			
TUA	eSg-Pg			10		-0.5	100	0.77	237		3.5	3.6
ECZ	Pg	19	19	16.7	U	-0.7	100	0.83	33		4.1	4.1
	eSg			30.5		1.8						
WTZ	iPg	19	19	19.7	D	1.2	100	0.88	297		3.9	4.1
TRZ	Pg	19	19	29.5		-0.9	100	1.48	218		3.5	3.8
	Sg			50		-0.3	100					
WNZ	(S*)	19	19	45		-2.0		1.49	260		3.5	3.4
KRP	Pg	19	19	39.5		-1.2	100	1.98	283			
	(Sg)		20	07		-0.4						

CNZ	eP*	19	19	38.5		1.4	99	2.07	246				
	ePg			44		1.6							
TNZ	P*	19	19	50.5		-1.2		2.92	253		3.8		
	ePg			58		-1.7							
MNG								2.95	220		3.5	3.8	
WEL								3.81	220	3.7			
ONE								3.90	311	4.0			

AMPLITUDES: TUA 1.6 2.5 ECZ 3.6 4.5 WTZ 11 15
TRZ 0.6 1.7 WNZ 0.1 0.1 TNZ 0.1
MNG 0.6 1.7 WEL 0.1 ONE 0.1

78/ 053

FEB 03 $08^h00^m35^s.1$ 46°.48S 166°.02E 33 km M = 3.3
± 2.4 0.12 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
MNW	Pn	08	00	57.0		0.4	100	1.31	58			
	eP*			59.3		0.4	100					
	Sn		01	12.6		-0.0	100					
MSZ	ePn	08	01	08.0		-1.3	100	2.25	37		3.1	3.5
	Sn			37.6		2.5	98					
	eS*			43.0		-1.3	100					
MJZ	e	08	01	46				4.01	53			
	eSn		02	17		-0.5	100					

AMPLITUDES: MSZ 0.4 1.7

78/ 054

FEB 03 $16^h44^m12^s.9$ 32°.58S 179°.73W 265 km M = 5.4
± 1.6 0.09 0.21 18 S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	16	45	36		2.6	99	5.30	195		5.3	5.4
	i			39.0								
	eS		46	35.2		-0.9	100					
ONE	eP	16	45	43		3.0		5.84	235			
WTZ	P	16	45	41.3		-0.9	100	6.03	206		5.4	5.6
	i			45.6								
	S		46	51		-1.2	100					
GNZ	eP	16	45	44.8		-1.2	100	6.33	196		5.3	5.5
	i			49.0								
	S		46	59.0		0.1	100					
KRP	e(P)	16	45	56		6.7		6.60	215		3.5*	
	e			58.9								
CRZ	eP	16	45	50		0.5	100	6.61	252		3.6*	
TRZ	P	16	46	02.0		1.3	100	7.51	201		5.1	5.6
	S		47	27.8		2.5	99					
TNZ	eP	16	46	12.5		3.7		8.14	214		4.0*	
MNG	eP	16	46	15.5		-2.9	98	8.90	204		5.5	5.4
	i			18.5								
	e			52								
	S		47	56.8		-0.0	100					
WEL	P	16	46	27.8		-1.1	100	9.75	205	5.4		
	S		48	16.2		0.4	100					
MJZ	eP	16	47	20		1.5	100	13.74	211			
	S		49	45		-0.5	100					

AMPLITUDES: ECZ 2.1 2.7 WTZ 4.8 7.5 GNZ 4.0 10
KRP 0.7 CRZ 0.3 TRZ 0.6 4.5
TNZ 0.4 MNG 8.2 8.5 WEL 1.1

78/ 055

FEB 04 08h57m18s.1 43°.24S 171°.09E 33 km M = 3.5
± 0.5 0.04 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
KAI	eP*	08	57	30		-2.6		0.76	18	2.9		
	e			40.3								
	eS*			44.0		0.8						
MJZ	P*	08	57	32.1		-2.5	99	0.87	211			
	i			34.0								
	S*			48.0		1.3	100					
GSP	P*	08	57	38.0		-1.8	100	1.19	221			
	i			39.2								
	S*			58.0		2.2	99					
OMZ	Pn	08	57	45.2		-1.5	100	1.84	184		3.9	3.6
	eP*			49.8		-0.9	100					
	eS*		58	16.5		1.4	100					
COB	ePn	08	57	56		0.6	100	2.47	30		3.8	3.4
	eP*		58	00.5		-1.0	100					
	S*			34.0		-0.1	100					
ROX	ePn	08	57	55.3		-1.4	100	2.57	209		3.7	
	iP*		58	02.5		-0.7	100					
MSZ	ePn	08	58	00		1.4	100	2.70	237		3.5	3.5
	eP*			06		0.6	100					
	S*			40.8		-0.1	100					
MNG	ePn	08	58	22		3.1	98	4.19	53		3.5	

AMPLITUDES: KAI 0.6 OMZ 1.3 1.3 COB 0.6 0.8
ROX 0.4 MSZ 0.7 1.1 MNG 0.3

78/ 056

FEB 04 15h33m38s.6 39°.30S 174°.38E 258 km M = 4.0
± 1.2 0.06 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
TNZ	P	15	34	13.0		1.2	100	0.11	0			
	eS			39.0		1.3	100					
CNZ	P	15	34	13.7		-0.5	100	0.91	84			
GSZ	P	15	34	15.0		0.7	100	0.94	89			
MNG	P	15	34	19.4		1.0	100	1.57	148		4.1	4.6
	e			43.0								
	S			49.2		-0.1	100					
KRP	eP	15	34	18		-1.0	100	1.65	34		2.7*	
TRZ	P	15	34	23.0		1.8	99	1.91	98		4.0	3.9
	S			56.0		1.8	99					
WEL	S	15	34	54.8		-0.9	100	2.01	172		3.7	3.5
COB	P	15	34	24.0		0.3	100	2.19	215		4.1*	3.0*
	eS			56.8		-1.9	99					
WTZ	eP	15	34	25.3		-0.7	100	2.43	58		4.0	3.8
	eS		35	01.5		-1.4	100					
GNZ	P	15	34	31.8		0.7	100	2.92	78		4.0	4.0
	S		35	09.9		-2.0	99					

AMPLITUDES: TNZ 0.4 0.3 MNG 4.0 15 KRP 0.3
TRZ 0.4 0.6 WEL 0.5 0.6 COB 2.5 0.8
WTZ 0.7 0.5 GNZ 0.7 1.1

78/ 057

FEB 05 07h41m22s.4 40°.43S 176°.78E 12 km M = 3.5
± 0.8 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	P*	07	41	39.0		0.5	100	0.87	2		3.5	
	S*			51.8		1.5	99					
MNG	P*	07	41	41.0		0.2	100	1.01	259		3.8	3.5
	S*			55.3		1.0	100					
GSZ	P*	07	41	49.0		0.3	100	1.48	321			
CNZ	P*	07	41	49.1		-1.0	100	1.56	322			
	eS*		42	09.5		-1.1	100					
WEL	e(P*)	07	41	57		3.6		1.75	240	3.3		
	eS*		42	17		0.5	100					
	e			22								
GNZ	ePn	07	41	53.5		-2.1	98	2.02	29		3.2	
	Sn		42	21.3		0.8	100					
TNZ	eP*	07	42	01		-0.6	100	2.23	303		3.7	
	e			06								
WTZ	ePn	07	42	02		0.7		2.45	4		3.1	3.4
	eSn			27		-3.6						
KRP	eP*	07	42	09		-0.3		2.68	338		3.7	
	e			11								
COB	ePn	07	42	12		1.2		3.14	257		3.7	3.3
	eP*			20.3		3.1						
	eS*			59		0.7						

AMPLITUDES:									
TRZ	1.7	MNG	10	7.5	WEL	0.2			
GNZ	0.3	TNZ	0.3		WTZ		0.2	0.4	
KRP	0.3	COB	0.3	0.4					

FELT: Porangahau (64) MM V

78/ 058

FEB 05 $11^h40^m29^s.6$ 37°.91S 176°.11E 239 km M = 4.3

± 0.8 0.04 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
KRP	P	11	41	01.0		-0.2	100	0.45	268		2.9*	2.9*
	S			26.0		0.4	100					
WTZ	P	11	41	01.0		-1.0	100	0.70	96		3.9	3.7
	e			23.2								
	eS			26.2		-1.0	100					
GNZ	P	11	41	08.7		0.2	100	1.67	117		4.3	4.4
	S			38.0		-0.6	100					
TRZ	P	11	41	10.3		1.3	99	1.74	161		4.3	
	S			40.8		1.3	99					
TNZ	P	11	41	12.2		2.0	97	1.86	226		3.9*	3.2*
	e(S)			47.0		5.5						
ECZ	eP	11	41	11.0		0.1	100	1.94	84		4.4	
	i			15.2								
MNG	P	11	41	19.0		-0.0	100	2.75	190		4.6	4.6
	i			55.0								
	S			57.0		-0.5	100					
WEL	eP	11	41	27.5		-0.3	100	3.53	197	4.4		
	eS		42	13		-0.1	100					
COB	eP	11	41	34		-0.8	100	4.11	218		3.5*	3.5*
	S		42	24.3		-1.1	100					

AMPLITUDES:									
KRP	0.7	0.7	WTZ	1.6	1.1	GNZ		2.6	5.8
TRZ	0.8		TNZ	1.2	0.3	ECZ		1.1	
MNG	6.7	8.7	WEL	0.7		COB		0.5	1.5

78/ 059

FEB 05 $14^h16^m20^s.1$ 33°.90S 178°.63W 264 km M = 4.4

± 2.3 0.20 0.34 28 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	14	17	31.5		1.4	100	4.43	210		4.2	
WTZ	P	14	17	40.5		-1.4	100	5.41	220		4.5	4.2
	e		18	34.2								
	eS			44.5		-1.3	100					
GNZ	P	14	17	41.6		-0.9	100	5.45	209		4.3	4.3
	S		18	47.8		1.0	100					
KRP	eP	14	17	52		0.3	100	6.21	228		2.9*	
TRZ	(S)	14	19	20.8		5.8		6.72	212			4.7
MNG	eS	14	19	47		-0.9	100	8.19	213			4.0
WEL	eS	14	20	06		-1.3	100	9.05	213	4.6		
COB	eS	14	20	29		1.7	99	9.93	221			3.1*

AMPLITUDES: ECZ 0.2 WTZ 0.7 0.4 GNZ 0.5 0.8
KRP 0.2 TRZ 0.7 MNG 0.4
WEL 0.2 COB 0.3

78/ 060

FEB 06 $03^h04^m59^s.3$ 34°.73S 179°.16E 349 km M = 4.5

± 2.0 0.18 0.32 19 S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eS	03	06	47.8		2.1	100	3.01	189			4.6
WTZ	P	03	06	05.2		-0.3	100	3.69	208		4.4	4.3
	S			54.5		-3.0	99					
GNZ	P	03	06	09.2		0.3	100	4.01	193		4.5	4.6
	S		07	03.5		0.1	100					
KRP	eP	03	06	12.0		-0.1	100	4.33	221		3.4*	
TNZ	P	03	06	31.8		2.6	99	5.87	219		3.7*	
MNG	P	03	06	37.0		-0.2	100	6.57	205		4.8	4.2
	S		07	53		-1.2	100					
WEL	eP	03	06	46		-1.1	100	7.41	207	4.7		
	eS		08	12		-0.1	100					
COB	eP	03	06	54		-1.8	100	8.13	217		3.4*	3.1*
	eS		08	30		2.5	99					

AMPLITUDES: ECZ 0.7 WTZ 0.8 0.7 GNZ 1.1 2.3
KRP 0.7 TNZ 0.3 MNG 2.8 0.8
WEL 0.3 COB 0.2 0.3

78/ 061

FEB 06 $22^h28^m22^s.1$ 40°.43S 175°.79E 33 km M = 3.8

± 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
MNG	iP*	22	28	30.9		1.1	100	0.30	231			
	eS*			36.0		0.7	100					
WEL	P*	22	28	42.3		-1.0	100	1.15	222	3.7		
	S*			58.1		-0.8	100					
GSZ	P*	22	28	43.6		0.2	100	1.16	352			
	S*			59.3		0.2	100					
TRZ	eP*	22	28	41.7		-2.0	97	1.18	42		3.4	3.9
	S*		29	00.5		0.8	100					
CNZ	P*	22	28	44.1		-0.6	100	1.24	351			
	S*		29	01.0		-0.5	100					
COB	ePn	22	28	59.7		1.1	100	2.41	253		3.8	3.5

	eP*		29	07.8		3.3							
	i			12.7									
GNZ	ePn	22	29	00.0		0.4	100	2.48	45		3.4	3.8	
	eSn			28		0.3	100						
KRP	Pn	22	29	03.0		3.1		2.51	355		4.5	4.6	
	iP*			09.7		3.5							
	S*			37.0		-2.1							
	i			45.5									
WTZ	(P*)	22	29	11.6		3.6		2.62	21		3.6	3.7	
	(S*)			50.8		8.5							

AMPLITUDES: WEL 1.4 TRZ 0.8 3.5 COB 0.6 1.2
GNZ 0.3 1.3 KRP 2.5 2.0 WTZ 0.6 0.7

FELT: Palmerston North (62)

78/ 062

FEB 07 $00^h16^m10^s.2$ 37°.96S 179°.22E 84 km M = 4.3
± 4.4 0.20 0.48 32 S.E. of RES. 3.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	00	16	22.0		-3.5	99	0.60	296		4.3	4.4
	i			33.5								
GNZ	P	00	16	34.3		2.4	100	1.17	234		3.9	
	S			49.5		1.2	100					
WTZ	P	00	16	40.0		0.3	100	1.77	269		4.5	
	i			46.8								
TRZ	P	00	16	51.2		2.0	100	2.47	229		4.5	4.4
KRP	eP	00	16	55.8		0.2	100	2.92	270		2.7*	
	e		17	27								
GSZ	P	00	17	01.0		2.4	100	3.14	244			
CNZ	eP	00	17	00.3		1.7	100	3.14	246			
	e			03.2								
MNG	P	00	17	06.8		-2.9	100	3.93	226		4.4	4.1
	S			51.3		-3.7	99					
TNZ	(P)	00	17	13.5		3.1		4.00	251		3.3*	
WEL	eS	00	18	12.5		-3.5		4.79	225	4.2		

AMPLITUDES: ECZ 12 14 GNZ 4.0 WTZ 6.2
TRZ 1.5 2.5 KRP 0.3 MNG 3.5 2.2
TNZ 0.2 WEL 0.3

78/ 063

FEB 07 $00^h20^m52^s.4$ 37°.86S 179°.07E 33 km M = 3.8
± 1.8 0.06 0.13 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	00	21	01.0		-1.0	100	0.45	292		3.7	3.8
	iS			10.0		0.9	100					
GNZ	P	00	21	12.8		1.3	100	1.13	226		3.8	3.5
	S			28.0		2.3	99					
TRZ	P	00	21	29.5		0.2	100	2.44	225		3.9	3.8
	(S)		22	01.8		4.8						
KRP	eP	00	21	33.5		-0.6	100	2.80	268		3.6	
	eS		22	05.0		-0.6	100					
GSZ	eP	00	21	40		2.0	99	3.08	242			
MNG	P	00	21	48.0		-1.4	100	3.92	224		4.0	3.7
	S		22	32.0		-0.6	100					
WEL	eS	00	22	51		-2.0	99	4.77	223	4.0		

AMPLITUDES: ECZ 4.6 7.5 GNZ 4.0 3.0 TRZ 0.6 0.6
KRP 0.3 MNG 1.1 0.8 WEL 0.2

78/ 064

FEB 07 $02^h41^m54^s.9$ $37°.98S$ $178°.74E$ 12 km M = 4.8

± 1.3 0.04 0.12 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P*	02	42	00.9		-0.6	100	0.32	332			
GNZ	P*	02	42	13.0		2.1	100	0.87	220			
	eS*			22.4		-0.2	100					
	e			26.2								
WTZ	P*	02	42	18.7		-0.9	100	1.39	269			
TRZ	Pn	02	42	30.0		-0.0	100	2.17	223		4.6	
	eSn			52.8		-3.6	97					
	eS*		43	01.0		-0.6	100					
WNZ	ePn	02	42	32.2		2.2		2.17	252		4.7	
	e			43.8								
KRP	Pn	02	42	33.8		-1.1	100	2.53	270		4.5	4.7
	iP*			39.0		-0.2	100					
	Sn		43	05.7		0.6	100					
CNZ	Pn	02	42	39.0		0.6	100	2.78	243			
	e		43	01.0								
GSZ	Pn	02	42	39.8		1.4	100	2.79	241			
TNZ	ePn	02	42	51.8		2.0	100	3.63	249		4.7	
	e(P*)		43	01.5		3.6						
MNG	Pn	02	42	48.0		-2.2	99	3.65	223		4.9	4.9
	Sn		43	34.0		2.0	100					
ONE	ePn	02	42	57.0		0.1	100	4.14	301			
WEL	ePn	02	43	04.2		2.3	99	4.51	222	4.9		
	Sn			51.7		-0.8	100					
COB	Pn	02	43	14.0		-2.6	99	5.59	234		4.6	4.7
	Sn		44	20.3		1.8	100					
CRZ	Pn	02	43	23.0		0.1	100	6.05	304		5.5	
KAI	Sn	02	44	55.0		-2.7		7.22	229	4.9		

AMPLITUDES: TRZ 3.7 WNZ 0.7 KRP 3.0 3.7
TNZ 0.5 MNG 11 14 WEL 1.6
COB 0.7 3.5 CRZ 1.5 KAI 0.6

78/ 065

FEB 08 $16^h00^m09^s.0$ $37°.43s$ $176°.54E$ 257 km M = 4.3

± 1.3 0.08 0.09 8 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	16	00	42.7		-0.6	100	0.66	147		4.0	4.1
	S		01	07.2		-2.8	99					
KRP	P	16	00	45.0		0.5	100	0.94	238		3.0*	
	S		01	12.8		0.5	100					
ECZ	P	16	00	49.3		0.2	100	1.62	100		4.0	4.2
	eS		01	20.2		0.0	100					
GNZ	P	16	00	50.0		0.4	100	1.68	136		4.5	4.7
	i			53.2								
	S		01	19.8		-1.2	100					
CNZ	P	16	00	54.0		2.3	99	1.93	204			
GSZ	P	16	00	54.2		2.0	99	1.99	202			
TRZ	P	16	00	54.3		0.8	100	2.13	174		4.1	
	eS		01	30		2.0	99					
MNG	P	16	01	05.3		-0.1	100	3.29	194		4.7	4.4
	e			45								
	S			50.0		0.7	100					
WEL	eP	16	01	12		-2.5	99	4.09	199	4.4		

	eS		02	05		-0.7	100						
COB	eP	16	01	20		-1.8	100	4.70	218		3.5*	3.4*	
	eS		02	18.0		-0.7	100						

AMPLITUDES:									
WTZ	1.7	2.2	KRP	0.7	ECZ	0.5	0.7		
GNZ	3.7	9.3	TRZ	0.4	MNG	7.4	4.7		
WEL	0.4		COB	0.4	1.2				

78/ 066

FEB 08 $16^h53^m52^s.6$ $50°.49S$ $164°.73E$ 33 km M = 4.6

± 1.3 0.08 0.34 R S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNW	iP	16	55	05.9		0.2	100	5.09	23		5.0	4.4
	S		56	01.0		0.0	100					
ROX	P	16	55	17.3		0.8	99	5.89	33		4.7	
MSZ	P	16	55	20.8		-0.1	100	6.21	22		4.4	
GSP	P	16	55	35		-0.8	99	7.31	31			
MJZ	eP	16	55	40		0.3	100	7.59	33			
	e			51								
COB	eP	16	56	25		-0.4	100	10.93	34		4.6	

AMPLITUDES:									
MNW	3.6	1.8	ROX	0.8	MSZ	1.0			
COB	0.2								

78/ 067

FEB 08 $22^h09^m44^s.6$ $34°.83S$ $178°.80E$ 314 km M = 5.5

± 1.0 0.05 0.09 8 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	22	10	40.0		-0.4	100	2.86	184		4.7	5.3
	eS		11	21.0		-3.0	98					
WTZ	P	22	10	46.2		-0.2	100	3.47	204		5.3	5.5
	eS		11	36		1.2	100					
ONE	eP	22	10	48.8		-0.6	100	3.75	254	3.7*		
	eS		11	39		-1.1	100					
GNZ	iP	22	10	50.9		0.4	100	3.86	189		5.7	
	e		11	34.5								
	S			41.0		-1.1	100					
KRP	P	22	10	54.5		1.8	100	4.06	220		4.8*	
	S		11	48.0		2.0	99					
WNZ	eP	22	10	57.3		1.2	100	4.37	209		5.6	
TRZ	P	22	11	03.0		0.1	100	4.98	198		5.6	
	e			57.5								
	S		12	05		0.7	100					
CRZ	P	22	11	02.5		-1.5	100	5.07	273		4.2*	
CNZ	P	22	11	05.5		1.4	100	5.08	210			
GSZ	P	22	11	06.0		1.3	100	5.13	209			
TNZ	P	22	11	13.0		2.7	99	5.61	218		4.5*	
MNG	P	22	11	17.7		-1.4	100	6.35	204		5.9	5.6
	e		12	24.5								
	S			33.2		-0.1	100					
CAZ	P	22	11	20.1		0.5	100	6.40	198			
	e		12	27								
	eS			35.8		1.5	100					
WEL	P	22	11	28.0		-1.3	100	7.19	205	5.6		
	S		12	50.0		-1.4	100					
COB	P	22	11	36.0		-1.5	100	7.87	216		4.3*	4.3*
	S		13	06.5		0.1	100					
MJZ	eP	22	12	18.0		-0.0	100	11.19	213			
	eS		14	17.5		-1.9	99					

AMPLITUDES:	ECZ	1.1	4.0	WTZ	8.0	14	ONE	0.7	
	GNZ	17		KRP	19		WNZ	0.7	
	TRZ	3.6		CRZ	1.3		TNZ	1.7	
	MNG	35	24	WEL	3.0		COB	1.5	5.8

78/ 068

FEB 09 $07^h 14^m 56^s.5$ 37°.96S 176°.38E 12 km M = 3.4

± 0.2 0.02 0.01 R S.E. of RES. 0.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPg	07	15	06.9		0.4	99	0.49	93		3.3	3.1
	Sg			13.0		-0.1	100					
KRP	iPg	07	15	10.0		-0.1	100	0.67	273		3.3	4.0
	Sg			19.3		0.0	100					
CNZ	ePg	07	15	25.0		0.1	100	1.40	208			
GNZ	ePg	07	15	25.8		-0.3	99	1.47	118		3.6	
	e			29.3								
	e			54.5								
MNG	ePg	07	15	53		1.0		2.74	194		3.2	

AMPLITUDES:	WTZ	5.5	3.2	KRP	3.6	19	GNZ	1.1	
	MNG	0.2							

78/ 069

FEB 12 $00^h 21^m 32^s.7$ 32°.69S 177°.61W 298 km M = 4.6

± 2.0 0.26 0.49 46 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	00	23	01		-0.3	100	5.90	211		4.4	
WTZ	P	00	23	11.0		-2.3	99	6.88	218		4.6	4.9
	eS		24	31.5		-0.8	100					
GNZ	eP	00	23	15.0		1.2	100	6.93	210		4.3	4.5
	S		24	33.0		-0.2	100					
KRP	eP	00	23	25		2.2	99	7.66	225		3.0*	
	eS		24	52		2.6						
TRZ	eP	00	23	30		0.5	100	8.20	212		4.7	4.7
	e			37								
	S		25	03		1.7	100					
MNG	eP	00	23	46		-1.6	100	9.67	213		4.0	4.8
	eS		25	33		-0.8	100					

AMPLITUDES:	ECZ	0.2		WTZ	0.6	1.3	GNZ	0.3	0.8
	KRP	0.2		TRZ	0.2	0.5	MNG	0.2	1.6

78/ 070

FEB 12 $02^h 43^m 44^s.9$ 33°.41S 178°.70W 33 km M = 4.4

± 2.5 0.22 0.39 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	02	44	56.3		1.9	100	4.82	207		4.5	
WTZ	eP	02	45	05.5		-1.5	100	5.76	216		4.3	4.3
	eS		46	10		0.8	100					
GNZ	eP	02	45	08.0		-0.4	100	5.86	206		4.3	4.2
	S		46	14.0		2.3	100					
KRP	eP	02	45	19.5		2.3	100	6.51	225		4.7	
TRZ	eS	02	46	43		1.2	100	7.11	209			4.4
	e			45.5								
MNG	eP	02	45	43		-2.4	100	8.57	211		3.9	4.2
	S		47	15.3		-1.5	100					
WEL	eS	02	47	34		-3.4	99	9.42	212	4.7		
COB	eS	02	47	58		0.5	100	10.26	219			4.4

AMPLITUDES:	ECZ	0.3	WTZ	0.6	0.6	GNZ	0.5	0.6
	KRP	0.3	TRZ		0.3	MNG	0.2	0.5
	WEL	0.2	COB		0.5			

78/ 071

FEB 12 $05^h21^m37^s.8$ 33°.84S 178°.49W 33 km M = 4.3

± 3.2 0.27 0.47 R S.E. of RES. 2.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	eP	05	22	58.0		1.1	100	5.53	220		4.3	4.3
	S		23	59.0		2.3	100					
GNZ	eP	05	22	57.7		0.4	100	5.56	209		4.5	4.2
	i		23	00.0								
	S		24	01		3.5	99					
KRP	eP	05	23	09		1.1	100	6.34	228		4.7	
TRZ	eS	05	24	29		0.9	100	6.84	212			4.2
MNG	eP	05	23	32		-2.7	100	8.31	214		3.9	4.0
	e			49								
	S		25	01.0		-2.3	100					
WEL	eS	05	25	21		-3.0	99	9.16	214	4.8		
COB	eS	05	25	44		-1.3	100	10.05	221			4.2

AMPLITUDES:	WTZ	0.6	0.6	GNZ	0.8	0.7	KRP	0.3
	TRZ		0.2	MNG	0.2	0.3	WEL	0.3
	COB		0.3					

78/ 072

FEB 12 $11^h27^m49^s.8$ 37°.68S 176°.46E 216 km M = 3.8

± 1.6 0.08 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	eP	11	28	17.7		-1.3	100	0.52	126		3.2	
KRP	P	11	28	19.9		-0.1	100	0.76	251		2.5*	
	S			42.7		-0.8	100					
GNZ	P	11	28	26.0		0.2	100	1.57	128		3.8	3.6
	S			51.6		-1.9	100					
CNZ	P	11	28	27.8		1.0	100	1.67	205			
GSZ	P	11	28	29.2		1.9	100	1.74	203			
TRZ	eP	11	28	29.3		0.5	100	1.89	171		3.8	3.8
	S		29	02.2		3.3	97					
TNZ	eP	11	28	34.0		1.9	100	2.22	227		3.2*	
MNG	iP	11	28	41.0		-0.1	100	3.03	194		4.5	3.8
	eS		29	20.0		-0.9	100					
WEL	eP	11	28	49		-1.6	100	3.83	199	3.9		
	eS		29	37		-0.9	100					
COB	eS	11	29	50.5		-1.3	100	4.46	219			2.8*

AMPLITUDES:	WTZ	0.4	KRP	0.3	GNZ	1.0	1.0
	TRZ	0.3	0.6	TNZ	0.2	MNG	5.9	1.4
	WEL	0.2	COB		0.3			

78/ 073

FEB 13 $05^h12^m54^s.3$ 32°.59S 177°.54W 270 km M = 4.6

± 2.0 0.10 0.24 30 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	e(P)	05	14	31		7.3		6.02	211		4.6	
GBZ	eP	05	14	34		0.5	100	6.81	236			
WTZ	eP	05	14	33.5		-2.4	99	7.00	218		4.5	4.6
	eS		15	56		0.5	100					
GNZ	eP	05	14	36.5		0.1	100	7.04	210		4.7	4.8

	e			58									
	S		15	55.8		-0.6	100						
KRP	eP	05	14	48		2.5	99	7.78	225		3.0*		
CRZ	eP	05	14	52		-1.2	100	8.38	255		3.7*		
MNG	eP	05	15	11		0.3	100	9.78	213		4.2	4.4	
	e			17									
	S		16	58.0		-0.0	100						
WEL	eS	05	17	16		-1.5	100	10.64	213	4.9			
COB	eS	05	17	38		0.7	100	11.52	220			3.2*	

AMPLITUDES: ECZ 0.3 WTZ 0.4 0.6 GNZ 0.7 1.6
KRP 0.2 CRZ 0.3 MNG 0.3 0.6
WEL 0.2 COB 0.3

78/ 074

FEB 13 $09^h35^m17^s.3$ $38°.89S$ $176°.29E$ 12 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
CNZ	Pg	09	35	31.0		0.3	100	0.66	242			
GSZ	iPg	09	35	31.0		0.0	100	0.67	235			
TRZ	Pg	09	35	33.0		-0.2	100	0.78	148		3.2	3.5
	eSg			46.0		2.2	98					
WTZ	Pg	09	35	38.2		-0.6	100	1.06	31		3.2	3.8
	Sg			54.2		1.0	100					
KRP	Pg	09	35	39.7		-0.6	100	1.13	328		3.6	3.3
	Sg			56.0		0.4	100					
GNZ	eP*	09	35	42.0		0.0	100	1.38	80		3.3	3.2
	e			51.8								
	e			54.0								
	S*			58.5		-1.8	99					
MNG	Pn	09	35	47.0		-0.8	100	1.84	200		3.7	3.8
	iP*			50.0		0.2	100					
	iPg			54.8		0.4	100					
	eSn		36	09		-1.7	99					
WEL	eP*	09	36	05		1.1		2.66	206	3.8		
	e(Sn)			33.5		2.9						
GBZ	Pn	09	36	01.2		0.9	100	2.74	346			
COB	ePn	09	36	08		-2.6		3.50	230		3.7	3.7
	e			46								

AMPLITUDES: TRZ 1.0 2.5 WTZ 1.3 4.3 KRP 1.7 0.7
GNZ 0.8 0.9 MNG 2.6 3.7 WEL 0.3
COB 0.2 0.7

78/ 075

FEB 14 $14^h58^m25^s.1$ $43°.65S$ $168°.83E$ 12 km M = 4.0
± 0.5 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
GSP	Pg	14	58	45.5		0.3	100	0.99	120			
	Sg			59.5		0.9	100					
MJZ	Pg	14	58	49.2		-0.9	100	1.23	106			
	Sg		59	06.5		-0.3	100					
ROX	P*	14	58	58.8		0.8	100	1.86	169		4.0	4.0
	iPg		59	02.5		-0.2	100					
	S*			22.5		-0.0	100					
OMZ	Pn	14	59	01.0		2.2		2.07	134			
KAI	e	14	59	20				2.20	60	3.9		
	eSg			39		-0.3	100					
MNW	ePn	14	59	04.0		2.0	98	2.29	202		4.2	3.9

	ePg			12.0		0.4	100				
	eS*			33.5		-2.2	97				
COB	Pn	14	59	23.3		-0.1	100	3.87	50	4.3	3.7
	eP*			32.0		-0.3	100				
	e	15	00	30							
	e			40							
MNG	Pn	14	59	54.0		4.2		5.80	61	4.3	

AMPLITUDES: ROX 1.6 4.5 KAI 0.7 MNW 2.5 3.0
COB 0.8 0.7 MNG 1.0

78/ 076

FEB 14 $22^h51^m07^s.5$ 33°.34S 178°.80W 33 km M = 4.4
± 1.8 0.16 0.26 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	22	52	18.5		1.2	100	4.86	206		4.7	
	e		53	17								
	e			22								
WTZ	P	22	52	29.0		-0.8	100	5.77	215		4.4	4.5
	eS		53	32.5		0.4	100					
	e			37								
GNZ	eP	22	52	30.8		-0.6	100	5.89	205		4.5	4.3
	S		53	36.5		1.5	100					
KRP	eP	22	52	41		1.2	100	6.50	224		4.7	
	e			52								
MNG	eP	22	53	07		-1.3	100	8.59	211		4.1	4.5
	eS		54	37.7		-2.1	99					
COB	eS	22	55	20		-0.2	100	10.27	219			4.3

AMPLITUDES: ECZ 0.4 WTZ 0.7 0.9 GNZ 0.7 0.8
KRP 0.3 MNG 0.3 1.0 COB 0.4

78/ 077

FEB 15 $04^h36^m16^s.6$ 36°.50S 177°.26E 33 km M = 3.9
± 0.6 0.03 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
GBZ	P*	04	36	44		1.0	99	1.47	281			
	eS*		37	02		-0.5	100					
WTZ	P*	04	36	43.0		-0.5	100	1.50	188		3.6	3.9
	i		37	01.2								
	iS*			04.4		0.9	100					
ECZ	P*	04	36	45.3		0.5	100	1.57	140		4.1	
KRP	eP*	04	36	51.2		-0.4	100	1.98	224		3.7	
	S*		37	17.6		-0.2	100					
GNZ	P*	04	36	54.8		-1.0	99	2.22	164		4.2	4.0
	S*		37	24.8		-0.3	100					
ONE	e	04	37	20				2.46	286			
	e(S*)			38		6.0						
CNZ	eP*	04	37	11.0		1.7		3.01	206			
MNG	e	04	37	24.5				4.35	198		3.8	
	e(P*)			27.8		-4.1						

AMPLITUDES: WTZ 0.8 1.1 ECZ 0.7 KRP 0.4
GNZ 1.6 1.3 MNG 0.3

78/ 078

FEB 15 $05^h31^m51^s.2$ 35°.55S 179°.05E 227 km M = 4.3
± 1.4 0.08 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	eP	05	32	34.0		0.1	100	2.18	191		4.0	
	e		33	00.8								
	eS			07		0.2	100					
WTZ	P	05	32	41.9		-0.1	100	2.94	214		4.9	4.6
	S		33	20.2		-1.3	100					
GBZ	P	05	32	41.3		-1.1	100	2.98	256			
GNZ	eP	05	32	44.0		-1.0	100	3.19	195		4.1	
	S		33	26.5		-0.2	100					
KRP	P	05	32	52.8		2.0	99	3.69	229		3.6*	
TRZ	eP	05	32	59.0		-0.1	100	4.37	203		4.2	4.3
	eS		33	54		2.1	99					
CNZ	P	05	33	04.0		2.2	99	4.59	216			
MNG	eP	05	33	15		-2.0	99	5.80	208		4.0	4.5
	eS		34	23		-0.7	100					
WEL	eS	05	34	42		-1.2	100	6.64	209	4.5		
COB	eS	05	35	02		0.6	100	7.43	220			3.2*

AMPLITUDES:								
ECZ	0.4	WTZ	4.5	2.7	GBZ	2.7		
GNZ	0.7	KRP	1.5		TRZ	0.2	0.6	
MNG	0.6	2.5	WEL	0.2	COB	0.5		

78/ 079

FEB 15 $06^h29^m17^s.9$ 36°.20S 177°.50E 12 km M = 4.6

± 1.5 0.09 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
GBZ	eP*	06	29	45.5		-1.4	100	1.64	269			
	e			50.5								
ECZ	P*	06	29	49.0		0.7	100	1.71	151		4.9	
	i			57.5								
	e		30	20.5								
WTZ	Pn	06	29	45.9		-2.5	99	1.83	193		4.3	
KRP	Pn	06	29	54.4		-0.8	100	2.33	222		4.8	
	i		30	07.0								
	iS*			32.8		3.3						
GNZ	Pn	06	29	57.2		0.0	100	2.47	170		5.1	
	i		30	19.0								
	iSn			24.2		-2.6	99					
	i			28								
ONE	ePn	06	29	59		0.4	100	2.58	279			
	e		30	22.8								
CNZ	Pn	06	30	12.5		3.0	99	3.37	207			
	i			14.0								
TRZ	ePn	06	30	10.0		0.3	100	3.39	189		4.8	
	e			22.0								
GSZ	Pn	06	30	14.2		4.0	97	3.43	206			
CRZ	ePn	06	30	22		-0.4	100	4.32	293		4.4	
MNG	Pn	06	30	27.2		-0.2	100	4.69	199		4.6	4.3
	eSn		31	23		3.0						
WEL	eSn	06	31	40		0.3	100	5.52	202	4.6		
COB	ePn	06	30	47.0		-0.3	100	6.15	216		4.7	

AMPLITUDES:								
ECZ	4.0	WTZ	3.3		KRP	2.5		
GNZ	9.5	TRZ	1.0		CRZ	0.3		
MNG	1.6	0.8	WEL	0.2	COB	0.4		

78/ 080

FEB 16 $08^h27^m58^s.1$ 40°.50S 174°.37E 33 km M = 4.1

± 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
WEL	P	08	28	13.0		-0.1	100	0.85	159	4.2		
	S			25.4		1.1	100					
MNG	P	08	28	12.9		-0.4	100	0.85	98			
	S			25.0		0.4	100					
TNZ	P	08	28	20.0		0.4	100	1.31	0		4.1	4.2
	S			37.8		2.2	99					
COB	P	08	28	20.0		-0.4	100	1.38	244		4.2	
	eS			36.5		-0.6	100					
	e			39.5								
GSZ	P	08	28	22.6		-0.1	100	1.54	38			
CNZ	P	08	28	22.5		-0.8	100	1.58	35			
KKY	P	08	28	27.6		-1.2	100	1.99	195			
	e			48.5								
	iS			53.3		1.5	100					
TRZ	eP	08	28	29		-1.4	100	2.11	64		3.3	4.1
	e			32								
	S			56.8		2.1	99					
KRP	P	08	28	37.9		-1.0	100	2.73	20		4.2	4.7
	e			42.8								
	S		29	10.5		0.9	100					
KAI	eS	08	29	14		-2.3		3.01	227	3.9		
WTZ	eP	08	28	49		3.2		3.23	40		4.1	4.6
	eS		29	18		-3.7						
GNZ	e	08	29	06				3.37	58		3.9	4.4
	i			18.5								
	S			22.0		-3.3	95					
GSP	e(P)	08	29	13.1		5.1		4.86	220			
	eS		30	00.5		-0.3	100					
MSZ	eP	08	29	28		-0.1		6.34	227		3.9	3.8
	eS		30	32		-4.2						

AMPLITUDES: WEL 9.4 TNZ 2.6 4.0 COB 4.5
TRZ 0.2 1.6 KRP 1.0 2.4 KAI 0.4
WTZ 0.4 0.8 GNZ 0.6 3.0 MSZ 0.3 0.4

FELT: Wellington (68) MM IV, Waikawa Beach (65) MM III

78/ 081

FEB 16 $09^h35^m45^s.4$ 37°.72S 176°.39E 12 km M = 3.1
± 0.7 0.06 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	Pg	09	35	55.7		-0.9	100	0.54	119		3.1	3.0
	e		36	02.8								
	Sg			03.5		-0.5	100					
WIZ	eSg	09	36	08.2		0.1	100	0.67	73			
KRP	Pg	09	35	59.0		-0.8	100	0.70	253		3.0	3.4
	Sg		36	09.8		0.4	100					
GNZ	ePg	09	36	19.0		1.5	99	1.58	126		3.3	
ECZ	e	09	36	35.0				1.71	90			

AMPLITUDES: WTZ 2.6 1.7 KRP 1.7 4.2 GNZ 0.4

FELT: Te Puke (26)

78/ 082

FEB 16 $11^h31^m00^s.1$ 41°.64S 174°.11E 12 km M = 4.0
± 0.5 0.04 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
WEL	P*	11	31	13.0		1.4	100	0.60	55	4.2		
	S*			20.8		0.8	100					

KKY	e	11	31	21.5			0.85	202				
	S*			25.1	-1.9	100						
	i			42.3								
	i			46.3								
COB	P*	11	31	22.2	0.9	100	1.17	297		4.2		
	eS*			36.3	-0.6	100						
MNG	Pn	11	31	23.5	-1.9	100	1.45	46		4.0	4.4	
	S*			42.6	-2.7	99						
KAI	eSn	11	32	04	1.7		2.20	245	3.5			
TNZ	ePn	11	31	39.0	-0.1	100	2.46	5		3.9	4.1	
	eSn		32	07.0	-1.5	100						
GSZ	ePn	11	31	43.0	1.7	100	2.61	26				
	eP*			47.5	1.6	100						
CNZ	ePn	11	31	42.5	0.4	100	2.67	25				
	iP*			45.5	-1.4	100						
TRZ	eP*	11	31	53	1.7	100	2.93	46		3.6	3.6	
	eS*		32	28.8	-0.9							
	e			38.3								
GSP	P*	11	32	10.2	2.2	99	3.91	229				
	eS*			58.5	-0.4	100						
MSZ	ePn	11	32	26.2	6.2		5.45	234		3.9		

AMPLITUDES: WEL 17 COB 7.3 MNG 9.5 26
KAI 0.3 TNZ 0.4 0.9 TRZ 0.2 0.3
MSZ 0.4

78/ 083

FEB 16 $21^h48^m38^s.4$ 39°.92S 176°.12E 33 km M = 4.4
± 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
TRZ	P*	21	48	50.6		-0.7	100	0.66	56			
GSZ	P*	21	48	52.8		-0.3	100	0.76	327			
	S*		49	04.0		0.2	100					
CNZ	P*	21	48	53.8		-0.6	100	0.85	328			
	eS*		49	05.0		-1.1	100					
MNG	P*	21	48	54.1		-0.4	100	0.85	215		4.1	
	S*		49	04.5		-1.9	99					
WNZ	ePn	21	48	59.8		0.3	100	1.29	359		4.9	4.9
	iP*		49	04.5		2.7						
	eS*			22		2.9						
TNZ	Pn	21	49	03.7		0.8	100	1.53	298		4.3	4.7
	eP*			09.0		3.1	93					
	S*			25.5		-0.8	100					
	e			28.7								
WEL	Pn	21	49	05.0		-0.3	100	1.71	217	4.3		
	i			14.2								
	Sn			26.2		0.7	100					
GNZ	ePn	21	49	10.3		1.7	99	1.95	50		3.4	4.1
	i			19.0								
	Sn			31.5		0.2	100					
KRP	Pn	21	49	09.0		-0.8	100	2.04	347		4.9	
	iP*			16.8		2.2	99					
	iSn			33.5		0.0	100					
	i(S*)			37.5		-4.0						
WTZ	Pn	21	49	08.6		-1.3	100	2.05	20		4.0	4.5
	iP*			16.6		2.0						
	Sn			32.4		-1.2	100					
	eS*			40.0		-1.7						
COB	Pn	21	49	20.8		0.1	100	2.83	245		4.3	4.1

	i(P*)			32.5		4.5							
	eSn			55		2.5							
KAI	eSn	21	50	29		-1.3		4.41	232	4.6			
MJZ	ePn	21	50	03.2		1.3		5.86	224				
	Sn		51	02.2		-2.9							

AMPLITUDES: MNG 35 WNZ 2.6 3.5 TNZ 2.6 9.7
WEL 2.6 GNZ 0.6 4.0 KRP 8.3
WTZ 2.6 6.8 COB 1.3 3.2 KAI 0.8

FELT: Moawhango (58). Ongaonga (59) MM IV, Palmerston North (62) MM III

78/ 084

FEB 17 $10^h24^m14^s.1$ 38°.03S 176°.10E 12 km M = 3.5
± 0.5 0.03 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
KRP	iP*	10	24	23.8	UE	0.7	100	0.46	283		3.1	3.0
	eS*			30		0.6	100					
	e			37.5								
WNZ	P*	10	24	24.0		-1.5	100	0.60	180		3.8	3.4
	e			53								
WTZ	eP*	10	24	26		-1.3	100	0.70	87		3.2	
	iPg			27.0		-1.5	100					
TUA								1.13	134		3.5	3.4
NGZ	eP*	10	24	34.2		-1.8	99	1.21	198			
	eSg			54		-1.2	100					
TRZ	ePn	10	24	41.5		-0.3	100	1.63	160		3.6	3.3
	e		25	20.5								
GNZ	ePn	10	24	43		1.1	100	1.64	113		3.8	3.3
	ePg			46		-1.2	100					
	eSg		25	12		2.8	98					
TNZ	ePn	10	24	45		1.1	100	1.77	229		3.9	
GBZ	Sg-P*			29		-1.1	100	1.87	345			
MNG	ePn	10	24	56		0.5	100	2.64	190		3.9	3.5
	eP*		25	02		1.8	99					
	eSg			43		0.2	100					
ONE								2.65	328	3.8		

AMPLITUDES: KRP 7.0 4.7 WNZ 1.0 0.6 WTZ 2.0
TUA 0.5 0.4 TRZ 0.3 0.2 GNZ 1.1 0.5
TNZ 0.4 GBZ 0.8 1.0 MNG 0.7 0.3
ONE 0.3

FELT: Rotorua (33)

78/ 085

FEB 17 $20^h43^m06^s.1$ 38°.35S 175°.96E 166 km M = 3.5
± 2.0 0.07 0.08 13 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	iP	20	43	29.7	U	0.1	100	0.54	322		2.9*	2.3*
	eS			48.5		0.8	100					
NGZ	P	20	43	33.2		1.7	99	0.87	198			
WTZ	eS	20	43	48.5		-2.9	97	0.89	66			3.1
TUA	S-P			21		0.4	100	1.03	116		3.5	3.6
GNZ	eS	20	44	05		1.3	100	1.65	101			3.5
MNG	P	20	43	45.7		-0.3	100	2.29	189		3.4	3.9
	eS		44	16		-0.7	100					
WEL	e?	20	44	04				3.07	197	3.8		
	eS			34		0.3	100					

COB	eS	20	44	47		-0.9	100	3.70	221			2.9*

AMPLITUDES: KRP 1.0 0.3 WTZ 0.5 TUA 0.4 0.5
GNZ 1.0 MNG 0.7 3.3 WEL 0.2
COB 0.5

78/ 086

FEB 18 $04^h20^m07^s.7$ 37°.16S 179°.91W 12 km M = 4.5
± 0.9 0.06 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
ECZ	Pn	04	20	32.9		1.4	100	1.34	246		4.5	4.5
	e			38.9								
	e			43.7								
	eSg			54		1.0	100					
GNZ	Pn	04	20	43.8		0.5	100	2.20	227		4.4	4.7
	e			58.2								
	eSn		21	12		1.9	99					
WIZ	ePn	04	20	44		-1.2	100	2.34	260			
	eSn		21	13		-0.3	100					
WTZ	Pn	04	20	48.7		0.0	100	2.60	251		4.4	4.8
	ePg		21	00		-0.2	100					
	Sn			19.0		-0.5	100					
TUA	Sn-Pn			34		0.6	100	2.84	234		4.3	4.7
TRZ	Pn	04	21	00.8		-0.3	100	3.51	226		4.2	4.8
	eP*			10		1.2	100					
	e			34								
	eSn			43		1.6	100					
KRP	Pn	04	21	03.7		0.0	100	3.70	257		4.4	4.4
	eP*			10		-2.0	99					
	e			28								
	eSn			45		-1.0	100					
NGZ	ePn	04	21	09.5		0.8	100	4.07	239			
	eSn			54		-0.8	100					
TNZ	ePn	04	21	23		2.4	99	4.93	244		4.8	4.8
	eSn		22	17		1.3	100					
MNG	ePn	04	21	19		-2.3	99	4.99	225		4.4	4.5
	eSn		22	15		-1.9	99					
WEL	eSn	04	22	35		-2.3	99	5.84	223	4.5		
CIZ	ePn	04	21	54		1.8	100	7.25	160			
	eSn		23	10		-1.3	100					

AMPLITUDES: ECZ 3.3 5.0 GNZ 4.5 14 WTZ 3.8 9.0
TUA 0.8 2.3 TRZ 0.5 2.9 KRP 1.0 0.7
TNZ 0.3 0.3 MNG 2.0 3.2 WEL 0.4
CIZ 1.3 4.5

78/ 087

FEB 18 $09^h57^m10^s.2$ 33°.03S 177°.60W 33 km M = 5.0
± 1.6 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
ECZ	eP	09	58	33		2.6	99	5.62	213		5.1	4.9
	e(S)		59	41		9.8						
WIZ	eP	09	58	38		-0.2	100	6.19	222			
	e		59	37								
WTZ	P	09	58	42.0		-2.2	100	6.63	220		5.0	4.7
	e			53.7								
	eS		59	58.5		3.1	99					
GNZ	eP	09	58	44		-0.3	100	6.64	211		4.9	4.7
	eS		59	54		-1.6	100					

TUA	S-P			1 18		1.1	100	7.17	215				
ONE								7.19	245	5.7			
KRP	eP	09	58	56		0.9	100	7.43	227		5.3		
TRZ	eP	09	59	01.5		-0.3	100	7.92	213		4.7	4.8	
	eS	10	00	27		0.6	100						
CRZ	eP	09	59	08		2.1	100	8.23	258		5.4		
NGZ	eP	09	59	06		-0.2	100	8.24	220				
	eS	10	00	34		-0.1	100						
MNG	eP	09	59	19		-2.8	99	9.39	214		4.5	4.8	
	eS	10	00	59		-2.8	99						
WEL	e(S)	10	01	14		-8.4		10.25	214	4.9			
CIZ	e	09	59	49				10.94	176				
	eS	10	01	41		1.8	100						

AMPLITUDES:											
ECZ		0.8	0.7	WTZ	2.5	1.1	GNZ		1.4	1.4	
ONE	0.5			KRP	1.0		TRZ		0.3	0.6	
CRZ		0.3		MNG	0.7	1.6	WEL	0.3			
CIZ		0.3	0.7								

78/ 088

FEB 18 $11^h13^m25^s.6$ 33°.08S 177°.79W 33 km M = 4.7
± 1.8 0.10 0.13 R S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	11	14	47		2.8	99	5.50	212		4.8	4.7
	e(S)		15	52		8.3						
WTZ	P	11	14	57.2		-0.6	100	6.50	220		4.5	4.5
	eS		16	09		1.4	100					
GNZ	P	11	14	59.8		1.7	100	6.52	210		4.4	4.5
	e		15	04								
	eS		16	08		-0.2	100					
ONE								7.03	245	5.4		
TUA	S-P		1	19		3.4	99	7.05	214		4.9	4.7
KRP	P	11	15	10.3		1.7	100	7.29	226		4.9	5.0
	eS		16	27		0.4	100					
TRZ	eP	11	15	15		-0.5	100	7.79	212			4.5
	eS		16	37		-1.9	100					
NGZ	eP	11	15	20		0.2	100	8.11	219			
	eS		16	46		-0.3	100					
MNG	eP	11	15	33		-2.5	99	9.27	214		4.3	4.4
	eS		17	11		-3.1	99					
WEL	e(S)	11	17	28		-6.8		10.13	214	4.8		
CIZ	e	11	16	08				10.92	175			
	eS		17	54		0.2	100					

AMPLITUDES:											
ECZ		0.4	0.4	WTZ	0.8	0.7	GNZ		0.5	0.9	
ONE	0.3			TUA	0.5	0.4	KRP		0.4	0.3	
TRZ			0.3	MNG	0.4	0.7	WEL	0.2			
CIZ			0.6								

78/ 089

FEB 18 $12^h16^m46^s.6$ 33°.29S 178°.06W 33 km M = 4.7
± 2.1 0.10 0.16 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	12	18	04		2.9	99	5.19	211		4.6	4.5
	e(S)		19	05		7.6						
WTZ	P	12	18	11.8		-2.7	99	6.18	219		4.5	4.4
	eS		19	21		-0.1	100					
GNZ	P	12	18	14.0		-1.0	100	6.22	210		4.6	4.5
	e			45								

	eS		19	20.5		-1.4	100						
TUA	S-P		1	14		1.7	100	6.73	214				
ONE								6.73	246	5.5			
TUA								6.73	214		4.9	4.7	
KRP	eP	12	18	24		-1.3	100	6.97	227		5.1		
TRZ	e(P)	12	18	39		6.6		7.49	212			4.5	
	eS		19	53		0.4	100						
NGZ	eP	12	18	34		-2.5	100	7.79	219				
	e			51									
CRZ	eP	12	18	39		2.5	100	7.79	259		5.3		
MNG	eP	12	18	55		2.6	100	8.95	213		4.2	4.4	
	e(S)		20	22		-5.8							
WEL	e(S)	12	20	41		-7.4		9.82	214	4.8			
CIZ	eS	12	21	11		0.9	100	10.72	174				

AMPLITUDES:										
ECZ		0.3	0.3	WTZ		0.9	0.6	GNZ	0.9	1.0
ONE	0.4			TUA		0.6	0.4	KRP	0.6	
TRZ			0.3	CRZ		0.3		MNG	0.4	0.7
WEL	0.2			CIZ			0.3			

78/ 090

FEB 18 $17^h20^m07^s.5$ 33°.14S 177°.76W 33 km M = 5.0

± 1.6 0.08 0.13 R S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	17	21	24		-1.5	100	5.45	212		4.9	5.0
	eS		22	27		2.4	100					
WTZ	P	17	21	37.8		-1.4	100	6.46	220		4.9	5.0
	e			41								
	eS		22	50		1.4	100					
GNZ	eP	17	21	41		1.6	100	6.48	211		5.0	5.0
	e			57								
	eS		22	51		2.0	100					
TUA	S-P		1	15		-0.1	100	7.00	215		5.0	5.1
ONE								7.02	246	5.7		
KRP	eP	17	21	50		-0.1	100	7.26	227		5.3	
	e		22	02.5								
	e		23	23								
TRZ	eP	17	21	57		0.1	100	7.76	213		4.6	4.9
	eS		23	21		1.2	100					
CRZ	eP	17	22	03		1.9	100	8.06	258		5.5	
	e			23								
NGZ	eP	17	22	02		0.8	100	8.07	220			
	eS		23	27		-0.3	100					
TNZ	e	17	22	25.5				8.77	224			5.5
MNG	eP	17	22	14		-2.9	99	9.22	214		5.0	4.3
	eS		23	54		-1.1	100					
WEL	eS	17	24	11		-4.7	95	10.08	214	4.9		
CIZ	e	17	22	47				10.85	175			
	eS		24	35		0.9	100					

AMPLITUDES:										
ECZ		0.6	0.8	WTZ		2.0	2.2	GNZ	2.1	3.1
TUA		0.7	0.9	ONE	0.6			KRP	1.1	
TRZ		0.3	0.7	CRZ		0.4		TNZ		0.3
MNG		2.0	0.5	WEL	0.3			CIZ	0.4	1.0

78/ 091

FEB 18 $18^h15^m09^s.9$ 33°.16S 177°.87W 33 km M = 4.7

± 1.8 0.09 0.14 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	18	16	30		3.0	99	5.39	212		4.8	4.7
	e(S)		17	38		12.6						
WTZ	P	18	16	39.9		-0.7	100	6.38	220		4.7	4.5
	eS		17	51		1.7	100					
GNZ	P	18	16	41.8		0.9	100	6.41	210		4.7	4.5
	eS		17	50		0.1	100					
TUA	S-P		1	16		1.6	100	6.93	214			
ONE								6.93	246	5.4		
TUA								6.93	214		5.0	4.9
KRP	P	18	16	51.7		0.3	100	7.17	227		5.0	
TRZ	eP	18	16	58		-0.3	100	7.69	212		4.6	4.5
	e		17	18.7								
	eS		18	20		-0.6	100					
CRZ	eP	18	17	03		0.7	100	7.97	258		5.3	
NGZ	eP	18	17	04		1.4	100	7.99	219			
	eS		18	29		1.0	100					
MNG	eP	18	17	14		-4.4	97	9.15	214		4.1	4.4
	eS		18	52		-3.8	99					
WEL	e(S)	18	19	04		-12.5		10.01	214		4.4	4.3
CIZ	e	18	17	50				10.84	175			
	eS		19	37		0.8	100					

AMPLITUDES:									
ECZ	0.4	0.5	WTZ	1.3	0.7	GNZ	0.9	0.9
ONE	0.3		TUA	0.7	0.6	KRP	0.5	
TRZ	0.3	0.3	CRZ	0.3		MNG	0.3	0.7
WEL	0.2	0.3	CIZ	0.3	0.4			

78/ 092

FEB 18 $19^h55^m45^s.8$ 34°.02S 176°.83W 33 km M = 4.6

± 2.3 0.31 0.43 R S.E. of RES. 2.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	19	57	03		1.9	100	5.26	224		4.6	4.5
	e(S)		58	14		16.0						
GNZ	eP	19	57	16		1.8	100	6.22	220		4.4	4.4
	eS		58	25		3.9	99					
WTZ	eP	19	57	15.5		-1.1	100	6.39	230		4.4	4.4
	eS		58	24		-1.3	100					
TUA	S-P		1	15		1.8	100	6.81	224		4.8	4.7
KRP	P	19	57	29.8		0.5	100	7.32	236		4.8	
ONE								7.45	254	5.3		
NGZ	eP	19	57	39		0.8	100	7.97	227			
	eS		59	04		0.6	100					
MNG	eP	19	57	50		-2.2	100	9.00	221		4.1	4.4
	eS		59	26		-2.0	100					
WEL	eS	19	59	45.5		-3.0	99	9.85	220	4.8		

AMPLITUDES:									
ECZ	0.3	0.3	GNZ	0.5	0.8	WTZ	0.7	0.6
TUA	0.4	0.4	KRP	0.4		ONE	0.3	
MNG	0.3	0.8	WEL	0.2				

78/ 093

FEB 19 $07^h40^m24^s.9$ 40°.91S 173°.62E 133 km M = 4.1

± 0.8 0.04 0.05 8 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	P	07	40	47.3		1.7	100	0.69	255		3.6*	3.4*
	e			49.3								
	eS		41	01		-0.5	100					

WEL	P	07	40	49.5		1.8	100	0.94	114	4.2		
	eS		41	03.8		-1.4	100					
MNG	iP	07	40	54.0	U	1.1	100	1.45	79		4.0	3.9
	eS		41	13.2		-1.1	100					
TNZ	iP	07	40	59.2	D	2.0	99	1.82	19		3.7*	4.0*
	eS		41	20		-1.7	100					
CAZ	eS	07	41	26		1.0	100	1.98	91			
NGZ	eP	07	41	04		0.7	100	2.30	42			
	eS			33		0.6	100					
KAI	eS	07	41	33		0.5	100	2.31	225	3.6*		
TRZ	eS	07	41	45		1.1	100	2.81	62			3.7
KRP	P	07	41	18.0		1.1	100	3.33	27		2.9*	3.1*
	e			51.5								
	eS			55		-1.4	100					
TUA								3.44	53			4.2
WTZ	e(S)	07	42	18.5		8.2		3.91	43			4.0
GNZ	e	07	42	07				4.09	58			4.3
	eS			11		-3.2	98					
GSP	e	07	41	40				4.18	218			
	eS		42	15.5		-1.1	100					
MSZ	S	07	42	50.2		-1.4	100	5.63	226			3.0*

AMPLITUDES:								
COB	2.0	4.5	WEL	4.0		MNG	6.9	7.5
TNZ	0.8	2.3	KAI	0.7		TRZ		0.4
KRP	0.4	0.7	TUA		0.4	WTZ		0.5
GNZ		1.5	MSZ		0.5			

78/ 094

FEB 19 $23^h30^m46^s.9$ 39°.09S 176°.21E 33 km M = 4.1

± 0.3 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
WNZ	iPn	23	30	57.3		0.5	100	0.47	349		3.6	3.7
	eSn		31	04.5		0.5	100					
NGZ	iPn	23	30	57.9	U	1.0	100	0.48	259			
TRZ	iPn	23	31	00.7	D	1.3	100	0.66	135			
TUA								0.78	69		3.6	3.9
WTZ	iPn	23	31	06.3	D	-1.3	100	1.26	29		3.6	4.2
	e			18								
	Sn			22.8		-0.3	100					
KRP	iPn	23	31	07.1	DSE	-0.8	100	1.28	335		4.8	4.3
	Sn			23.7		0.1	100					
TNZ	Pn	23	31	10.3		0.4	100	1.43	266		4.0	4.3
	e			16								
	eS*			31		-0.7	100					
	e			47								
GNZ	Pn	23	31	12.0		1.4	100	1.48	73		3.8	3.9
	e			21.5								
	Sn			28.7		0.3	100					
	e(S*)			39		5.7						
MNG	iPn	23	31	11.1	D	-1.5	100	1.63	200		4.4	4.3
	P*			12.8		-3.2	97					
	eSn			34.5		2.6	99					
CAZ	ePn	23	31	14		-1.1	100	1.81	180			
	eP*			20		0.9	100					
	e			31								
	eSn			37		0.6	100					
ECZ	ePn	23	31	21		-0.9	100	2.30	53		4.0	4.0
	e		32	08								
WEL	ePn	23	31	24		0.0	100	2.46	206	4.2		

	e			36									
	eSn			50		-1.9	99						
	eS*		32	01		-1.3	100						
COB	Pn	23	31	36.3		0.4	100	3.33	232		4.5	4.3	
	e			38.0									
	eSn		32	16		3.1	97						

AMPLITUDES:

WNZ	1.1	2.0	TUA	2.1	4.2	WTZ	2.5	8.0
KRP	18	4.7	TNZ	0.8	1.8	GNZ	2.1	4.6
MNG	16	17	ECZ	0.4	0.5	WEL	1.0	
COB	1.5	3.2						

78/ 095

FEB 21 $01^h25^m54^s.4$ 36°.53S 177°.64E 12 km M = 4.8

± 0.8 0.04 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
WIZ	eP*	01	26	14		0.4	100	1.06	200			
	eS*			28		0.2	100					
ECZ	P*	01	26	17.2		-1.7	100	1.37	148		4.9	
	ePg			21		-1.1	100					
WTZ	iP*	01	26	20		-1.8	99	1.54	199		4.7	4.7
	e			55.5								
GNZ	iPn	01	26	29.7	U	0.7	100	2.13	172		5.0	5.0
	e(Sn)			50		-5.0						
	eS*		27	00		0.0	100					
KRP	iPn	01	26	30.1	USW	0.5	100	2.18	230		5.2	
	ePg			36.8		-1.6	100					
WNZ	ePg	01	26	43		-0.4	100	2.43	210		4.6	4.5
	eS*		27	07.5		-1.3	100					
ONE								2.75	285	5.0		
TRZ	ePn	01	26	42.5		0.5	100	3.09	192		4.8	
	e		27	05								
TNZ	ePn	01	26	51		0.6	100	3.70	223		5.3	
MNG	Pn	01	27	00.0		-0.2	100	4.42	202		4.8	4.7
	e		28	01								
CAZ	ePn	01	27	05		3.6	92	4.51	194			
	e		28	00								
CRZ	ePn	01	27	03		0.9	100	4.55	296		4.5	4.7
	eSn			52		-1.2	100					
	e(Sg)		28	37		9.1						
WEL	e	01	27	16				5.26	204	4.6		
	eSn		28	12		2.0	99					

AMPLITUDES:

ECZ	8.0		WTZ	14	12	GNZ	13	19
KRP	9.5		WNZ	0.3	0.3	ONE	2.5	
TRZ	2.0		TNZ	0.8		MNG	3.9	4.4
CRZ	0.3	0.4	WEL	0.4				

78/ 096

FEB 21 $23^h38^m08^s.4$ 45°.50S 169°.49E 12 km M = 3.8

± 0.4 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
ROX	iPg!	23	38	10.8		-0.9	100	0.12	281			
OMZ	iP*!	23	38	27.9		-0.4	100	1.10	67			
MSZ	ePn	23	38	32.9		0.0	100	1.39	306		4.0	3.9
	eSn			52		0.8	100					
GSP	iPn	23	38	32.5	U	-0.8	100	1.41	16			
	eSg			55		-1.3	100					
MJZ	ePn	23	38	37		0.3	100	1.66	25			

	eSn			59		1.2	100				
OBZ	ePn	23	38	36.5		-0.7	100	1.70	214		
	eSn			59		0.3	100				
KAI	eSg	23	39	59		0.0	100	3.28	26	3.7	
COB	eP*	23	39	37.5		2.5	96	5.00	29		3.6
	eSn		40	17		-1.1	100				

AMPLITUDES: MSZ 6.9 11 KAI 0.2 COB 0.3

78/ 097

FEB 22 $02^h03^m40^s.3$ 43°.14S 170°.46E 12 km M = 4.0
± 0.5 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
MJZ	iP*	02	03	56.3		0.3	100	0.85	180			
	eS*		04	06		-1.4	100					
KAI	iP*	02	03	57.0		-0.3	100	0.93	49			
	eS*		04	08		-1.7	100					
GSP	iP*	02	04	00.0	U	0.7	100	1.04	198			
OMZ	ePn	02	04	14		1.4	100	1.96	171		3.6	3.5
	eSn			37.5		0.7	100					
MSZ	ePg	02	04	29		0.2	100	2.39	229		4.0	4.0
	eS*			53		-0.8	100					
ROX	eP*	02	04	25.7		1.9	99	2.47	199		4.3	4.2
	eSg		05	03		-0.8	100					
COB	iPn	02	04	21.0	U	-1.1	100	2.65	40		4.5	4.1
	P*			28		1.2	100					
	Sn			54.8		1.3	100					
	eS*		05	02		0.4	100					
MNW	e(Pg)	02	04	44		-3.8		3.34	217	3.9		
	eS*		05	19		-3.0	98					
WEL	eSn	02	05	17		-1.5	100	3.70	61	4.0		
OBZ	e(P*)	02	04	55		3.2		4.12	203			
	eSn		05	31		2.3	99					

AMPLITUDES: OMZ 0.6 1.0 MSZ 2.5 5.0 ROX 1.7 3.5
COB 2.4 3.5 MNW 0.4 WEL 0.3

FELT: Evans Creek (98) MM IV

78/ 098

FEB 25 $03^h26^m03^s.2$ 32°.90S 177°.54W 367 km M = 4.8
± 2.1 0.24 0.36 31 S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	03	27	33		0.4	100	5.76	213		4.9	5.0
	eS		28	45		2.3	99					
WTZ	iP	03	27	42.8	D	-1.2	100	6.77	220		5.0	4.9
	eS		29	00		-3.3	98					
GNZ	eP	03	27	46		1.8	100	6.78	211		4.8	4.8
	eS		29	02		-1.6	100					
KRP	eP	03	27	53		-0.3	100	7.56	226		3.2*	
	eS		29	23		3.0	99					
NGZ	P	03	28	02.0		-0.9	100	8.38	220			
	eS		29	36		-1.2	100					
MNG	eP	03	28	16.5		-0.0	100	9.53	214		4.2	4.7
	eS		30	02.5		0.6	100					
WEL	eS	03	30	21		0.6	100	10.39	214	5.1		

AMPLITUDES: ECZ 0.6 0.8 WTZ 1.4 1.3 GNZ 1.0 1.5
KRP 0.3 MNG 0.3 1.4 WEL 0.4

78/ 099

FEB 26 $08^h06^m26^s.8$ 38°.23S 175°.91E 196 km M = 3.7
± 1.1 0.05 0.06 8 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	iP	08	06	53.6	U	0.3	100	0.42	316		2.7*	2.4*
	eS		07	14		0.3	100					
WTZ	P	08	06	56.0		0.5	100	0.88	74		3.4	3.5
	eS		07	17		-0.7	100					
TRZ	eS	08	07	29		2.7	90	1.50	152			3.9
GNZ	eP	08	07	02		-0.4	100	1.71	105		3.5	3.7
	e			03.8								
	eS			29		-0.8	100					
MNG	iP	08	07	10.2	U	0.4	100	2.41	188		3.6	4.1
	eS			42		-1.0	100					
WEL	eS	08	07	59		-0.2	100	3.18	196	3.9		
COB	eP	08	07	27		0.9	100	3.76	220		3.6*	3.0*
	eS		08	11		-0.9	100					

AMPLITUDES: KRP 0.5 0.3 WTZ 0.6 0.8 TRZ 1.2
GNZ 0.5 1.3 MNG 1.0 3.8 WEL 0.2
COB 0.6 0.6

78/ 100

FEB 27 $05^h18^m17^s.0$ 38°.45S 177°.59E 69 km M = 3.8
± 1.2 0.06 0.08 18 S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	iP!	05	18	30.8		1.5	100	0.40	120			
WTZ	P	05	18	32.3		0.4	100	0.67	314		3.3	4.0
	eS			42		-1.0	100					
ECZ	iP	05	18	37.1	D	0.2	100	1.07	45		4.4	3.6
	e			41								
	eS			50		-1.6	100					
TRZ	iP!	05	18	41.9		2.6	99	1.25	208			
	eS			55.5		-0.5	100					
KRP	eP	05	18	46		0.8	100	1.70	287		2.7*	
	e		19	00								
NGZ	iP	05	18	47.8	D	2.5	99	1.71	244			
CAZ	iP	05	18	59.2	D	0.4	100	2.67	203			
	e(S)		19	33.5		3.4						
MNG	P	05	18	56.0		-3.3	98	2.71	216		3.8	3.8
	eS		19	29.5		-1.5	100					
WEL	eS	05	19	52		-0.5	100	3.57	217	4.0		

AMPLITUDES: WTZ 3.0 13 ECZ 6.2 1.0 KRP 0.5
MNG 1.8 2.3 WEL 0.3

78/ 101

FEB 28 $00^h34^m43^s.1$ 41°.77S 171°.85E 12 km M = 3.8
± 0.5 0.04 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
KAI	eP*	00	34	58		-0.4	100	0.83	203	4.1		
	eS*		35	08.3		-1.3	100					
	eSg			09.9		-1.4	100					
COB	iP*	00	34	59.5	D	-1.0	100	0.95	45		4.0	3.7
	eS*		35	12		-1.3	100					
KKY	Pn	00	35	10.0		0.6	100	1.52	116			
	eSn			30		0.9	100					

WEL	eP*	00	35	23		0.4	100	2.25	79	3.6	
	eS*			52		-0.1	100				
MJZ	ePn	00	35	23		1.0	100	2.45	204		
	eSn			51		-0.2	100				
GSP	Pn	00	35	26.0		0.2	100	2.73	209		
	eSn		36	01		3.0	97				
MNG	ePn	00	35	30.5		1.3	100	2.97	69	4.2	3.9
	eP*			35.5		0.4	100				
	eS*		36	11		-2.9	98				
NGZ	ePn	00	35	44		2.6	99	3.86	49		
	e			57							
	e(Sn)		36	30		4.7					
	eSg			54		0.7	100				
MSZ	ePn	00	35	43		-1.4	100	4.09	223	3.8	3.8
	eSn		36	30		-0.7	100				
KRP	(P*)	00	36	02.3		-3.5		4.78	38	3.8	3.7
	eSn			47		-0.2	100				

AMPLITUDES: KAI 6.9 COB 6.2 10 WEL 0.3
MNG 3.3 2.0 MSZ 0.5 1.0 KRP 0.4 0.4

FELT: Granity (79) MM IV

78/ 102

FEB 28 $03^h05^m20^s.8$ 37°.48S 177°.14E 170 km M = 3.8
± 1.2 0.05 0.05 7 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	03	05	43.9	U	-0.7	100	0.52	194		3.5	3.5
	eS		06	02		-1.0	100					
ECZ	eP	03	05	48		-0.7	100	1.13	101		3.6	3.6
	eS		06	10		-0.2	100					
KRP	iP	03	05	51.0	UE	0.3	100	1.35	250		2.8*	2.5*
	eS		06	14		0.3	100					
GNZ	iP	03	05	51.9	USW	1.2	100	1.36	150		3.9	4.0
	eS		06	14		0.2	100					
NGZ	eP	03	06	00.5		2.1	98	2.09	215			
	e			39								
TRZ	eS	03	06	29		1.4	99	2.09	187			4.2
MNG	iP	03	06	13.3	D	-1.3	100	3.39	202		3.7	3.8
	eS			55		-0.9	100					
WEL	eS	03	07	14		-1.0	100	4.23	205	4.2		

AMPLITUDES: WTZ 1.3 1.5 ECZ 0.5 0.5 KRP 0.5 0.3
GNZ 2.0 4.3 TRZ 1.7 MNG 0.8 1.4
WEL 0.3

78/ 103

FEB 28 $14^h17^m22^s.3$ 32°.04S 179°.46W 346 km M = 4.7
± 2.5 0.24 0.64 44 S.E. of RES. 2.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP?	14	18	54		1.6	100	5.89	196			4.7
	eS		20	05		2.0	100					
WTZ	eP	14	18	58		-2.8	99	6.61	205		4.8	4.7
	eS		20	17.5		-0.7	100					
GNZ	eP	14	19	05		0.6	100	6.91	197		4.3	4.7
	eS		20	21		-3.4	99					
KRP	eP	14	19	08		0.6	100	7.17	214		3.2*	
TRZ	eS	14	20	51		1.4	100	8.09	201			4.7
NGZ	P	14	19	21.0		1.5	100	8.19	208			

MNG	eP	14	19	33		-2.0	100	9.49	204		4.9	4.6
	e			34.9								
	eS		21	19		-0.9	100					
WEL	eS	14	21	40		1.8	100	10.33	205	4.9		

AMPLITUDES: ECZ 0.4 WTZ 0.9 0.8 GNZ 0.3 1.2; KRP 0.3 TRZ 0.4 MNG 1.8 1.0; WEL 0.3

78/ 104

MAR 01 $04^h47^m18^s.3$ 37°.93S 179°.22E 12 km M = 4.3

± 1.3 0.04 0.09 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	iP*	04	47	27.8	U	-1.6	100	0.58	293		4.4	4.3
	eS*			38		0.6	100					
GNZ	iP*	04	47	40.8	D	1.1	100	1.19	232		4.3	4.1
	eS*			57		1.5	100					
WIZ	Pg	04	47	52.0		0.1	100	1.66	283			
WTZ	iPn	04	47	47.0	U	-0.9	100	1.76	267		4.1	4.3
	Pg			54.7		0.6	100					
	eSn		48	10		-0.1	100					
TRZ	ePn	04	47	58		0.3	100	2.48	228		4.4	
KRP	Pn	04	48	02.8		-0.8	100	2.92	269		4.1	4.2
	eSn			36		-1.7	100					
NGZ	ePn	04	48	06		-0.0	100	3.10	245			
MNG	iPn	04	48	16.2	U	-1.6	100	3.96	226		4.2	4.0
	eSn		49	01		-1.8	100					
TNZ	ePn	04	48	21		2.6	99	4.00	250		4.4	
ONE	ePn	04	48	28		3.4	96	4.45	297	4.6		
WEL	eSn	04	49	23		-0.2	100	4.81	224	4.2		
CRZ	ePn	04	48	49		-1.3	100	6.34	301		5.0	

AMPLITUDES: ECZ 15 16 GNZ 11 12 WTZ 4.6 6.2; TRZ 1.5 KRP 0.8 0.8 MNG 2.0 1.6; TNZ 0.2 ONE 0.3 WEL 0.3; CRZ 0.4

78/ 105

MAR 01 $22^h47^m02^s.8$ 44°.24S 167°.70E 12 km M = 3.7

± 0.9 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
MSZ	iP*	22	47	12.1	D	0.3	100	0.46	161		3.5	3.5
	eS*			18		-0.2	100					
MNW	Pn	22	47	27.3		-2.1	99	1.54	182			
GSP	Pn	22	47	31.2		0.1	100	1.66	87			
	P*			34.1		1.6	100					
	eSg			58		-1.1	100					
MJZ	eP*	22	47	38.5		0.2	100	2.01	84			
	e(Pg)			40		-3.4						
	eSg		48	12		1.5	100					
OMZ	P*	22	47	47.2		1.6	100	2.44	111		3.5	3.4
	ePg			51		-1.1	100					
	eSg		48	25		-0.0	100					
KAI	eSg	22	48	50		-0.6	100	3.20	59	4.2		
COB	ePn	22	48	16.5		1.7	99	4.87	51		4.2	3.8
	e		49	23								
	eSg			45		-1.8	99					

AMPLITUDES: MSZ 22 42 OMZ 0.3 0.5 KAI 0.6

COB 0.4 0.5

78/ 106

MAR 02 $16^h58^m42^s.8$ 48°.99S 166°.01E 33 km M = 4.0

± 3.5 0.22 0.45 R S.E. of RES. 2.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNW	eP	16	59	33		0.3	100	3.40	19			
	eS	17	00	08		-2.4	99					
ROX	P	16	59	44.1		0.7	100	4.18	34		4.2	3.9
	eS	17	00	31		1.8	100					
MSZ	eP	16	59	47		-1.0	100	4.52	17		4.1	3.9
	eS	17	00	40		2.6	99					
GSP	e	17	01	26				5.60	31			
MJZ	eS	17	01	08		-2.0	100	5.88	33			

AMPLITUDES: ROX 0.5 0.6 MSZ 0.9 0.9

78/ 107

MAR 02 $21^h55^m22^s.0$ 39°.74S 175°.21E 12 km M = 3.5

± 0.3 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
NGZ	iP*	21	55	33.4	U	-0.6	100	0.64	29			
	eS*			41		-1.8	99					
TNZ	iP*	21	55	37.8	D	0.2	100	0.85	310		2.8	3.4
	eS*			50.5		1.4	100					
	eSg			52		1.2	100					
MNG	iP*	21	55	37.9	U	-0.7	100	0.90	167		3.9	3.6
	S*			49.1		-1.6	100					
TRZ	eSg	21	56	07		2.5	98	1.26	82			3.2
CAZ	eSg	21	56	10		0.7	100	1.40	147			
WEL	Pn	21	55	50		0.9	100	1.58	192	3.4		
	eSn		56	10		0.6	100					
	e(Sg)			21		5.6						
KRP	ePn	21	55	51		-1.5	100	1.84	8		3.9	4.0
	eSn		56	15		-0.4	100					
COB	ePn	21	55	58		-1.2	100	2.32	234		3.7	3.3
	eSn		56	27		-0.2	100					

AMPLITUDES: TNZ 0.3 1.7 MNG 16 11 TRZ 0.6
WEL 0.4 KRP 1.0 1.0 COB 0.6 0.8

FELT: Wanganui (57) MM IV

78/ 108

MAR 04 $08^h27^m42^s.0$ 40°.67S 175°.85E 12 km M = 3.4

± 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
MNG	iPg	08	27	47.3		-0.8	100	0.29	280			
	Sg			52.5		0.2	100					
CAZ	iPg	08	27	48.5	D	-1.3	100	0.37	129			
	e(S*)			55.5		0.8						
	Sg			56.5		1.5	99					
WEL	P*	08	28	00		-0.7	100	1.03	233	3.5		
	Sg			16		-0.7	100					
TRZ	Pg	08	28	08		-1.2	100	1.34	34		3.4	3.3
CNZ	P*	08	28	10		1.4		1.48	351			
NGZ	P*	08	28	09.5		0.8	100	1.49	353			
	(Pg)			13.5		1.2	100					
	Sg			30.5		-2.0	99					

TNZ	P*	08	28	16		1.0	100	1.86	322		3.3	3.5
	(Pg)			17.5		-2.2						
	Sg			45.5		0.6	100					
COB	Pn	08	28	20		-0.3	100	2.40	259		3.6	3.5
	P*			25		0.9	100					
	(S*)			57		1.4						
GNZ	eSn?	08	28	56		1.4		2.63	40			
KRP	P*	08	28	33.5		3.3		2.75	355			
	S*		29	09.5		3.3						
WTZ	Pn	08	28	25		-1.0		2.83	19		2.9	

AMPLITUDES: MNG 28 30 WEL 1.1 TRZ 0.6 0.6
TNZ 0.2 0.4 COB 0.4 1.1 WTZ 0.1

78/ 109

MAR 05 $08^h27^m01^s.8$ 41°.38S 175°.04E 12 km M = 3.3
± 1.7 0.09 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
WEL	Pg	08	27	06.6	DSE	-0.2	100	0.22	295			
	Sg			09.5		-0.7	100					
MNG	iP*	08	27	16.4	U	-0.7	100	0.83	24		3.1	3.3
	S*			26		-2.4	99					
	Sg			30		-0.0	100					
COB	Pn	08	27	31		-0.4	100	1.76	279		3.7	3.0
	Sn			54		0.4	100					
CNZ	P*	08	27	43		2.3	99	2.21	10			
NGZ	S*	08	28	12		1.4	100	2.24	11			
TNZ	eS*	08	28	10.5		-0.4		2.25	347			
KRP	P*	08	28	04		1.8		3.47	7			
	eS*			46		-1.6						

AMPLITUDES: WEL 8.2 MNG 3.5 7.0 COB 0.9 0.7

FELT: Greater Wellington (68,69) MM IV

78/ 110

MAR 05 $19^h59^m10^s.7$ 36°.78S 177°.76E 165 km M = 4.8
± 1.1 0.05 0.06 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	19	59	40		2.1	98	1.11	146		4.3	4.7
	S			57		-1.8	99					
	e	20	00	10								
WTZ	P	19	59	39.8	D	-0.4	100	1.35	207		4.6	4.9
	e(S)	20	00	03.5		0.7						
GNZ	iP	19	59	45.9	D	0.3	100	1.87	174			
	S	20	00	13.5		0.9	100					
TUA								2.09	193		4.5	4.9
KRP	iP	19	59	48.2	DNE	-0.1	100	2.12	236			
	S	20	00	18		0.7	100					
WNZ	P	19	59	50		-0.3	100	2.27	215		5.0	
TRZ	P	19	59	56.5		-1.1	100	2.87	195			
	(S)	20	00	34		0.3	100					
ONE	P	19	59	59		0.6	100	2.92	289	3.6*		
	S	20	00	34.5		-0.4	100					
CNZ	P	19	59	58.1		-1.0	100	2.99	215			
TNZ	P	20	00	06		-0.9		3.60	227		3.6*	3.3*
MNG	P	20	00	10.8	D	-4.3		4.23	204		5.1	5.0
	S			59.5		-5.3						
CRZ	P	20	00	21		-1.0		4.76	298		3.5*	

WEL	P	20	00	21	-5.1	5.07	206	5.1		
	S		01	18	-6.4					
COB	P	20	00	30	-6.0	5.82	221		3.9*	4.1*
	S		01	36	-6.3					
KAI						7.55	219	4.0*		
MSZ						10.86	220		3.3*	3.6*

AMPLITUDES: ECZ 2.3 5.6; WTZ 8.0 18; TUA 1.6 5.0; WNZ 0.6; ONE 0.8; TNZ 0.4 0.3; MNG 13 13; CRZ 0.3; WEL 1.7; COB 0.8 4.7; KAI 0.6; MSZ 0.3 1.1

78/ 111

MAR 06 $03^h04^m13^s.2$ 33°.19S 179°.49E 420 km M = 4.5

± 0.9 0.14 0.36 19 S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	03	05	39		0.1	100	5.20	202		4.6	
GNZ	e(P)	03	05	43		0.3	100	5.57	192		4.2	4.4
	S		06	53		0.0	100					
TUA								5.92	198			5.1
MNG	P	03	06	10		-0.4	100	8.08	202		4.4	4.6
	S		07	42.5		-0.3	100					
WEL	S	03	08	00.5		0.5	99	8.92	204	4.4		
COB	e(S)	03	08	15		1.9		9.56	212			3.0*

AMPLITUDES: WTZ 0.8; GNZ 0.3 0.7; TUA 0.9; MNG 0.6 1.3; WEL 0.1; COB 0.2

78/ 112

MAR 06 $04^h49^m48^s.5$ 40°.00S 173°.92E 12 km M = 3.5

± 0.3 0.01 0.02 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	P*	04	50	04.7	U	-0.2	100	0.89	23		3.2	3.6
	Sg			19		0.3	100					
MNG	P*	04	50	12.5	D	-0.1	100	1.34	118		3.6	3.6
	S*			29.5		-0.9	99					
COB	Pn	04	50	12.5	D	-0.8	99	1.41	220		4.2	3.5
	P*			13.5		-0.3	100					
	S*			33		0.4	100					
WEL	ePn	04	50	15		1.4		1.43	154	3.3		
	Sn			33.5		1.2	98					
CNZ	Pn	04	50	14.4		0.0	100	1.49	58			
	Sn			34		0.3	100					
TRZ	ePg	04	50	39		4.4		2.28	80		3.6	3.3
	eSg			51 10		4.7						
KRP	ePn	04	50	27		-0.2		2.43	32			
	Pg			37		-0.7						
	Sn			58		1.7						

AMPLITUDES: TNZ 0.7 2.5; MNG 4.2 4.9; COB 4.1 3.0; WEL 0.4; TRZ 0.3 0.2

78/ 113

MAR 06 $14^h21^m15^s.9$ 37°.41S 177°.40E 12 km M = 3.8

± 0.8 0.07 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
WTZ	iPg	14	21	30.6	U	1.2	100	0.66	210		3.3	3.5
	i			37								
	(Sg)			42		3.6						

ECZ	P*	14	21	34		0.6	100	0.95	108		4.1	3.8
	iPg			36		0.7	100					
	eSg			49		0.8						
	i		22	00								
GNZ	Pn	14	21	37.6		-1.9	99	1.32	158		3.5	4.0
	Pg			47.5		4.7						
	Sn			57		-0.1	100					
TUA								1.41	188		3.5	3.9
KRP	Pn	14	21	41.9	D	-0.9	100	1.57	250			
	Sn		22	04		1.1	100					
NGZ	Pn	14	21	52		-0.3		2.26	218			
	S*		22	29		3.6						
CNZ	Pn	14	21	52.5		-0.4	100	2.30	219			
TNZ	Pn	14	22	01.5		-0.4	100	2.97	232		4.6	
MNG	Pn	14	22	04		-5.7		3.54	204		4.1	3.8
	P*			12		-5.4						
	Sn			47		-3.3						
	S*			59.5		-4.1						
WEL	P*	14	22	27		-4.8		4.38	207	3.7		
	S*		23	27		-1.8						
COB	Pn	14	22	26.5		-5.3		5.16	223		4.0	3.7
	Sn		23	27		-2.3						
MJZ	Sn	14	24	43		-4.7		8.42	217			

AMPLITUDES:								
WTZ	4.8	7.0	ECZ	2.6	1.6	GNZ	1.6	7.0
TUA	0.5	1.5	TNZ	0.3		MNG	1.9	1.3
WEL	0.1		COB	0.2	0.4			

78/ 114

MAR 07 $05^h08^m15^s.6$ 38°.73S 175°.90E 137 km M = 4.2

± 0.7 0.03 0.04 5 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	S	05	08	50		1.2	99	0.19	58			
CNZ	iP	05	08	36.7		1.0	100	0.54	210			
KRP	P	05	08	37.6	D	-0.3	100	0.85	341			
	S			54		-1.1	100					
TUA								0.98	95		3.9	4.4
TRZ	P	05	08	41.5	U	1.4	99	1.09	139		4.3	3.9
	S		09	01		2.1						
WTZ	iP	05	08	40.5	D	0.0	100	1.14	49		4.2	4.0
	S			59		-0.7	100					
TNZ	P	05	08	42.5		0.6	100	1.27	249		3.2*	3.0*
GNZ	P	05	08	46.5		0.2	100	1.66	88		4.2	4.3
	S		09	09		-0.8	100					
MNG	iP	05	08	48.8	U	-0.4	100	1.91	190		4.7	4.1
	S		09	13.5		-1.2	99					
CAZ	P	05	08	53.1	U	0.5	100	2.19	173			
	S		09	20		-0.7	100					
ECZ	P	05	08	53.5		-1.0	100	2.33	64		4.3	4.1
	S		09	25		1.0	100					
WEL	P	05	08	58		-1.2		2.69	198	3.9		
	S		09	31.5		-0.9						
COB	P	05	09	06		-2.3		3.38	225		3.4*	3.5*
	S			45.5		-3.0						
KAI								5.10	221	3.7*		
MJZ	S	05	10	59		-7.9		6.65	216			
MSZ								8.41	223			3.1*

AMPLITUDES:								
WNZ	0.4	TUA	1.5	4.0	TRZ	2.5	2.5	

WTZ	5.6	3.6	TNZ	0.4	0.3	GNZ	3.4	7.5	
MNG	21	7.0	ECZ	1.0	0.6	WEL	0.4		
COB	0.5	2.2	KAI	0.4		MSZ		0.4	

78/ 115

MAR 08 $22^h21^m39^s.9$ 44°.97S 167°.63E 33 km M = 4.4

± 0.5 0.02 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
MSZ	iP*	22	21	49.6	D	1.1	99	0.36	34			
MNW	iPn	22	21	53.9	N	-0.6	100	0.81	181			
	Sn		22	05.5		0.1	100					
ROX	iPn	22	22	01.6	D	0.4	100	1.30	114			
	Sn			17.5		0.4	100					
GSP	iPn	22	22	09.0	D	-0.4	100	1.90	65			
	P*			14		0.3						
	Sn			32.5		0.9	99					
OBZ	ePn	22	22	10.5		0.2	100	1.96	170			
	P*			14		-0.8						
	Sn			33.5		0.4	100					
MJZ	Pn	22	22	13		-1.3	99	2.26	65			
	P*			16		-3.7						
	Sn			40		-0.1	100					
OMZ	iPn	22	22	14.6	D	-0.7	100	2.33	94		4.5	
	eSn			41.5		-0.4	100					
KAI								3.67	50	4.4		
COB	Pn	22	22	55.5	U	-1.6		5.39	46		4.8	4.5
	Sn		23	55.5		0.0						
WEL	Sn	22	24	21		1.5		6.39	57	4.0		
MNG	Pn	22	23	20		-2.2		7.24	56		4.5	4.3
	e			25.5								
	Sn		24	40.5		0.8						
TNZ	ePn	22	23	27		-1.0		7.66	43		4.3	4.1
KRP	Pn	22	23	50		0.8		9.21	43			
	Sn		25	27		-0.2						

AMPLITUDES:									
OMZ	3.0	KAI	0.7		COB	1.3	2.5		
WEL	0.1	MNG	1.1	0.9	TNZ	0.1	0.1		

78/ 116

MAR 09 $09^h22^m51^s.5$ 36°.84S 177°.80E 12 km M = 4.3

± 1.1 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
WIZ	Pg	09	23	10		1.2	100	0.85	215			
	Sg			21		0.7	100					
ECZ	(Pg)	09	23	14		1.3	100	1.04	146		4.2	4.2
	e			15								
	e			17								
	Sg			33.5		6.7						
WTZ	iPn	09	23	15.2	D	0.2	100	1.31	209		4.3	4.2
	Sn			31.5		-1.0	100					
GNZ	iPn	09	23	21.5	D	-0.3	100	1.82	175		4.1	4.3
	Pg			34		5.8						
	Sn			43		-1.5	100					
TUA								2.03	195		4.3	4.1
KRP	iPn	09	23	26.9	DE	1.1	100	2.11	238			
	Sn			50.5		-1.0	100					
WNZ	Pn	09	23	27.5		-0.1	100	2.24	216		4.2	
TRZ	Pn	09	23	33		-2.5	98	2.83	196		4.1	4.0

	P*			40		-0.8							
	Pg			47		-1.6							
	Sn		24	10		1.3	100						
	Sg			26		-0.6							
CNZ	Pn	09	23	38		0.6	100	2.96	216				
	S*		24	18		-3.8							
TNZ	Pn	09	23	47.5		1.6		3.58	228		5.1	4.9	
	e(S*)		24	36		-4.5							
MNG	Pn	09	23	50		-4.2		4.19	205		4.4	4.6	
	P*		24	01		-3.2							
	Sn			38		-3.6							
	S*			55		-3.8							
WEL	Sn	09	24	54		-7.9		5.04	207	4.2			
COB	Pn	09	24	13.5		-2.7		5.80	221		4.2	4.1	
	P*			33		1.3							
	Sn		25	18.5		-1.8							
KAI								7.52	219	4.1			
MJZ	Sn	09	26	30		-9.0		9.08	216				

AMPLITUDES: ECZ 3.0 3.4 WTZ 11 9.0 GNZ 3.5 8.3
TUA 1.5 1.2 WNZ 0.2 TRZ 0.6 0.8
TNZ 0.8 0.4 MNG 2.4 5.3 WEL 0.2
COB 0.3 0.8 KAI 0.1

78/ 117

MAR 09 $11^h14^m57^s.8$ 37°.10S 176°.85E 203 km M = 3.6
± 0.5 0.02 0.03 5 S.E. of RES. 0.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	11	15	27		-0.3	100	0.89	173		2.9	
KRP	P	11	15	30.5		0.1	100	1.33	231			
GNZ	iP	11	15	34.8	U	0.0	100	1.81	149		4.0	3.8
	S		16	03.5		0.1	100					
NGZ	P	11	15	40		0.0	100	2.30	205			
TRZ	S	11	16	15.5		-0.1	100	2.46	180			3.1
MNG	P	11	15	52.5	U	-3.7		3.68	196		4.2	3.7
	S		16	37.5		-3.9						
WEL	S	11	16	55		-4.5		4.49	200	3.7		
COB	S	11	17	08		-5.9		5.11	217			

AMPLITUDES: WTZ 0.2 GNZ 1.3 1.3 TRZ 0.1
MNG 2.2 0.8 WEL 0.1

78/ 118

MAR 09 $16^h30^m23^s.2$ 35°.75S 179°.54E 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	W P	W S
ECZ	P*	16	31	00		-0.2	100	2.10	202		4.1	3.8
	Sg			34		0.0	100					
WTZ	iPn	16	31	10.2	D	0.2	100	3.03	222		4.4	4.0
	Sn			46		0.7	100					
GNZ	Pn	16	31	11		-0.5	100	3.13	202		4.6	3.9
	i			12								
	Sn			48.5		0.6	100					
TUA	Sn-Pn			40		-1.2		3.60	211		4.6	4.0
KRP	Pn	16	31	22.5	D	0.9	99	3.88	235			
	Sn		32	05.5		-0.2	100					
ONE	P*	16	31	36		-0.3	100	4.21	268			
TRZ	Pn	16	31	28		-0.3	100	4.37	209		4.0	3.8
	Sn		32	17		-0.6	100					

NGZ	Pn	16	31	32		-0.0	100	4.64	221				
	Sn		32	23		-1.0	98						
CNZ	ePn	16	31	32.5		-0.2		4.69	221				
TNZ	eP*	16	32	00		4.3		5.35	229		4.6		
MNG	Pn	16	31	44.5		-3.6		5.82	212		3.9	3.8	
	P*		32	05.5		1.8							
	Sn			48		-4.4							
WEL	Sn	16	33	06		-7.0		6.68	213	4.0			
COB	Sn	16	33	27		-7.0		7.55	223			3.9	
MJZ	Sn	16	34	40.5		-11.2		10.78	218				

AMPLITUDES: ECZ 0.6 0.4 WTZ 3.0 1.1 GNZ 3.0 1.0
TUA 0.9 0.3 TRZ 0.2 0.2 TNZ 0.1
MNG 0.4 0.4 WEL 0.1 COB 0.3

78/ 119

MAR 09 $17^h47^m51^s.5$ 39°.22S 177°.54E 12 km M = 3.6
± 1.0 0.04 0.09 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TUA	Sg-Pg			07.5	U	0.5	100	0.51	323		4.1	3.8
TRZ	Pg	17	48	06.5		1.7	100	0.65	239		3.2	3.3
	e			10.5								
	Sg			16.5		2.8						
	e		49	19								
GNZ	Pg	17	48	06.4	D	0.8	100	0.68	33		3.5	3.6
	e			19								
WNZ	eP*	17	48	16		1.7		1.27	297		3.8	3.7
	eS*			31		-0.1						
WTZ	P*	17	48	13.8	D	-1.2	100	1.30	341		3.7	3.9
	Pg			16		-2.0						
	S*			31		-1.4	100					
	Sg			35		-0.7	100					
NGZ	P*	17	48	20		1.8		1.49	271			
CNZ	P*	17	48	20		0.9	100	1.55	270			
	eS*			40.5		0.9						
ECZ	Pg	17	48	33		6.7		1.72	28		3.5	3.4
	(Sn)			43		0.9						
KRP	P*	17	48	30		2.6	99	2.03	309			
MNG	Pn	17	48	25		-0.8	100	2.12	228		3.2	3.4
	Pg			33		-1.2						
	Sn			49.5		-2.1	99					
TNZ	eP*	17	48	35.5		0.9		2.46	270		3.6	
	ePg			43		1.8						
	Sg		49	16.5		2.2						
WEL	Sn	17	49	11		-1.0		2.96	225	3.3		
COB	ePn	17	48	52		-1.4		4.13	242		3.8	3.2
	Sn		49	40		-0.1						

AMPLITUDES: TUA 16 8.5 TRZ 1.5 3.0 GNZ 5.2 11
WNZ 0.3 0.3 WTZ 3.1 4.5 ECZ 0.2 0.2
MNG 0.7 1.2 TNZ 0.1 WEL 0.1
COB 0.2 0.2

FELT: Wairoa (53) MM IV

78/ 120

MAR 09 $19^h05^m20^s.8$ 39°.17S 177°.54E 12 km M = 4.3
± 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
TUA	Sg-Pg			07	U	0.5	100	0.47	320		4.5	4.5
GNZ	iPg	19	05	35.6	DW	1.6	100	0.65	36			
TRZ	iPg	19	05	35.8	U	1.2	100	0.67	235			
WNZ	P*	19	05	45		1.8	99	1.24	295		4.5	4.7
	ePg			48		2.0						
	S*		06	02		2.2	99					
WTZ	iPn	19	05	42.9	D	-0.6	100	1.26	340			
	Sn			59		-1.4	100					
CNZ	Pn	19	05	47.5		0.1	100	1.55	268			
	Pg			50		-2.2						
	i			56.5								
WIZ	Pn	19	05	48.5		-0.5	100	1.66	350			
	(Pg)			57		2.5						
ECZ	Pn	19	05	49.5		0.4	100	1.67	29		4.1	4.3
	Pg			57		2.3						
	(Sg)		06	18		0.7						
KRP	ePn	19	05	52.5		-1.1		2.01	308			
	P*			56		-0.1						
	iPg			59.8	UNW	-1.5	100					
	S*		06	22		-0.5	100					
MNG	Pn	19	05	54		-1.6	100	2.14	227		4.2	4.2
	Pg		06	03		-1.2						
	e			12								
	Sn			22.5		0.8	100					
TNZ	ePn	19	05	56		-3.8		2.46	269		4.4	4.6
	P*		06	01.5		-2.4	99					
	ePg			10		-0.5	100					
WEL	e(Pg)	19	06	19		-2.4		3.00	224	4.2		
	Sn			40		-2.2						
COB	Pn	19	06	21		-2.0		4.16	241		4.6	4.1
	P*			31		-1.9						
	Sn		07	08		-2.0						
	Sg			44		3.2						
ONE	eP*	19	06	31		-3.1		4.23	322	4.1		
	Pg			45		-1.3						
	e(Sn)		07	14		2.2						
KAI								5.73	232	4.2		
MJZ	Sn	19	08	17		-5.3		7.16	225			
OMZ								7.69	218			3.7
ROX								8.77	221			4.0
MSZ								9.04	229		4.1	4.2

AMPLITUDES:

TUA	48	55	WNZ	1.6	3.3	ECZ		0.9	1.9
MNG	6.3	8.3	TNZ	0.7	1.1	WEL	0.7		
COB	1.3	1.4	ONE	0.1		KAI	0.2		
OMZ		0.1	ROX		0.2	MSZ		0.2	0.5

FELT: Wairoa (53) MM IV

78/ 121

MAR 11 $23^h 10^m 29^s.6$ 40°.25S 175°.29E 12 km M = 3.6

± 0.3 0.01 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
MNG	iP*	23	10	37.6		0.0	100	0.40	158		3.4	3.5
	S*			44		0.8	100					
CAZ	P*	23	10	47		-0.4	100	0.97	133			
	eSg		11	04		1.5	99					
CNZ	iP*	23	10	49.4		0.4	100	1.07	11			

	Sg		11	05		-0.7	100						
WEL	P*	23	10	49		-0.7	100	1.11	201	3.3			
	S*		11	02.5		-2.1	97						
TNZ	P*	23	10	53.4	U	0.9	100	1.27	326		3.5	4.1	
	Sg		11	13		0.4	100						
TRZ	Sg	23	11	15		-0.9	100	1.37	60		3.4	3.7	
WNZ	(Sg)	23	11	30		1.8		1.74	22		3.8	3.7	
COB	Pn	23	11	04.5		0.5		2.12	246		3.7	3.7	
	iS*			35.5		0.7	100						
KRP	Pn	23	11	07		0.1	100	2.33	5				
	Sn			38		3.0							
WTZ	(P*)	23	11	16		0.5		2.62	31		3.4		
GNZ	(Pg)	23	11	25		1.6		2.65	54			3.3	
	Sn			39		-3.8							
MJZ	P*	23	11	56		-3.2		5.18	222				
	Sn		12	40.5		-3.0							
MSZ	Pg	23	12	47		-4.5		7.02	229		4.4		

AMPLITUDES: MNG 27 44 WEL 0.6 TNZ 0.6 4.0
TRZ 0.6 1.6 WNZ 0.1 0.1 COB 0.6 2.2
WTZ 0.3 GNZ 0.4 MSZ 0.7

78/ 122

MAR 11 $23^h51^m14^s.3$ 40°.27S 175°.25E 12 km M = 3.6
± 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
MNG	iP*	23	51	21.9		-0.2	100	0.39	152			
	S*			28		0.4	100					
CAZ	P*	23	51	31		-1.1	100	0.98	130			
	S*			47		1.8	100					
	Sg			50		2.6						
WEL	P*	23	51	32.5		-1.3	100	1.07	200	3.4		
	S*			47		-1.1	100					
CNZ	iP*	23	51	34.3		0.1	100	1.10	12			
	Sg			50		-1.4	100					
TNZ	P*	23	51	38.0	U	0.8	100	1.28	328		3.5	4.2
	Sg			57.5		0.1	100					
TRZ	Pg	23	51	45.5		2.6	99	1.41	60		3.2	3.3
	Sg			59.5		-2.4	99					
COB	Pn	23	51	49		0.9	100	2.08	246		4.0	3.8
	Sn		52	16.5		2.9						
	S*			19		0.8						
KRP	Pn	23	51	51		-1.0	100	2.36	6			
	Pg		52	06		4.0						
	Sn			22		1.7	100					
WTZ								2.66	31		3.2	
GNZ								2.70	54			3.2
MSZ								6.97	229		3.8	3.8

AMPLITUDES: WEL 0.9 TNZ 0.6 4.1 TRZ 0.3 0.6
COB 1.3 3.0 WTZ 0.2 GNZ 0.3
MSZ 0.2 0.3

78/ 123

MAR 12 $16^h13^m10^s.6$ 30°.71S 177°.03W 33 km M = 5.5
± 2.1 0.10 0.16 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	16	15	03		1.4	100	7.87	207		5.7	5.9
	e(P*)			23		-2.9						

	Sn		16	28		2.2	100					
	eS*			17	05	-3.0						
WIZ	ePn	16	15	08.5		0.7		8.32	214			
	Sn			16	34	-2.6	99					
WTZ	Pn	16	15	13.5		-0.5	100	8.78	213		5.4	5.9
	Sn			16	47	-0.7	100					
ONE	Pn	16	15	17		2.6	99	8.81	233			
	e				33							
GNZ	Pn	16	15	12		-3.7	98	8.91	206		5.5	5.7
	e				32							
	Sn			16	50.5	-0.1	100					
TUA								9.40	209		5.4	5.8
CRZ	Pn	16	15	23.5		0.4	100	9.45	244		6.8	6.4
	Sn			17	03	-0.6	100					
KRP	Pn	16	15	22		-1.4	100	9.47	218			
	e				32							
	e(Sn)			17	08	3.9						
WNZ								9.72	214		5.2	
TRZ	e(Pn)	16	15	31.5		-1.3		10.16	208		5.0	6.0
	Sn			17	22	1.2	100					
CNZ	Pn	16	15	37.5		0.9	100	10.43	214			
TNZ	ePn	16	15	42.5		-1.9		11.01	217		5.5	
	e				53							
MNG	ePn	16	15	46		-6.6		11.61	210		5.2	5.9
	Sn			17	49	-6.6						
WEL	Sn	16	18	08		-8.2		12.47	210	5.6		
CIZ								13.24	179			
COB	ePn	16	16	09		-6.2		13.27	216		5.3	5.3
	Sn			18	27	-8.4						
KAI								15.00	215	5.2		
ROX								18.22	212		5.8	5.0
MSZ								18.31	216		5.5	5.2
MNW								19.24	214	4.9	5.5	5.0

AMPLITUDES:									
ECZ		1.6	3.1	WTZ	3.3	9.5	GNZ	3.2	8.0
TUA		1.0	2.4	CRZ	3.7	0.8	WNZ	0.1	
TRZ		0.4	5.0	TNZ	0.2		MNG	2.1	13
WEL	1.1			CIZ	0.7	2.3	COB	0.6	2.4
KAI	0.3			ROX	1.1	0.4	MSZ	1.5	1.2
MNW	0.1	0.7	0.6						

78/ 124

MAR 13 $16^h47^m43^s.8$ 33°.80S 179°.72E 33 km M = 4.3

± 2.8 0.17 0.39 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	16	48	45		3.0	99	4.00	193		4.5	4.1
	e(Sn)		49	30		4.0						
	e			36								
WTZ	Pn	16	48	51		-0.9	100	4.73	207		4.2	4.2
	Sn		49	45		1.5	100					
GNZ	Pn	16	48	54.3		-1.7	100	5.03	195		4.6	4.3
	Sn		49	50		-0.6	100					
KRP	Pn	16	49	00		-0.2	100	5.34	218			
	e(Sn)		50	01		2.9						
TRZ	ePn	16	49	08.5		-3.5		6.20	201			4.6
	Sn		50	18		-0.7	100					
CNZ	ePn	16	49	15.5		1.4		6.35	211			
MNG	Pn	16	49	23.3		-7.8		7.60	205		4.7	4.5
	Sn		50	42.5		-10.0						

WEL	Sn	16	51	00.5		-12.3		8.45	206	4.2			
COB	e(Pn)	16	49	42		-10.3		9.15	215		4.2	3.9	
	Sn		51	17		-12.8							

AMPLITUDES: ECZ 0.4 0.2 WTZ 0.7 0.6 GNZ 1.2 1.1
TRZ 0.6 MNG 1.5 1.2 WEL 0.1
COB 0.1 0.2

78/ 125

MAR 14 $22^h34^m14^s.8$ 38°.33S 176°.23E 12 km M = 2.9
± 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
WNZ	Pg	22	34	22		0.4	100	0.31	198			2.6
	eSg			28		1.9						
KRP	Pg	22	34	29		0.3	100	0.68	306			
	e(Sg)			41.5		3.5						
WTZ	Pg	22	34	27		-1.9	99	0.69	60		2.6	2.5
	Sg			39		0.7	100					
TUA								0.86	124		3.1	
NGZ	ePg	22	34	36		1.3	100	0.98	209			
GNZ	Pg	22	34	45		1.0	100	1.44	103		3.4	
	e(Sg)		35	11		7.5						
MNG	Pg	22	35	00.5		-2.0	99	2.36	194		3.0	

AMPLITUDES: WNZ 0.4 WTZ 0.5 0.3 TUA 0.4
GNZ 0.8 MNG 0.2

FELT: Waiotapu Forest (33)

78/ 126

MAR 14 $22^h36^m05^s.9$ 38°.30S 176°.26E 12 km M = 3.5
± 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
WNZ	Pg	22	36	13		-0.3	100	0.35	200		2.9	3.2
	Sg			20		1.7	99					
WTZ	Pg	22	36	18.7	U	-0.6	100	0.66	61		3.3	3.3
	Sg			30		1.7	99					
KRP	iPg	22	36	20.5	UNW	0.6	100	0.68	303			
	Sg			28		-1.2						
TUA								0.86	126		3.8	
NGZ	Pg	22	36	27		0.4	100	1.02	210			
CNZ	Pg	22	36	28		0.6		1.06	212			
WIZ	ePg	22	36	26.5		-1.0	100	1.06	44			
GNZ	Pg	22	36	35		0.2	100	1.43	104		4.0	3.7
	(Sg)		37	02		7.9						
MNG	P*	22	36	47		-0.9	100	2.39	194		3.8	3.4
	Pg			52.5		-1.8	99					
	(Sg)		37	38		11.4						

AMPLITUDES: WNZ 0.5 1.2 WTZ 2.6 2.2 TUA 2.0
GNZ 3.3 2.3 MNG 1.2 0.5

FELT: Waiotapu Forest (33)

78/ 127

MAR 15 $05^h41^m37^s.0$ 37°.54S 176°.62E 187 km M = 4.7
± 0.5 0.03 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
WIZ	P	05	42	02.6		0.0	100	0.46	88			
	e(S)			25		2.6						

WTZ	iP	05	42	02.2	U	-0.6	100	0.53	146		4.4	4.3
	S			23		0.2	100					
KRP	iP	05	42	05.0	USW	-0.1	100	0.94	246			
	S			26.5		-0.3	100					
WNZ	eP	05	42	06		-0.8	100	1.16	200		4.4	4.7
	e(S)			31		1.1						
	e			46								
TUA	S-P			24		-0.1	100	1.33	162		4.7	4.9
ECZ	P	05	42	11.4		1.2	99	1.54	96		4.5	4.6
	i			19								
	S			40		4.1						
	e			47								
GNZ	iP	05	42	10.8	DNW	0.4	100	1.57	135		4.6	4.9
	S			36		-0.2	100					
NGZ	P	05	42	13		0.0	100	1.82	205			
CNZ	iP	05	42	13.0		-0.4	100	1.85	207			
TRZ	P	05	42	14.3		-0.7	100	2.02	175		4.8	
TNZ	P	05	42	19		-0.4	100	2.40	226		3.7*	3.5*
	S			54		1.8	86					
ONE	P	05	42	21		0.1	100	2.53	314	3.1*		
	e(S)		43	01		6.2						
MNG	iP	05	42	25.9	D	-3.0		3.19	196		5.1	4.9
	S		43	06		-3.0						
WEL	P	05	42	35.5		-3.6		4.00	200	4.7		
	S		43	20		-7.0						
CRZ	P	05	42	43.5		-1.3		4.45	313			
COB	P	05	42	42.5		-4.9		4.65	219		3.5*	3.8*
	S		43	36		-5.7						
KAI								6.39	217	3.8*		
MSZ								9.68	220		3.3*	3.6*

AMPLITUDES:

WTZ	9.0	7.5	WNZ	0.3	0.5	TUA	4.0	6.7		
ECZ	2.5	3.3	GNZ	7.5	21	TRZ	3.0			
TNZ	0.6	0.6	ONE	0.3		MNG	21	17		
WEL	1.1		COB	0.4	3.0	KAI	0.4			
MSZ	0.3	1.1								

78/ 128

MAR 16 $10^h33^m27^s.9$ 39°.03S 174°.96E 231 km M = 3.6

± 1.4 0.07 0.09 10 S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	P	10	33	59.5		0.9	100	0.48	250			
	(S)		34	30		7.5						
CNZ	iP	10	34	00.0		1.3	100	0.49	111			
NGZ	iP	10	34	00.2		1.4	100	0.53	107			
	S			24		1.2	100					
GSZ	eP	10	34	00.6		1.7	100	0.55	117			
	S			24		1.1	100					
KRP	S	10	34	28		-1.1	100	1.19	23			
TRZ	S	10	34	35.5		1.8	100	1.54	111			3.8
MNG	iP	10	34	07.1	U	1.2	100	1.65	166		4.2	3.7
	S			34.5		-0.8	100					
WTZ	P	10	34	07.7	D	-0.5	100	1.91	58		3.3	3.2
	S			36.5		-2.9	99					
CAZ	S	10	34	45		2.0		2.12	153			
WEL	S	10	34	44		-1.7	100	2.27	184	3.3		
GNZ	P	10	34	14		0.6	100	2.43	82		3.7	3.4
	S			46.5		-2.1	99					
COB	iP	10	34	16.1	U	0.1	100	2.67	219		3.5*	3.1*

		S			51			-2.4	99						
	AMPLITUDES:	TRZ				0.7	MNG		5.5	2.4	WTZ			0.2	0.2
		WEL	0.1				GNZ		0.5	0.4	COB			0.7	0.9

78/ 129

MAR 16 $17^h04^m00^s.6$ 39°.96S 173°.19E 12 km M = 3.5
± 0.6 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
COB	iPg	17	04	24.0	U	-0.5	100	1.18	197		3.7	3.2
	Sg			40		-0.5	100					
TNZ	Pg	17	04	24.5		-0.5	100	1.21	50		3.1	3.6
	Sg			41.5		0.3	100					
WEL	e(Pg)	17	04	35		-1.8		1.79	138	3.6		
	S*			58		2.1	99					
MNG	P*	17	04	34		0.2	100	1.87	111		3.4	3.6
	Pg			40.5		2.0						
	S*			58		-0.4	100					
CNZ	P*	17	04	35		-0.5	100	1.97	68			
NGZ	P*	17	04	36		-0.4	100	2.02	68			
	Pg			42		0.3	100					
	e(S*)		05	03		-0.1						
	Sg			06		-3.0	92					
KRP	eP*	17	04	50		1.5	99	2.74	43			
	ePg			56		0.1	100					
	Sn		05	15		-0.7	100					
	Sg			34		1.2	100					

	AMPLITUDES:	COB			2.0	2.5	TNZ		0.3	1.3	WEL	0.5			
		MNG			1.2	2.5									

78/ 130

MAR 16 $21^h33^m32^s.6$ 31°.75S 177°.94W 33 km M = 4.6
± 1.3 0.07 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
ECZ	Pn	21	35	07.5		1.3	99	6.60	205		5.0	4.5
	eSn		36	15		-2.1						
WTZ	Pn	21	35	17		-1.4	99	7.49	212		4.9	4.5
	Sn		36	39.5		1.0	100					
GNZ	Pn	21	35	20.5		0.2	100	7.63	205		4.6	4.6
	Sn		36	41.5		-0.5	100					
KRP	ePn	21	35	27.5		-0.1	100	8.17	219			
CRZ	Pn	21	35	30.5		0.8	100	8.32	249		5.4	
	Sn		36	58		-0.4	100					
NGZ	Pn	21	35	39.5		-0.7	100	9.09	214			
MNG	Pn	21	35	51.5		-5.6		10.32	209		4.1	4.4
	Sn		37	39		-7.7						
WEL	eSn	21	37	58		-9.2		11.18	210			
COB	Sn	21	38	18		-8.1		11.97	216			3.8

	AMPLITUDES:	ECZ			0.5	0.2	WTZ		1.3	0.5	GNZ			0.5	0.8
		CRZ			0.2		MNG		0.2	0.6	COB				0.1

78/ 131

MAR 17 $02^h23^m33^s.0$ 44°.99S 167°.37E 12 km M = 3.6
± 1.2 0.04 0.10 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	P*	02	23	41.9		-0.8	100	0.50	51		3.3	3.4
	S*			47.8		-1.9	99					

MNW	P*	02	23	49.1		1.1	100	0.81	168		3.7	3.9
	S*		24	00.0		1.1	100					
ROX	P*	02	23	59.8		0.7	100	1.46	110			
	eS*		24	16.5		-2.0						
OBZ	P*	02	24	07		-1.0	100	1.99	165			
	S*			32		-2.2	99					
GSP	P*	02	24	10.6		0.9	100	2.08	67			
	eS*			37		0.0	100					
OMZ	ePn	02	24	13		0.1	100	2.52	93		3.5	3.4
	eSn			44		1.2	100					
COB	ePn	02	24	55.0		0.9	100	5.54	47		4.2	

AMPLITUDES: MSZ 11 24 MNW 7.0 23 OMZ 0.3 0.5
COB 0.3

78/ 132

MAR 18 $21^h20^m25^s.1$ 39°.19S 175°.88E 84 km M = 4.3
± 0.4 0.02 0.03 5 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
NGZ	P	21	20	37.0		-0.7	100	0.21	273			
	S			46.2		-1.1	100					
GSZ	P	21	20	39.2		1.2	99	0.24	249			
CNZ	iP	21	20	38.2		0.1	100	0.26	268			
WNZ	P	21	20	40.3		0.0	100	0.58	17		4.4	
TRZ	P	21	20	43.9		1.3	99	0.81	117		4.0	
	i			45.7								
TNZ	P	21	20	47.8		1.0	100	1.17	270		3.7*	3.9*
	S		21	04.8		1.6	99					
KRP	P	21	20	48.2		-0.2	100	1.30	348		3.8*	3.6*
	S		21	05.1		-0.9	100					
WTZ	P	21	20	50.4		-0.5	100	1.48	36		4.1	4.5
	S		21	09.8		-0.6	100					
CAZ	P	21	20	55.2		1.1	100	1.73	171			
GNZ	P	21	20	54.8		0.3	100	1.76	73		4.3	4.3
	S		21	16.0		-0.3	100					
WIZ	P	21	20	56.8		-0.2	100	1.95	32			
	i		21	13.0								
WEL	P	21	21	00.8		-0.5	100	2.26	202	4.5		
	S			26.2		-1.9	98					
	e			36.8								
ECZ	P	21	21	05.9		0.2	100	2.57	55		4.2	4.2
	e			29.8								
	eS			36.3		0.2	100					
	e			39.7								
COB	eP	21	21	11.0		-1.5	99	3.07	231		4.1*	3.7*
	e			13.2								
	e			23.5								
	eS			48.5		0.2	100					
KAI	eS	21	22	24		-6.1		4.75	224	3.8*		

AMPLITUDES: WNZ 2.0 TRZ 3.5 TNZ 1.6 3.2
KRP 7.8 4.9 WTZ 4.0 10 GNZ 5.2 8.5
WEL 2.5 ECZ 0.8 0.8 COB 2.5 3.8
KAI 0.6

78/ 133

MAR 20 $20^h05^m28^s.3$ 45°.06S 167°.59E 105 km M = 3.2
± 1.2 0.04 0.07 8 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	iP	20	05	44.5		0.0	100	0.45	31		3.4	3.2
	S			57.2		0.3	100					
MNW	P	20	05	46.8		0.2	100	0.72	178		3.1	3.2
	S			59.5		-0.9	99					
ROX	eP	20	05	53.0		0.3	100	1.30	109		3.3	3.1
	eS		06	11.8		0.6	100					
MJZ	S	20	06	33.0		-0.9	99	2.32	63			

AMPLITUDES: MSZ 7.1 8.4 MNW 1.7 4.8 ROX 0.5 0.7

78/ 134

MAR 21 $18^h25^m54^s.1$ 39°.12S 174°.83E 217 km M = 4.3

± 1.0 0.05 0.08 8 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CNZ	P	18	26	25.2		1.7	100	0.57	99			
	S			47.8		1.5	100					
GSZ	eP	18	26	22.3		-1.4	100	0.61	106			
	i			26.0								
NGZ	P	18	26	25.7		2.0	99	0.61	97			
WNZ	eP	18	26	26.5		0.0	100	1.11	64		4.6	
KRP	P	18	26	28.2		0.2	100	1.31	25		3.7*	
	S			54.0		-0.3	100					
MNG	iP	18	26	31.8		1.5	100	1.58	162		4.4	4.6
	e			50.8								
	S			57		-1.2	100					
TRZ	eP	18	26	32.0		1.5	100	1.60	106		4.3	3.8
	eS		27	00.3		1.7	100					
	i			02.4								
WTZ	iP	18	26	33.8		-0.8	100	2.03	57		4.6	4.0
	eS		27	04		-1.8	100					
WEL	P	18	26	37.0		1.1	100	2.17	181	4.4		
	S		27	07.2		-1.0	100					
GNZ	P	18	26	39.9		0.1	100	2.54	80		4.6	4.1
	S		27	12.8		-2.4	99					
COB	P	18	26	39.8		-0.1	100	2.55	219		4.1*	3.5*
	S		27	13.3		-2.1	99					
ECZ	eP	18	26	47.7		-0.3	100	3.25	65		4.1	
KAI	eS	18	27	48		-4.2		4.28	216	3.5*		

AMPLITUDES: WNZ 0.4 KRP 3.7 MNG 10 21
TRZ 1.0 0.8 WTZ 4.5 1.1 WEL 1.4
GNZ 3.9 1.9 COB 2.7 2.2 ECZ 0.3
KAI 0.3

78/ 135

MAR 21 $18^h55^m23^s.0$ 44°.62S 168°.63E 12 km M = 3.3

± 0.3 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
MSZ	P*	18	55	32.7		-0.2	100	0.51	264		2.9	3.2
	S*			39.5		-0.5	100					
ROX	P*	18	55	42.0		1.0	100	0.99	150		3.1	3.5
	S*			54.0		-0.2	100					
GSP	P*	18	55	43.2		0.1	100	1.11	64			
	S*			57.0		-0.9	100					
MNW	P*	18	55	49.0		1.6	98	1.37	211		3.8	3.5
	e		56	11.5								
MJZ	eP*	18	55	49.5		0.4	100	1.47	65			

	e			51.6									
	S*		56	08.5		-0.0	100						
OBZ	eS*	18	56	33		-1.0	99	2.31	189				

AMPLITUDES: MSZ 4.5 14 ROX 0.8 4.5 MNW 2.8 3.8

FELT: Mt Aspiring (113) MM IV, 'The Branches' (122)

78/ 136

MAR 22 $10^h54^m43^s.6$ 31°.92S 179°.58E 240 km M = 4.6

± 3.9 0.29 0.69 70 S.E. of RES. 2.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	eP	10	56	19		1.5	100	6.42	199		4.4	4.4
	eS		57	29		-1.8	100					
GNZ	e	10	57	39				6.83	190			4.5
	eS			42.0		1.7	100					
CNZ	e(P)	10	56	41.2		3.9		7.97	203			
MNG	eP	10	56	52.5		-1.7	100	9.30	200		4.8	4.6
	e		58	29.7								
	eS			36.5		0.0	100					
WEL	eS	10	58	54		-1.3	100	10.13	201	4.7		
COB	eS	10	59	10		1.8	100	10.68	209			3.2*

AMPLITUDES: WTZ 0.4 0.5 GNZ 0.8 MNG 1.6 1.1
WEL 0.2 COB 0.3

78/ 137

MAR 22 $23^h31^m37^s.8$ 42°.56S 172°.57E 12 km M = 3.9

± 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
KKY	P*	23	31	52.3		-1.1	100	0.85	81			
	i			52.7								
	S*		32	05.7		0.9	100					
KAI	eP*	23	31	53.5		-0.1	100	0.85	272	3.8		
	S*		32	06.4		1.2	100					
CHR	P*	23	31	55.9		0.2	100	0.98	177			
	eS*		32	11.4		2.6						
COB	Pn	23	32	02.4		-1.0	100	1.48	5		4.4	4.0
	Sn			23.0		0.4	100					
WEL	eP*	23	32	16.0		1.6	100	2.08	53	3.5		
	e(S*)			47.0		5.3						
	i			51.5								
MJZ	ePn	23	32	11.0		-1.0	100	2.10	226			
	e			18.3								
	Sn			36.3		-1.3	100					
	e			45								
GSP	Pn	23	32	16.1		-0.5	100	2.44	229			
	i			25.0								
	eSn			47.2		1.4						
OMZ	eP*	23	32	28.8		2.3	99	2.79	205		3.7	
MNG	ePn	23	32	20.9		-2.3	99	2.92	49		4.1	
	eP*			27.2		-1.6						
TNZ	ePn	23	32	32		-0.9	100	3.64	23		4.1	
	e			38								
MSZ	ePn	23	32	35.8		-1.9		3.99	236		3.7	
	e			53.7								
KRP	ePn	23	32	55.2		1.5	100	5.16	27		4.0	
	eSn		33	54		2.9						

AMPLITUDES: KAI 3.2 COB 6.5 9.0 WEL 0.3

OMZ 0.4 MNG 2.7 TNZ 0.3
MSZ 0.5 KRP 0.5

78/ 138

MAR 23 $11^h21^m59^s.3$ 42°.58S 172°.63E 12 km M = 4.3
± 0.4 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
KKY	P*	11	22	14.7		0.5	100	0.80	79			
KAI	eP*	11	22	17		1.1	100	0.90	273	3.9		
	e			28.5								
CHR	P*	11	22	17.9		1.1	100	0.95	180			
	i			18.8								
	e			34.5								
COB	iP*	11	22	25.4		-0.5	100	1.48	3		4.6	
	eS*			45.4		-0.2	100					
WEL	eP*	11	22	34.5		-1.0	100	2.05	52	3.9		
	iPg			39.3		-1.6						
	eS*		23	06		3.4	92					
	iSg			12.0		3.4						
MJZ	Pn	11	22	34.4		0.7	100	2.12	227			
	ePg			42.5		0.3						
	eSn		23	00.0		0.4	100					
	eSg			09		-1.7						
GSP	Pn	11	22	38.0		-0.4	100	2.46	230			
	iPg			47.0		-2.1						
OMZ	Pn	11	22	41.4		-1.4	100	2.79	206			
	ePg			53.5		-2.2						
MNG	Pn	11	22	43.4		-1.0	100	2.90	49		4.6	4.2
	iP*			50.0		0.0	100					
	e(S*)		23	26		-1.9	99					
TNZ	ePn	11	22	57.0		2.5		3.64	22		4.4	
	e		23	00.4								
	eP*			05.4		2.8						
ROX	Pn	11	22	54.8		-1.3	100	3.75	218		4.2	
	eP*		23	08.1		3.5						
	e		24	09								
MSZ	ePn	11	22	55.8		-3.8		4.01	237		4.2	
	ePg		23	16.0		-4.4						
CNZ	ePn	11	23	01.3		1.4		4.04	34			
	i			05.0								
	eP*			08.1		-1.2						
TRZ	eP*	11	23	19.5		4.3		4.38	48		4.1	
	e			23.2								
	e			36.3								
KRP	ePn	11	23	16.8		1.6	100	5.16	27		4.3	
	e		24	17								
WTZ	ePn	11	23	28.5		6.2		5.67	37		4.5	4.7
	e			38								
	e		24	24								
GNZ	eP*	11	23	39.2		1.7		5.69	48		4.2	
	e			46.8								
	ePg			56.8		2.6						
	Sn		24	24.5		-0.8	100					

AMPLITUDES: KAI 4.5 COB 11 WEL 0.8
MNG 8.5 4.5 TNZ 0.6 ROX 0.7
MSZ 1.5 TRZ 0.3 KRP 1.2
WTZ 0.3 0.3 GNZ 0.4

78/ 139

MAR 23 $16^h29^m47^s.3$ 32°.04S 177°.94W 253 km M = 4.4

± 2.2 0.12 0.27 38 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	16	31	22		1.7	100	6.34	206		4.4	4.6
	e		32	41								
WTZ	eP	16	31	29.5		-2.3	99	7.24	214		4.5	4.3
	eS		32	53		-0.6	100					
GNZ	P	16	31	32.0		-1.4	100	7.37	205		4.3	4.5
	S		32	58.3		1.8	100					
KRP	eP	16	31	44		3.3		7.95	221		3.0*	
CRZ	eP	16	31	44.5		0.4	100	8.22	251		3.7*	
MNG	eP	16	32	09		1.4	100	10.07	210		4.0	4.4
	eS		33	57		-0.8	100					
WEL	eS	16	34	16		-1.4	100	10.93	210	5.0		
COB	eS	16	34	37		1.4	100	11.74	217			3.0*

AMPLITUDES: ECZ 0.2 0.3 WTZ 0.4 0.3 GNZ 0.3 0.7
KRP 0.2 CRZ 0.3 MNG 0.2 0.6
WEL 0.3 COB 0.2

78/ 140

MAR 23 $19^h10^m46^s.5$ 36°.97S 177°.73E 12 km M = 4.2

± 1.4 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	19	10	59.5		-1.4	100	0.70	218			
	i		11	06.0								
ECZ	ePg	19	11	05.2		-1.1	100	0.97	138			
	e			12.2								
	i			33.2								
WTZ	P*	19	11	06.6		-1.1	100	1.17	210		3.8	3.9
	iPg			13.0		2.7	99					
GNZ	ePn	19	11	15.8		0.7	100	1.69	172		4.0	
	iPg			22.2		1.5	100					
	i			33.1								
	Sg			42.8		-0.7	100					
KRP	Pn	19	11	18.0		-1.1	100	1.99	241		4.5	
	e			36.0								
	iSg			51.0		-2.6						
CNZ	ePn	19	11	32.8		2.4	99	2.82	217			
	iPg			41.2		-2.2	99					
	i			47.4								
TNZ	ePn	19	11	40		0.9	100	3.45	229		5.0	
	e			43.7								
MNG	ePn	19	11	46.2		-1.0	100	4.05	205		4.1	
	ePg		12	03.8		-4.5						
WEL	eSn	19	12	54		0.6	100	4.89	207	4.2		
COB	ePn	19	12	09.0		-0.3	100	5.66	222		4.3	
	eP*			21.5		-2.8						

AMPLITUDES: WTZ 5.2 4.8 GNZ 2.6 KRP 2.6
TNZ 0.6 MNG 1.3 WEL 0.2
COB 0.4

78/ 141

MAR 24 $03^h24^m32^s.3$ 39°.36S 175°.83E 87 km M = 3.7

± 0.5 0.02 0.03 7 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	P	03	24	44.2		-1.0	100	0.21	294			
NGZ	iP	03	24	44.2		-1.2	99	0.24	317			
CNZ	P	03	24	45.0		-0.6	100	0.27	306			
TRZ	eP	03	24	50.0		0.2	100	0.79	104			
	i			58.7								
	eS		25	04.0		1.0	100					
	e			08.5								
TNZ	P	03	24	54.3		0.5	100	1.13	278		3.7*	3.5*
	S		25	11.0		1.0	100					
TUA	S-P			19.0		2.5	89	1.17	62		3.5	3.7
MNG	P	03	24	54.4		-1.2	99	1.29	192		3.9	4.0
	S		25	13.3		-0.0	100					
KRP	eP	03	24	57.7		-0.1	100	1.45	351		2.9*	3.1*
	S		25	17.0		-0.0	100					
WTZ	P	03	25	01.0		0.7	100	1.65	34		3.6	3.9
	S			21.2		-0.1	100					
GNZ	P	03	25	03.0		-0.0	100	1.85	68		3.5	3.4
	e			21.8								
	S			25.8		-0.0	100					
WEL								2.09	202	3.7		
COB	eP	03	25	18.0		0.1	100	2.93	233		3.3*	3.2*
	eS			53.5		1.3	99					
	e			58.0								

AMPLITUDES:									
TNZ	1.6	1.4	TUA	0.6	1.0	MNG	9.0	15
KRP	0.8	1.5	WTZ	1.0	2.0	GNZ	0.7	0.9
WEL	0.4		COB	0.4	1.1			

78/ 142

MAR 24 $03^h59^m31^s.0$ $36°.66S$ $177°.57E$ 12 km M = 4.2
± 0.7 0.03 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
WIZ	P*	03	59	48.9		1.1	98	0.92	199			
	i			55.7								
	eS*			59.7		-0.5	100					
ECZ	eP*	03	59	54.5		0.2	100	1.30	143		4.1	4.1
	e	04	00	02.2								
	S*			11.5		-0.0	100					
	e			21.7								
WTZ	P*	03	59	56.0		-0.1	100	1.40	199		4.2	
GNZ	eP*	04	00	05.9		-0.7	100	2.02	170		3.9	
	e			08.0								
	e			31								
KRP	P*	04	00	07.0		-0.2	100	2.05	231		4.4	
	eS*			34.2		-0.0	100					
TUA								2.17	189		4.2	4.2
CNZ	ePn	04	00	21.3		3.9	0	3.00	212			
	eP*			23.0		-0.3	100					
TNZ	P*	04	00	32.8		-0.2	100	3.56	224		4.8	
MNG	ePn	04	00	38		3.1		4.28	202		3.9	
	e		01	26								
WEL	eSn	04	01	44		0.8	99	5.11	204	4.4		
COB	e(Pn)	04	01	00.8		4.9		5.81	219		4.4	3.9
	e(Sn)		02	09		8.9						

AMPLITUDES:									
ECZ	1.2	1.6	WTZ	6.8		GNZ	1.2	
KRP	1.7		TUA	0.9	0.8	TNZ	0.3	
MNG	0.6		WEL	0.2		COB	0.3	0.3

78/ 143

MAR 24 $11^h43^m03^s.6$ 36°.82S 177°.85E 12 km M = 4.2

± 1.2 0.06 0.07 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	P*	11	43	19.2		-0.7	100	0.89	216			
	i			26.0								
	eS*			31.0		-0.9	100					
ECZ	eP*	11	43	22.3		-0.2	100	1.03	148			
	i			25.8								
	e			31.8								
	e			42.8								
WTZ	P*	11	43	25.9		-2.0	99	1.36	210		4.2	
GNZ	P*	11	43	35.0		-1.0	100	1.84	176		3.9	
	i			39.5								
	S*		44	00.3		0.1	100					
TUA								2.07	195		3.9	4.2
KRP	Pn	11	43	37.2		-1.3	100	2.15	238		4.7	
TRZ	Pn	11	43	49.8		1.7	100	2.85	196		4.3	4.4
	iP*			56.0		2.5	99					
	eS*		44	30.2		-0.6	100					
CNZ	ePn	11	43	51.7		1.6	100	3.00	217			
	iP*			53.2		-2.8						
	i		44	00.5								
ONE	eP*	11	43	57		0.9		3.01	289			
	e		44	09								
MNG	ePn	11	44	06.2		-0.6	100	4.23	205		4.0	4.0
	iP*			14.0		-2.9						
	eSn			55		0.4						
WEL	Sn	11	45	14.5		-0.3	100	5.08	207	4.4		
COB	ePn	11	44	28.0		-0.9	100	5.84	222		4.4	3.8
	eSn		45	36		2.6	99					

AMPLITUDES: WTZ 8.2 GNZ 2.0 TUA 0.6 1.5
KRP 3.2 TRZ 1.1 1.7 MNG 1.1 1.3
WEL 0.4 COB 0.4 0.4

78/ 144

MAR 24 $12^h55^m45^s.0$ 36°.76S 178°.04E 33 km M = 4.7

± 1.0 0.06 0.07 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	12	56	03.5		1.1	100	1.02	157			4.7
	iS			14.7		-0.7	100					
WIZ	P	12	56	01.0		-1.5	100	1.03	221			
	i			08.0								
WTZ	P	12	56	08.0		-0.8	100	1.48	214			
GNZ	P	12	56	12.0		-2.2	99	1.88	180			
	i			25.2								
TUA								2.16	199		4.5	4.7
KRP	P	12	56	19.2		-0.9	100	2.31	239		5.1	
	e			37.2								
	iS			46.2		-0.3	100					
WNZ	eP	12	56	21.8		0.2		2.42	219		4.5	
	e			31.0								
TRZ	P	12	56	32.3		3.5	94	2.95	199		4.7	
	i			38.0								
	i		57	09.2								
ONE	eP	12	56	32		0.7	100	3.13	287			

CNZ	P	12	56	33.2		1.9	99	3.13	218			
	i			35.1								
MNG	P	12	56	47.4		-0.4	100	4.35	207		4.8	4.7
	i			57.0								
	e(S)		57	40.0		4.6						
	i			45.0								
CRZ	eP	12	56	56		-0.1	100	4.95	296		4.8	
WEL	eP	12	56	58.8		-0.6	100	5.19	208	4.6		
	S		57	56.5		0.8	100					
COB	eP	12	57	09.8		-0.4	100	5.98	222		4.7	4.4
	i			13.0								
	e		58	21								

AMPLITUDES:										
ECZ		13	TUA		2.2	4.0	KRP		7.0	
WNZ	0.3		TRZ		2.6		MNG		6.0	6.0
CRZ	0.4		WEL	0.6			COB		0.9	1.3

78/ 145

MAR 24 $15^h40^m28^s.5$ 32°.95S 179°.56W 437 km M = 5.4

± 1.3 0.15 0.26 15 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	15	41	54.2		1.4	100	4.99	198		5.1	5.3
	e			57.0								
	e		42	56.2								
	eS		43	02.3		3.2						
WIZ	P	15	41	56.8		1.0	100	5.29	209			
WTZ	eP	15	41	58.7		-2.0	99	5.76	208		5.9	5.2
	i		42	02.2								
	eS		43	11		-2.3	99					
GNZ	P	15	42	01.8		-1.6	100	6.01	198		5.5	5.2
	i			05.8								
	S		43	17.5		-0.5	100					
KRP	eP	15	42	07.0		-0.2	100	6.38	217		3.8*	
	i			09.1								
	eS		43	27		1.9	99					
TUA								6.43	204		5.3	5.3
TRZ	eP	15	42	17.7		1.4	100	7.22	203		5.4	5.7
	e		43	38.0								
	eS			44.1		2.7	99					
CNZ	eP	15	42	19		0.7	100	7.39	211			
MNG	eP	15	42	31.5		-0.5	100	8.63	206		5.3	5.5
	i		44	02.8								
	iS			09.9		0.1	100					
WEL	eP	15	42	43.0		1.5	100	9.48	207	5.3		
	S		44	26.0		-0.9	100					
COB	eP	15	42	49.0		-0.6	100	10.20	215		3.7*	3.9*
	S		44	41.1		-0.5	100					

AMPLITUDES:										
ECZ	1.2	1.6	WTZ		11	3.0	GNZ		4.7	3.7
KRP	1.5		TUA		1.1	1.1	TRZ		1.0	4.8
MNG	4.6	9.5	WEL	0.8			COB		0.3	1.6

78/ 146

MAR 25 $12^h35^m23^s.3$ 36°.69S 177°.19E 307 km M = 4.1

± 1.2 0.09 0.12 10 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	12	36	06.3		0.1	100	1.30	187		3.9	3.9
	S			38.5		-1.2	100					
ECZ	eP	12	36	08.5		1.2	100	1.48	133		4.3	4.2

	e			12.5									
	e(S)			44.2		2.7							
	e			56.8									
KRP	eP	12	36	09		-0.5	100	1.81	226		2.8*		
GNZ	P	12	36	11.0		-0.4	100	2.06	162		3.9	4.2	
	S			47.2		-1.8	99						
CNZ	eP	12	36	19		0.8	100	2.83	207				
	eS		37	03		1.9	99						
TRZ	eP	12	36	18.2		-0.5	100	2.88	186		4.2	4.5	
	eS		37	04		2.1	99						
MNG	P	12	36	31.3		-0.7	100	4.15	198		4.3	4.2	
	S		37	25.8		0.1	100						
WEL	eS	12	37	42		-0.3	100	4.97	202	4.2			
COB	eP	12	36	49		0.3	100	5.61	217			2.9*	
	eS		37	54		-1.6	99						

AMPLITUDES: WTZ 0.7 0.8 ECZ 0.7 0.6 KRP 0.3
GNZ 0.7 1.8 TRZ 0.3 1.3 MNG 1.6 1.6
WEL 0.2 COB 0.3

78/ 147

MAR 25 $14^h45^m21^s.2$ 42°.73S 172°.00E 0 km M = 3.6
± 0.4 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
KAI	Pg	14	45	30.5		-0.4	100	0.49	295			
	Sg			37.5		0.1	100					
CHR	Pg	14	45	40.0		0.1	100	0.93	150			
	eSg			53.0		0.6						
MJZ	ePn	14	45	51.0		-0.3	100	1.68	221			
	iP*			53.2		0.9	99					
	iPg			55.8		0.6	100					
	Sn		46	14.0		0.4	100					
COB	ePn	14	45	52.0		0.1	100	1.73	19		3.9	3.6
	iP*			55.0		1.9						
	eSn		46	15.4		0.7	100					
	e			17.0								
GSP	ePn	14	45	55.0		-0.8	99	2.02	225			
	iP*			57.7		-0.2	100					
	iPg		46	00.0		-1.9						
	S*			24.8		-0.1						
OMZ	eP*	14	46	09.0		3.3		2.47	198		3.3	
ROX	eP*	14	46	21.0		0.2		3.36	214			
	e			24.5								
	e			50.8								
	e		47	10.5								
MNG	ePn	14	46	13.0		-1.1	99	3.36	52		3.6	
	iP*			21.0		0.2	100					
MSZ	ePn	14	46	16		-0.6	100	3.55	235			
	e(Pg)			31		-1.8						
	eSn			57.8		-0.4						

AMPLITUDES: COB 1.6 2.7 OMZ 0.2 MNG 0.6

78/ 148

MAR 25 $17^h12^m23^s.4$ 42°.75S 171°.97E 3 km M = 3.8
± 0.5 0.02 0.03 4 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KAI	ePg	17	12	33		0.1	100	0.47	298			
	Sg			39.7		0.4	100					

CHR	Pg	17	12	42.2		0.2	100	0.92	149		
	eSg			56		1.6					
MJZ	ePn	17	12	52.5		-0.2	100	1.66	221		
	iP*			55.7		2.0	98				
	iPg			57.8		1.0	100				
	eSn		13	15		0.6	100				
COB	ePn	17	12	53.0		-1.1	100	1.75	19	4.1	3.7
	iP*			56.0		0.6					
	eSn		13	17.0		0.1	100				
	e			19.6							
GSP	Pn	17	12	57.0		-0.2	100	1.99	225		
	iP*			59.5		0.2	100				
	iPg		13	01.2		-2.3	97				
	eS*			24.0		-1.8	99				
	iSg			27.7		-2.5					
OMZ	eP*	17	13	10.0		2.9		2.45	198	3.5	
ROX	eP*	17	13	23		0.7	100	3.33	214	3.8	
	e(Pg)			27.2		-3.4					
MNG	ePn	17	13	16.1		-0.2	100	3.38	52	3.8	
	iP*			23.1		-0.1	100				
MSZ	ePn	17	13	18		-0.0		3.51	235	3.8	
	eSn		14	00		0.9					

AMPLITUDES: COB 2.5 3.5 OMZ 0.3 ROX 0.3
MNG 0.9 MSZ 0.7

78/ 149

MAR 26 $09^h27^m41^s.2$ 36°.91S 177°.57E 217 km M = 4.9
± 1.0 0.05 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
WIZ	P	09	28	09.4		-1.8	100	0.69	206			
ECZ	P	09	28	13.0		-0.5	100	1.11	136		4.2	4.9
	e			31.0								
	S			40.0		1.3	100					
WTZ	iP	09	28	13.0		-1.0	100	1.17	203		4.8	4.9
	S			37.2		-2.2	99					
GNZ	P	09	28	19.3		0.2	100	1.77	168			
	eS			47		-1.3	100					
KRP	P	09	28	21.1		0.7	100	1.91	237		4.2*	
	eS			52.0		1.3	100					
TUA								1.93	190		4.8	5.1
WNZ	P	09	28	22.8		0.7	100	2.08	214		4.8	
TRZ	P	09	28	29.6		0.8	100	2.71	192			
	S		29	09		3.3	97					
NGZ	P	09	28	30.5		1.2	100	2.75	214			
CNZ	P	09	28	31.2		1.5	100	2.79	214			
GSZ	P	09	28	32.0		1.7	100	2.83	213			
TNZ	eP	09	28	38.8		2.0	99	3.39	227		3.5*	
MNG	iP	09	28	44.0		-0.9	100	4.05	203		5.3	5.1
	S		29	33.3		-0.9	100					
CAZ	P	09	28	46.0		0.2	100	4.13	194			
CRZ	eP	09	28	52.0		-0.7	100	4.69	300		3.5*	
WEL	P	09	28	54.5		-0.7	100	4.89	206	5.1		
	S		29	51.0		-1.8	100					
COB	P	09	29	03.2		-1.5	100	5.62	221		3.9*	4.0*
	S		30	08.8		-0.8	100					
KAI	eS	09	30	44		-5.4		7.35	218	4.0*		

AMPLITUDES: ECZ 1.4 6.5 WTZ 10 14 KRP 9.3

TUA	3.0	6.5	WNZ	0.4	TNZ	0.3		
MNG	20	18	CRZ	0.3	WEL	1.9		
COB	0.8	3.7	KAI	0.6				

78/ 150

MAR 27 16h05m16s.0 45°.15S 170°.60E 12 km M = 3.8

± 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
OMZ	P*	16	05	21.4		0.2	100	0.23	70			
GSP	P*	16	05	35.8		-0.1	100	1.10	338			
	S*			51.0		0.4	100					
MJZ	P*	16	05	36.8		-0.3	100	1.17	355			
	S*			52.5		-0.1	100					
MSZ	P*	16	05	51.0		0.3	100	1.97	283		4.0	
	eS*		06	15.0		-1.6	100					
MNW	Pn	16	05	53.0		1.6	100	2.20	252		4.0	3.9
	Sn		06	21		3.0	97					
OBZ	ePn	16	05	54		-1.2	100	2.47	224			
	eSn		06	23		-1.6	100					
KAI	eSn	16	06	34		4.0		2.69	13	3.7		
COB	ePn	16	06	21		0.1		4.36	22		3.8	3.4
	eSn		07	10		0.0						

AMPLITUDES: MSZ 3.5 MNW 1.8 3.7 KAI 0.3
COB 0.2 0.3

FELT: 'The Dasher' (136)

78/ 151

MAR 28 06h41m40s.5 37°.59S 176°.45E 278 km M = 4.2

± 1.1 0.07 0.09 7 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	06	42	15.7		-1.2	100	0.58	133		3.5	3.6
	e			39.3								
	S			45.7		0.3	100					
KRP	eP	06	42	17.0		-0.8	100	0.80	245		2.6*	
	eS			47		0.1	100					
GNZ	P	06	42	23.0		0.3	100	1.63	131		4.7	4.4
	S			53.0		-2.4	98					
ECZ	eP	06	42	23		0.0	100	1.66	94		3.7	
NGZ	P	06	42	25.0		1.6	99	1.73	202			
GSZ	P	06	42	26.0		1.9	99	1.82	202			
TRZ	eP	06	42	26.5		1.0	100	1.99	172		4.3	4.6
	eS		43	02.5		2.1	99					
MNG	P	06	42	36.7		0.3	100	3.12	194		4.6	4.3
	eS		43	19.5		-0.5	100					
WEL	eS	06	43	35		-0.6	100	3.92	199	4.1		
COB	eP	06	42	51		-1.2	100	4.54	218		3.2*	3.0*
	eS		43	47.5		-0.8	100					

AMPLITUDES: WTZ 0.4 0.6 KRP 0.3 GNZ 5.0 4.5
ECZ 0.2 TRZ 0.6 2.8 MNG 5.5 3.2
WEL 0.2 COB 0.2 0.5

78/ 152

MAR 29 04h00m59s.0 45°.39S 167°.56E 76 km M = 3.3

± 0.5 0.01 0.04 4 S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNW	P	04	01	11.6		-0.3	100	0.40	174		3.2	3.3

	S			21.8		0.1	100				
MSZ	P	04	01	15.0		-0.4	100	0.76	20	3.4	3.5
	S			28.2		0.5	100				
OBZ	eP	04	01	26		0.5	100	1.57	166		
	eS			45.5		0.0	100				
GSP	eP	04	01	33.2		-0.3	100	2.16	55		
	S			59.8		0.7	99				
OMZ	eS	04	02	05		-0.1	100	2.39	84		
MJZ	eP	04	01	39		0.5	100	2.50	57		
	eS		02	07.5		-0.4	100				

AMPLITUDES: MNW 5.5 17 MSZ 7.0 13

78/ 153

MAR 29 $08^h06^m54^s.3$ 41°.36S 174°.73E 29 km M = 2.9

± 0.4 0.04 0.03 2 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WHW	iP*	08	06	59.5		0.3	100	0.06	6			
WEL	P*	08	06	59.4		0.1	100	0.08	21			
	S*		07	03.8		0.9	100					
BHW	iP*	08	06	59.2		-0.3	100	0.12	115			
MRW	iP*	08	07	00.0		0.3	100	0.13	352			
WDW	iP*	08	07	00.2		-0.3	100	0.22	65			
CAW	iP*	08	07	02.4		0.0	100	0.36	46			
TCW	iP*	08	07	03.1		0.5	100	0.37	293			
MOW	iP*	08	07	02.4		-0.6	100	0.40	99			
MNG	ePn	08	07	11.0		0.0	100	0.94	38		2.5	2.7
	eP*			13.5		1.8	97					
	S*			23.0		-1.4	99					
COB	ePn	08	07	20.0		0.9	100	1.53	280		3.4	3.1
	iP*			21.1		-0.6	100					
	S*			40.9		-1.2	99					

AMPLITUDES: WEL 4.8 MNG 0.6 1.4 COB 0.6 1.1

FELT: Eastbourne (68) MM IV

78/ 154

MAR 29 $08^h55^m59^s.0$ 40°.66S 175°.03E 12 km M = 3.7

± 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
MNG	iP*	08	56	06.7		0.6	100	0.34	83			
	e			12.0								
CAW	iP*	08	56	08.1		0.2	100	0.45	176			
WDW	iP*	08	56	10.2		-0.3	100	0.61	183			
MRW	iP*	08	56	11.3		0.5	100	0.62	203			
WEL	P*	08	56	11.7		0.3	100	0.66	197	3.9		
	S*			21.0		0.7	100					
WHW	iP*	08	56	12.0		0.3	100	0.67	199			
BHW	P*	08	56	12.5		-0.6	100	0.76	189			
MOW	P*	08	56	12.2		-1.3	100	0.78	168			
TCW	P*	08	56	14.5		0.7	100	0.79	226			
CAZ	P*	08	56	14.3		-1.9	99	0.94	105			
	S*			30.0		1.1	100					
GSZ	P*	08	56	25.0		0.1	100	1.45	17			
NGZ	P*	08	56	26.7		0.2	100	1.54	17			
	S*			48.0		1.1	100					
TRZ	eP*	08	56	32		1.7	99	1.76	52		3.6	
	e			37.5								

	eSg			59		0.5						
COB	ePn	08	56	28.0		-1.0	100	1.79	255		3.6	3.7
	iP*			32.0		1.2	100					
	eSn			53.0		1.5						
	iS*			55.2		0.8	100					
	eSg			59.2		-0.3						
KKY	Pn	08	56	29.9		-2.3	99	2.02	209			
	e			41.3								
	Sn			53.5		-3.5						
KRP	ePn	08	56	43		0.8	100	2.76	8		4.0	
	eP*			48		0.7						
	e			50.5								
	eS*		57	20.5		-2.9	95					
	eSg			31.5		-0.6						
WTZ	eP*	08	56	50		-2.6		3.08	30		3.5	
	ePg		57	00		-1.2						
KAI	eS*	08	57	37		-2.5		3.29	234	3.7		
	e			45								
GSP	i(S*)	08	58	27.0		-6.1		5.08	225			

AMPLITUDES: WEL 7.5 TRZ 0.5 COB 0.7 3.1
KRP 0.6 WTZ 0.3 KAI 0.2

FELT: Waikawa Beach, Levin (65) MM IV, Wellington (68) MM III

78/ 155

MAR 29 $09^h59^m35^s.1$ 33°.17S 178°.68W 279 km M = 5.2
± 1.5 0.08 0.12 22 S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	10	00	55.2		2.3	99	5.05	206		5.2	5.2
	e(S)		01	59		5.1						
WIZ	eP	10	00	57.7		-0.8	100	5.51	217			
	i			59.7								
WTZ	P	10	01	03.0		-1.0	100	5.97	215		5.4	
GNZ	eP	10	01	03.0		-2.5	99	6.08	205		5.3	5.3
	i			06.0								
	S		02	16.0		-0.3	100					
TUA								6.57	210		5.5	5.5
KRP	P	10	01	14.7		1.7	100	6.69	223		3.8*	
CRZ	P	10	01	21.3		0.7	100	7.31	258		3.9*	
TRZ	eP	10	01	21		0.0	100	7.33	208		5.2	5.2
	S		02	46		1.9	100					
MNG	P	10	01	39.5		0.4	100	8.78	210		4.8	4.9
	e			45								
	S		03	15.5		-0.9	100					
WEL	eS	10	03	33.0		-2.7	99	9.64	211	5.3		
COB	eP	10	01	58.5		-1.5	100	10.47	218		3.5*	3.6*
	eS		03	55.5		1.3	100					
CIZ	e(P)	10	02	12		6.6		10.90	172			
	S		04	05		1.0	100					
KAI	eS	10	04	34		1.2	100	12.19	217	3.9*		
MSZ	eP	10	03	05		3.8		15.50	218		3.8*	
	e			16								

AMPLITUDES: ECZ 1.8 1.7 WTZ 4.8 GNZ 4.0 6.2
TUA 2.0 2.0 KRP 1.5 CRZ 0.5
TRZ 0.7 1.8 MNG 1.6 2.7 WEL 0.7
COB 0.2 0.9 CIZ 0.3 0.6 KAI 0.3
MSZ 0.6

78/ 156

MAR 30 $11^h35^m10^s.6$ $36°.69S$ $177°.95E$ 233 km M = 4.4
± 1.1 0.07 0.07 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	11	35	44.7		0.1	100	1.11	155		4.2	4.5
	e		36	08								
	eS			10.2		-0.9	100					
WTZ	P	11	35	46.2		-1.3	99	1.50	210		4.3	4.2
	e		36	13.5								
	S			16.0		-0.2	100					
GNZ	P	11	35	52.0		0.5	100	1.95	178		4.6	4.7
	i		36	21.2								
	S			24.0		0.9	100					
KRP	P	11	35	54.5		-0.3	100	2.29	237		3.3*	
	S		36	29.5		0.5	100					
TRZ	eP	11	36	02.5		0.0	100	3.00	197		4.4	4.6
	(S)			48.5		5.9						
CNZ	eP	11	36	07		2.9	82	3.15	216			
MNG	P	11	36	17.8		-1.0	100	4.37	205		4.1	4.1
	eS		37	12.0		0.2	100					
WEL	eS	11	37	30		-0.5	100	5.22	207	4.3		
COB	eS	11	37	47		-0.8	100	5.99	221			3.1*

AMPLITUDES: ECZ 1.2 2.5 WTZ 2.8 2.2 GNZ 4.8 8.8
KRP 1.0 TRZ 0.6 2.2 MNG 1.1 1.6
WEL 0.3 COB 0.5

78/ 157

MAR 31 $00^h56^m02^s.6$ $32°.73s$ $179°.02E$ 311 km M = 4.7
± 2.3 0.13 0.19 22 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eS	00	58	21		-0.9	100	4.97	184			5.0
WTZ	eP	00	57	25.5		-1.4	100	5.51	197		4.7	4.7
	eS		58	35		1.9	99					
KRP	eP	00	57	33		1.2	100	5.91	208		3.1*	
	e(S)		58	52		10.2						
GNZ	eP	00	57	34		1.6	100	5.96	188		4.4	4.9
	eS		58	41		-1.8	100					
MNG	P	00	57	59.4		-2.1	99	8.38	199		4.5	4.8
	eS		59	34		-1.1	100					
WEL	eS	00	59	54		0.6	100	9.20	200	4.9		
CIZ	eS	01	00	50		0.5	100	11.74	164			

AMPLITUDES: ECZ 1.0 WTZ 0.9 1.1 KRP 0.3
GNZ 0.5 2.2 MNG 0.8 2.0 WEL 0.3

78/ 158

MAR 31 $13^h05^m59^s.4$ $38°.38S$ $178°.38E$ 12 km M = 4.2
± 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
GNZ	iP*	13	06	09.2	USW	2.1	99	0.39	226		3.9	3.6
	e			27								
ECZ	iP*	13	06	12.2	U	-0.3	100	0.70	11		4.1	4.6
	e			20								
	eS*			23		1.0	100					
TUA	(Sg-P*			20		) 3.5		1.05	246		4.4	4.4
TRZ	Pn	13	06	26.7		-1.2	100	1.68	225			3.9

	ePg			35		1.4	100						
WNZ	ePn	13	06	29		-0.5	100	1.80	261		4.4	4.2	
	ePg			36		0.1	100						
	eS*			57.5		2.4	99						
KRP	Pn	13	06	34.0		-2.1	99	2.29	281		4.0		
	eP*			39		-0.6	100						
NGZ	ePn	13	06	35.5		-0.9	100	2.30	249				
	e			41									
MNG	Pn	13	06	46.8		-1.3	100	3.17	224		4.0	4.0	
	ePg		07	05		1.6	100						
	eSn			24.5		-0.3	100						
TNZ	ePn	13	06	49		0.0	100	3.23	254		4.4	4.4	
	e		07	43									
WEL	eSn	13	07	43		-2.4	99	4.02	223	4.1			
CIZ	ePn	13	07	37		-0.1	100	6.76	147				
	eSn		08	52		0.9	100						

AMPLITUDES: GNZ 46 39 ECZ 5.6 19 TUA 8.0 7.5
TRZ 1.6 WNZ 0.5 0.5 KRP 1.3
MNG 1.8 2.5 TNZ 0.3 0.3 WEL 0.3

78/ 159

APR 01 $17^h19^m20^s.7$ 43°.25S 170°.77E 12 km M = 3.8
± 0.4 0.03 0.07 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MJZ	iP*	17	19	35.8	SW	0.8	100	0.77	196			
	eS*			46		0.5	100					
KAI	P*	17	19	36.0		-0.5	100	0.86	33	3.7		
	eS*			47		-1.2	100					
GSP	iP*	17	19	40.1	U	0.5	100	1.04	211			
	eS*			55		1.5	100					
OMZ	ePg	17	19	58.5		0.8	100	1.83	177		3.4	3.2
	eSg		20	23		0.6	100					
ROX	Pg	17	20	07.8		-2.6	99	2.46	204		4.0	3.6
	eSg			42		-1.6	100					
MSZ	eP*	17	20	07		2.4	99	2.50	234			
	eS*			36.5		-0.9	100					
COB	Pn	17	20	00.6		-1.2	100	2.61	35		4.1	3.7
	eP*			07.5		1.1	100					
	eSn			35		2.3	99					
	eS*			41		0.5	100					
MNW	eP*	17	20	18		-1.7	100	3.39	221		4.0	3.7
	e(Sn)			58		6.5						
WEL	eSn	17	20	54		-1.6	100	3.56	58	4.0		
MNG	e(Pn)	17	20	31		4.9		4.39	55		4.1	3.6
	e(Sn)		21	22		6.4						

AMPLITUDES: KAI 3.0 OMZ 0.4 0.6 ROX 0.9 1.0
COB 1.0 1.5 MNW 0.8 0.8 WEL 0.3
MNG 1.3 0.5

FELT: Evans Creek (98) MM IV

78/ 160

APR 02 $02^h58^m43^s.6$ 38°.17S 178°.77E 12 km M = 3.6
± 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
ECZ	(S-P)			16		8.9		0.51	339		3.4	3.2
GNZ	iP*	02	58	59.0	W	1.4	100	0.76	231			

	eS*		59	10		2.1	99						
WIZ	ePn	02	59	09		0.6	100	1.41	297				
WTZ	iPn	02	59	08.3	U	-0.2	100	1.42	277		3.8	3.7	
	eSn			26		-1.1	100						
TUA	S*-Pn			20		0.6	100	1.42	243		4.1	3.7	
KRP	eP*	02	59	29		0.4	100	2.56	275		3.6		
NGZ	ePn	02	59	26.5		0.9	100	2.67	247				
	ePg			36.5		-1.1	100						
MNG	ePn	02	59	37.5		0.2	100	3.54	225		3.4	3.3	
	ePg			55		-0.0	100						
	eSn	03	00	14.5		-3.3	95						

AMPLITUDES: ECZ 1.9 1.5 WTZ 3.0 2.5 TUA 2.2 1.0
KRP 0.4 MNG 0.4 0.4

78/ 161

APR 02 $15^h48^m37^s.8$ 49°.44S 164°.96E 33 km M = 4.4
± 1.8 0.15 0.29 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	eP	15	49	27.5		1.1	100	3.29	41			
	eS		50	01		-2.0	99					
MNW	P	15	49	36.2		-0.8	100	4.08	27	4.3	4.6	4.2
	eS		50	19.5		-2.3	99					
ROX	P	15	49	49.3		0.4	100	4.95	38		4.3	4.3
	eS		50	42		-0.6	100					
MSZ	eP	15	49	51		-1.1	100	5.18	24		4.6	4.2
	eS		50	50		1.7	100					
GSP	eP	15	50	08		0.1	100	6.34	35			
	e			18								
	eS		51	17		0.8	100					
MJZ	e	15	50	22				6.64	37			
	eS		51	25		1.7	100					

AMPLITUDES: MNW 0.6 2.2 2.0 ROX 0.5 1.2 MSZ 2.0 1.5

78/ 162

APR 02 $17^h19^m30^s.4$ 36°.01S 178°.32E 294 km M = 4.5
± 0.8 0.06 0.10 5 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	S-P			34		-0.3	100	1.68	174		4.2	4.3
WIZ	eP	17	20	14		-1.1	99	1.76	211			
	eS			49		-0.9	100					
WTZ	P	17	20	18.6		-0.3	100	2.24	208		4.7	4.3
	i			19.1								
	S			56.5		-0.2	100					
GNZ	P	17	20	23.2		0.6	100	2.64	185		4.8	4.6
	eS		21	04		0.7	100					
KRP	P	17	20	26.1		0.6	100	2.94	229		3.0*	
	eS		21	09		0.6	100					
TUA	S-P			44		1.0	100	2.94	198		4.3	4.5
NGZ	P	17	20	36.3		1.4	99	3.83	213			
MNG	P	17	20	48.9		-0.7	100	5.11	205		4.4	4.5
	i			49.4								
	e		21	44.7								
	eS			51		-0.6	100					
WEL	eS	17	22	09.0		-0.6	100	5.96	207	4.5		

AMPLITUDES: ECZ 0.6 0.7 WTZ 3.6 1.4 GNZ 4.0 4.2
KRP 0.4 TUA 0.5 0.7 MNG 1.8 2.5

WEL 0.3

78/ 163

APR 02 $19^h40^m17^s.7$ 39°.30S 177°.49E 12 km M = 3.6
± 0.7 0.04 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
TUA	S*-P*			07	U	-0.7	100	0.56	331		4.2	4.0
TRZ	P*	19	40	30.9		2.2	99	0.58	244			
	e(Sg)			43		5.5						
GNZ	iP*	19	40	33.2	U	1.1	100	0.77	32		3.4	3.5
	eSg			45.5		1.4	100					
WTZ	Pn	19	40	39.3		-2.6	99	1.38	343		3.3	3.6
	eSn			58		-2.0	100					
NGZ	Pn	19	40	42.9		-0.3	100	1.47	274			
	eS*		41	04.5		1.2	100					
WIZ	eP*	19	40	50		0.6	100	1.79	352			
	e(Pg)			57.5		3.6						
MNG	Pn	19	40	49.7		-1.2	100	2.03	229		3.4	3.3
	ePg		41	01		2.2	99					
	e			52								
KRP	P*	19	40	53.8		-0.2	100	2.06	311		3.5	3.4
	eSg		41	28		0.9	100					
TNZ	eP*	19	40	58		-2.2	99	2.42	272		4.1	4.0
	e		41	12								
	eS*			33		1.1	100					
WEL	eSn	19	41	34		-2.2	99	2.88	226	3.7		
	e		42	19								

AMPLITUDES: TUA 16 12 GNZ 3.6 6.8 WTZ 1.2 2.0
MNG 1.1 1.0 KRP 0.5 0.3 TNZ 0.3 0.3
WEL 0.2

78/ 164

APR 03 $10^h20^m59^s.7$ 44°.14S 168°.99E 12 km M = 3.7
± 0.8 0.05 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
MJZ	iP*	10	21	18.2	SE	-1.0	100	1.07	82			
	eS*			33		-0.5	100					
ROX	Pn	10	21	22.9		-0.8	100	1.36	170		3.8	3.7
	eSn			40		-1.6	99					
OMZ	Pn	10	21	28.3		0.5	100	1.66	125			
	eSn			50		1.1	100					
MNW	Pn	10	21	29.5		-1.8	99	1.91	210	3.3	3.9	3.6
	eSn			56		1.1	100					
KAI	eS*	10	22	14		1.0	100	2.39	48	3.7		
OBZ	e?	10	21	38				2.83	192			
	ePn			44		0.1	100					
	eSn		22	19		1.8	99					

AMPLITUDES: ROX 2.2 3.9 MNW 0.3 2.0 2.5 KAI 0.4

78/ 165

APR 04 $11^h41^m32^s.0$ 38°.82S 178°.93E 12 km M = 3.5
± 0.8 0.04 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
GNZ	iP*	11	41	45.4		-0.3	100	0.73	283		3.9	3.8
	e			51								
	eS*			55		-0.6	100					

ECZ	eP*	11	41	53		0.0	100	1.16	345	3.4	3.3
	e		42	29							
TUA	Sn-Pn			18		-0.3	100	1.39	270	3.3	3.4
WTZ	Pn	11	41	59.8		-1.4	99	1.74	298	3.6	3.6
	P*		42	04.2		1.3	99				
	eSg			30.5		-0.2	100				
NGZ	ePg	11	42	27		2.1	97	2.61	261		
KRP	e(P*)	11	42	25		3.8		2.82	287	3.6	
	eSg		43	07		0.1	100				
MNG	ePn	11	42	21		-0.4	100	3.21	235	3.2	3.3
	eSn			58		-0.6	100				

AMPLITUDES: GNZ 12 13 ECZ 0.4 0.4 TUA 0.3 0.5
WTZ 1.3 1.1 KRP 0.3 MNG 0.3 0.4

78/ 166

APR 04 $15^h02^m31^s.6$ 37°.65S 179°.96E 12 km M = 3.7
± 0.9 0.05 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
ECZ	e?	15	02	46				1.13	267		3.5	3.6
	ePg			53.5		-0.9	100					
	eS*		03	08		1.0	99					
GNZ	Pn	15	03	03.3		1.3	99	1.83	236		3.6	3.6
	eSn			25.0		0.2	100					
	eS*			28		0.0	100					
WTZ	Pn	15	03	09.0		-0.6	100	2.38	261		3.9	3.8
	eSn			37.5		-0.6	100					
TUA	Sn-Pn			30		0.2	100	2.50	242			
MNG	ePn	15	03	40		0.4	100	4.58	228		3.9	3.7
	eSn		04	30		-0.9	100					

AMPLITUDES: ECZ 0.5 0.9 GNZ 0.9 1.5 WTZ 1.4 1.0
MNG 0.7 0.5

78/ 167

APR 05 $04^h43^m09^s.9$ 38°.90S 176°.03E 112 km M = 4.1
± 0.7 0.03 0.04 7 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	e	04	43	28				0.28	11			
	eS			39		0.6	100					
NGZ	iP	04	43	28.1	U	1.3	100	0.43	229			
TUA	S-P			15.5		0.0	100	0.87	84		3.9	4.1
KRP	iP	04	43	31.6	UNW	-0.4	100	1.05	338		3.1*	3.1*
	e			33								
	e			43.4								
	eS			47		-1.9	99					
WTZ	iP	04	43	32.8	D	-0.7	100	1.18	40		4.1	3.7
	S			50.2		-1.2	100					
TNZ	iP	04	43	35.8	U	0.7	100	1.32	257		3.5*	3.2*
	eS			56		1.7	99					
GNZ	iP	04	43	38.5	DW	0.3	100	1.57	81		4.2	4.1
	S			59.2		-0.4	100					
MNG	iP	04	43	40.7	U	0.2	100	1.76	194		4.3	4.5
	eS		44	03.5		0.0	100					
CAZ	iP	04	43	44.5	U	1.0	100	2.01	176			
	eS		44	08		-0.6	100					
	e			12								
ECZ	P	04	43	47.0		-0.6	100	2.31	59		4.6	3.9
	eS		44	18		2.1	99					

WEL	eS	04	44	19.8		-2.3	98	2.57	202	4.1				

AMPLITUDES: WNZ 0.3 0.4 TUA 2.2 3.5 KRP 1.7 1.7
WTZ 4.5 2.2 TNZ 0.7 0.6 GNZ 4.5 5.5
MNG 11 20 ECZ 2.0 0.4 WEL 0.8

78/ 168

APR 05 $05^h34^m22^s.6$ $40°.50S$ $175°.48E$ 12 km M = 3.9
± 0.4 0.02 0.05 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iPg!	05	34	27.8		2.0	99	0.12	178			
CAZ	P*	05	34	33.7		-2.0	99	0.70	126			
	S*			45.4		0.2	100					
WEL	P*	05	34	39.3		-0.7	100	0.95	214	3.7		
	eS*			53		0.2	100					
NGZ	iPn	05	34	44.0	U	-2.1	99	1.32	5			
	eSn		35	02		-1.7	100					
TRZ	Pg	05	34	52.7		1.7	100	1.40	48			
TNZ	ePn	05	34	49		-0.4	100	1.56	327		3.8	3.9
	eS*		35	12		0.9	100					
KRP	Pn	05	35	02.7		-0.5	100	2.57	1		4.2	4.4
	P*			08.1		0.4	100					
	eSn			34		0.2	100					
	e(S*)			45		3.6						
WTZ	eP*	05	35	13		1.9	99	2.77	26		3.5	3.5
	e			31								

AMPLITUDES: WEL 2.4 TNZ 0.8 1.6 KRP 1.2 1.3
WTZ 0.4 0.4

FELT: Palmerston North (62) MM IV

78/ 169

APR 05 $09^h03^m50^s.4$ $38°.32S$ $176°.09E$ 162 km M = 3.8
± 1.1 0.04 0.06 9 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	iP	09	04	13.6	USW	-0.1	100	0.58	312		3.1*	2.3*
	eS			32		0.3	100					
WTZ	P	09	04	14.3		-0.6	100	0.78	65		3.5	3.5
	eS			33		-0.8	100					
NGZ	P	09	04	17.2		1.3	100	0.94	203			
GNZ	iP	09	04	22.0	U	0.2	100	1.56	103		3.8	3.7
	eS			46		0.2	100					
TNZ	P	09	04	23.0		0.9	100	1.59	237		3.2*	
ECZ	P	09	04	27.0		-0.1	100	2.04	73		3.7	
MNG	iP	09	04	30.2	U	-0.4	100	2.34	191		4.6	4.0
	eS		05	01		-0.6	100					
CAZ	eS	09	05	09		2.2	98	2.58	178			
WEL	eS	09	05	17		-2.1	98	3.13	199	3.8		

AMPLITUDES: KRP 1.7 0.3 WTZ 1.2 1.4 GNZ 1.5 1.9
TNZ 0.3 ECZ 0.3 MNG 13 3.4
WEL 0.2

78/ 170

APR 06 $02^h44^m33^s.2$ $37°.30S$ $176°.95E$ 245 km M = 3.8
± 1.4 0.07 0.08 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	02	45	05.1	U	-1.2	100	0.68	178		3.6	3.2

	eS			30		-2.1	99					
KRP	P	02	45	10.0		0.3	100	1.29	241		2.9*	
	eS			39		0.9	100					
ECZ	P	02	45	09.2		-0.8	100	1.32	108		3.7	3.7
	eS			40.5		1.9	99					
GNZ	iP	02	45	12.0	U	0.1	100	1.58	148		4.1	3.6
	eS			42		0.0	100					
NGZ	P	02	45	18.0		1.0	100	2.15	209			
MNG	iP	02	45	30.7	U	-0.8	100	3.50	199		4.7	3.7
	eS		46	16		-0.7	100					
WEL	eS	02	46	35		0.9	100	4.33	202			

AMPLITUDES: WTZ 0.7 0.3 KRP 0.5 ECZ 0.3 0.3
GNZ 1.7 0.8 MNG 7.1 0.8

78/ 171

APR 06 $13^h08^m26^s.1$ 37°.65S 176°.44E 213 km M = 4.0
± 1.2 0.06 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
WTZ	P	13	08	54.1		-0.9	100	0.55	128		3.5	3.5
	S		09	15.8		-1.5	100					
KRP	iP	13	08	55.7	D	-0.3	100	0.76	249		2.7*	
	eS		09	19		-0.2	100					
TUA	S-P			27		1.2	100	1.28	154		3.6	4.0
GNZ	iP	13	09	02.1	U	0.1	100	1.59	129		4.1	4.3
	S			28.4		-1.4	100					
NGZ	eP	13	09	04		1.4	100	1.66	203			
	eS			33		2.1	99					
ECZ	(P)	13	09	06.7		4.0		1.67	92		3.7	3.9
	eS			32		1.0	100					
TRZ	eP	13	09	07		1.9	100	1.93	171			
	e(S)			40		4.8						
TNZ	P	13	09	09.8		1.5	100	2.23	226		3.4*	3.0*
	e(S)			47		6.2						
ONE	eP	13	09	11		-0.3	100	2.51	318	3.1*		
MNG	iP	13	09	16.5	U	-1.1	100	3.06	194		4.6	4.4
	eS			55		-2.4	99					
CAZ	eS	13	10	04		2.5	99	3.26	183			
WEL	eS	13	10	12		-2.5	99	3.85	199	4.1		

AMPLITUDES: WTZ 0.7 0.8 KRP 0.5 TUA 0.3 0.7
GNZ 2.1 4.6 ECZ 0.3 0.5 TNZ 0.3 0.2
ONE 0.3 MNG 7.2 5.0 WEL 0.3

78/ 172

APR 07 $23^h40^m52^s.6$ 32°.52S 179°.80E 445 km M = 5.1
± 2.3 0.16 0.38 27 S.E. of RES. 2.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	23	42	23		2.9	99	5.26	191		5.3	4.7
	eS		43	31		1.9	100					
WIZ	eP	23	42	22		0.2	100	5.44	202			
ONE	eP	23	42	23		0.0	100	5.56	233	3.5*		
WTZ	eP	23	42	24		-2.8	99	5.92	202		5.6	4.9
	e			27.4								
	eS		43	40		-1.0	100					
CRZ	e?	23	42	49				6.25	250		3.8*	
GNZ	eP	23	42	28		-2.6	100	6.28	193		5.4	5.0
	e			32								
	eS		43	47		-0.9	100					

KRP	P	23	42	35.0		2.9	99	6.43	212		3.8*		
NGZ	eP	23	42	45		1.6	100	7.47	206				
	eS		44	09.5		-1.5	100						
MNG	eP	23	42	56		-2.1	100	8.80	202		5.0	5.1	
	eS		44	37		-0.5	100						
WEL	eS	23	44	57		2.6	100	9.64	203	4.9			

AMPLITUDES: ECZ 1.5 0.4 ONE 0.3 WTZ 5.6 1.3
CRZ 0.4 GNZ 3.5 2.5 KRP 1.5
MNG 2.5 3.5 WEL 0.3

78/ 173

APR 08 $11^h13^m43^s.8$ $40°.33S$ $173°.84E$ 164 km **M = 4.5**
± 0.5 0.04 0.05 7 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	iP!	11	14	12.9		1.7	100	1.13	228			
WEL	P	11	14	14.1		2.4	99	1.19	144	4.3		
	eS			33		-0.1	100					
MNG	iP	11	14	14.8	D	2.2	99	1.29	103		4.4	4.7
	e			27								
	eS			33		-1.7	100					
NGZ	iP	11	14	18.9	D	1.2	100	1.78	51			
	eS			42		-1.9	100					
CAZ	eS	11	14	48		1.7	100	1.91	108			
KKY	iP	11	14	22.4		1.2	100	2.09	183			
	e			41								
TRZ	eP	11	14	26		0.9	100	2.42	72			
	e			29.3								
	eS			56		-0.9	100					
WNZ	P	11	14	25.8		0.4	100	2.44	47		4.9	4.8
	e		15	13								
KRP	iP	11	14	28.7	DSW	-0.5	100	2.74	29		3.5*	
WTZ	iP	11	14	36.3	U	-1.0	100	3.39	47		4.0	4.4
	eS		15	17		-1.5	100					
GNZ	iP	11	14	40.2	D	-0.5	100	3.65	64		4.7	4.6
	eS		15	22.5		-1.9	100					
MJZ	eP	11	14	52		1.2	100	4.44	213			
	eS		15	39		-3.6	96					
ECZ	P	11	14	51.7		-0.2	100	4.52	56		4.5	4.5
	eS		15	46		1.5	100					
ONE	eP	11	14	54		1.4	100	4.57	5	3.5*		
GSP	eP	11	14	56		1.1	100	4.74	216			
	eS		15	48		-1.8	100					
MSZ	eP	11	15	13		-0.6	100	6.16	223		3.5*	3.9*
	e(S)		16	18.5		-4.9						
CIZ	eS	11	17	07		-0.2	100	8.00	120			

AMPLITUDES: WEL 3.0 MNG 16 44 WNZ 0.4 0.3
KRP 1.6 WTZ 0.6 1.5 GNZ 2.5 3.3
ECZ 0.5 0.5 ONE 0.4 MSZ 0.8 3.5

78/ 174

APR 10 $01^h44^m49^s.0$ $31°.57s$ $179°.64E$ 250 km **M = 4.7**
± 3.8 0.20 0.27 43 S.E. of RES. 3.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	01	46	22.2		2.2	100	6.18	188		4.6	4.8
	eS		47	31.5		0.4	100					
WTZ	eS	01	47	47		2.6	100	6.77	198			4.8
GNZ	eP?	01	46	33		0.3	100	7.18	190			4.9

	eS		47	49		-4.9	98						
NGZ	eP	01	46	47		0.3	100	8.28	202				
	eS		48	20		1.2	100						
MNG	eP	01	47	00.1		-3.7	99	9.64	199		4.6	4.8	
	eS		48	47.0		-2.7	100						
COB	eS	01	49	23		2.0	100	11.02	208			3.3*	
CIZ	eP?	01	47	52		9.5		12.73	167				
	eS		50	01		1.2	100						

AMPLITUDES: ECZ 0.3 0.5 WTZ 1.0 GNZ 1.8
MNG 0.9 1.7 COB 0.4 CIZ 0.4 0.4

78/ 175

APR 11 $02^h44^m22^s.2$ 38°.32S 176°.20E 155 km M = 3.7
± 1.9 0.07 0.07 13 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	eP	02	44	46		0.9	100	0.66	307		2.4*	2.5*
	eS		45	03		0.2	100					
WTZ	iP	02	44	45.0	U	-0.4	100	0.70	62		3.7	3.0
	eS		45	02		-1.3	100					
NGZ	eP	02	44	49		1.6	99	0.98	208			
	e		45	12								
GNZ	eS	02	45	15		0.0	100	1.47	103			3.4
MNG	iP	02	45	02.4	U	0.0	100	2.37	193		4.2	3.8
	eS			34		0.8	100					
WEL	e(S)	02	45	40		-11.1		3.17	200	3.9		
COB	eS	02	46	05		-2.0	99	3.85	223			2.8*

AMPLITUDES: KRP 0.3 0.4 WTZ 2.0 0.5 GNZ 0.9
MNG 4.5 2.2 WEL 0.3 COB 0.4

78/ 176

APR 11 $16^h52^m39^s.2$ 44°.96S 168°.00E 12 km M = 3.9
± 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
MSZ	iP*!	16	52	44.7		-0.7	100	0.30	348			
MNW	iP*	16	52	55.1	U	0.0	100	0.86	198	3.6		
	eS*		53	07		0.2	100					
ROX	iP*	16	52	58.4	D	-0.2	100	1.07	119		4.0	4.2
	eS*		53	12.3		-0.5	100					
HHP	Pn	16	53	08.6		-0.5	100	1.79	70			
	P*			11.0		0.1	100					
	eS			31		-0.6	100					
OBZ	ePn	16	53	11		-0.3	100	1.94	178			
	eSn			36		0.6	100					
MJZ	ePn	16	53	14		1.8	93	2.02	62			
	eS*			42		0.7	100					

AMPLITUDES: MNW 2.5 ROX 5.5 18

78/ 177

APR 11 $19^h47^m49^s.7$ 32°.50S 179°.18W 303 km M = 4.8
± 1.7 0.09 0.17 25 S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	19	49	14		0.2	100	5.51	199		4.9	4.8
	e		50	16								
	eS			23		3.2	99					
	e			50								
WIZ	eP	19	49	15		-2.8	99	5.84	210			

	eS		50	27		0.2	100					
ONE	e(P)	19	49	33		10.0		6.27	237	3.5*		
WTZ	eP	19	49	21.9		-1.5	100	6.31	209		4.9	4.7
	eS		50	36		-1.0	100					
GNZ	P	19	49	26.0		-0.2	100	6.54	200		4.9	4.8
	eS		50	40		-2.1	100					
AUC	eP?	19	49	33		6.0		6.61	227			
KRP	eP	19	49	30		-0.9	100	6.93	217		3.1*	
CRZ	eP	19	49	36		3.3	99	7.07	252		3.8*	
NGZ	eP	19	49	44		1.2	100	7.90	211			
	eS		51	12		0.3	100					
MNG	eP	19	49	57		-1.5	100	9.17	206		4.2	4.7
	eS		51	39		-0.9	100					
	e		52	29								
WEL	eS	19	51	59		0.3	100	10.03	207	4.9		
CIZ	eS	19	52	36		1.7	100	11.63	171			

AMPLITUDES: ECZ 0.7 0.6 ONE 0.3 WTZ 1.2 0.9
GNZ 1.2 1.6 KRP 0.3 CRZ 0.4
MNG 0.4 1.5 WEL 0.3

78/ 178

APR 12 $00^h33^m46^s.6$ 38°.31S 175°.68E 291 km M = 4.0
± 1.0 0.09 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
NGZ	P	00	34	26.0		0.5	100	0.87	183			
	eS			57		0.9	100					
WTZ	eP	00	34	25		-1.5	99	1.08	73			
	e(S)			50		-7.8						
TNZ	eP	00	34	29		0.9	100	1.34	229			
GNZ	P	00	34	32.6		0.8	100	1.87	101		3.9	3.9
	eS		35	06		-1.0	100					
MNG	P	00	34	36.2		0.7	100	2.31	184		4.0	3.8
	eS		35	14		0.4	100					
ECZ	P	00	34	36.2		0.4	100	2.35	76		4.3	
COB	eP	00	34	48		-0.2	100	3.59	218		3.3*	2.9*
	eS		35	35		-1.3	99					

AMPLITUDES: GNZ 0.8 1.2 MNG 2.1 1.4 ECZ 0.6
COB 0.3 0.4

78/ 179

APR 12 $08^h58^m32^s.9$ 34°.49S 178°.46E 272 km M = 4.5
± 1.9 0.10 0.16 19 S.E. of RES. 2.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	e(P)	08	59	37.5		8.2		3.20	198			
ECZ	eP	08	59	30		0.8	100	3.20	179		4.1	4.6
	eS	09	00	11		-2.1	100					
ONE	eP	08	59	35		1.4	100	3.60	248	3.3*		
WTZ	eP	08	59	35		0.4	100	3.69	198		4.4	4.7
	eS	09	00	26		3.3	99					
KRP	eP	08	59	42		1.9	100	4.17	214		3.2*	
GNZ	eP	08	59	37		-3.1	99	4.17	185		4.3	4.8
	eS	09	00	32		-0.5	100					
CRZ	eP	08	59	47		-0.3	100	4.78	269		3.5*	
NGZ	eP	08	59	53		0.5	100	5.21	205			
	e	09	00	50								
MNG	eP	09	00	06		-3.0	99	6.56	200		4.7	4.6
	eS		01	24		-0.5	100					

WEL	eS	09	01	42		-0.9	100	7.39	202	4.5
CIZ	eS	09	02	49		2.6	99	10.21	159	

AMPLITUDES: ECZ 0.3 0.9 ONE 0.3 WTZ 0.9 2.0
KRP 0.6 GNZ 0.8 3.8 CRZ 0.3 0.3
MNG 2.0 2.2 WEL 0.2 CIZ 0.4

78/ 180

APR 12 $11^h56^m38^s.1$ 38°.15S 176°.19E 175 km M = 3.8
± 1.4 0.05 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	iP	11	57	02.8	D	0.1	100	0.57	293		3.0*	2.5*
	eS			20.5		-1.2	100					
WTZ	iP	11	57	02.0	U	-1.2	100	0.65	76		3.8	
NGZ	eP	11	57	08		1.5	100	1.13	204			
	eS			31		2.7	99					
TRZ	eP	11	57	11		1.2	100	1.48	161			
	eS			34		-0.2	100					
GNZ	eP	11	57	10.5		0.4	100	1.52	110		3.5	3.4
	eS			33		-1.7	100					
ECZ	P	11	57	14.3	U	0.1	100	1.92	77		3.9	3.8
	eS			43		1.0	100					
MNG	iP	11	57	21.3	U	-0.1	100	2.53	192		4.4	3.7
	eS			53		-1.6	100					
CAZ	eS	11	58	01		1.5	100	2.75	179			
WEL	eS	11	58	10		-2.0	99	3.32	199			

AMPLITUDES: KRP 1.2 0.4 WTZ 2.0 GNZ 0.7 0.8
ECZ 0.5 0.4 MNG 6.6 1.6

78/ 181

APR 13 $22^h35^m04^s.7$ 34°.74S 179°.32E 318 km M = 4.4
± 1.9 0.14 0.29 16 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eS	22	36	47		-0.1	100	3.01	192			4.5
WTZ	P	22	36	08.2		-1.3	100	3.74	210		4.9	4.2
	eS		37	01		0.6	100					
GNZ	P	22	36	15.0		2.3	98	4.03	195		4.2	4.4
	eS		37	05		-0.9	100					
KRP	eP	22	36	17		0.2	100	4.41	223		3.4*	
NGZ	e(P)	22	36	36		8.6		5.34	213			
MNG	eP	22	36	41		-1.4	100	6.61	206		4.6	4.4
	e		37	53								
	eS			59		-0.2	100					
WEL	eS	22	38	18		0.5	100	7.46	207			

AMPLITUDES: ECZ 0.6 WTZ 2.6 0.6 GNZ 0.6 1.3
KRP 0.8 MNG 1.7 1.2

78/ 182

APR 14 $22^h56^m20^s.2$ 41°.78S 174°.56E 33 km M = 3.5
± 0.5 0.04 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
BHW	iPn	22	56	29.8	D	0.1	100	0.44	32			
WEL	iPn	22	56	30.8	D	-0.0	100	0.52	18	3.9		
	Sn			38.5		-0.1	100					
MRW	iPn	22	56	31.3		-0.1	100	0.56	11			
TCW	iPn	22	56	31.5	U	-0.5	100	0.60	339			
WDW	iPn	22	56	32.0	D	-0.0	100	0.60	33			

MOW	iPn	22	56	32.7	D	0.3	100	0.63	56			
CAW	iPn	22	56	34.7	D	0.4	100	0.77	30			
KIW	Pn	22	56	37.2		0.4	100	0.95	16			
COB	ePn	22	56	44		-0.7	99	1.54	296		3.6	3.3
	P*			47		-0.8						
	Sn		57	04		0.9	98					
TNZ	eP*	22	57	10		4.3		2.59	357			3.2
	Sn			31.5		3.0						
	e			49								
NGZ	P*	22	57	11		3.2		2.72	18			
	Sn			34		2.5						
MJZ	Sn	22	57	58		2.1		3.73	232			
KRP	P*	22	57	34.5		6.2		3.92	11			
	e			45								
	S*		58	23.5		4.0						
	e			34								

AMPLITUDES: WEL 11 COB 0.9 1.7 TNZ 0.1

78/ 183

APR 15 $18^h12^m19^s.7$ $37°.95S$ $176°.12E$ 279 km M = 3.9

± 1.3 0.09 0.10 8 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	e(P)	18	12	56		0.1		0.46	273			
	S		13	25		0.8	100					
WTZ	P	18	12	55		-1.6	99	0.69	93		3.2	3.4
	S		13	24		-1.5	100					
TUA	S-P			30	D	-0.6	100	1.18	137		4.3	4.3
NGZ	eP	18	13	01.4		1.8	99	1.29	198			
	e(S)			35		4.2						
GNZ	P	18	13	02		-0.2	100	1.66	115		4.1	3.9
	S			36		0.9	100					
TRZ	P	18	13	03.5		1.1	100	1.69	161		3.4	4.0
	(S)			40		4.4						
TNZ	P	18	13	05		1.5	100	1.84	227		2.9*	
ECZ	eS	18	13	42		2.8		1.94	83			4.0
WEL	eP	18	13	20		0.4	100	3.49	197	4.2		
	eS		14	06		-0.3	100					
COB	P	18	13	24		-2.2	99	4.09	219		3.8*	3.1*
	S		14	18		-0.2	100					
HHP	P	18	14	08		-2.3		7.72	213			
MSZ	P	18	14	23.5		-4.3		9.12	220		2.8*	

AMPLITUDES: WTZ 0.2 0.4 TUA 1.0 1.0 GNZ 1.2 1.5
TRZ 0.1 0.9 TNZ 0.1 ECZ 0.4
WEL 0.3 COB 0.9 0.6 MSZ 0.1

78/ 184

APR 16 $15^h56^m11^s.4$ $40°.94S$ $174°.33E$ 72 km M = 4.0

± 0.2 0.01 0.01 3 S.E. of RES. 0.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TCW	iP	15	56	23.6		0.5	100	0.28	188			
MRW	iP	15	56	24.5		0.3	100	0.41	136			
KIW	iP	15	56	24.6	U	0.2	100	0.45	81			
WHW	iP	15	56	25.0		0.3	100	0.48	139			
WEL	iP	15	56	25.0	USE	0.2	100	0.49	136	3.8		
	S			34.5		-0.2	100					
CAW	iP	15	56	25.9	U	0.1	100	0.58	107			
WDW	iP	15	56	26.2		0.3	100	0.60	124			

BHW	iP	15	56	26.3	U	0.2	100	0.63	139		
MOW	iP	15	56	28.9	U	0.2	100	0.85	125		
MNG	iP	15	56	29.5	D	-0.1	100	0.94	70	3.8	3.9
	e			37							
	S			42.5		-0.7	99				
COB	iP	15	56	32.6	D	-0.6	99	1.21	262		
	S			49.5		-0.1	100				
CAZ	S	15	56	53.5		-1.4	29	1.44	89		
KKY	iP	15	56	37.6	U	-0.1	100	1.56	198		
	eS			57.5		-0.1	100				
	e		57	00.5							
NGZ	P	15	56	44		0.1	100	2.02	30		
	e			54							
	i		57	04.5							
	S			08		0.1	100				
TRZ	S	15	57	17		0.4	100	2.36	55		3.9
KAI	S	15	57	22		-3.2	0	2.70	233	3.4*	
KRP	P	15	56	58.0	U	-1.9		3.15	18		
	e		57	08							
	S			34		-2.5					
WTZ	S	15	57	43		-4.6		3.60	36		4.2
GNZ	S	15	57	45		-4.1		3.65	52		4.3
MJZ	eP	15	57	12		-2.3		4.18	222		
	S			56		-6.2					
HHP	eP	15	57	16		-2.4		4.49	220		
	S		58	04		-5.8					
OMZ	S	15	58	10		-8.5		4.83	210		3.4*
MSZ	S	15	58	38		-9.9		6.02	230		3.1*
CIZ	S	15	59	12.5		-9.2		7.39	117		

AMPLITUDES: WEL 7.8 MNG 14 22 TRZ 1.0
KAI 0.4 WTZ 0.9 GNZ 2.1
OMZ 0.6 MSZ 0.6 CIZ 0.8

78/ 185

APR 17 $22^h27^m04^s.2$ 37°.42S 176°.98E 131 km M = 3.9
± 0.8 0.05 0.04 8 S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	P	22	27	22		-0.3	100	0.20	123			
	e(S)			39		2.8						
WTZ	iP	22	27	23.2	U	-0.7	100	0.57	179		3.6	3.6
	eS			39		-0.0						
KRP	P	22	27	30.3		0.3	100	1.25	246			
	S			50		0.3	100					
ECZ	P	22	27	30.5		0.2	100	1.28	103		3.8	3.8
	e			33.5								
	(S)			54.5		4.3						
	e		28	00								
TUA	S-P			20		-0.8	99	1.39	174		3.9	4.0
GNZ	P	22	27	32.0	U	-0.4	100	1.48	146		4.0	3.9
	e			37.5								
	S			55		0.9	99					
NGZ	P	22	27	39		-0.4	100	2.06	211			
	S		28	12		5.9						
MNG	P	22	27	52.0		-5.0		3.40	200		4.1	4.1
	e		28	07								
	S			31		-6.2						
WEL	S	22	28	51		-5.9		4.23	203	4.1		
COB	S	22	29	07		-6.8		4.93	221		2.9*	2.9*

AMPLITUDES:	WTZ	2.4	2.9	ECZ	0.8	0.9	TUA		0.9	1.2	
	GNZ	2.5	3.5	MNG	1.9	2.5	WEL	0.3			
	COB	0.1	0.4								

78/ 186

APR 18 $14^h59^m13^s.4$ $35°.77$S $178°.78$E 12 km M = 4.4

± 1.6 0.06 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
ECZ	Pg	14	59	52		-0.4	100	1.93	186		4.6	4.4
	Sg	15	00	21		2.5	99					
	Sg			29.5		11.0						
WIZ	Pn	14	59	49.5	D	0.9	100	2.17	216			
	P*			51.5		-0.1						
	Sn	15	00	13		-2.0	99					
	e			15.5								
WTZ	Pn	14	59	55.0		0.1	100	2.64	212		4.5	4.6
	(Sn)	15	00	29		2.8						
	e			31.5								
GBZ								2.72	260			
GNZ	iPn	14	59	58.7	DNE	-0.2	100	2.93	192		4.7	4.6
	e(P*)	15	00	09		4.4						
	Sn			33		-0.2	100					
TUA	Sn-Pn			37		-1.1		3.30	203		4.3	4.7
	S*-Pn			50		-0.1						
KRP	iPn	15	00	05.6	U	0.6	100	3.37	229			
	P*			16		3.8						
	(Sn)			40		-3.9						
AUC	iPn	15	00	06.5	U	1.0	100	3.41	250			
WNZ								3.57	216			4.2
ONE	Pn	15	00	09		1.0	100	3.59	269			
TRZ	Pn	15	00	12.3		-2.4	99	4.09	202		4.1	4.5
	Sn		01	00		-1.0	100					
NGZ	Pn	15	00	16		-0.7	100	4.24	216			
	e		01	14								
	S*			17.5		-4.6						
TNZ	ePn	15	00	27		1.4		4.89	224		4.8	
	e(Pg)			46		-6.2						
MNG	Pn	15	00	28.8		-5.1		5.50	207		4.5	4.4
	P*			41.5		-6.9						
	eSn		01	30		-4.8						
	e(S*)			54		-5.8						
WEL	Sn	15	01	46.5		-8.7		6.34	209	4.3		
COB	e(Pn)	15	00	50		-6.1		7.13	220		3.9	4.2

AMPLITUDES:	ECZ	2.1	1.8	WTZ	5.0	5.7	GBZ		2.2		
	GNZ	4.3	6.3	TUA	0.6	1.5	WNZ			0.1	
	TRZ	0.3	1.1	TNZ	0.2		MNG		2.0	1.9	
	WEL	0.2		COB	0.1	0.6					

78/ 187

APR 20 $03^h49^m39^s.5$ $37°.79$S $176°.26$E 173 km M = 3.7

± 0.5 0.04 0.02 3 S.E. of RES. 0.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	P	03	50	03.9	U	0.0	100	0.58	257			
	S			23		0.2	100					
WTZ	eP	03	50	03.5		-0.5	99	0.60	109		2.9	3.2
	S			23		0.0	100					
TUA	S-P			22		-0.5	99	1.23	146		4.1	3.8

NGZ	P	03	50	11		0.1	100	1.48	200				
GNZ	S	03	50	38		0.3	100	1.63	122				3.7
TNZ	P	03	50	16.5		-0.2	100	2.03	226			2.8*	4.5*
MNG	iP	03	50	23.4	U	-3.6		2.89	192			4.2	4.1
	S			58		-5.5							
WEL	S	03	51	15		-6.2		3.68	198	3.8			
COB	S	03	51	29		-6.0		4.27	219				2.9*
MJZ	S	03	52	42		-11.2		7.59	214				

AMPLITUDES: WTZ 0.3 0.6 TUA 1.3 0.6 GNZ 1.6
TNZ 0.1 6.3 MNG 3.4 3.0 WEL 0.1
COB 0.4

78/ 188

APR 20 $10^h05^m08^s.3$ 47°.22S 165°.91E 33 km M = 4.2
± 0.8 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
OBZ	Pn	10	05	33.7		0.8	99	1.54	79			
	Sn			51		-0.3	100					
MNW	iPn	10	05	37.3	D	0.0	100	1.86	40	4.1	4.6	4.6
	Sn			58.5		-0.5	100					
MSZ	ePn	10	05	51		-0.6	100	2.91	29		4.2	4.1
	e		06	13.5								
	Sn			25		0.8	99					
ROX	Pn	10	05	51.5		-0.4	100	2.93	55		4.3	4.1
	Sn		06	24.5		-0.4	100					
MJZ	Sn	10	07	04		0.4	100	4.55	46			
COB	ePn	10	06	57		-2.0		7.86	41		4.0	

AMPLITUDES: MNW 2.0 10 23 MSZ 2.5 4.0 ROX 1.3 2.0
COB 0.1

78/ 189

APR 21 $08^h02^m10^s.7$ 41°.02S 172°.29E 12 km M = 3.7
± 0.5 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
COB	iPg	08	02	17.6		-0.3	100	0.34	102			
	(Sg)			21.5		-1.3						
KAI	P*	08	02	39.5		-0.4	100	1.65	203	4.2		
	Pg			42.5		-1.5						
	S*		03	00		-1.6	99					
KKY	P*	08	02	41.5	D	-0.2	100	1.75	144			
	S*		03	06.5		1.7	99					
WEL	P*	08	02	44		-0.1	100	1.89	99	3.8		
	S*		03	08		-1.0	100					
TNZ	eP*	08	02	54		0.6	100	2.44	42		3.3	3.9
	Pg		03	02		2.0						
	eS*			30		4.7						
	eSg			36		3.2						
MNG	P*	08	02	54		0.2	100	2.46	82			4.0
CAZ	eSg	08	03	55		3.7		2.99	89			
NGZ	eP*	08	03	05		-0.5	100	3.14	55			
	S*			47		0.4	100					
MJZ	Pn	08	03	02.5		1.8	99	3.26	204			3.8*
	Sn			38.5		0.1	100					
KRP	ePn	08	03	13		2.4		3.99	40			
	(Pg)			29		-2.3						
	S*		04	14		2.2						
	e(Sg)			23		-2.0						

MSZ	Pn	08	03	22		-0.6		4.87	220	3.8	3.7
	Sn		04	18.5		1.5					
ROX								4.96	205		3.5
GNZ	Sn	08	04	25.5		5.0		5.01	64		3.3

AMPLITUDES: KAI 2.5 WEL 0.7 TNZ 0.1 0.6
MNG 4.0 MJZ 2.0 MSZ 0.4 0.6
ROX 0.2 GNZ 0.1

FELT: Karamea (74) and Cobb River (75) MM IV

78/ 190

APR 21 $09^h07^m51^s.0$ $32°.12S$ $179°.87E$ 221 km M = 5.0
± 1.7 0.13 0.19 92 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	09	09	15.5		0.4	100	5.67	191		5.0	5.0
	(S)		10	19		-1.5						
WIZ	eP	09	09	16.5		-0.7	100	5.83	201			
	S		10	22.5		-1.7	99					
WTZ	P	09	09	23		-0.3	100	6.32	201		5.0	5.2
	S		10	36		0.8	100					
CRZ	eP	09	09	25		-0.1	100	6.45	247			
GNZ	P	09	09	27		-1.1		6.69	193		4.7	5.2
	S		10	43		-0.9	100					
KRP	eP	09	09	28.5		-1.0	100	6.79	210			
	(S)		10	49		2.5						
TUA								7.04	198			5.1
TRZ	S	09	11	09		-1.1		7.82	198			5.0
MNG	P	09	09	56.5		-3.9		9.20	201		4.4	5.2
	e(S)		11	36		-5.7						
CAZ	eS	09	11	39		-4.0		9.25	197			
WEL	S	09	11	54		-6.9		10.03	203	4.7		
COB	S	09	12	10.5		-4.4		10.63	211			3.5*
CIZ	e(S)	09	12	49		-0.8		12.15	168			
MJZ	S	09	13	25		-5.8		13.97	209			

AMPLITUDES: ECZ 1.0 1.0 WTZ 1.9 2.8 GNZ 0.8 4.7
TUA 0.8 TRZ 1.0 MNG 0.6 5.0
WEL 0.2 COB 0.6

78/ 191

APR 21 $20^h03^m12^s.2$ $37°.50S$ $177°.06E$ 12 km M = 2.7
± 1.2 0.11 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
WIZ	Sg-Pg			01		-1.0	100	0.10	104			
	iPg		03	13.7		-1.4	99					
WTZ	Pg	20	03	22.2	D	0.0	100	0.49	187		2.5	2.6
	e			26.5								
	(Sg)			30		1.1						
ECZ	Pg	20	03	38		1.6	99	1.20	100		2.9	
	e			41.5								
KRP	Pg	20	03	37.5		-0.7	100	1.28	250			
	Sg			56		0.5	100					

AMPLITUDES: WTZ 1.1 1.0 ECZ 0.1

78/ 192

APR 21 $22^h53^m41^s.5$ $46°.16S$ $166°.53E$ 12 km M = 3.8
± 2.0 0.08 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
MNW	iPg	22	53	57.9	D	-1.0	100	0.85	64	3.8	3.9	4.1
	Sg		54	10		-0.5	100					
MSZ	ePg	22	54	18		0.3	100	1.79	34		3.6	3.5
	Sg			41		-0.8	100					
MJZ	eP*	22	54	47		3.9		3.55	53			
	Pg			54		0.9	100					
	Sg		55	42		1.1	99					

AMPLITUDES: MNW 5.0 11 37 MSZ 1.9 2.5

78/ 193

APR 22 $17^h19^m44^s.6$ 32°.43S 178°.74W 275 km M = 4.8

± 1.3 0.10 0.17 62 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP?	17	21	13.5		3.3		5.71	202		4.5	4.8
	e			19								
	(S)		22	21		3.7						
	e			29								
WTZ	P	17	21	20.5		-0.1	100	6.55	211		5.1	4.9
	e			24								
	e		22	31.5								
	S			35.5		-0.5	100					
ONE	P	17	21	21		-0.5	100	6.62	238			
GNZ	P	17	21	24		1.0	99	6.74	202		4.9	5.0
	e			29								
	S		22	40		-0.1	100					
	e			44								
TUA	S-P		1	20		-1.6		7.19	207		4.2	4.9
KRP	eP	17	21	28.5		-0.4	100	7.21	219			
	S		22	52		1.3	99					
TRZ	S	17	23	07		-0.6	100	7.96	206			5.0
CNZ	(P)	17	21	46		4.9		8.19	213			
TNZ	e(P)	17	21	44		-4.2		8.76	218			3.2*
	e			49.5								
	e(S)		23	25		-0.2						
MNG	P	17	21	54.5		-1.7		9.40	208		4.7	5.1
	e		23	26.5								
	S			32		-7.8						
	e			33.5								
WEL	S	17	23	50.5		-8.5		10.25	209	4.7		
COB	eP	17	22	10		-6.4		11.02	216		3.7*	3.5*
	S		24	03.5		-12.7						
MJZ	S	17	25	15		-14.2		14.31	213			
MSZ	eP	17	23	10		-7.1		16.06	217		3.5*	3.2*
	eS		25	53		-14.1						

AMPLITUDES: ECZ 0.3 0.5 WTZ 1.8 1.3 GNZ 1.3 2.7
TUA 0.1 0.5 TRZ 0.9 TNZ 0.1
MNG 1.1 3.7 WEL 0.2 COB 0.3 0.6
MSZ 0.3 0.3

78/ 194

APR 22 $20^h23^m33^s.0$ 38°.69S 175°.85E 138 km M = 3.5

± 1.2 0.04 0.05 10 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
NGZ	P	20	23	55		1.8	97	0.53	201			
CNZ	iP	20	23	54		0.6	100	0.57	205			

KRP	P	20	23	54.5	U	-0.5	100	0.80	342		2.4*		
	S		24	12		0.0	100						
TUA								1.02	97			3.6	
WTZ	P	20	23	57.4		-0.7	100	1.13	52		2.8	3.2	
	S		24	16.5		-0.7	100						
TRZ	P	20	24	00		1.8		1.14	139		3.4	3.2	
	e(S)			21		3.6							
TNZ	eS	20	24	26.5		7.1		1.25	246			2.5*	
GNZ	P	20	24	04.5		0.3	100	1.70	89		3.6	3.6	
	S			28.5		0.5	100						
MNG	iP	20	24	06.9	U	-0.2	100	1.95	188		4.2	3.8	
	iS			32	D	-1.1	100						
ECZ	P?	20	24	14		1.9		2.34	66		3.8		
WEL	S	20	24	49.5		-1.1		2.73	197	3.5			
COB	eP	20	24	21.5		-4.4		3.39	224		2.7*	3.2*	
	S		25	02		-4.2							
MJZ	S	20	26	16		-8.7		6.67	216				
MSZ	S	20	26	55		-12.1		8.43	222			2.5*	

AMPLITUDES:									
KRP	0.3		TUA	0.7	WTZ	0.2	0.6		
TRZ	0.3	0.5	TNZ	0.1	GNZ	0.8	1.3		
MNG	6.6	3.4	ECZ	0.3	WEL	0.1			
COB	0.1	1.1	MSZ	0.1					

78/ 195

APR 23 $11^h40^m08^s.0$ $36°.97S$ $177°.80E$ 131 km M = 3.8

± 0.4 0.03 0.04 3 S.E. of RES. 0.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	P	11	40	29		0.1	100	0.74	221			
	S			45		0.1	100					
ECZ	e(P)	11	40	36		5.5		0.94	141		3.4	3.5
	(S)		41	01		13.2						
WTZ	P	11	40	33.0		-0.2	100	1.20	212		4.2	3.6
	S			52		-0.4	99					
GNZ	P	11	40	38.5		0.0	100	1.67	174		3.6	4.1
	S		41	02		0.2	100					
TUA	S-P			25.5		0.3	100	1.90	195		3.6	3.6
KRP	iP	11	40	43.1	DE	0.3	100	2.03	242		3.2*	
TRZ	P	11	40	53		1.6		2.69	196		3.9	
NGZ	P	11	40	52.5		-0.4		2.80	217			
TNZ	P	11	41	02		0.0		3.49	230		3.0*	
MNG	P	11	41	05.7	U	-4.0		4.07	206		4.5	3.6
	S			52		-5.0						
WEL	S	11	42	11.5		-5.7		4.91	208			
COB	eP	11	41	26		-5.5		5.70	222		3.7*	2.7*
	S		42	29.5		-6.7						
CIZ	S	11	43	36		-0.6		8.19	150			
MJZ	S	11	43	42		-13.0		8.96	216			

AMPLITUDES:									
ECZ	0.5	0.6	WTZ	5.2	1.5	GNZ	1.0	5.0	
TUA	0.3	0.3	KRP	1.2		TRZ	0.3		
TNZ	0.1		MNG	3.7	0.6	COB	0.5	0.2	
CIZ		0.1							

78/ 196

APR 24 $04^h45^m53^s.9$ $37°.98S$ $176°.10E$ 169 km M = 3.4

± 0.4 0.03 0.02 3 S.E. of RES. 0.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	P	04	46	17.2	D	-0.2	100	0.45	277		2.8*	1.9*

	S			35.5		0.1	100					
WTZ	iP	04	46	18.5	D	-0.1	100	0.70	91		2.9	2.9
	eS			38.5		0.9						
NGZ	eP?	04	46	23		0.1		1.26	197			
CNZ	P	04	46	23.2		0.0	100	1.30	199			
GNZ	P	04	46	27.1	D	0.3	99	1.66	114		3.2	3.2
	S			52		-0.1	100					
MNG	iP	04	46	35.5	U	-3.2		2.68	190		4.3	3.8
COB	e(S)	04	47	38		-6.0		4.05	219			2.3*

AMPLITUDES: KRP 0.7 0.1 WTZ 0.3 0.3 GNZ 0.3 0.5
MNG 5.0 1.7 COB 0.1

78/ 197

APR 25 $04^h34^m14^s.5$ 37°.16S 177°.40E 102 km M = 4.1
± 0.8 0.06 0.06 6 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	P	04	34	30		-0.1	100	0.40	204			
	(S)			41.5		-0.6	100					
	e			48								
WTZ	iP	04	34	33.9	D	-0.2	100	0.89	201		4.2	4.2
	S			50		1.0	99					
ECZ	P	04	34	37		1.0	99	1.06	121		4.1	3.9
	i			39								
	(S)			55		2.8						
	e		35	07								
GNZ	P	04	34	41.0	D	-1.1	99	1.57	162		3.9	4.3
	e			51								
	eS		35	03		-0.0	100					
KRP	iP	04	34	43.7	DE	0.3	100	1.66	242			
TUA								1.66	187		4.0	4.2
WNZ	P	04	34	45		-0.0	100	1.80	214		4.2	
TRZ	P	04	34	57		3.4		2.44	191		3.8	3.9
NGZ	P	04	34	53.1		-0.9		2.47	214			
ONE	S?	04	35	28		-4.0		2.81	298	2.7*		
TNZ	P	04	35	02		-1.1		3.13	229		3.7*	
MNG	P	04	35	06		-5.9		3.77	203		4.1	4.1
	i			15								
	S			48		-7.4						
WEL	S	04	36	08		-7.8		4.61	206	3.9		
COB	P	04	35	27		-6.4		5.35	221		3.6*	3.2*
	S		36	27.5		-6.7						

AMPLITUDES: WTZ 10 10 ECZ 2.7 1.8 GNZ 2.5 10
TUA 1.1 1.5 WNZ 0.2 TRZ 0.3 0.8
ONE 0.1 TNZ 0.6 MNG 1.7 2.1
WEL 0.1 COB 0.5 0.6

78/ 198

APR 25 $23^h03^m13^s.2$ 39°.41S 174°.44E 204 km M = 4.0
± 1.0 0.04 0.08 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	23	03	41		0.8	100	0.23	348			
	S		04	02		1.1	100					
CNZ	P	23	03	43.8		1.1	100	0.88	76			
	S		04	06		0.3	100					
NGZ	P	23	03	44.1		1.1		0.94	76			
	S		04	05		-1.2						
MNG	iP	23	03	48.3	U	1.3	99	1.45	147		4.3	4.4

	S		04	12.5		-0.6	100						
KRP	P	23	03	49		-0.5	100	1.72	30				
	S		04	16		-1.5	99						
WEL	S	23	04	20		-0.5	100	1.89	173	3.6			
COB	iP	23	03	54.2	U	0.6	100	2.12	217		4.0*	3.7*	
	e		04	19									
	S			23.5		-1.3	99						
WTZ	P	23	03	56.7	D	-0.5	100	2.45	55		3.8	3.5	
	e(S)		04	28		-3.1							
GNZ	P	23	04	01.8	U	-0.5		2.90	76		4.3	4.0	
	S			36.5		-3.7							
MJZ	S	23	05	33		-4.3		5.45	212				

AMPLITUDES: TNZ 0.2 0.5 MNG 9.5 13 WEL 0.2
COB 2.6 4.8 WTZ 0.6 0.3 GNZ 1.7 1.2

78/ 199

APR 26 $01^h40^m28^s.2$ $33°.18S$ $178°.35W$ 33 km M = 4.3

± 6.3 0.20 0.59 R S.E. of RES. 2.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	Pn	01	41	44		1.7	100	5.17	208		4.6	4.3
	e(Sn)		42	38		-0.4	100					
WTZ	Pn	01	41	52		-3.3	99	6.12	217		4.5	4.1
	e(P*)		42	11		-2.7						
	e(Sn)		43	03		1.8						
GNZ	(S*)	01	43	44		8.5		6.20	207		4.7	4.2
ONE	e(Pn)	01	42	02		0.8	100	6.55	245			
KRP	e	01	42	15				6.88	225			
	Sn?		43	21		1.6						
	e(S*)			46		-9.7						
CRZ	Pn	01	42	14.5		-0.6	100	7.58	258		5.1	
MNG	Pn	01	42	29.5		-4.0		8.92	212		3.9	4.1
	e(P*)			54		-7.4						
	Sn		44	00		-8.5						
	(S*)			39		-17.9						
WEL	Sn	01	44	22		-7.1		9.78	212	4.4		
COB	e(Sn)	01	44	44		-5.6		10.63	219			3.7
CIZ	Sn	01	44	55		-0.0		10.85	173			

AMPLITUDES: ECZ 0.3 0.2 WTZ 0.9 0.3 GNZ 1.0 0.5
CRZ 0.2 MNG 0.2 0.4 WEL 0.1
COB 0.1 CIZ 0.1

78/ 200

APR 28 $08^h19^m51^s.5$ $37°.63S$ $177°.42E$ 133 km M = 3.4

± 1.5 0.09 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	P	08	20	09.6		-1.4	100	0.49	224		3.5	3.4
	S			24.8		-1.1	100					
ECZ	eP	08	20	15.5		1.7	100	0.90	94		3.0	
GNZ	P	08	20	15.0		-1.0	100	1.12	155		3.6	3.7
	S			35.3		0.6	100					
KRP	P	08	20	20.2		-0.2	100	1.52	258		2.8*	
	S			43		0.5	100					
NGZ	P	08	20	29.2		1.9	100	2.11	222			
CNZ	P	08	20	30.0		2.1	99	2.15	223			
TNZ	eP	08	20	38.5		1.4	100	2.85	236		3.2*	
MNG	eP	08	20	41.5		-2.1	99	3.35	206		3.5	3.4
	eS		21	24.0		0.7	100					

COB	eP	08	21	03		-2.9	99	5.01	225		3.6*

AMPLITUDES: WTZ 2.0 2.0 ECZ 0.2 GNZ 1.6 3.0
KRP 0.6 TNZ 0.2 MNG 0.6 0.5
COB 0.5

78/ 201

APR 29 $16^h 29^m 29^s.6$ 39°.11S 174°.88E 226 km M = 4.7
± 0.9 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
TNZ	P	16	30	00.1		0.5	100	0.40	259		3.9*	3.5*
	eS			23.5		0.8	100					
CNZ	P	16	30	01.0		1.1	100	0.53	100			
GSZ	P	16	30	01.2		1.1	100	0.58	107			
NGZ	P	16	30	01.1		1.0	100	0.58	98			
KRP	P	16	30	03.9		-0.2	100	1.29	24		3.7*	
	S			30.0		-1.0	100					
TRZ	P	16	30	08.2		1.7	99	1.57	107		4.2	
	e			31.5								
	e(S)			39.0		3.9						
MNG	P	16	30	07.5		0.9	100	1.57	163		4.8	4.9
	e			31.2								
	S			35.2		0.0	100					
WTZ	P	16	30	08.8		-1.5	99	2.00	56		4.2	4.7
	i			35								
	S			41.2		-0.6	100					
CAZ	iS	16	30	39.7		-3.3		2.07	150			
	i			46.3								
WEL	P	16	30	12.2		0.0	100	2.18	182	4.8		
	S			44.0		-1.0	100					
GNZ	P	16	30	15.2		-0.2	100	2.50	80		4.6	4.9
	e			41								
	S			49		-2.0	99					
COB	iP	16	30	15.4		-0.8	100	2.57	219		5.0*	4.1*
	S			51.2		-1.2	100					
ECZ	eP	16	30	22.9		-0.6	100	3.21	65		4.8	4.9
	e			58.5								
	S		31	07		1.7	99					
CHR	eP	16	30	40		-1.9		4.73	200			
	eS		31	35		-3.3						
HHP	P	16	30	57.5		-3.3		6.23	212			
	eS		32	06		-5.8						

AMPLITUDES: TNZ 1.5 0.9 KRP 3.7 TRZ 0.8
MNG 23 37 WTZ 1.8 5.5 WEL 3.2
GNZ 3.6 11 COB 20 8.8 ECZ 1.6 1.8

78/ 202

APR 29 $19^h 43^m 07^s.3$ 39°.54S 174°.47E 154 km M = 4.4
± 1.0 0.05 0.06 11 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CNZ	P	19	43	32.1		0.4	100	0.90	68			
GSZ	P	19	43	32.5		0.8	100	0.90	74			
NGZ	P	19	43	33.0		0.9	100	0.95	68			
MNG	P	19	43	37.0		1.4	99	1.33	145		4.4	4.5
	S			56.2		-1.2	100					
WNZ	eP	19	43	37.5		-0.6	100	1.56	55		4.4	
WEL	P	19	43	41.0		0.8	100	1.76	173	4.6		
	e		44	03.5								

	S			06.0		0.5	100				
TRZ	P	19	43	41.8		0.9	100	1.82	91	4.3	
	eS		44	07.0		0.4	100				
COB	P	19	43	43.0		-0.5	100	2.04	220	3.7*	3.8*
	e		44	08.2							
	iS			10.2		-1.1	100				
WTZ	eP	19	43	47		-2.2		2.51	53	3.8	
	e			56							
GNZ	P	19	43	53.0		-1.3	99	2.91	73	4.7	
	S		44	29.0		-1.2	100				

AMPLITUDES:							
MNG	18	27	WNZ	0.3	WEL	4.1	
TRZ	1.4		COB	1.3	5.7 WTZ	0.6	
GNZ	4.0						

78/ 203

APR 29 $19^h47^m11^s.9$ $40°.14S$ $174°.93E$ 12 km $M = 3.9$

± 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
MNG	P*	19	47	23.5		-0.4	100	0.64	139		3.8	3.7
	S*			31.7		-1.0	100					
GSZ	P*	19	47	28.8		-1.3	100	1.00	31			
	S*			44.2		0.7	100					
CNZ	P*	19	47	29.6		-1.4	100	1.05	27			
	S*			45.0		-0.1	100					
NGZ	P*	19	47	30.2		-1.5	99	1.09	29			
	S*			46.5		0.2	100					
WEL	P*	19	47	32.6		-0.1	100	1.15	186	3.8		
	S*			48.2		0.1	100					
TRZ	P*	19	47	41.8		1.9	99	1.57	69		3.7	
	e(S*)		48	03		2.4						
	i			05.0								
WNZ	eP*	19	47	42.3		-0.8	100	1.76	31		4.3	
COB	ePn	19	47	44.0		0.4	100	1.93	240		3.9	3.6
	eP*			45.8		-0.1	100					
	eS*		48	11		-0.2	100					
KRP	Pn	19	47	49.0		0.7	100	2.27	12		4.3	4.6
	eP*			54.0		2.3	98					
	S*		48	19.2		-2.2	99					
	e			26.5								
WTZ	ePn	19	47	55.5		1.4	100	2.68	37		3.8	
	eP*			59.5		0.6	100					
GNZ	e	19	48	07.5				2.83	59			3.7
	e			10.2								
	Sn			29.5		0.3	100					

AMPLITUDES:							
MNG	26	29	WEL	2.0	TRZ	0.8	
WNZ	0.3		COB	1.2	2.2 KRP	1.8	2.6
WTZ	0.5		GNZ	0.8			

78/ 204

APR 30 $16^h39^m29^s.6$ $32°.38S$ $179°.33W$ 563 km $M = 4.8$

± 2.8 0.39 0.71 41 S.E. of RES. 2.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	16	41	11.5		-1.2	100	6.35	207		5.4	4.6
	i			13.8								
	e		42	31								
	eS			34.5		-0.3	100					
GNZ	eP	16	41	12.0		-3.1	99	6.61	198		5.1	4.7

	S		42	41.1		2.0	100				
KRP	eP	16	41	19		0.7	100	6.95	216	3.2*	
TRZ	P	16	41	29.0		2.4	99	7.81	202	4.9	4.8
	(S)		43	05.5		5.6					
MNG	P	16	41	41.5		1.0	100	9.22	205	4.6	4.3
	eS		43	23		-2.2	100				
COB	eS	16	43	54		0.4	100	10.77	214		3.2*

AMPLITUDES: WTZ 3.2 0.5 GNZ 1.4 0.9 KRP 0.3
TRZ 0.3 0.5 MNG 0.8 0.5 COB 0.3

78/ 205

MAY 01 $15^h06^m27^s.2$ 38°.22S 176°.14E 214 km M = 4.2
± 0.8 0.04 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
KRP	P	15	06	56.0		-0.3	100	0.56	302		2.8*	
	S		07	19.0		0.2	100					
WTZ	P	15	06	55.8		-1.1	100	0.71	71		4.3	3.6
	eS		07	19.5		-0.5	100					
NGZ	P	15	07	00.5		1.6	99	1.04	203			
	eS			26.0		2.6						
	e			30.5								
CNZ	P	15	07	00.6		1.5	99	1.08	205			
TRZ	eS	15	07	27.8		-0.8	100	1.43	158			
	e			34								
GNZ	P	15	07	03.4		0.7	100	1.54	106			4.1
	S			30.8		0.5	100					
TNZ	eP	15	07	05.0		1.0	100	1.68	235		3.1*	
ECZ	P	15	07	06.0		-0.9	100	1.98	75		4.4	
MNG	iP	15	07	12.5		0.8	100	2.45	192		4.6	4.2
	S			46.5		0.2	100					
WEL	eS	15	08	02		-0.3	100	3.24	199	3.9		
COB	eP	15	07	27.8		-0.9	100	3.89	222		3.4*	3.1*
	S		08	15		-1.3	99					

AMPLITUDES: KRP 0.6 WTZ 4.5 1.0 GNZ 3.5
TNZ 0.2 ECZ 1.2 MNG 10 4.6
WEL 0.2 COB 0.4 0.7

78/ 206

MAY 01 $17^h35^m47^s.1$ 40°.28S 176°.60E 103 km M = 4.1
± 0.6 0.02 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
CAZ	eP	17	36	05.0		0.2	100	0.68	204			
	S			17.4		-0.8	100					
TRZ	eP	17	36	05.0		-0.4	100	0.75	13			
MNG	P	17	36	07.0		-0.1	100	0.92	248		4.2	
GSZ	P	17	36	12.3		1.2	100	1.27	322			
	S			28.5		-0.8	100					
NGZ	P	17	36	12.5		0.6	100	1.33	325			
	e			18.5								
CNZ	P	17	36	13.0		0.9	100	1.35	323			
WNZ	eP	17	36	16.3		0.0	100	1.69	347		4.4	
WEL	eP	17	36	18		1.4	100	1.71	234	4.0		
	e			26.0								
	S			39.0		0.3	100					
GNZ	P	17	36	20.0		0.1	100	1.97	34		3.4	4.1
	S			45		0.7	100					
TNZ	eP	17	36	22.2		1.6	99	2.03	302		3.4*	

	i			34.0								
WTZ	P	17	36	23.9		-0.6	100	2.31	8		4.0	4.5
	S			50.0		-2.4	98					
KRP	P	17	36	27.0		-0.1	100	2.49	340		3.2*	
	e			40.8								
	S			56.1		-0.8	100					
COB	eP	17	36	35.8		1.2	100	3.05	253		3.5*	3.6*
	e			49.5								
	S		37	11.0		0.7	100					
MJZ	eS	17	38	17		-2.7	96	5.88	229			
HHP	P	17	37	17.5		0.6	100	6.16	227			
	S		38	25		-1.5	99					

AMPLITUDES:									
MNG	24		WNZ	0.3		WEL	1.3		
GNZ	0.5	4.0	TNZ	0.4		WTZ		1.3	4.7
KRP	1.0		COB	0.6	2.8				

FELT: Southern Hawkes Bay (59,60). Maximum intensity MM IV

78/ 207

MAY 01 $17^h39^m29^s.4$ 33°.85S 179°.09E 337 km M = 4.7

± 1.5 0.08 0.21 13 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eS	17	41	30.5		1.2	100	3.86	186			4.7
ONE	P	17	40	42.5		0.8	100	4.34	242			
WTZ	P	17	40	40.8		-2.2	99	4.46	202		4.7	4.7
	i			42.7								
	eS		41	39.0		-1.8	99					
	i			42.0								
GNZ	P	17	40	48.0		0.6	100	4.86	190		4.8	4.9
	S		41	47.8		-0.8	100					
KRP	eP	17	40	48		-0.7	100	4.99	214		3.0*	
	e			51.5								
TRZ	eS	17	42	13		1.6	100	5.98	197			4.7
NGZ	P	17	41	01.5		0.9	100	6.01	207			
CNZ	P	17	41	02.8		1.8	99	6.06	207			
MNG	eP	17	41	14.4		-1.9	99	7.34	202		4.7	4.7
	S		42	39		-1.3	100					
WEL	eP	17	41	26		-0.2	100	8.18	204	4.7		
	eS		42	59		0.7	100					
COB	eP	17	41	34.5		0.6	100	8.82	213		3.6*	3.3*
	eS		43	15		2.8						
MSZ	eP	17	42	34		-0.3	100	13.83	215		3.2*	

AMPLITUDES:									
ECZ		0.8	WTZ	1.4	1.6	GNZ		1.6	3.0
KRP	0.3		TRZ		0.8	MNG		1.7	1.9
WEL	0.2		COB	0.3	0.5	MSZ		0.2	

78/ 208

MAY 01 $22^h05^m13^s.4$ 39°.05S 174°.35E 22 km M = 3.8

± 0.3 0.02 0.02 2 S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	P*	22	05	19.0		1.0	99	0.13	169			
CNZ	P*	22	05	30.5		-0.3	100	0.94	99			
	S*			48.2		4.6						
GSZ	P*	22	05	31.1		-0.5	100	0.99	103			
	S*			44.2		-0.7	100					
NGZ	P*	22	05	31.8		0.1	100	1.00	98			
	S*			45.2		0.2	100					

KRP	Pn	22	05	37.2	-0.7	100	1.47	40		3.6	3.6
	S*			59.5	0.4	100					
MNG	Pn	22	05	42.7	0.3	100	1.79	151		4.1	3.8
	Sn		06	04.3	0.1	100					
WEL	eSn	22	06	16	0.7	100	2.26	172	3.6		
COB	Pn	22	05	50.3	-0.1	100	2.38	211		3.9	3.7
	eP*			56	0.8	100					
	eS*		06	25.0	-1.4	98					

AMPLITUDES: KRP 2.8 3.2 MNG 7.7 4.5 WEL 0.3
COB 0.9 1.9

78/ 209

MAY 02 $09^h25^m38^s.5$ $38°.79S$ $175°.18E$ 238 km M = 3.9
± 0.8 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
CNZ	eP	09	26	11.2		1.1	99	0.50	145			
	iS			35.0		0.4	100					
	i			41.0								
NGZ	P	09	26	11.0		0.8	100	0.52	140			
	eS			34.2		-0.6	100					
	e			38.5								
TNZ	eP	09	26	11.5		0.5	100	0.74	237		3.0*	
KRP	P	09	26	11.3		-0.5	100	0.91	18		3.4*	
TRZ	S	09	26	45.0		0.3	100	1.49	121			3.5
WTZ	P	09	26	16.0		-1.0	100	1.64	61		3.6	
MNG	iP	09	26	20.1		1.3	99	1.84	173		4.5	4.0
	i			43.0								
	S			48.8		-1.2	99					
GNZ	P	09	26	22.9		0.4	100	2.23	87		4.0	3.7
	S			56.0		-0.6	100					
WEL	S	09	27	02.0		0.2	100	2.52	187			
COB	P	09	26	29.0		-1.3	99	2.97	218		3.5*	2.8*
	e		27	06								
	eS			08.5		-2.0						

AMPLITUDES: TNZ 0.2 KRP 1.8 TRZ 0.4
WTZ 0.5 MNG 9.8 3.5 GNZ 0.9 0.8
COB 0.6 0.4

78/ 210

MAY 02 $21^h26^m17^s.9$ $37°.91S$ $176°.58E$ 160 km M = 4.4
± 1.1 0.06 0.06 8 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	21	26	39.0		-0.9	100	0.32	102		3.9	4.1
	S			55.0		-1.7	100					
WIZ	P	21	26	40.0		-1.1	100	0.61	51			
	eS			57		-2.0						
KRP	P	21	26	42.3		-0.1	100	0.83	269		3.5*	2.9*
	S		27	01.2		-0.1	100					
GNZ	P	21	26	47.7		0.8	100	1.35	123			
	S		27	09.0		-0.2	100					
NGZ	P	21	26	50.4		2.1	99	1.48	211			
	e		27	21.5								
CNZ	P	21	26	50.7		2.0	99	1.52	212			
GSZ	P	21	26	51.2		2.0	99	1.57	210			
ECZ	P	21	26	49.5		0.3	100	1.57	83		4.2	
	eS		27	14.8		1.5	100					
TRZ	eP	21	26	48		-2.0	99	1.65	174			

	e			55.5									
	e(S)		27	19		4.2							
TNZ	eP	21	26	57.0		1.4	100	2.14	233		3.4*	3.2*	
	i			57.9									
	e(S)		27	30.5		5.8							
MNG	iP	21	27	03.5		-0.7	100	2.83	197		4.8	4.6	
	S			41.2		1.5	100						
WEL	eP	21	27	13.0		-1.7	100	3.65	202	4.6			
	eS			57.0		-1.3	100						
COB	P	21	27	22.0		-1.8	100	4.36	222		3.7*	3.7*	
	S		28	14.5		-0.1	100						

AMPLITUDES: WTZ 3.7 7.5 KRP 3.8 1.0 ECZ 1.5
TNZ 0.4 0.3 MNG 13 11 WEL 1.1
COB 0.7 2.6

78/ 211

MAY 02 $22^h05^m51^s.2$ 33°.49S 179°.74E 388 km M = 4.8
± 1.9 0.20 0.39 29 S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	22	07	05		-1.0	100	4.31	193		4.4	4.9
	e		08	02.5								
	e			09								
WTZ	P	22	07	12.0		-1.4	100	5.01	206		4.8	4.6
	eS		08	18		0.2	100					
GNZ	P	22	07	16.5		-0.2	100	5.33	195		4.9	4.8
	S		08	23.0		-0.8	100					
KRP	P	22	07	20.8		1.3	100	5.60	216		3.6*	
NGZ	eP	22	07	31		0.4	100	6.59	209			
CNZ	P	22	07	32.1		1.0	100	6.63	209			
TNZ	eP	22	07	39		2.0	100	7.15	216		3.6*	
MNG	P	22	07	44.2		-1.4	100	7.89	204		5.2	4.9
	eS		09	17.0		1.3	100					
WEL	eS	22	09	36		2.7	99	8.73	205	4.8		
COB	eP	22	08	03		-0.3	100	9.42	214		3.7*	4.2*
	S		09	44.0		-3.8	96					

AMPLITUDES: ECZ 0.3 0.8 WTZ 1.4 1.0 GNZ 1.6 2.3
KRP 1.1 TNZ 0.2 MNG 4.5 2.6
WEL 0.3 COB 0.3 3.5

78/ 212

MAY 03 $02^h08^m53^s.9$ 38°.81S 175°.87E 166 km M = 4.2
± 1.0 0.04 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
NGZ	iP	02	09	18.1		1.1	100	0.42	207			
	S			35.5		0.8	100					
CNZ	P	02	09	18.6		1.4	100	0.47	212			
GSZ	P	02	09	19.0		1.6	100	0.52	205			
	eS			34.5		-0.9	100					
KRP	iP	02	09	19.3		-0.5	100	0.92	344		4.2*	
	S			37.5		-2.2	99					
TRZ	P	02	09	23.0		2.2	99	1.05	135		4.2	4.1
	eS			41.2		-0.3	100					
WTZ	P	02	09	21.8		-0.3	100	1.21	47		4.2	4.2
	S			42.2		-1.7	100					
TNZ	P	02	09	23.5		1.2	100	1.21	251		3.4*	3.2*
	eS			47.0		2.9	99					
WIZ	eP	02	09	26.0		-0.5	100	1.65	40			

GNZ	P	02	09	28.2		1.2	100	1.69	85		4.0	4.5	
	S			52.0		-0.6	100						
MNG	iP	02	09	30.0		1.4	100	1.84	189		4.8	4.2	
	S			53.8		-1.4	100						
WEL	P	02	09	38.0		0.2	100	2.62	198	4.0			
	S		10	10		-1.5	100						
COB	P	02	09	44.5		-2.1	99	3.32	226		3.6*	3.6*	
	S		10	24.8		-2.2	99						

AMPLITUDES: KRP 15 TRZ 2.0 3.0 WTZ 3.6 4.0
TNZ 0.5 0.5 GNZ 1.7 10 MNG 30 7.8
WEL 0.5 COB 0.7 2.6

78/ 213

MAY 03 $03^h17^m53^s.4$ 37°.96S 176°.69E 12 km M = 3.2
± 0.4 0.04 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
WTZ	iPg	03	17	57.6		-1.0	99	0.23	96			
WIZ	Pg	03	18	05.9		0.5	100	0.58	42			
KRP	Pg	03	18	12.0		0.0	100	0.92	272		3.2	
	eSg			24.5		0.1	100					
GNZ	iPg	03	18	18.0		-0.7	100	1.25	123		3.6	3.1
	Sg			36.5		0.9	99					
MNG	eP*	03	18	45		2.4		2.82	199		3.1	

AMPLITUDES: KRP 1.3 GNZ 1.8 0.8 MNG 0.2

FELT: Te Teko (34) MM IV

78/ 214

MAY 03 $03^h53^m25^s.0$ 38°.02S 176°.72E 12 km M = 3.2
± 0.4 0.05 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
WTZ	Pg	03	53	29.7		-0.1	100	0.22	80			
	Sg			32.2		-0.9	99					
WIZ	Pg	03	53	38.5		0.8	100	0.62	37			
KRP	ePg	03	53	43.5		-0.6	100	0.94	276		2.9	
	eSg			57.0		0.1	100					
GNZ	Pg	03	53	50.0		0.7	100	1.20	122		3.5	
ECZ	eSg	03	54	17		1.9		1.48	78		3.4	
MNG	eSn	03	54	44		3.2		2.76	200		3.2	

AMPLITUDES: WTZ 7.8 KRP 0.6 GNZ 1.5
ECZ 0.2 MNG 0.3

FELT: Te Teko (34) MM IV

78/ 215

MAY 03 $12^h25^m54^s.4$ 38°.04S 176°.68E 12 km M = 3.8
± 0.4 0.03 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
WTZ	iPg	12	25	59.1		-0.8	100	0.25	77			
WIZ	Pg	12	26	07.4		-0.3	100	0.65	38			
	Sg			23.3		6.7						
WNZ	ePg	12	26	11		1.4		0.75	217		3.3	3.4
	eSg			17		-2.8						
TUA	Pg	12	26	10.8		-0.9	100	0.85	154		4.1	4.0
	Sg			22.4		-0.9	100					
KRP	Pg	12	26	13.0		0.1	100	0.91	277		3.6	3.4
	Sg			26.0		0.7	100					

GNZ	Pg	12	26	19.0		-0.1	100	1.21	120	4.4	3.7	
	eSg			37.8		2.3	95					
NGZ	ePg	12	26	23.2		0.1	100	1.41	216			
CNZ	ePg	12	26	24.2		0.2	100	1.46	217			
	e			26.0								
	e			27.9								
TRZ	eP*	12	26	23.5		2.1		1.51	176	3.7	3.6	
	ePg			26.4		1.3						
	eSg			53.8		8.2						
ECZ	iPg	12	26	28.2		3.0		1.52	77	3.9	4.0	
	eSg			48.0		2.4						
MNG	ePn	12	26	39		1.7		2.74	199	3.7		
	ePg			47.5		-2.3						
COB	ePn	12	27	02		3.3		4.31	224	3.9		

AMPLITUDES:								
WNZ	0.2	0.3	TUA	4.2	4.3	KRP	3.7	1.8
GNZ	10	3.5	TRZ	0.7	0.7	ECZ	0.6	0.8
MNG	1.0		COB	0.2				

FELT: Matahina, Te Teko (34) MM IV

78/ 216

MAY 03 $14^h54^m06^s.0$ 38°.04S 176°.70E 12 km M = 4.1

± 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
WTZ	iPg	14	54	11.0		-0.2	100	0.23	76			
WIZ	Pg	14	54	19.2		0.1	100	0.64	37			
WNZ	Pg	14	54	23.0		1.6		0.76	218		3.5	3.6
	e			28.0								
	e			44.2								
TUA	Pg	14	54	22.7		-0.5	100	0.85	155		4.4	4.1
	Sg			34.5		-0.2	100					
KRP	Pg	14	54	24.9		0.1	100	0.93	277		4.1	
	i			26.2								
	Sg			37.8		0.4	100					
GNZ	Pg	14	54	30.3		-0.1	100	1.21	121		4.7	
	eSg			48		1.3	95					
NGZ	ePg	14	54	34.2		-0.7	100	1.42	216			
CNZ	ePg	14	54	36.0		0.2	100	1.47	218			
	i			38.8								
ECZ	Pg	14	54	35.9		-0.5	100	1.50	77		4.2	4.4
	e			39.3								
	e(Sg)		55	00		3.3						
TRZ	P*	14	54	35.2		2.2		1.51	176		4.1	
	ePg			38.0		1.3						
AUC	Pg	14	54	44.3		-0.8		1.93	307			
MNG	Pn	14	54	50.0		1.0		2.74	200		4.0	
	ePg		55	00		-1.5						
ONE	ePg	14	55	07		1.6		2.93	320			
COB	eP*	14	55	17		-3.9		4.32	224		4.1	
	ePg			29		-4.3						

AMPLITUDES:								
WNZ	0.3	0.5	TUA	9.4	5.7	KRP	11	
GNZ	25		ECZ	1.3	2.3	TRZ	1.7	
MNG	2.0		COB	0.3				

FELT: Bay of Plenty (27,34) MM IV

78/ 217

MAY 03 $15^h34^m17^s.1$ $44°.65S$ $168°.32E$ 85 km M = 3.5
± 0.6 0.03 0.03 5 S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	iP	15	34	29.5		-0.8	100	0.29	266			
	i			38.0								
	S			40.8		0.6	100					
ROX	P	15	34	39.0		1.1	99	1.09	140		3.3	4.0
	S			53.8		0.3	100					
MNW	P	15	34	39.4		-0.3	100	1.23	203		2.7	2.9
	S			55.8		-0.9	99					
HHP	P	15	34	42.6		-0.3	100	1.48	78			
	S		35	01.4		-1.1	99					
MJZ	P	15	34	45.8		0.4	100	1.67	67			
	S		35	06.8		0.2	100					
OMZ	P	15	34	49.2		0.9	99	1.89	104		3.8	3.6
	S		35	11.0		-0.3	100					
OBZ	P	15	34	53.5		0.2	100	2.26	184			
	eS		35	19.7		-0.4	100					

AMPLITUDES: MSZ 10 28 ROX 0.7 8.8 MNW 0.3 1.1
OMZ 1.1 1.3

78/ 218

MAY 03 $16^h39^m35^s.5$ $41°.18S$ $172°.61E$ 12 km M = 3.9
± 0.8 0.03 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
COB	iPg	16	39	41.6		2.7	99	0.13	45			
KKY	Pg	16	40	04.9		-0.6	100	1.48	147			
	Sg			26.2		0.7	100					
WEL	Pg	16	40	07.5		-1.0	100	1.63	94	3.7		
	e			10.2								
	Sg			31.8		1.2	100					
MNG	eP*	16	40	16.0		0.9	100	2.25	76		4.4	4.2
	iPg			18.4		-2.6	99					
	Sg			50.5		-0.8	100					
TNZ	ePn	16	40	17		3.1	98	2.41	35		3.9	3.9
	ePg			24		-0.2	100					
	eSg			56		-0.7	100					
	e		41	03								
CNZ	eP*	16	40	27.8		-0.0	100	3.00	50			
	e			30.8								
NGZ	eP*	16	40	28		-0.6	100	3.05	50			
	iPg			36.0		-1.1	100					
	e(S*)		41	14		5.5						
MJZ	P*	16	40	29.0		-2.7		3.22	209			
	Sn		41	03		0.7						
HHP	Pn	16	40	28.2		-1.4		3.56	207			
	Sn		41	08		-2.5						
KRP	ePn	16	40	37.8		2.7		3.96	36		3.6	
	eSn		41	24		3.9						
TUA	eP*	16	40	47		-1.6		4.22	57			
	e			55								
MSZ	ePn	16	40	46.5		-1.4	100	4.90	223		3.9	3.9
	e			50.8								
	Sn		41	39.5		-3.3						

AMPLITUDES: WEL 0.7 MNG 9.5 6.5 TNZ 0.4 0.6

KRP 0.4 MSZ 0.5 0.8

FELT: Cobb River (75) MM IV

78/ 219

MAY 04 $01^h44^m40^s.4$ 39°.38S 176°.96E 33 km M = 3.7

± 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
TRZ	P*	01	44	45.8		-1.1	100	0.20	213			
TUA	P*	01	44	51.6		-0.7	100	0.59	14		3.4	3.9
	S*		45	01.2		0.1	100					
WNZ	P*	01	44	59.0		-0.1	100	1.01	318		4.0	
NGZ	P*	01	45	00.0		-0.1	100	1.07	280			
	eS*			15		0.4	100					
GSZ	P*	01	45	00.1		-0.1	100	1.07	275			
	i			02.0								
GNZ	Pn	01	44	57.8		-1.2	100	1.11	48		3.6	3.8
	iP*		45	03.0		2.3	98					
	e			32								
CNZ	P*	01	45	00.2		-0.7	100	1.12	279			
WTZ	Pn	01	45	02.5		-0.5	100	1.39	1		3.6	
	eP*			07.1		1.5						
	e			14.5								
MNG	ePn	01	45	05.0		-1.8	99	1.68	222			
	eP*			12.5		2.1	99					
KRP	Pn	01	45	09.0		0.0	100	1.84	322		3.8	
	eP*			14.0		1.0	100					
	eSn			29.7		-0.8	100					
WIZ	eP*	01	45	18		4.5		1.86	6			
TNZ	ePn	01	45	12.5		1.1	100	2.02	275		4.2	
	eP*			19.7		3.6						
WEL	e(Pn)	01	45	22		3.5		2.54	221	3.7		
	e			32								
	e(Sn)			44		-3.3						
COB	eP*	01	45	47		3.0		3.66	241		3.8	3.3
	eS*		46	36		4.3						

AMPLITUDES: TUA 2.5 9.0 WNZ 0.7 GNZ 2.5 6.6
WTZ 2.1 KRP 1.0 TNZ 0.6
WEL 0.3 COB 0.3 0.3

FELT: Napier (52) MM V

78/ 220

MAY 04 $02^h41^m26^s.6$ 37°.99S 176°.72E 12 km M = 3.4

± 0.3 0.03 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
WTZ	iPg	02	41	32.0		0.6	100	0.21	89			
	Sg			35.2		0.6	100					
WIZ	Pg	02	41	37.8		-1.0	99	0.59	39			
TUA	Pg	02	41	43.8		-0.8	100	0.88	158		3.6	
KRP	Pg	02	41	46.2		0.5	100	0.94	274		3.0	
	eSg			58.5		0.1	100					
GNZ	Pg	02	41	51.3		0.0	100	1.21	123		3.7	
	e(Sg)		42	12.2		4.5						
MNG	ePn	02	42	12		1.7		2.80	200		3.2	
	ePg			22		-1.1						

AMPLITUDES: TUA 1.4 KRP 0.8 GNZ 2.3
MNG 0.3

FELT: Te Teko (34) MM IV

78/ 221

MAY 04 $08^h26^m47^s.1$ 39°.48S 177°.16E 33 km M = 4.9
± 0.5 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
TRZ	P*	08	26	55.0		0.6	100	0.27	254					
TUA	P*	08	27	00.3		0.0	100	0.67	359					
	S*			09.7		-0.2	100							
GNZ	P*	08	27	06.1		-0.8	100	1.07	39					
WNZ	P*	08	27	07.3		-1.4	100	1.18	315					
GSZ	P*	08	27	09.0		-0.6	100	1.23	279					
	i			10.4										
NGZ	P*	08	27	08.5		-1.1	100	1.23	283					
CNZ	P*	08	27	09.2		-1.2	100	1.28	282					
WTZ	Pn	08	27	11.2		0.1	100	1.50	355			4.5		
	eP*			15.0		0.9								
	eSn			28.5		-0.6								
CAZ	Pn	08	27	13.2		0.8	100	1.59	206					
	e			22.5										
MNG	Pn	08	27	14.4		0.3	100	1.72	228					
	iP*			21.3		3.5								
	e			46.8										
WIZ	Pn	08	27	17.8		0.5		1.95	1					
	eP*			25.6		3.9								
KRP	Pn	08	27	18.0		-0.0	100	2.01	320			5.2		
	iP*			24.5		1.9	99							
ECZ	Pn	08	27	20.0		0.8	100	2.09	32			4.7	4.9	
	i			36.8										
TNZ	Pn	08	27	21.5		1.1	100	2.18	277			5.4	5.3	
	iP*			28.3		2.8	93							
	S*			57		2.8								
WEL	ePn	08	27	25		-0.7	100	2.56	225	4.4				
	Sn			54		-0.8	100							
	e		28	01										
COB	Pn	08	27	41.0		-0.8	100	3.75	243					
	e		28	10										
KAI								5.31	233	4.6				
MJZ	ePn	08	28	22.2		-0.4		6.74	226					
	Sn		29	33.0		-1.9								
HHP	Pn	08	28	25.4		-1.1		7.03	224					
	eSn		29	40		-1.8								

AMPLITUDES: WTZ 15 KRP 22 ECZ 2.6 4.7
TNZ 7.6 7.7 WEL 1.4 KAI 0.6

FELT: Central and southern Hawkes Bay (52,53,60). Maximum intensity at Patoka (52) MM V

78/ 222

MAY 04 $08^h28^m50^s.3$ 39°.46S 176°.99E 33 km M = 4.1
± 0.5 0.03 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	P*	08	28	56		-0.4	100	0.15	235					
TUA	P*	08	29	02.5		-0.9	100	0.67	11			3.9	4.4	
	S*			11.9		-1.1	100							
WNZ	P*	08	29	10.5		0.3	100	1.08	320			4.4		
	e			12.5										

GSZ	P*	08	29	10.8		0.3	100	1.10	279		
	i			12.0							
NGZ	P*	08	29	09.3		-1.2	99	1.11	284		
GNZ	P*	08	29	12		0.7	100	1.15	45		
CNZ	P*	08	29	12.2		0.9	100	1.15	283		
WTZ	Pn	08	29	13.5		-0.5	100	1.48	0	3.9	3.9
	eP*			18.5		1.7	98				
	eSn			32		0.3	100				
MNG	Pn	08	29	16		-0.1	100	1.64	225	3.9	
	eP*			26		6.5					

AMPLITUDES: TUA 6.5 20 WNZ 1.6 WTZ 4.0 3.2
MNG 5.7

78/ 223

MAY 04 $11^h39^m03^s.3$ 39°.47S 177°.16E 33 km M = 4.3
± 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
TRZ	P*	11	39	11.2		0.6	100	0.28	253			
TUA	P*	11	39	16.6		0.2	100	0.67	359		4.0	4.5
	S*			26.0		0.1	100					
GNZ	P*	11	39	22.2		-0.7	99	1.06	39		4.3	
	e			27.5								
	Sn			34.0		-0.8	99					
	eS*			41		3.6						
WNZ	P*	11	39	24.7		-0.1	100	1.18	315		4.8	
	e			28.0								
	eS*			40.8		0.0	100					
NGZ	P*	11	39	25.2		-0.6	100	1.24	283			
GSZ	P*	11	39	25.2		-0.6	100	1.24	279			
	i			27.0								
WTZ	Pn	11	39	27.8		0.6	100	1.49	355		4.0	
	iP*			31.8		1.7						
MNG	Pn	11	39	30.9		0.5	100	1.73	228		4.4	
	eP*			37.2		3.2						
	i			42.0								
WIZ	ePn	11	39	34.0		0.6	100	1.94	1			
	iP*			42.0		4.3						
KRP	Pn	11	39	34.2		0.0	100	2.01	320		4.1	4.6
	eP*			40.5		1.8						
	eS*		40	06		0.8						
ECZ	ePn	11	39	36.0		0.7	99	2.09	32			
WEL	ePn	11	39	41.5		-0.4	100	2.57	225	4.0		
	eP*			51.0		2.6						
	eSn		40	11		-0.1	100					

AMPLITUDES: TUA 7.0 23 GNZ 15 WNZ 3.5
WTZ 4.2 MNG 16 KRP 1.9 4.5
WEL 0.6

FELT: Central Hawkes Bay (52,53,60) MM IV

78/ 224

MAY 05 $17^h15^m53^s.2$ 37°.98S 176°.77E 10 km M = 4.2
± 0.5 0.02 0.03 3 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	15	57.0		-0.2	100	0.17	92			
WIZ	P*	17	16	05.4		1.3	100	0.56	37			
	eS*			10		-1.9	99					

WNZ	eP*	17	16	09		0.2	100	0.84	219		3.9		
TUA	iP*	17	16	08.8	U	-0.8	100	0.88	160		4.3	4.1	
	eS*			21		-0.5	100						
	eSg			23.5		0.4	100						
KRP	S*-P*			14		0.8	100	0.97	273		4.2	4.3	
GNZ	Pg	17	16	17.4		0.1	100	1.19	124				
	eSg			34		0.6	100						
ECZ	ePg	17	16	23		0.7	100	1.44	79				
	e			25.6									
	eSg			42		0.3	100						
	e			47									
CNZ	ePn	17	16	21		0.9	100	1.55	218				
	ePg			24		-0.6	100						
	e			34									
	eSn			41.5		1.3	100						
	eSg			46		0.4	100						
TRZ	eP*	17	16	22		0.6	100	1.57	179		4.3	4.0	
	eSn			37.8		-2.9							
	eS*			43		0.7	100						
TNZ	eP*	17	16	34		1.4	100	2.23	236		4.3		
MNG	Pn	17	16	39		1.6	99	2.82	200		4.1		
	P*			41		-1.7	99						
	Pg			48		-2.3	98						
	Sn		17	08.5		-2.2	99						
COB	P*	17	17	09		-0.7	100	4.40	224				

AMPLITUDES: WTZ 25 WNZ 0.5 TUA 7.2 4.8
KRP 11 12 TRZ 2.5 1.8 TNZ 0.4
MNG 2.2

FELT: Pikowai (27), Te Teko (34), Ohope (35)

78/ 225

MAY 05 $19^h10^m27^s.0$ 34°.68S 178°.92E 286 km M = 4.5
± 2.0 0.18 0.34 21 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP?	19	11	31.9		9.4		3.02	186			4.5
	eS		12	07		1.4	100					
WTZ	P	19	11	29.0		-0.1	100	3.65	205		4.7	4.5
	eS		12	16		-1.4	100					
	e			21								
GNZ	eP	19	11	32		-1.3	100	4.02	190		4.1	4.5
	S		12	24.3		-0.6	100					
	e			26.1								
CNZ	P	19	11	50.0		2.4	99	5.26	210			
MNG	eP	19	12	02		-1.0	100	6.53	204		4.6	4.4
	eS		13	20		1.6	100					
WEL	eP	19	12	13		-0.4	100	7.37	205			
	eS		13	36		-0.9	100					

AMPLITUDES: ECZ 0.7 WTZ 2.2 1.5 GNZ 0.5 1.8
MNG 1.8 1.3

78/ 226

MAY 05 $23^h22^m37^s.6$ 38°.03S 176°.73E 12 km M = 4.0
± 0.3 0.02 0.02 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPg	23	22	40.3		-2.0	99	0.21	77			
WIZ	iP*	23	22	48.6		-0.7	100	0.62	36			

	Pg			51.4		1.1	100					
	S*			55.0		-2.8	98					
	eSg			58		-0.8	100					
WNZ	eP*	23	22	52		0.0	100	0.77	219		3.7	
TUA	P*	23	22	51.9		-1.2	100	0.85	157		4.0	4.2
	S*		23	03.5		-0.9	100					
	Sg			05.0		-1.1	100					
KRP	P*	23	22	54.4		-0.5	100	0.94	276		4.0	3.9
	S*		23	07.5		-0.1	100					
	Sg			11		1.3	100					
GNZ	iPn	23	23	00.1	U	0.8	100	1.19	121			
	eS*			15		0.2	100					
	e			17								
ECZ	P*	23	23	04.5		0.6	100	1.48	77		3.9	4.2
	eS*			26		2.5	99					
	iSg			30.0		2.5	99					
CNZ	iP*	23	23	04.9	D	0.7	100	1.49	218			
	Pg			10.0		2.3	99					
TNZ	eP*	23	23	15.5		-0.3	100	2.18	237		4.3	
MNG	ePn	23	23	20		-0.7	100	2.76	200		3.9	
	P*			25		-0.8	100					
	e			29								

AMPLITUDES: WTZ 14 WNZ 0.4 TUA 3.8 6.5
KRP 7.0 5.0 ECZ 0.7 1.4 CNZ 3.7
TNZ 0.4 MNG 1.6

FELT: Pikowai (27)

78/ 227

MAY 06 $01^h39^m00^s.2$ 43°.49S 172°.77E 25 km M = 3.8
± 1.4 0.07 0.16 4 S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CHR	P*	01	39	04.9		0.0	100	0.11	246			
	S*			05.9		-2.3	99					
MJZ	ePn?	01	39	30.5		2.3	99	1.74	253			
	eP*			34.5		3.4	98					
	eSn			48		-1.2	100					
	e			56								
RHP	Pn	01	39	32.9	U	0.6	100	2.03	252			
	e?			51.5								
	eSn			55		-1.4	100					
OMZ	ePn	01	39	32		-0.7	100	2.07	219			
	e			43								
	eSn			55.8		-1.3	100					
	eS*		40	05		1.1	100					
COB	Pn	01	39	36.7		-0.5	100	2.40	359		4.0	3.6
	e?			54								
	Sn		40	05		-0.1	100					

AMPLITUDES: COB 0.9 1.3

FELT: Mt Pleasant (110)

78/ 228

MAY 06 $07^h08^m15^s.9$ 39°.63S 174°.26E 201 km M = 4.4
± 0.9 0.05 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	P	07	08	43.5	D	0.4	100	0.45	12		3.5*	3.6*
	S?		09	03.7		-0.2	100					

CNZ	iP	07	08	48.0	D	1.5	100	1.09	67		
	eS		09	11		0.8	100				
MNG	iP	07	08	50.0		1.3	100	1.37	137		4.2
	i		09	06.5							
WEL	P	07	08	53		1.2	100	1.70	167	4.6	
	iS		09	18.6		-0.9	100				
COB	iP	07	08	53.3	U	-0.1	100	1.86	218		4.4*
	S		09	20.5		-1.8	99				
KRP	P	07	08	54.3	D	-0.3	100	1.98	31		3.3*
TRZ	iP	07	08	55.8	D	1.2	100	1.99	89		4.6 4.4
	eS		09	25		0.5	100				
WTZ	eP	07	09	01.8		-0.7	100	2.70	53		4.5 4.0
GNZ	P	07	09	07.2	D	0.0	100	3.10	73		4.7 4.4
	S			43.8		-3.0	95				
ECZ	eP	07	09	16.2		-0.6	100	3.88	61		

AMPLITUDES: TNZ 0.7 1.3 CNZ 23 27 MNG 7.6
WEL 3.3 COB 7.5 KRP 1.3
TRZ 1.9 2.5 WTZ 2.4 0.9 GNZ 3.3 2.9

78/ 229

MAY 07 $03^h29^m58^s.5$ 39°.03S 174°.80E 221 km M = 4.3
± 1.1 0.04 0.07 8 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CNZ	iP	03	30	29.6	U	1.0	100	0.60	106			
	eS?			50		-1.8						
KRP	iP	03	30	32.0	D	-0.3	100	1.25	28		3.3*	3.0*
	iS			58.5	DSW	-0.1	100					
TRZ	P	03	30	36.0		0.4	100	1.65	109		4.5	4.3
	S		31	03		-1.4	99					
MNG	iP	03	30	36.3	U	0.5	100	1.66	162		4.3	4.2
	e			59								
	e		31	01								
	eS			06.0		1.4	99					
WEL	eP	03	30	41		-0.5	100	2.25	181	4.3		
	S		31	14		-0.7	100					
	e			17.6								
COB	iP	03	30	44.8		-0.4	100	2.59	217			
	e		31	10.8								
	S			21.0		-0.3	100					

AMPLITUDES: CNZ 10 2.4 KRP 1.7 0.8 TRZ 1.5 2.3
MNG 7.4 6.5 WEL 1.1

78/ 230

MAY 07 $04^h31^m54^s.0$ 38°.91S 175°.20E 230 km M = 4.6
± 1.1 0.05 0.08 8 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CNZ	iP	04	32	26.0	U	1.5	100	0.40	137			
	e			45.9								
	S			49.7		1.8	99					
TNZ	P	04	32	26.5		1.0	100	0.69	247		3.6*	
KRP	iP	04	32	26.6	D	-0.6	100	1.03	15		3.7*	3.1*
	iS			52.7	S	-0.4	100					
TRZ	iP	04	32	31.2	U	1.2	100	1.41	117		4.5	4.4
	S			55.4		-2.4	99					
TUA	iP	04	32	31.0		0.1	100	1.53	87		4.6	4.5
	S			58		-1.5	100					
MNG	iP	04	32	33.6	U	1.1	100	1.72	173		4.4	4.7

	e			58						
	S		33	03.5	1.2	100				
WEL	eP	04	32	40	0.9	100	2.39	188	4.5	
	eS		33	14	-0.0	100				
COB	iP	04	32	42.9	-1.5	100	2.88	220		
	e		33	11.0						
	S			21.5	-2.0	99				
ECZ	eP	04	32	44.5	-0.1	100	2.90	66	5.0	

AMPLITUDES: CNZ 11 13 TNZ 0.7 KRP 4.1 1.1
TRZ 1.6 3.1 TUA 2.3 2.1 MNG 8.8 22
WEL 1.3 ECZ 2.8

78/ 231

MAY 07 $06^h10^m44^s.1$ 37°.97S 176°.72E 12 km M = 3.3
± 0.7 0.05 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
WTZ	iPg	06	10	48.4		-0.5	100	0.22	95			
	Sg			51		-1.2	100					
WIZ	Pg	06	10	57.0	U	1.1	100	0.58	41			
KRP	Pg	06	11	03.0		-0.1	100	0.94	272		3.1	
GNZ	Pg	06	11	08.5		-0.6	100	1.23	124		3.6	
	Sg			27		1.3	99					

AMPLITUDES: WTZ 3.5 9.5 KRP 0.9 GNZ 1.9

FELT: Te Teko (34)

78/ 232

MAY 07 $09^h40^m19^s.9$ 36°.60S 178°.49E 216 km M = 4.2
± 1.1 0.06 0.10 7 S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	iP	09	40	52.6	D	0.6	100	1.10	178		4.2	4.2
	eS?		41	17		-0.0	100					
WIZ	eP	09	40	53.5		-0.9	99	1.39	228			
TUA	e?	09	41	15				2.46	205			
KRP	iP	09	41	07.8	D	0.3	100	2.71	240		3.2*	
CNZ	eP?	09	41	20		3.3		3.49	221			
	e			24.5								
	eS		42	01		0.3	100					
MNG	eP	09	41	31		-0.1	100	4.66	210		3.9	4.5
	eS		42	26		-0.3	100					

AMPLITUDES: ECZ 1.3 1.2 KRP 0.9 CNZ 1.0 1.4
MNG 0.6 3.2

78/ 233

MAY 07 $10^h01^m12^s.0$ 39°.25S 173°.84E 25 km M = 4.1
± 0.6 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	iP*	10	01	20		-0.8	100	0.42	82			
	e			23								
	S*			28		0.9	100					
	e			37.5								
CNZ	iP*	10	01	35.1	U	-0.8	100	1.32	88			
	S*			54.2		0.7	100					
	e			59.5								
MNG	P*	10	01	43.8		-1.2	100	1.86	138		4.4	4.5
	i			44.7								

	S*		02	10.4		0.8	100					
KRP	iPn	10	01	40.4	D	-1.5	99	1.87	46		3.7	4.1
	P*			44.6		-0.6	100					
	Sn		02	05.0		0.6	100					
	S*			10.8		0.9	100					
COB	ePn	10	01	43.5		-0.5	100	2.02	204			
	P*			49.5		1.7	99					
	e			58.5								
	eSn		02	09		1.0	100					
WEL	P*	10	01	50		0.0	100	2.16	161	4.0		
	eS*		02	17		-1.3	99					

AMPLITUDES: CNZ 3.3 24 MNG 12 20 KRP 2.3 5.8
WEL 0.8

FELT: Warea (46) MM V, New Plymouth (47) MM IV

78/ 234

MAY 07 $18^h 56^m 15^s.3$ 37°.93S 177°.50E 33 km M = 4.3
± 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
WTZ	iPn	18	56	24.5		0.1	100	0.41	262			
WIZ	iPn	18	56	23.7	U	-1.6	100	0.48	328			
	Sn			31.5		-1.1	100					
	S*			36.2		3.5						
GNZ	iPn	18	56	29.9		-0.2	100	0.82	150		3.5	
	eSn?			41		0.0	100					
ECZ	iPn	18	56	29.8	D	-0.8	100	0.86	74		4.7	4.7
	eS*			44.5		1.0	100					
TUA	Pn	18	56	31.8		0.4	100	0.92	197		3.8	4.3
	P*			33		0.5	100					
	S*			46		0.8	100					
	e			57								
WNZ	Pn	18	56	38		1.3	100	1.30	237		4.1	
KRP	iPn	18	56	39.5	D	-0.6	100	1.56	270		4.5	4.6
	P*			45		1.8	99					
	iSn			59.0		0.4	100					
TRZ	e?	18	56	42.5				1.71	198		4.1	4.2
	ePn			43.5		1.4	100					
	eP*			47		1.3	100					
	e			57								
	eS*		57	06		-2.4	99					
TNZ	ePn	18	56	59		2.6	98	2.75	242		4.7	
	e		57	15.5								
MNG	Pn	18	57	00.0		-1.3	100	3.11	210		4.3	4.7
	P*			06.9		-2.6	98					
	eSn			36		0.0	100					
WEL	eP*	18	57	23.5		-0.6	100	3.96	211	4.4		
	eSn			56		-0.5	100					

AMPLITUDES: GNZ 4.2 ECZ 13 19 TUA 2.3 8.9
WNZ 0.4 KRP 6.8 8.7 TRZ 1.8 3.4
TNZ 0.7 MNG 3.9 11 WEL 0.6

78/ 235

MAY 08 $11^h 50^m 27^s.5$ 37°.82S 177°.41E 33 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
WIZ	iP*	11	50	35.0	U	-0.8	100	0.34	329			

	eS*?			42		0.2	100					
WTZ	iPn	11	50	36.6		0.4	100	0.38	244			3.2
ECZ	ePn	11	50	43.7		0.3	100	0.91	82		3.7	3.8
	Sn			55.5		0.2	100					
GNZ	ePn	11	50	42		-2.0	98	0.94	150			
	eP*			45.9		0.6	100					
	eSn			56		-0.3	100					
	e		51	01.5								
TUA	e?	11	50	44				1.01	192		3.7	3.8
	Pn			45.9		1.1	100					
	e			53.6								
	eS*		51	01		1.1	100					
CNZ	ePn	11	50	59		0.5	100	2.01	226			
MNG	e	11	51	12				3.17	208		3.8	3.7
	eSn			48		-1.7	99					

AMPLITUDES: WTZ 9.6 ECZ 1.2 2.2 TUA 1.7 2.1
CNZ 1.9 MNG 1.2 1.2

78/ 236

MAY 08 $22^h39^m58^s.5$ $39°.75$S $177°.13$E 33 km M = 4.0
± 0.8 0.03 0.06 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*	22	40	05.4		-1.0	100	0.31	310			
TUA	P*	22	40	15		-1.2	100	0.94	1		3.7	4.3
	eS*			31.9		2.7	96					
CAZ	e	22	40	29.9				1.34	211			
CNZ	iPn	22	40	19.5	U	-1.0	100	1.35	294			
	Sn			35.7		-1.2	100					
	e			48.5								
WNZ	iPn	22	40	20.9	U	-0.0	100	1.38	324		4.6	4.5
	eS*			42		0.1	100					
MNG	ePn	22	40	22		-1.0	100	1.53	235		3.5	3.8
	P*			27.0		0.9	100					
	Sn			43		1.7	99					
WTZ	Pn	22	40	26.5		0.2	100	1.77	356		3.3	3.9
	e			34								
	e			41.5								
TNZ	ePn?	22	40	32		-0.2	100	2.20	284		4.1	3.9
	e			34.6								
	Sn?			58.7		1.2	100					
KRP	iPn	22	40	31.4	UE	-0.9	100	2.21	325		4.3	
	iP*			38.0	U	0.4	100					
	e			55.5								
	eSn			57		-0.7	100					

AMPLITUDES: TUA 2.0 8.7 WNZ 1.4 1.5 MNG 2.7 6.2
WTZ 0.7 2.3 TNZ 0.9 0.7 KRP 2.2

FELT: Napier (52)

78/ 237

MAY 09 $12^h57^m28^s.9$ $37°.46$S $177°.06$E 143 km M = 3.8
± 2.0 0.11 0.14 15 S.E. of RES. 2.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	12	57	48.6		-1.1	100	0.52	186		3.8	3.4
	S		58	05.6		0.0	100					
ECZ	P	12	57	54.0	U	-1.0	100	1.20	102		3.8	3.7
KRP	P	12	57	56.5		0.5	100	1.30	249			

TUA	eP	12	57	57		0.5	100	1.35	177		
GNZ	P	12	57	57.5		0.3	100	1.40	148		
	e		58	03							
	e			10.4							
	S			18		-0.8	100				
TRZ	eP	12	58	10		4.9	92	2.10	185	4.0	4.1
	eS			33.9		1.2	100				
	e			35.8							
MNG	P	12	58	19.8		-1.9	100	3.38	201	3.9	3.8
	S		59	00		-2.2	100				

AMPLITUDES: WTZ 3.3 1.8 ECZ 0.8 0.7 TRZ 0.5 1.4
MNG 1.2 1.2

78/ 238

MAY 11 $18^h39^m26^s.6$ 37°.24S 176°.34E 337 km M = 4.3
± 1.3 0.09 0.13 11 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	18	40	10.8		-0.0	100	0.91	145		4.2	4.1
	eS			44		-1.5	99					
KRP	P	18	40	12.6	D	1.7	99	0.94	222		3.5*	
GNZ	eP	18	40	16.5		-0.1	100	1.93	137			
	iS			55.0		-0.7	100					
CNZ	P	18	40	18		0.6	100	2.06	197			
TRZ	eP?	18	40	20		0.3	100	2.35	171		4.3	4.1
	eS		41	03		1.8	99					
MNG	iP	18	40	29.5	U	-0.1	100	3.45	191		4.7	4.4
	eS		41	19		0.0	100					
COB	P	18	40	42		-1.5	99	4.76	215		3.9*	3.0*
	eS		41	43.5		-0.3	100					

AMPLITUDES: WTZ 1.3 1.3 KRP 1.6 TRZ 0.4 0.6
MNG 5.5 3.7 COB 1.0 0.4

78/ 239

MAY 13 $03^h47^m40^s.1$ 41°.99S 174°.29E 12 km M = 3.9
± 1.1 0.06 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
WEL	iP*	03	47	55.3	D	0.6	100	0.79	27	4.1		
	eS*		48	04		-1.4	100					
COB	iPn	03	48	06.1	D	0.3	100	1.48	307		3.9	3.4
	P*			08.0		1.5	100					
	eSn			26		1.1	100					
MNG	iPn	03	48	09.0	D	1.0	100	1.64	34		4.1	4.1
	Sn			30.3		1.4	100					
KAI	eSn	03	48	40		-2.5	99	2.20	255			
	e		49	06								
TNZ	eP*	03	48	30		0.9	100	2.80	1		3.9	3.7
	eS*		49	06		0.2	100					
CNZ	eP*	03	48	31.5		-0.1	100	2.95	19			
	eS*		49	10		-0.1	100					
KRP	eP*	03	48	51		-1.5	100	4.18	14		4.0	4.3
	eS*		49	44.5		-2.4	99					

AMPLITUDES: WEL 7.9 COB 2.2 2.3 MNG 8.2 9.7
TNZ 0.3 0.3 KRP 0.3 0.4

78/ 240

MAY 13 $13^h57^m12^s.5$ 38°.30S 177°.04E 125 km M = 4.2
± 1.0 0.04 0.05 8 S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP!	13	57	28.2		-2.1	100	0.32	353			
TUA	iP	13	57	32.2		0.9	100	0.51	170		4.3	4.2
	eS			45		-0.6	100					
WIZ	P	13	57	31.6		-1.6	100	0.78	9			
	e			41								
GNZ	iP	13	57	36.0		2.3	100	0.85	114			
	eS			49		-0.9	100					
KRP	iP	13	57	37.8	DS	0.1	100	1.24	287		3.4*	3.4*
	eS			53.3		-3.6	98					
TRZ	eP	13	57	40		2.1	100	1.26	188		4.0	4.5
	e			43								
	S			57.0		-0.3	100					
	e		58	00								
ECZ	P	13	57	40.8	U	2.0	100	1.34	63		4.1	4.0
	eS			59		0.2	100					
CNZ	iP	13	57	42.1	D	1.8	100	1.47	232			
	eS		58	02.5		1.0	100					
TNZ	iP	13	57	52.8	D	2.9	99	2.26	246		3.9*	3.3*
	eS		58	20		1.8	100					
MNG	eP	13	57	55		0.4	100	2.61	207		4.0	4.2
	eS		58	27.5		1.1	100					
CAZ	eP	13	57	57		1.5	100	2.67	193			
	eS		58	28		-0.0	100					
WEL	eS	13	58	45		-1.5	100	3.46	210	4.2		
COB	eP	13	58	16		-1.6	100	4.33	229		3.8*	3.0*
	e			31								
	eS		59	05		-2.6	99					
CIZ	eS	14	00	20		-2.9	99	7.43	141			

AMPLITUDES:										
	TUA	7.0	5.0	KRP	3.0	2.8	TRZ	1.3	8.8
	ECZ	1.6	1.2	TNZ	1.2	0.4	MNG	2.5	5.5
	WEL	0.5		COB	1.0	0.5	CIZ		0.7

78/ 241

MAY 13 $21^h05^m01^s.8$ 38°.00S 176°.71E 9 km M = 3.4
± 0.7 0.03 0.04 7 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPg!	21	05	05.5		-1.1	99	0.22	85			
WIZ	eP*	21	05	13		-0.7	100	0.61	39			
TUA	P*	21	05	17.3		-0.9	100	0.87	157		3.5	3.5
	eS*			29.5		-0.7	100					
KRP	eP*	21	05	19.5		0.4	100	0.93	274		3.1	3.0
	eS*			32		0.3	100					
GNZ	Pn	21	05	25.3		0.9	100	1.21	122		3.8	3.1
	eSg			44		1.1	100					
ECZ	Pg	21	05	32.7		0.7	100	1.48	79		3.6	

AMPLITUDES:									
	TUA	1.2	1.2	KRP	1.1	0.7	GNZ	3.2	1.0
	ECZ	0.3							

FELT: Matahina (34) MM IV

78/ 242

MAY 13 $23^h35^m28^s.8$ $38°.39S$ $178°.04E$ 33 km M = 4.1

± 1.1 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
GNZ	P*	23	35	36.3		0.4	100	0.25	182			
TUA	iPn	23	35	43.4	U	-0.0	100	0.81	239		4.2	4.4
	eSn			55		0.7	100					
WTZ	iPn	23	35	44.4	U	-0.6	100	0.92	296		4.0	4.0
	eSn			56.5		-0.4	100					
WIZ	P	23	35	47.6		0.3	100	1.09	322			
	eS		36	00		-1.0	100					
TRZ	eP*	23	35	58		2.2	99	1.50	219		4.0	4.0
	e		36	02								
	e			25								
WNZ	ePn	23	35	54		0.6	100	1.54	260		4.2	
KRP	Pn	23	35	59.5		-0.5	100	2.02	283		4.0	
	eSn		36	24		0.5	100					
CNZ	ePn	23	36	02		0.8	100	2.11	247			
	e			40								
TNZ	ePn	23	36	15.5		2.6	99	2.97	253		4.3	4.3
	e(Sn)			52		5.9						
MNG	ePn	23	36	10		-3.0	98	2.98	221		3.9	3.9
	e(P*)			24.5		3.7						
	eSn			45.5		-0.8	100					
WEL	eSn	23	37	05		-1.9	99	3.83	220	4.0		

AMPLITUDES:											
	TUA	8.8	14	WTZ	11	12	TRZ	2.0	2.3		
	WNZ	0.5		KRP	1.5		TNZ	0.3	0.3		
	MNG	1.5	1.9	WEL	0.3						

78/ 243

MAY 14 $17^h01^m53^s.7$ $37°.06S$ $176°.94E$ 7 km M = 3.8

± 1.1 0.04 0.04 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*	17	02	02.6	D	-1.5	100	0.51	157			
	e?			07								
	eS*			11		-0.4	100					
WTZ	iP*	17	02	09.7	U	-1.5	100	0.93	178		3.2	
	e			18								
KRP	Pn	17	02	18.0		-1.2	100	1.41	232		3.6	4.0
	eSg			43		1.6	100					
ECZ	ePn	17	02	18		-1.4	100	1.43	117		4.2	4.2
	ePg			23.8		1.2	100					
	eSn			40		1.5	100					
GBZ	S*-P*			20		0.7	100	1.44	305			
TUA	eP*	17	02	27		1.6	100	1.75	175		3.7	3.8
	eSg			52		-1.0	100					
	e		03	03								
GNZ	ePn	17	02	24		-0.5	100	1.80	152		3.8	3.8
	eSn			49		1.6	100					
ONE	e?	17	02	49				2.44	301			
	eSn		03	02		-0.8	100					
	eS*			10		0.7	100					

AMPLITUDES:											
	WTZ	1.0		KRP	1.0	1.7	ECZ	1.0	1.2		
	GBZ	3.0	9.2	TUA	0.3	0.3	GNZ	1.1	1.3		

78/ 244

MAY 14 $17^h36^m01^s.8$ 36°.87S 176°.81E 12 km M = 3.9

± 0.7 0.04 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
WIZ	iP*	17	36	13.8	D	-1.4	100	0.72	155			
	e			18								
	eS*			22		-3.0	98					
WTZ	iP*	17	36	20.8	U	-1.2	100	1.12	173		3.6	3.6
	e			28								
	eSg			41		1.3	100					
GBZ	Sg-Pn			21		1.2	100	1.26	301			
KRP	Pn	17	36	29.5		2.3	99	1.46	224		3.7	3.9
	eSg			51		-0.2	100					
ECZ	Pn	17	36	30.2		1.0	100	1.61	121		4.3	4.2
	ePg			35		0.6	100					
	eSg			56		-0.1	100					
TUA	eP*	17	36	38		1.7	100	1.95	172		3.9	4.0
	eS*		37	02		0.0	100					
	e(Sg)			14		6.4						
GNZ	ePn	17	36	35		0.2	100	2.02	152		4.0	3.8
	ePg			42.5		-0.0	100					
	eSn		37	01		1.5	100					
	e(Sg)			14		4.3						
ONE	eSn	17	37	04		-1.5	100	2.26	298	3.9		
	e			28								
MNG	eP*?	17	37	08		-1.2	100	3.89	195			3.9

AMPLITUDES: WTZ 1.2 1.0 GBZ 3.5 7.2 KRP 1.1 1.4
ECZ 1.0 0.9 TUA 0.3 0.3 GNZ 1.1 1.0
ONE 0.5 MNG 0.3

78/ 245

MAY 14 $23^h53^m35^s.3$ 37°.01S 177°.01E 12 km M = 3.9

± 1.0 0.05 0.05 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*	23	53	50.5		-2.5	99	0.97	181		3.2	3.4
	eS*		54	04		-1.9	100					
ECZ	eP*	23	53	59		-1.3	100	1.40	119		4.6	4.1
	eSg		54	22		-0.6	100					
KRP	(Pg)	23	54	09.0		3.7		1.48	232		3.9	4.1
	eSg			26		0.7	100					
TUA	ePg	23	54	14		2.4	99	1.79	176		3.9	3.9
	e(Sg)			43		7.2						
GNZ	eP*	23	54	09		1.6	100	1.82	154		3.9	3.8
	eS*			34		2.7	99					
ONE	eP*	23	54	20		1.5	100	2.47	299	4.2		
	eSg			58		-0.4	100					
TNZ	ePg?	23	54	42.5		6.5		3.01	223			
MNG	eP*	23	54	39		-2.1	100	3.80	198		3.7	

AMPLITUDES: WTZ 0.8 1.1 ECZ 2.9 1.0 KRP 1.7 1.8
TUA 0.4 0.4 GNZ 1.2 1.3 ONE 0.6
MNG 0.3

78/ 246

MAY 15 $01^h27^m54^s.6$ 38°.01S 176°.72E 5 km M = 3.4

± 1.2 0.08 0.07 12 S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPg!	01	27	58.1		-0.9	100	0.22	83			
TUA	iP*	01	28	08.9	U	-2.3	99	0.86	157		3.7	3.4
	eS*			22		-1.2	100					
KRP	P*	01	28	12.4		-0.1	100	0.94	275		3.0	3.0
	eS*			25		-0.4	100					
GNZ	iPn	01	28	18.0	D	0.5	100	1.21	122		3.9	3.3
	eSg			36.5		1.3	100					
TRZ	Pg	01	28	26.0		0.2	100	1.55	177		3.5	
MNG	ePn	01	28	42		3.0	98	2.78	200		3.4	

AMPLITUDES: TUA 1.7 0.9 KRP 0.8 0.7 GNZ 4.0 1.4
TRZ 0.4 MNG 0.5

FELT: Te Teko (34) and Pikowai (27)

78/ 247

MAY 15 $02^h06^m52^s.7$ $38°.03$S $176°.74$E 3 km M = 3.3
± 1.7 0.11 0.10 21 S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPg!	02	06	55.9		-0.9	100	0.20	77			
TUA	iP*	02	07	07.9	U	-1.2	100	0.85	158		3.5	3.3
	eS*			19.0		-1.8	100					
KRP	eP*	02	07	10.5		-0.6	100	0.95	276		3.0	2.9
	eS*			24		-0.3	100					
GNZ	ePn	02	07	16		0.5	100	1.18	122		3.7	3.2
	eSg			34		1.5	100					
MNG	ePn	02	07	40		2.8	99	2.76	200		3.3	

AMPLITUDES: TUA 1.3 0.8 KRP 0.7 0.5 GNZ 2.5 1.4
MNG 0.4

78/ 248

MAY 15 $11^h15^m06^s.5$ $42°.57$S $172°.57$E 6 km M = 3.7
± 0.8 0.03 0.03 5 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KAI	eP*	11	15	24		1.1	100	0.86	273	3.7		
	eS*			36		1.2	100					
CHR	P*	11	15	25.8		1.1	100	0.96	178			
	eS*			38		0.1	100					
COB	iPn	11	15	32.1	U	-1.0	100	1.48	5		4.0	3.8
	eSn			52.5		-0.4	100					
WEL	eP*	11	15	46		2.2	99	2.09	53	3.5		
	eS*		16	12.5		1.0	100					
MJZ	Pn	11	15	41.3		-0.0	100	2.09	227		4.0*	3.3*
	ePg			48		-0.8	100					
	eSn		16	08		0.6	100					
RHP	iPn	11	15	45.1	D	-0.1	100	2.38	229			
	eS*		16	19		-1.2	100					
OMZ	ePg	11	16	02		-0.6	100	2.77	205		3.6	3.1
	e			51								
MNG	ePn	11	15	50.5		-2.3	99	2.93	49		3.9	3.5
	eP*			58		-0.2	100					
	eSn		16	27		-0.5	100					
MSZ	ePn	11	16	05		-2.1	99	3.98	237		4.7	3.6
	e			24								
	e(Sn)			58		5.2						

AMPLITUDES: KAI 2.5 COB 2.7 5.5 WEL 0.3

		MJZ		3.8	1.5	OMZ		0.3	0.2	MNG		1.9	0.8
		MSZ		5.0	0.6								

FELT: 'The Poplars' (94) MM IV

78/ 249

MAY 15 $11^h36^m20^s.4$ 38°.02S 176°.70E 4 km M = 3.4

± 1.6 0.12 0.11 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!	11	36	24.0		-1.1	100	0.23	82			
TUA	iP*	11	36	35.7	U	-1.4	100	0.86	156		3.6	3.4
	eS*			47		-2.1	99					
KRP	eP*	11	36	38		-0.0	100	0.92	275		3.2	2.8
	eS*			50		-0.7	100					
GNZ	Pn	11	36	44.0		0.5	100	1.21	121		3.7	3.3
	eSg		37	03		1.6	100					
TRZ	ePn	11	36	48		0.1	100	1.54	176		3.5	
MNG	ePn	11	37	08		3.3	98	2.76	200		3.5	

AMPLITUDES:		TUA		1.5	0.9	KRP		1.4	0.5	GNZ		2.5	1.6
		TRZ		0.4		MNG		0.5					

78/ 250

MAY 15 $11^h37^m11^s.1$ 42°.11S 174°.21E 7 km M = 4.2

± 1.0 0.05 0.06 7 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KKY	iP*!	11	37	22.3		1.1	100	0.49	231			
WEL	iP*	11	37	28.9	DSE	0.4	100	0.93	27	4.4		
	eS*			42		0.8	100					
COB	iPn	11	37	35.2	D	-2.6	99	1.50	312		4.3	3.9
	e?			52.5								
MNG	iPn	11	37	39.9	D	-1.5	100	1.77	33		4.3	4.2
	eP*			43.4		0.4	100					
	eSg		38	09		-1.8	100					
CHR	e	11	37	53				1.84	219			
KAI	ePn	11	37	46.8		0.6	100	2.12	258	4.4		
	eP*			51		2.1	100					
	eSn		38	12.5		0.0	100					
CNZ	eP*	11	38	04		-1.3	100	3.08	20			
	e			49.5								
TRZ	ePg	11	38	15		-1.5	100	3.23	39		4.0	3.9
	e		39	06								
MJZ	iPn	11	38	01.2	U	-1.5	100	3.33	234		4.3*	4.1*
	eSn			40		-1.4	100					
RHP	ePn	11	38	06.7		0.0	100	3.62	235			
	eP*			16		1.5	100					
	eS*		39	03		1.0	100					
OMZ	ePn	11	38	09		-0.2	100	3.81	218		4.0	3.6
	e(Pg)			33		4.9						
	e		39	30								
TUA	eP*	11	38	22		1.1	100	4.00	35		4.2	
	e		39	08								
KRP	ePn	11	38	19		3.0	99	4.30	14		4.8	4.9
	e		39	11								
GNZ	ePg	11	38	43		0.4	100	4.53	41		4.2	3.9
	e		39	56								
WTZ	P*	11	38	35.0		3.0	99	4.64	28		3.9	4.0
	e		39	42								
MSZ	ePn	11	38	25		-4.0	96	5.26	239		4.2	4.0

	e			49											
	eSn			39	27			-0.8	100						
CIZ	e		11	39	01					7.01	108				
	eSn			40	10			0.0	100						

AMPLITUDES:											
	WEL	12		COB	5.0	8.0	MNG	13	13		
	KAI	2.5		TRZ	0.4	0.4	MJZ	3.7	3.5		
	OMZ	0.4	0.3	TUA	0.3		KRP	1.5	1.6		
	GNZ	0.6	0.5	WTZ	0.4	0.4	MSZ	0.8	1.0		

78/ 251

MAY 15 $15^h52^m41^s.5$ 37°.95S 176°.67E 12 km M = 3.1
± 0.7 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
WTZ	iP*	15	52	45.9	U	-1.1	100	0.25	97			
KRP	ePn	15	53	00		0.8	100	0.89	272		3.0	
	eSn			12		-0.3	100					
TUA	iP*	15	52	56.9	U	-1.7	99	0.94	156		3.0	3.2
	eS*		53	11		-0.2	100					
GNZ	iPn	15	53	05.8	D	1.4	99	1.27	123		3.4	3.0
	eSg			25		0.5	100					
TRZ	eP*	15	53	11		1.0	100	1.60	176			
MNG	ePn	15	53	25		-0.4	100	2.82	199		3.3	

AMPLITUDES:									
	KRP	0.8		TUA	0.3	0.5	GNZ	1.0	0.6
	MNG	0.3							

FELT: Te Teko (34)

78/ 252

MAY 15 $20^h33^m57^s.5$ 36°.07S 174°.34E 9 km M = 3.9
± 1.3 0.06 0.09 14 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ONE	iP*	20	34	02.8	W	-1.2	100	0.30	4			
	Sg			08.3		0.5	100					
AUC	P*	20	34	11.7		-2.0	99	0.86	156			
CRZ	eP*	20	34	36		0.7	100	2.12	320		3.8	3.6
	eSg		35	09		-0.2	100					
TNZ	ePn	20	34	46		0.1	100	3.11	179		4.0	3.8
	e(Sn)		35	27		4.7						
CNZ	Pn	20	34	49.0		1.0	100	3.27	163			
MNG	Pn	20	35	09.2		2.6	98	4.63	169		4.3	
	i			10.3								
COB	ePn	20	35	13		-0.9	100	5.17	194		4.3	3.7
	eSn		36	11		-0.7	100					

AMPLITUDES:									
	ONE	13		CRZ	0.6	0.5	TNZ	0.3	0.3
	MNG	1.2		COB	0.4	0.4			

FELT: Kaipara district. Minor damage reported, goods thrown from shelves and hanging pictures moved. Maximum intensity MM VII at Paparoa (12)

78/ 253

MAY 15 $22^h23^m59^s.3$ 36°.02S 174°.30E 12 km M = 2.9
± 2.8 0.06 0.42 R S.E. of RES. 2.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ONE	eP*	22	24	04		-0.7	100	0.25	12			
	eS*			08.5		0.1	100					
AUC	eS*	22	24	26		-2.6	99	0.93	155			

KRP	ePn	22	24	34		-0.1	100	2.14	153		3.0	2.8
	eP*			39		1.9	100					
	eSg		25	13		1.4	100					

AMPLITUDES: ONE 1.1 KRP 0.3 0.2

FELT: Kaipara district. Maximum intensity MM V at Maungaturoto (12)

78/ 254

MAY 15 $22^h33^m19^s.2$ 36°.28S 178°.35E 256 km M = 4.8
± 1.2 0.08 0.11 9 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	iP	22	33	58.3	U	0.6	100	1.42	174		4.6	4.8
	e		34	22.5								
	eS			28		0.4	100					
WTZ	iP	22	34	01.7	D	-0.9	100	2.02	212		4.7	4.6
	e(S)			31		-5.3						
GNZ	iPn	22	34	07.0		1.1	100	2.38	186			
	eS			40		-2.2	99					
TUA	P	22	34	09.1		-0.1	100	2.70	200		5.0	4.9
	eS			48		-0.1	100					
KRP	iP	22	34	10.2	DNE	0.0	100	2.79	233		3.8*	2.9*
	eS			49		-0.8	100					
CNZ	P	22	34	20.8		0.9	100	3.67	217			
	eS		35	09.5		2.4	99					
MNG	iP	22	34	33.0	U	-1.4	100	4.89	207		5.1	4.9
	e		35	26								
	eS			32		-0.9	100					
CAZ	P	22	34	35.0		0.3	100	4.91	199			
	e		35	31								
	eS			36		2.5	98					
WEL	eP	22	34	44		-0.7	100	5.73	208			
	eS		35	50		-1.6	100					

AMPLITUDES: ECZ 2.1 3.6 WTZ 5.0 4.0 TUA 2.7 2.5
KRP 2.9 0.4 MNG 9.5 7.5 WEL 1.3 1.0

78/ 255

MAY 16 $00^h22^m11^s.6$ 36°.10S 174°.30E 12 km M = 2.8
± R R R R S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ONE	eP*	00	22	16		-2.3	99	0.32	9	2.3		
	S*			21.9		-1.1	100					
KRP	ePn	00	22	45		-0.4	100	2.08	152		3.1	2.9
	eP*			50		1.9	100					
	eSg		23	23.5		2.0	100					

AMPLITUDES: ONE 1.1 KRP 0.4 0.3

FELT: Kaipara district. Maximum intensity MM V at Maungaturoto (12)

78/ 256

MAY 16 $00^h30^m05^s.9$ 36°.10S 174°.30E 12 km M = 2.1
± R R R R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ONE	eP*	00	30	12		-0.6	100	0.32	9	2.1		
	eS*			18		0.6	100					

AMPLITUDES: ONE 0.7

FELT: Kaipara district. Maximum intensity MM IV at Paparoa (12)

78/ 257

MAY 16 $03^h26^m14^s.5$ 45°.29S 167°.46E 105 km M = 3.7
± 0.7 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
MNW	iP!	03	26	30.9		-0.1	100	0.49	167	3.2	3.4	3.6
	eS			42		-1.4	98					
MSZ	iP	03	26	33.0	D	0.4	100	0.70	28		3.6	3.9
	eS			47		0.6	100					
ROX	iP	03	26	40.4	U	1.1	99	1.33	99		4.1	3.6
	eS			59		0.8	100					
OBZ	eP	03	26	43.5		-0.1	100	1.67	164			
	eS		27	06		0.5	100					
RHP	iP	03	26	50.6	D	-0.1	100	2.22	58			
	eS		27	18		0.3	100					
OMZ	P	03	26	53.8		-0.1	100	2.46	86		4.1	3.7
	eS		27	23		-0.4	100					
MJZ	P	03	26	53.8		-0.8	100	2.52	60		2.8*	3.6*
	S		27	23.8		-1.0	99					

AMPLITUDES: MNW 1.7 4.0 17 MSZ 7.1 26 ROX 3.2 2.0
OMZ 1.1 0.7 MJZ 0.5 5.0

78/ 258

MAY 17 $06^h28^m55^s.8$ 38°.39S 176°.11E 159 km M = 3.7
± 1.2 0.05 0.05 8 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	iP	06	29	18.4	DNE	-0.7	100	0.65	316		3.3*	2.6*
	eS			37		-0.1	100					
WTZ	iP	06	29	19.2	U	-0.8	100	0.80	60		3.3	3.6
	e			35								
	S			39.3		0.5	100					
TUA	P	06	29	21.3		0.4	100	0.92	117		4.0	3.7
	eS			40.5		0.2	100					
CNZ	P	06	29	22.9		2.0	98	0.92	208			
	e			49								
TRZ	iP	06	29	26.0	D	1.8	99	1.29	155		4.0	3.4
	e(S)			51		5.0						
GNZ	iP	06	29	26.9	D	0.2	100	1.52	100		3.9	3.3
	eS			49		-1.3	99					
WEL	eP	06	29	45		-0.1	100	3.07	199	4.0		
	eS		30	22		-1.0	100					
COB	eS	06	30	38		-0.4	100	3.74	223			3.1*

AMPLITUDES: KRP 2.3 0.5 WTZ 0.8 1.8 TUA 1.6 0.8
TRZ 1.1 0.5 GNZ 1.8 0.7 WEL 0.4
COB 0.8

78/ 259

MAY 17 $20^h24^m13^s.9$ 36°.00S 174°.30E 12 km
± R R R R S.E. of RES. ND

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ONE	eP	20	24	19		0.0	100	0.22	13			

AMPLITUDES: ONE 0.4

FELT: Mangaturoto (12)

78/ 260

MAY 18 $11^h12^m20^s.9$ 45°.43S 167°.29E 91 km M = 4.5

± 1.0 0.05 0.08 14 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNW	P	11	12	36.3		0.8	100	0.42	147			
MSZ	eP	11	12	39		-0.6	100	0.88	30			
ROX	P	11	12	47.8		1.6	99	1.43	93		4.6	4.6
	eS		13	05		-0.4	100					
OBZ	P	11	12	48.0		-0.2	100	1.58	159			
	eS		13	07		-1.8	99					
RHP	iP	11	13	00.2	D	1.1	100	2.39	57			
	e			24								
OMZ	iP	11	13	02.9	U	1.1	100	2.58	83		4.3	4.2
	eS			33.5		1.2	100					
MJZ	iP	11	13	03.4	DSW	0.2	100	2.68	59		4.1*	4.2*
	e			12								
	eS			33		-1.8	99					
COB	eP	11	13	46.5		-0.6	100	5.89	44		4.6	4.7
	eS		14	53		-0.9	100					

AMPLITUDES: ROX 10 22 OMZ 2.2 2.5 MJZ 8.5 22
COB 0.6 1.9

78/ 261

MAY 18 $12^h59^m52^s.0$ 37°.92S 176°.03E 213 km M = 3.7

± 1.8 0.07 0.11 14 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	iP	13	00	21.3	U	0.9	100	0.39	269		3.0*	
WTZ	P	13	00	21.7		-0.1	100	0.76	95		3.7	3.2
	eS			44		-0.9	100					
TUA	eS	13	00	51		0.4	100	1.25	135			3.6
GNZ	iP	13	00	29.6	UN	0.5	100	1.73	115		3.6	3.9
	eS			56		-1.8	99					
TRZ	eS	13	01	01		2.9	97	1.75	159			3.9
MNG	P	13	00	39.8		0.2	100	2.73	189		3.6	3.9
	eS		01	15		-1.5	100					
WEL	eS	13	01	33		0.4	100	3.50	196	4.0		
COB	eS	13	01	44		-0.9	100	4.07	218			2.9*

AMPLITUDES: KRP 1.0 WTZ 1.1 0.4 TUA 0.3
GNZ 0.6 1.9 TRZ 0.9 MNG 0.9 2.2
WEL 0.3 COB 0.4

FELT: Te Teko (34)

78/ 262

MAY 18 $19^h55^m16^s.3$ 35°.30S 179°.94E 238 km M = 4.3

± 1.9 0.11 0.18 21 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	19	56	05		0.4	100	2.65	205		4.2	4.2
	e			53								
WTZ	eP	19	56	13		-2.1	99	3.58	221		4.4	4.2
	e		57	16								
GNZ	eP	19	56	16		-0.3	100	3.68	204		4.2	4.2
	eS		57	01		-1.8	100					
TUA	eP	19	56	23		0.9	100	4.16	212		4.6	4.4

	eS		57	16		3.0	99						
KRP	eP	19	56	26		0.9	100	4.41	232		3.1*		
	eS		57	19		0.5	100						
ONE	eP	19	56	26		-1.2	100	4.58	262	3.4*			
TNZ	e	19	56	52				5.89	227		3.7*		
MNG	e?	19	57	02				6.38	212		4.0	4.1	
	e		58	30									
WEL	eS	19	58	20		-2.0	100	7.24	213	4.6			
COB	eP	19	57	13.5		1.8	100	8.10	222		3.6*	3.0*	
	eS		58	42		-0.0	100						

AMPLITUDES:											
ECZ	0.5	0.5	WTZ	1.1	0.8	GNZ	0.8	1.2			
TUA	0.7	0.4	KRP	0.4		ONE	0.3				
TNZ	0.3		MNG	0.5	0.8	WEL	0.3				
COB	0.3	0.3									

78/ 263

MAY 18 $23^h21^m23^s.8$ 38°.01S 176°.73E 12 km M = 4.1

± 0.4 0.03 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
WTZ	iP*!	23	21	26.3		-2.2	99	0.21	83			
WIZ	iP*	23	21	34.4	D	-0.9	100	0.60	37			
WNZ	P*	23	21	39.0		0.5	100	0.79	218		3.9	
TUA	iP*	23	21	38.3	U	-1.4	100	0.86	158		4.5	4.3
	eS*			50		-1.3	100					
KRP	iP*	23	21	40.6	USW	-0.5	100	0.94	275		4.0	3.8
	eS*			52		-1.8	99					
GNZ	P*	23	21	46.8		1.4	100	1.20	122			
ECZ	eP*	23	21	51.5		1.4	100	1.48	78		4.1	3.9
	eSg		22	14		0.5	100					
CNZ	ePn	23	21	51		1.1	100	1.51	218			
TRZ	Pg	23	21	54.8		-0.3	100	1.55	177		4.3	4.0
	e(Sg)		22	25		9.1						
TNZ	eP*	23	22	03.5		1.2	100	2.19	237		4.4	
MNG	ePn	23	22	06		-1.2	100	2.78	200		4.2	3.7
	eP*			15		2.6	99					
	e(Sg)		23	05		7.5						
ONE	ePg	23	22	24		1.0	100	2.93	319	4.1		

AMPLITUDES:											
WNZ	0.6		TUA	12	7.6	KRP	7.0	4.7			
ECZ	0.9	0.8	TRZ	2.6	1.8	TNZ	0.5				
MNG	3.0	1.0	ONE	0.3							

FELT: Pikowai (27)

78/ 264

MAY 18 $23^h24^m05^s.5$ 38°.04S 176°.66E 12 km M = 3.2

± 1.0 0.07 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
WTZ	iP*!	23	24	09.1		-2.1	99	0.26	77			
TUA	P*	23	24	21		-0.3	100	0.85	153		3.4	3.1
	eS*			33		0.2	100					
KRP	eP*	23	24	23.5		1.5	100	0.90	277		2.8	
GNZ	Pn	23	24	29.0		1.2	100	1.22	120		3.7	
	eSg			48		1.0	100					
MNG	ePg	23	24	59		-1.7	100	2.73	199		3.1	

AMPLITUDES:											
TUA	0.9	0.5	KRP	0.5		GNZ	2.3				
MNG	0.2										

78/ 265

MAY 18 $23^h26^m14^s.4$ 38°.04S 176°.62E 12 km M = 3.3

± 1.0 0.07 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
WTZ	iP*!	23	26	18.3		-2.3	99	0.30	79			
KRP	Pn	23	26	33.1		1.4	100	0.86	277		3.0	
TUA	P*	23	26	30.3		-0.1	100	0.87	152		3.4	3.2
	eS*			42		-0.2	100					
GNZ	Pn	23	26	38.3		1.2	100	1.26	119		3.7	
	eSg			58		1.1	100					
MNG	ePg	23	27	08		-1.4	100	2.73	199		3.3	

AMPLITUDES: KRP 0.9 TUA 0.9 0.6 GNZ 2.3
MNG 0.3

78/ 266

MAY 18 $23^h46^m32^s.5$ 37°.98S 176°.78E 12 km M = 3.4

± 1.0 0.10 0.09 12 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPg!	23	46	35.3		-1.2	100	0.16	92			
TUA	P*	23	46	47.4		-1.2	100	0.87	161		3.7	3.4
	eS*			59		-1.4	100					
KRP	eP*	23	46	50.0		-0.5	100	0.98	273		3.2	3.0
	eS*		47	04		0.3	100					
GNZ	Pn	23	46	55.0		0.9	100	1.18	125		3.8	
	eSg		47	13.9		1.4	100					
MNG	eP*	23	47	24		2.2	99	2.83	201		3.3	

AMPLITUDES: TUA 1.7 1.0 KRP 1.0 0.6 GNZ 3.2
MNG 0.4

78/ 267

MAY 19 $07^h58^m02^s.2$ 35°.81S 179°.40E 200 km M = 3.9

± 1.6 0.15 0.12 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	07	58	40		-1.0	99	2.00	200		3.8	3.9
	e		59	26								
WTZ	P	07	58	51.5		0.2	100	2.91	221		4.4	
	e			57.7								
GNZ	eP	07	58	54		1.2	99	3.03	201		3.9	3.7
	eS		59	32		0.1	100					
KRP	P	07	59	02.0		0.6	100	3.74	235		3.0*	2.8*
	eS			47		-0.2	100					
MNG	eP	07	59	25.5		-0.9	100	5.71	212		3.8	3.6
	e			39								
	e	08	01	02								

AMPLITUDES: ECZ 0.3 0.4 WTZ 1.6 GNZ 0.6 0.6
KRP 0.4 0.3 MNG 0.4 0.3

78/ 268

MAY 19 $08^h46^m10^s.9$ 45°.18S 167°.62E 101 km M = 3.7

± 0.7 0.02 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
MSZ	iP	08	46	27.2	U	-0.1	100	0.55	23		3.4	3.8
	eS			40		0.1	100					
MNW	P	08	46	27.9		0.2	100	0.60	180	3.5		

	eS			40		-0.5	100						
ROX	iP	08	46	36.0	D	1.6	97	1.24	105			3.7	4.0
	eS			52.5		0.3	100						
OBZ	P	08	46	41.0		0.1	100	1.76	169				
	eS		47	03		-0.4	100						
RHP	iP	08	46	44.7	D	-0.1	100	2.06	59				
	eS		47	11		1.0	99						
OMZ	eP	08	46	49		0.5	100	2.34	89			3.4	3.7
	eS		47	16		-0.6	100						
MJZ	iP	08	46	47.8	D	-1.0	99	2.36	61			2.9*	3.1*
	eS		47	16		-1.2	99						

AMPLITUDES:											
	MSZ	7.0	30	MNW	2.7			ROX		1.4	6.0
	OMZ	0.3	0.9	MJZ		0.7	2.0				

78/ 269

MAY 19 $23^h58^m03^s.3$ $44°.85$S $168°.16$E 12 km M = 3.4

± 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
MSZ	iP*	23	58	08.9		0.2	100	0.25	316			
	eS*			14		1.6	99					
MNW	eS*	23	58	34.5		-0.6	100	1.01	202	3.1		
ROX	iP*	23	58	23.9	U	1.8	99	1.03	128		3.7	3.4
	eSg			40		1.7	99					
RHP	iPn	23	58	29.1	D	-1.1	100	1.57	62			
	eSn			50.5		0.1	100					
MJZ	Pn	23	58	32.9		-1.4	100	1.86	63		3.0*	3.0*
	eSn			56.5		-1.0	100					
OMZ	iPn	23	58	35.8	U	0.1	100	1.97	97		3.7	3.0
	eSn		59	00		0.0	100					
OBZ	eP*	23	58	40		0.4	100	2.06	181			
	eSn		59	00		-2.1	99					
COB	eSn	24	00	13		-0.8	100	5.04	43			3.6

AMPLITUDES:											
	MSZ	43	22	MNW	0.6			ROX		3.0	3.6
	MJZ	0.5	0.9	OMZ		0.8	0.3	COB			0.3

78/ 270

MAY 20 $00^h25^m22^s.6$ $45°.18$S $167°.12$E 24 km M = 3.8

± 0.6 0.02 0.06 3 S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNW	P*	00	25	36.1		0.3	100	0.69	150	3.5		
	S*			45.3		-0.2	100					
MSZ	ePn	00	25	37.5		0.0	100	0.76	48			
ROX	iPn	00	25	49.6	U	1.0	99	1.58	102		3.9	4.0
	eSn		26	08		-0.1	100					
OBZ	ePn	00	25	52		-0.4	100	1.86	158			
	eSn		26	15		0.2	100					
	eS*			19.8		-0.3	100					
RHP	iPn	00	26	00.0	U	0.5	100	2.38	64			
MJZ	Pn	00	26	03.2		-0.3	100	2.67	65		3.7*	3.6*
	eSn			36		1.6	97					
OMZ	iPn	00	26	03.9	U	0.1	100	2.69	89		3.9	3.4
	eSn			34		-0.8	100					
COB	ePn	00	26	46		-0.2	100	5.80	47		4.2	3.8
	eSn		27	48		-1.5	98					

AMPLITUDES:											
	MNW	3.1		ROX		1.7	6.3	MJZ		1.2	1.8
	OMZ	0.7	0.4	COB		0.3	0.4				

78/ 271

MAY 20 $11^h49^m53^s.3$ 35°.84S 174°.70E 12 km M = 3.3

± 1.9 0.12 0.14 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ONE	eP*	11	49	58		-1.3	100	0.28	283			
	eS*		50	04		0.6	100					
	e			10								
KRP	ePn	11	50	28		-0.7	100	2.19	162		3.3	2.9
	eP*			34		2.2	99					
	eSn			54		-1.2	100					
	eSg		51	07		-0.1	100					
MNG	ePn	11	51	05		0.5	100	4.81	173		3.8	

AMPLITUDES: ONE 2.0 KRP 0.6 0.3 MNG 0.3

FELT: Maungaturoto (12) MM V

78/ 272

MAY 21 $18^h17^m36^s.1$ 35°.51S 178°.53E 320 km M = 4.3

± 1.0 0.08 0.16 8 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	18	18	30.8		-0.6	100	2.76	206		4.4	3.8
	eS		19	14.5		-0.1	100					
GNZ	eP	18	18	36		0.9	100	3.15	187			
	eS		19	21		-0.2	100					
KRP	eP	18	18	38		0.4	100	3.40	224		3.1*	
TRZ	eP	18	18	47		0.4	100	4.26	198			4.3
	e(S)		19	47		5.1						
MNG	eP	18	19	01.5		-0.8	100	5.64	204		4.5	4.2
	eS		20	09		-1.0	99					
WEL	eP	18	19	12		-0.3	100	6.48	206	4.4		
	eS		20	29		1.2	99					

AMPLITUDES: WTZ 1.3 0.4 KRP 0.5 TRZ 0.5
MNG 1.6 1.0 WEL 0.2

78/ 273

MAY 22 $04^h19^m46^s.8$ 43°.16S 171°.93E 12 km M = 3.4

± 0.7 0.03 0.07 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KAI	P*	04	20	01.5		0.8	100	0.75	329	3.1		
	eS*			10		-0.8	100					
	e			18.5								
	e			25.5								
MJZ	iP*	04	20	11.9	D	1.0	100	1.34	232		3.8*	3.8*
	Pg			14.0		-0.0	100					
	eSg			31		-1.2	100					
RHP	P*	04	20	16.8		0.9	100	1.63	234			
	Pg			18.5		-1.4	100					
	eS*			39		1.6	100					
OMZ	Pg	04	20	27.3		-0.8	100	2.04	201		3.6	3.3
	eSg			55		-0.6	100					
COB	eP*	04	20	27		2.1	99	2.16	16		3.8	3.4
	eSg			58		-1.7	99					

AMPLITUDES: KAI 0.9 MJZ 6.0 12 OMZ 0.5 0.6
COB 0.8 1.1

78/ 274

MAY 22 $19^h39^m57^s.9$ $38°.02S$ $176°.71E$ 12 km M = 3.6

± 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*!	19	40	01.0		-1.9	99	0.22	80			
WIZ	iP*	19	40	10.0	U	0.3	100	0.62	38			
WNZ	eP*	19	40	13		0.8	100	0.77	218		3.6	3.4
	e			34								
TUA	P*	19	40	12.9		-0.8	100	0.85	156		3.5	3.8
	eS*			23.9		-1.3	100					
KRP	iP*	19	40	15.1	D	0.1	100	0.94	276		3.8	
	iPg			16.9		0.0	100					
	eS*			27.5		-0.0	100					
GNZ	P*	19	40	21.0		1.4	99	1.21	121			
	eSg			40		1.4	99					

AMPLITUDES: WNZ 0.3 0.3 TUA 1.3 2.3 KRP 4.5

78/ 275

MAY 22 $19^h50^m10^s.6$ $38°.03S$ $176°.71E$ 12 km M = 3.6

± 0.5 0.04 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
WTZ	iP*!	19	50	14.0		-1.6	99	0.22	79			
WIZ	P*	19	50	22.9		0.4	100	0.63	38			
WNZ	ePg	19	50	28		1.7	99	0.76	218		3.5	
TUA	P*	19	50	25.0		-1.4	100	0.85	156		3.5	3.7
	Pg			26.6		-1.4	100					
	eS*			37		-0.9	100					
KRP	iP*	19	50	27.9	D	0.2	100	0.93	276		3.5	
	ePg			29.4		-0.1	100					
	eS*			40		-0.2	100					
GNZ	P*	19	50	34.0		1.6	99	1.21	121			
	eSg			53		1.6	99					

AMPLITUDES: WNZ 0.3 TUA 1.3 1.9 KRP 2.3

78/ 276

MAY 22 $20^h46^m24^s.3$ $38°.04S$ $176°.67E$ 5 km M = 3.9

± 0.5 0.03 0.02 4 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPg!	20	46	28.2		-1.3	99	0.25	77			
WIZ	P*	20	46	37.0		-0.3	100	0.66	39			
WNZ	eP*	20	46	40		1.2	100	0.74	217		3.8	3.6
	e		47	01								
TUA	iP*	20	46	39.8	U	-0.9	100	0.85	154		4.1	4.1
	eS*			51		-1.5	99					
KRP	P*	20	46	41.4		-0.2	100	0.91	277		4.1	3.7
	ePn			42.0		-1.1	100					
	ePg			43.0		0.4	100					
	eS*			54		-0.1	100					
GNZ	iP*	20	46	48.0	NW	1.0	100	1.21	120			
	eSg		47	06		0.6	100					
TRZ	ePn	20	46	52		0.6	100	1.51	176		4.0	3.8
	e		47	26								
ECZ	ePn	20	46	53		1.4	99	1.52	77		4.0	3.8
	e		47	29								
TNZ	ePg	20	47	07.5		0.2	100	2.13	237		4.1	

AMPLITUDES: WNZ 0.6 0.5 TUA 4.4 4.5 KRP 11 4.0
TRZ 1.2 1.2 ECZ 0.8 0.5 TNZ 0.3

FELT: Pikowai (27)

78/ 277

MAY 22 $20^h52^m06^s.6$ 38°.02S 176°.71E 12 km M = 3.6
± 0.5 0.04 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
WTZ	iP*!	20	52	10.0		-1.6	99	0.22	81			
WIZ	P*	20	52	18.3		-0.1	100	0.62	38			
WNZ	eP*	20	52	22		1.0	100	0.77	218		3.6	
TUA	iP*	20	52	21.1	U	-1.3	100	0.86	156		3.6	3.6
	S*			32.8		-1.2	100					
KRP	P*	20	52	23.8		0.1	100	0.94	275		3.8	
	Pg			25.7		0.1	100					
	eS*			36		-0.2	100					
GNZ	P*	20	52	30.0		1.6	99	1.21	122			
	eSg			49		1.6	99					

AMPLITUDES: WNZ 0.3 TUA 1.6 1.5 KRP 4.6

78/ 278

MAY 22 $22^h47^m46^s.4$ 38°.12S 176°.63E 12 km M = 3.5
± 0.5 0.03 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
WTZ	iP*!	22	47	50.2		-2.7	98	0.31	65			
WNZ	eS*	22	48	06		-1.8	100	0.66	219			3.2
WIZ	eP*	22	47	58.5		-1.7	100	0.74	37			
TUA	P*	22	48	01.2		0.0	100	0.80	149		3.6	3.4
	S*			12		-0.0	100					
KRP	iP*	22	48	03.8	D	1.1	100	0.88	282		3.4	3.1
	Pg			05.4		1.0	100					
	eS*			15		0.4	100					
GNZ	eP*	22	48	09		0.7	100	1.21	116			
	eSg			29		1.6	100					
ECZ	eP*	22	48	16		1.5	100	1.57	75		3.9	3.7
	eSg			40		0.4	100					

AMPLITUDES: WNZ 0.3 TUA 1.6 1.2 KRP 2.3 1.0
ECZ 0.5 0.4

FELT: Te Teko (34)

78/ 279

MAY 23 $00^h24^m49^s.8$ 45°.36S 167°.28E 80 km M = 3.7
± 0.9 0.03 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
MNW	S	00	25	14.0		-0.3	100	0.49	151			
MSZ	iP	00	25	05.9	U	-1.2	100	0.82	33		3.7	3.5
	eS			21		0.8	100					
ROX	iP	00	25	16.1	D	1.3	99	1.44	95		3.8	3.9
	e			29								
	eS			35		1.3	99					
OBZ	P	00	25	18.0		0.4	100	1.66	160			
	eS			38		-0.4	100					
RHP	iP	00	25	26.6	D	-0.7	100	2.36	59			
	eS			56		0.8	100					
OMZ	iP	00	25	30.0	U	-0.5	100	2.58	85		3.6	3.4

	eS		26	00		-0.8	100				
MJZ	eP	00	25	31		-0.4	100	2.65	60	2.9*	3.1*
	eS		26	01		-1.6	99				
COB	eP	00	26	17		1.5	99	5.84	45		3.8

AMPLITUDES: MSZ 10 12 ROX 2.0 5.0 OMZ 0.5 0.5
MJZ 0.6 1.8 COB 0.4

78/ 280

MAY 23 $00^h25^m08^s.4$ 38°.04S 176°.71E 12 km M = 3.4
± 0.5 0.04 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
WTZ	iP*	00	25	11.2	U	-2.2	99	0.22	77			
WIZ	iP*	00	25	20.0	U	-0.4	100	0.64	37			
WNZ	ePg	00	25	24		0.1	100	0.76	218		3.5	
TUA	P*	00	25	22.9		-1.1	100	0.85	156			
	eS*			34		-1.4	100					
KRP	iP*	00	25	25.3	D	-0.1	100	0.93	276		3.4	3.0
	Pg			27		-0.3	100					
	eS*			39		1.1	100					
GNZ	P*	00	25	31.3		1.3	100	1.20	121			
	eSg			51		2.0	99					
ECZ	eP*	00	25	36		0.9	100	1.49	77		3.6	3.5
	e(Sg)		26	02		3.1						

AMPLITUDES: WNZ 0.3 KRP 2.0 0.8 ECZ 0.3 0.3

78/ 281

MAY 23 $05^h24^m32^s.8$ 37°.94S 176°.68E 12 km M = 4.0
± 0.5 0.03 0.03 R S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP*!	05	24	36.2		-2.0	100	0.25	100			
WIZ	iP*	05	24	44.2	U	0.4	100	0.58	45			
	eS*			53		1.2	100					
WNZ	eP*	05	24	48		0.0	100	0.83	213		3.9	
KRP	eP*	05	24	49.0		-0.3	100	0.90	271		3.9	3.9
	eS*		25	01		-0.4	100					
	e(Sg)			07		3.7						
TUA	iP*	05	24	47.7	U	-2.3	99	0.94	157		4.3	4.1
	eS*			59		-3.7	98					
GNZ	iP*	05	24	56.1	N	0.4	100	1.27	124			
	eSg		25	19		3.2	99					
ECZ	Pn	05	25	00.0		1.2	100	1.50	81		4.2	3.9
	Pg			03.2		-0.0	100					
	eSg			22		-1.5	100					
TRZ	Pn	05	25	00.1		-0.2	100	1.61	176		4.1	3.8
	eSg			29		1.7	100					
TNZ	eP*	05	25	12		0.7	100	2.19	235		4.2	
MNG	ePn	05	25	15		-1.9	100	2.83	199		4.1	3.6
	eP*			24.9		2.6	99					
	eS*		26	00		0.7	100					
	e(Sg)			14		5.8						

AMPLITUDES: WNZ 0.5 KRP 6.6 5.6 TUA 6.0 4.0
ECZ 1.2 0.6 TRZ 1.4 0.8 TNZ 0.3
MNG 1.8 0.7

FELT: Pikowai (27) and Kawerau (34)

78/ 282

MAY 23 $07^h03^m15^s.5$ 44°.34S 168°.60E 12 km M = 4.1

± 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
MSZ	iP*	07	03	25.9	D	-0.8	100	0.58	236		3.8	3.9
	eS*			33		-1.7	100					
RHP	iPn	07	03	35.8	U	-0.1	100	1.10	78			
ROX	iPn	07	03	40.1	U	2.1	99	1.24	156		4.2	4.3
	e			42								
	eSg			58		0.4	100					
MJZ	iPn	07	03	40.6	UNE	0.6	100	1.39	76		3.9*	3.6*
	eSn			58.5		0.2	100					
MNW	e	07	03	16				1.60	205	4.0		
	e			38								
OMZ	P*	07	03	48.0		0.5	100	1.81	115		4.3	4.0
	eSg		04	14		-2.5	99					
OBZ	ePn	07	03	59		2.7	98	2.59	187			
	eS*		04	34		-0.7	100					
KAI	ePg	07	04	10		-0.8	100	2.74	49	4.2		
	eS*			40		0.8	100					
COB	ePn	07	04	21.8		-0.0	100	4.46	45		4.7	4.0
	eSn		05	11		-1.0	100					

AMPLITUDES: MSZ 25 60 ROX 6.5 18 MJZ 7.0 7.5
MNW 2.0 OMZ 3.4 3.5 KAI 0.9
COB 1.6 1.0

78/ 283

MAY 24 $06^h11^m46^s.5$ 53°.57S 158°.49E 33 km M = 5.8

±22.4 0.82 2.53 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CBZ	P	06	13	18.6		-0.4	100	6.52	85			
OBZ	P	06	13	53.3		-0.8	100	9.09	47			
MNW	eP	06	14	05.5		1.9	99	9.79	41			
ROX	iP	06	14	17.8	D	1.3	100	10.73	45		6.5	
MSZ	eP	06	14	19		1.0	100	10.84	38		6.5	
OMZ	eP	06	14	31		0.7	100	11.74	49		5.6	5.1
	e		15	26								
RHP	eP	06	14	34		-2.0	99	12.17	43			
MJZ	eP	06	14	37		-2.5	99	12.42	44		6.1*	
	e			41								
KAI	e(P)	06	15	07		5.7		14.01	43	5.3		
COB	eP	06	15	25		-0.1	100	15.76	43		6.0	
CIZ	eP	06	16	10		1.0	100	18.97	70			

AMPLITUDES: ROX 16 MSZ 35 OMZ 1.8 1.0
MJZ 15 KAI 0.4 COB 2.1
CIZ 1.7

78/ 284

MAY 24 $14^h19^m19^s.3$ 41°.56S 175°.17E 12 km M = 4.0

± 0.5 0.02 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
WEL	iP*	14	19	28.1	DSE	0.7	100	0.40	312	4.2		
	eS*			33		-0.2	100					
MNG	iP*	14	19	36.2	U	-0.8	100	0.97	14		3.8	4.1
	e(S*)			46		-4.0						

KKY	ePn	14	19	45		1.1	99	1.39	232		
	eSn		20	02		-0.2	100				
COB	Pn	14	19	51.0		0.3	100	1.90	284	4.1	3.7
	eSn		20	13		-1.2	99				
CNZ	eP*	14	20	02		1.0	100	2.38	7		
TNZ	ePn	14	19	59		0.8	100	2.45	345	3.9	4.0
	eSn		20	26.5		-1.0	100				
	eSg			43		1.2	99				
TUA	ePg	14	20	22		-0.8	100	3.14	30	3.8	
GNZ	e?	14	20	46				3.64	38		
KRP	ePn?	14	20	14		-0.5	100	3.64	5	4.2	4.3
	eP*			26		3.3					
	eS*		21	10		-0.2	100				

AMPLITUDES: WEL 39 MNG 13 29 COB 2.2 3.1
TNZ 0.4 0.7 TUA 0.2 KRP 0.5 0.6

FELT: In Wellington City Area (68). Maximum intensity MM IV.

78/ 285

MAY 24 $19^h31^m33^s.8$ $39°.08$S $175°.33$E 0 km M = 4.1
± 0.7 0.02 0.03 4 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	iPg	19	31	38.8	D	-0.7	100	0.28	135			
WNZ	eP*	19	31	49		0.0	100	0.75	54		3.9	3.8
	eS*		32	00		0.3	100					
TNZ	iP*	19	31	49.9	U	0.9	100	0.75	261		3.5	3.9
	eS*		32	01		1.4	99					
KRP	iP*	19	31	55.9	USE	-0.1	100	1.16	8		4.6	4.7
	eS*		32	11		-1.1	100					
TRZ	iPn	19	31	58.2	D	0.2	100	1.25	113		4.0	4.1
	eSn		32	17.5		1.7	99					
TUA	ePg	19	32	03		-0.0	100	1.44	80		3.9	3.8
	e			31								
MNG	iPn	19	32	01.2	U	-0.8	100	1.54	176		4.6	4.3
	eSn			21.5		-1.3	100					
WTZ	ePn	19	32	05		0.9	100	1.70	50		3.6	
WEL	ePn	19	32	13		1.4	99	2.25	191	4.0		
	eSn			41		1.2	100					
COB	Pn	19	32	19.7		0.1	100	2.83	224		4.4	4.3
	eSn			52		-1.7	99					

AMPLITUDES: WNZ 0.7 0.8 TNZ 1.5 5.5 KRP 18 18
TRZ 1.6 2.3 TUA 0.6 0.5 MNG 25 15
WTZ 0.5 WEL 0.5 COB 1.6 3.6

FELT: Ohakune district (40,49). Maximum intensity MM IV

78/ 286

MAY 25 $03^h56^m15^s.4$ $40°.37$S $173°.58$E 199 km M = 3.8
± 0.9 0.05 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
COB	iP	03	56	47.0	U	2.1	99	0.96	222		4.1*	3.3*
	eS		57	08		0.3	100					
WEL	eS	03	57	12		0.0	100	1.29	136	3.6		
TNZ	eP	03	56	47		-0.7	100	1.33	28			3.1*
	eS		57	12		-0.6	100					
MNG	iP	03	56	50.4	D	1.4	100	1.47	100		3.6	4.1
	e		57	09.5								
	eS			14.0		-0.9	100					

GSZ	P	03	56	52.2		-0.7	100	1.89	55			
	e(S)		57	16		-6.0						
KAI	eS	03	57	38		0.0	100	2.71	216	3.3*		
MJZ	eS	03	58	12		-0.6	100	4.30	212			2.8*
RHP	e(P)	03	57	30		5.3		4.54	214			
	eS		58	18		-0.4	100					
MSZ	eP?	03	57	45		1.5	99	6.00	222		3.1*	3.0*
	eS		58	50		-1.9	99					

AMPLITUDES: COB 4.8 2.5 WEL 0.4 TNZ 0.3
MNG 2.0 7.0 KAI 0.3 MJZ 0.5
MSZ 0.3 0.5

78/ 287

MAY 26 $03^h25^m57^s.9$ 40°.12S 175°.05E 12 km M = 3.7
± 0.3 0.01 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*	03	26	09.7	U	0.4	100	0.59	147		3.5	3.6
	S*			18		0.5	100					
GSZ	P*	03	26	15.3		0.2		0.94	26			
CNZ	P*	03	26	16.0		-0.1	100	1.00	23			
	Sg			33		1.3	99					
TNZ	P*	03	26	17.5	U	0.2	100	1.06	331		3.4	3.7
	Sg			34		0.0	100					
WEL	P*	03	26	18.5		-0.8	100	1.19	190	3.8		
	S*			34		-1.1	100					
TRZ	e(Sg)	03	26	48.5		0.7		1.48	68			3.3
COB	ePn	03	26	30.5		-0.4	100	2.02	241		4.1	3.6
	P*			31.8		-1.6						
	Sn			57		1.4	99					
KRP	P*	03	26	36.5		-0.6	100	2.22	10		3.9	4.2
	S*		27	05		-1.3	99					
WTZ	e(P*)	03	26	47		3.3		2.61	36		3.6	3.7
MJZ	Sn	03	28	12		0.8		5.16	220		3.5*	3.2*

AMPLITUDES: MNG 15 25 TNZ 0.8 2.0 WEL 1.9
TRZ 0.5 COB 2.0 2.2 KRP 0.7 1.3
WTZ 0.3 0.3 MJZ 0.2 0.2

78/ 288

MAY 26 $05^h21^m17^s.3$ 39°.04S 175°.37E 152 km M = 4.2
± 0.9 0.03 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
CNZ	iP	05	21	38.6		0.6	100	0.22	141			
	S			54.5		0.7	100					
GSZ	P	05	21	39		0.8	100	0.30	146			
	e(S)			52.5		-1.7						
WNZ	P	05	21	41.2	D	1.1	100	0.70	55		4.4	
TNZ	P	05	21	40.4		-0.2	100	0.79	259		3.3*	3.4*
	S		22	00		1.3	100					
KRP	iP	05	21	43.0	DSW	-0.4	100	1.12	7		3.8*	3.1*
	S		22	02		-1.4	100					
TRZ	P	05	21	46.5		2.0	99	1.23	115		3.9	4.2
	S		22	07.5		2.1	99					
TUA	P	05	21	47.0	D	0.7	100	1.40	81		3.9	3.9
	S		22	08		-0.5	100					
MNG	iP	05	21	48.6	U	0.4	100	1.58	177		4.4	4.5
	S		22	09.5		-2.4	98					
WTZ	P	05	21	48.4		-0.4	100	1.65	51		3.6	4.1

	S			22	11.5		-1.5	100					
GNZ	P	05	21	55.2			1.1	100	2.11	80			
	S			22	21		-1.3	100					
WEL	P	05	21	56.0		U	-0.5	100	2.29	191	4.4		
	S			22	25		-1.4	100					
ECZ	P	05	22	03			-0.3		2.83	63		4.2	4.5
	S			39			0.6						
COB	iP	05	22	01.5		U	-2.4		2.88	224		4.1*	3.8*
	S			36.5			-3.1						
MJZ	eP	05	22	44			-3.2		6.17	215		3.3*	3.5*
	S			23	50		-7.0						
OMZ	P	05	22	53.5			-3.3		6.88	207		3.5*	
CIZ	eS	05	24	34			-2.1		7.79	132			
ROX									7.85	213			3.3*
MSZ									7.92	222		3.0*	3.3*

AMPLITUDES:										
WNZ	0.6		TNZ	0.6	1.0	KRP	7.0	1.6
TRZ	0.8	4.0	TUA	0.8	0.8	MNG	14	24
WTZ	0.7	2.5	WEL	1.6		ECZ	0.6	1.0
COB	2.7	4.5	MJZ	0.7	2.0	OMZ	0.3	
CIZ		0.3	ROX		0.4	MSZ	0.2	0.8

78/ 289

MAY 26 $09^h26^m10^s.1$ 45°.10S 167°.66E 120 km M = 3.9

± 0.6 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	09	26	27.8	U	-0.1	100	0.46	23		4.0	3.6
	S			41.5		-0.1	100					
MNW	S	09	26	44		-0.3	100	0.68	182	4.1		
ROX	iP	09	26	36.0	D	1.2	97	1.23	109		4.3	4.0
	S			54		0.4	100					
OBZ	P	09	26	41.5		-0.4	100	1.84	170			
	S			27 06		0.1	100					
RHP	iP	09	26	43.7	D	-0.2	100	2.00	61			
	S			27 09.5		0.2	100					
MJZ	S	09	27	15		-1.2		2.29	62			3.3*
OMZ	P	09	26	48		0.0	100	2.30	91		3.6	3.6
	S			27 15.5		-1.0	99					
COB	eP	09	27	29.5		-1.0		5.46	45		4.1	3.8
	S			28 27.5		-5.2						

AMPLITUDES:										
MSZ	20	17	MNW	7.5		ROX	4.0	5.0
MJZ		3.0	OMZ	0.3	0.5	COB	0.1	0.1

78/ 290

MAY 26 $11^h00^m12^s.0$ 37°.81S 176°.35E 194 km M = 4.5

± 0.9 0.06 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
WTZ	iP	11	00	37.7	D	-0.8	100	0.53	109		4.4	4.4
	S			58.5		-0.6	100					
KRP	iP	11	00	38.9	D	-0.2	100	0.66	260		3.8*	3.1*
	S		01	00		-0.1	100					
WIZ	P	11	00	38.9		-0.6	100	0.72	67			
WNZ	P	11	00	40.5		0.3	100	0.84	193		4.1	4.2
	e(S)		01	02		0.0						
TUA	P	11	00	42		-0.6	100	1.18	148		4.1	4.8
	S		01	07		0.8	100					
CNZ	P	11	00	45		-0.6	100	1.52	204			
	e(S)		01	11.5		0.0						

GNZ	iP	11	00	46.3	S	0.4	100	1.56	123			
	S		01	10		-1.9	98					
ECZ	iP	11	00	48.1	D	0.4	100	1.75	87		4.8	4.5
	S		01	17.5		2.2	96					
TRZ	iP	11	00	48.0	U	0.0	100	1.77	168		4.7	4.6
	e(S)		01	16		0.1						
TNZ	P	11	00	50.7		-0.3	100	2.07	228		3.3*	3.2*
	S		01	22.5		1.3	99					
ONE	P	11	00	58		1.1		2.59	321			
MNG	iP	11	00	57.8	U	-2.5		2.88	193		5.1	4.9
	(S)		01	33.5		-4.3						
WEL	P	11	01	06.3		-3.8		3.68	199	4.5		
	S			50		-5.0						
COB	P	11	01	13.5		-4.5		4.31	219		3.6*	3.6*
	S		02	03.5		-5.8						
CIZ	e(S)	11	03	39		0.2		8.15	141			
OMZ	e(S)	11	03	35		-7.8		8.32	208			2.8*
MSZ								9.34	220		3.1*	3.3*

AMPLITUDES:									
WTZ	7.3	8.5	KRP	7.0	1.4	WNZ	0.2	0.2	
TUA	1.3	5.5	ECZ	3.7	2.2	TRZ	2.5	5.0	
TNZ	0.3	0.3	MNG	25	22	WEL	0.7		
COB	0.6	1.8	CIZ		0.3	OMZ		0.1	
MSZ	0.2	0.6							

78/ 291

MAY 27 $00^h34^m42^s.1$ 35°.02S 179°.60E 12 km M = 4.1

± 1.6 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	Pn	00	35	26		0.1	100	2.81	197		4.1	4.2
	P*			32		0.8						
	Sg		36	22.5		5.8						
WIZ	Pn	00	35	30.5		-0.4	100	3.18	217			
	Sn		36	07		-0.8	100					
WTZ	Pn	00	35	36		-1.2	99	3.64	215		4.3	4.0
	eP*			44		-1.3						
	(S*)		36	28.5		-4.2						
	(Sg)			40		-4.5						
GNZ	e(Pn)	00	35	40		0.0		3.83	199		4.2	4.0
	(Pg)		36	03		3.3						
	Sn			25		1.3	99					
TUA								4.27	207			3.7
ONE	ePn	00	35	47		0.1	100	4.35	258			
TRZ	eSn	00	37	01.5		8.8		5.04	205			4.1
	e(Sg)			29		-3.0						
CRZ	Pn	00	36	06.5		0.7	100	5.73	274		4.4	
TNZ	Pn	00	36	14.5		6.4		5.89	223		4.7	
MNG	ePn	00	36	14		-2.0		6.48	209		4.3	4.2
	P*			26		-7.8						
	Sn		37	25.5		-1.6						
	S*			56		-1.9						
COB								8.13	220			3.8
MJZ	Sn	00	39	29		3.5		11.40	215			

AMPLITUDES:									
ECZ	0.3	0.5	WTZ	1.7	0.7	GNZ	0.8	0.9	
TUA		0.1	TRZ		0.3	CRZ	0.1		
TNZ	0.1		MNG	0.8	0.8	COB		0.2	

78/ 292

MAY 27 $00^h38^m17^s.8$ 37°.15S 176°.81E 257 km M = 4.8
± 0.5 0.04 0.05 4 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	P	00	38	51		-0.6	100	0.48	141			
	(S)		39	23		5.2						
WTZ	iP	00	38	52.2	U	-0.7	99	0.85	171		4.8	4.8
	S		39	20.5		0.3	100					
ECZ	iP	00	38	57.8	U	0.9	99	1.48	112		4.7	4.8
	e(S)		39	32		4.8						
TUA	P	00	38	58		-0.3	100	1.67	171		4.6	4.8
	S		39	30		0.2	100					
GNZ	iP	00	38	59.4		0.3	100	1.77	148			
	(S)		39	31		-0.2	100					
CNZ	P	00	39	03.7		0.0	100	2.28	206			
TRZ	P	00	39	04.3		-0.5	100	2.39	180		4.8	4.9
	e(S)			43		1.6						
ONE	eP	00	39	05		0.1	100	2.41	304			
TNZ	P	00	39	09.6	D	0.7	99	2.80	223		3.7*	3.1*
MNG	iP	00	39	15.5	U	-2.4		3.62	196		5.1	4.9
	S		40	02.5		-2.2						
WEL	P	00	39	24.5		-2.9		4.43	200	4.9		
	S		40	17		-4.8						
COB	P	00	39	32		-3.0		5.05	218		4.0*	3.7*
	S		40	30.5		-4.7						
MJZ	P	00	40	15		-1.5		8.37	213		2.6*	3.2*
	S		41	43		-6.5						
MSZ	P	00	40	34		-4.2		10.09	219		3.1*	3.3*
	S		42	23		-5.6						

AMPLITUDES:

WTZ	9.0	10	ECZ	2.6	3.4	TUA	2.0	3.0
TRZ	1.9	5.0	TNZ	0.5	0.2	MNG	16	13
WEL	1.2		COB	1.1	1.9	MJZ	0.1	0.6
MSZ	0.2	0.5						

78/ 293

MAY 28 $00^h42^m40^s.9$ 35°.44S 178°.65E 240 km M = 4.9
± 0.8 0.06 0.09 9 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	00	43	25		-0.2	100	2.25	182		4.6	5.1
	eS		44	01		1.4	99					
WIZ	P	00	43	27.0		0.3	100	2.39	209			
	S		44	02		-0.2	100					
WTZ	P	00	43	31.5		-0.2	100	2.87	207		5.2	5.2
	S		44	11		-0.2	100					
GNZ	P	00	43	35.5		-0.4	100	3.24	189			
	S		44	16.5		-2.0	96					
ONE	P	00	43	38.5		-0.5	100	3.51	263			
TUA	P	00	43	39.5		-0.2	100	3.57	199		4.5	5.0
	S		44	24.5		-0.8	100					
WNZ	P	00	43	43		0.9	100	3.78	212		5.1	
TRZ	P	00	43	48.5		-0.7	100	4.36	199		4.5	4.8
	S		44	43.5		1.3	99					
NGZ	P	00	43	51		0.7	100	4.45	212			
	S		44	47		2.8						
CRZ	P	00	43	57		0.0	100	5.01	280		3.5*	
	e		44	12								

TNZ	eP	00	43	59	1.3	5.06	221		3.5*		
MNG	P	00	44	04.4	-1.9	5.75	205		4.6	5.0	
	S		45	11	-1.9						
WEL	S	00	45	30	-2.0	6.59	206	5.0			
MJZ	P	00	45	06	-2.2	10.61	214		3.0*	3.4*	
	S		47	00	-4.0						
OMZ						11.29	209		3.3*	3.0*	
MSZ						12.35	218			3.3*	

AMPLITUDES:											
	ECZ	1.5	5.0	WTZ	10	11	TUA		0.7	1.8	
	WNZ	0.3		TRZ	0.4	1.8	CRZ		0.3		
	TNZ	0.2		MNG	2.1	7.0	WEL	0.8			
	MJZ	0.2	0.9	OMZ	0.1	0.1	MSZ			0.5	

78/ 294

MAY 28 $21^h37^m51^s.4$ $37°.92S$ $179°.85E$ 12 km M = 4.8

± 0.9 0.05 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
ECZ	iP*	21	38	11.9	U	1.1	99	1.06	282			
GNZ	Pn	21	38	18.3		-0.7	100	1.61	243			
	eSn			39		-0.6	100					
WIZ	Pn	21	38	26.5		0.2	100	2.15	280			
	(Sn)			53.5		1.0						
WTZ	Pn	21	38	27.4	U	-0.5	100	2.27	268		5.2	5.3
	Sn			55		-0.3	100					
TUA	Pn	21	38	27.5		-0.9	100	2.30	247		4.8	5.0
	Sn			56		-0.2	100					
TRZ	Pn	21	38	36		-0.2	100	2.88	235		4.8	4.8
	Sn		39	12		2.0	97					
WNZ	Pn	21	38	39.5		1.1	100	3.04	255		4.8	4.9
	P*			42		-2.5						
	Sn		39	12		-1.8						
KRP	Pn	21	38	43.0		-0.6	100	3.42	269		5.0	4.9
	Sn		39	23		0.1	100					
	Sg			50		3.5						
NGZ	Pn	21	38	45.8		0.3	100	3.55	248			
	Sn		39	25		-1.3	99					
MNG	Pn	21	38	53		-3.1		4.34	230		4.9	5.0
	Sn		39	41		-4.0						
TNZ	ePn	21	38	53		-5.0		4.47	252		4.9	5.1
	(P*)		39	01		-8.0						
	Pg			26.5		4.6						
	Sn			48.5		0.1						
ONE	Pn	21	39	06		2.2		4.90	294	4.7		
	e(Sn)		40	05.5		6.9						
WEL	Pn	21	39	04		-3.5		5.17	228	4.8		
	Sn		40	00.5		-4.6						
COB	ePn	21	39	19.7		-3.9		6.35	238		5.1	4.6
	Sn		40	31.5		-2.0						
CIZ								6.61	157			
CRZ	Pn	21	39	32.5		3.1		6.77	299		4.8	
	Sn		40	48.5		5.0						
MJZ	ePn	21	39	59		-5.4		9.34	227		4.7*	4.8*
	Sn		41	40		-5.2						
OMZ								9.80	220		4.5	4.2
MSZ								11.23	229			4.5

AMPLITUDES:											
	WTZ	31	38	TUA	3.8	7.5	TRZ		3.3	4.3	
	WNZ	0.5	0.8	KRP	5.3	3.0	MNG		8.0	11	

	TNZ	0.5	0.8	ONE	0.3		WEL	0.8			
	COB	2.0	2.0	CIZ		6.5	5.0	CRZ	0.2		
	MJZ	1.0	2.2	OMZ		0.2	0.2	MSZ		0.7	

78/ 295

MAY 31 $02^h58^m23^s.1$ 38°.72S 175°.30E 236 km M = 3.8
± 1.3 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
NGZ	P	02	58	56		1.4	100	0.52	152			
	S		59	21		1.9	99					
KRP	P	02	58	56.0	D	0.2	100	0.82	13		3.1*	
	S		59	20		-1.2	100					
TNZ	e(S)	02	59	24.5		3.0		0.85	237			
WTZ	e(S)	02	59	26		-3.4		1.52	62			3.3
MNG	iP	02	59	04.8	U	0.9	100	1.90	176		4.3	3.8
	S			34		-1.3	100					
GNZ	P	02	59	06.5	D	0.4	100	2.13	89		3.8	3.9
	S			38		-1.2	100					
WEL	S	02	59	48		0.2	100	2.60	189	3.6		
COB	P	02	59	15.5		-0.6	100	3.09	219		3.4*	2.7*
	S			56.5		-0.7	100					

AMPLITUDES:										
KRP	1.0		WTZ		0.3	MNG	5.5	2.5		
GNZ	0.7	1.2	WEL	0.1		COB	0.5	0.3		

78/ 296

MAY 31 $17^h08^m41^s.2$ 35°.01S 178°.85E 225 km M = 4.1
± 1.8 0.15 0.24 31 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	17	09	37		0.6	100	3.33	206		3.9	3.8
	S		10	18		-1.2	100					
GNZ	P	17	09	40.5		-0.3	100	3.70	190		4.0	4.1
	S		10	28		1.1	100					
KRP	P	17	09	45		1.0	100	3.96	222		2.4*	
TUA	e(P)	17	09	46		1.1		4.03	199		3.8	4.2
	e(S)		10	37		2.7						
TRZ	P	17	09	53		-1.6	99	4.82	199			4.4
	S		10	52		0.3	100					
TNZ	e(P)	17	10	03.5		0.3	100	5.50	219		3.2*	
MNG	iP	17	10	09.1	U	-3.1		6.21	204		4.4	4.3
	S		11	17		-6.1						
WEL	P	17	10	19		-4.0		7.06	206	4.1		
	S		11	36		-6.5						
COB	S	17	11	52		-6.9		7.76	217		3.4*	3.0*

AMPLITUDES:										
WTZ	0.4	0.4	GNZ		0.5	0.9	KRP	0.1		
TUA	0.1	0.3	TRZ			0.6	TNZ	0.1		
MNG	1.3	1.2	WEL	0.1			COB	0.2	0.3	

78/ 297

MAY 31 $19^h28^m27^s.8$ 49°.44S 164°.71E 12 km M = 4.5
± 1.0 0.08 0.15 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	19	29	20.4	U	0.5	100	3.41	43			
	Sn			59		-0.1	100					
MNW	Pn	19	29	29.5		-0.6	100	4.16	29	4.5	4.8	4.8
	Sn		30	16		-1.1	99					
ROX	Pn	19	29	42		-0.2	100	5.05	40		4.5	4.6

	Sn		30	38.5		-0.1	100				
MSZ	Pn	19	29	45		0.0	100	5.26	26	4.6	4.4
	Sn		30	44.5		1.1	99				
OMZ	Sn	19	31	04		0.7		6.08	46		4.0
	S*			29		-2.7					
RHP	Pn	19	30	01		-0.9		6.50	37		
	Sn		31	13		-0.2					
MJZ	Pn	19	30	03		-2.3		6.74	38	4.5*	4.1*
	P*			20		-4.0					
	e(Sn)		31	18		-1.1					
COB	Pn	19	30	50		-1.0		10.09	37	4.2	4.2
	e(Sn)		32	37		-2.6					

AMPLITUDES: MNW 0.9 3.5 7.0 ROX 0.7 2.5 MSZ 2.2 2.1
OMZ 0.3 MJZ 1.4 1.0 COB 0.1 0.3

78/ 298

JUN 01 $13^h45^m49^s.4$ 40°.25S 173°.61E 195 km M = 3.8
± 1.2 0.04 0.06 9 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	e(P)	13	46	24		3.6		1.21	30		2.7*	2.9*
	S			45		0.7	100					
WEL	S	13	46	46.5		0.0	100	1.36	140	3.6		
MNG	iP	13	46	24.4	U	1.8	98	1.48	105		4.1	3.7
	S			48		-0.3	100					
CNZ	P	13	46	27.0		1.0	100	1.83	56			
	S			54		-0.3	100					
TRZ	S	13	47	08.5		-0.2	100	2.57	75			3.4
KRP	S	13	47	12		-0.8	100	2.76	34			
KAI	S	13	47	13		-0.8	100	2.82	215	2.8*		
TUA	e	13	47	17				3.10	63			4.0
	S			19		-0.9						
WTZ	S	13	47	25.5		-2.4		3.47	50			3.5
GNZ	S	13	47	34		-0.8	100	3.78	66			3.9
MJZ	eS	13	47	49		0.0		4.41	211			

AMPLITUDES: TNZ 0.1 0.2 WEL 0.4 MNG 5.5 2.9
TRZ 0.2 KAI 0.1 TUA 0.3
WTZ 0.2 GNZ 0.7

78/ 299

JUN 01 $17^h08^m38^s.0$ 38°.98S 178°.53E 33 km M = 3.8
± 0.7 0.03 0.05 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	17	08	49.1		0.4	100	0.52	310			
	Sn			56.5		0.1	100					
TUA	iPn	17	08	57.2	U	0.7	100	1.09	279		3.7	3.8
	Sn		09	09.5		-0.7	100					
ECZ	P*	17	09	01		-0.3	100	1.29	1		3.8	
TRZ	P*	17	09	03		-1.0	99	1.45	246		3.4	3.5
	S*			24		0.6	100					
WTZ	Pn	17	09	03.5		0.6	100	1.57	309		4.0	4.0
	Sn			21.5		-0.1	100					
WIZ	P*	17	09	11		1.1		1.79	324			
MNG	Pn	17	09	21.5	U	0.9		2.86	234		4.0	3.9
	Sn			53		0.2						
WEL	Sn	17	10	13		0.3		3.69	230			
CIZ	Sn	17	11	18.5		5.8		6.19	145			
MJZ	Sn	17	11	52		-0.7		7.86	228			

AMPLITUDES:	TUA	1.3	1.8	ECZ	0.7		TRZ	0.5	0.8
	WTZ	4.5	3.7	MNG	2.2	2.0			

78/ 300

JUN 01 $19^h21^m09^s.7$ 32°.95S 176°.74W 12 km M = 5.2

± 2.1 0.10 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	22	41.5		3.0		6.11	218		4.9	5.5
	(Pg)		23	07.5		-5.6						
	e(Sn)			48		2.2	99					
	e			53.5								
WIZ	Pn	19	22	49		1.6	100	6.75	226			
	P*			59.5		-6.6						
	eSn		23	57		-4.3						
GNZ	ePn?	19	22	56		3.9		7.10	215		4.9	5.7
	P*		23	09		-3.0						
	Sn		24	11		1.3	100					
WTZ	Pn	19	22	52.5		-0.6	100	7.17	224		5.0	5.6
	Sn		24	10.5		-0.9	100					
TUA	ePn	19	23	03		3.1		7.67	219		5.0	5.5
	Sn		24	23		-0.3	100					
ONE	Pn	19	23	04		1.2	100	7.88	247			
	P*			22		-3.4						
KRP	Pn	19	23	05		0.3	100	8.03	230		5.3	5.3
	P*			18		-9.8						
	Sn		24	31.5		-0.4	100					
WNZ								8.13	224			4.9
TRZ	Sn	19	24	43		2.1	99	8.40	216			5.8
NGZ	Sn	19	24	50		-0.0		8.77	223			
CNZ	Sn	19	24	51		-0.2	100	8.83	223			
CRZ	Pn	19	23	17		-0.3	100	8.95	258		5.2	
	P*			28		-15.5						
TNZ	e(Pn)	19	23	32		7.0		9.51	227		5.1	5.1
	e(Sn)		25	08		0.4						
MNG	Pn	19	23	28		-2.0	99	9.87	217		4.8	5.7
	Sn		25	13.5		-2.9	99					
WEL	Sn	19	25	33		-4.0		10.74	217	5.6		
CIZ	Sn	19	25	52		8.7		11.00	179			
KAI	e	19	26	32				13.39	221	4.9		
	eSn			40		-0.8						
MJZ	e(Pn)	19	24	37		-1.3		14.89	219		5.1*	5.0*
	Sn		27	06.5		-10.2						
OMZ								15.43	215			4.3
ROX								16.51	217		5.7	5.1
MSZ								16.71	221		5.4	4.8

AMPLITUDES:	ECZ	0.4	2.0	GNZ	1.4	13	WTZ	1.8	7.5
	TUA	0.5	2.1	KRP	0.8	0.5	WNZ		0.1
	TRZ		5.5	CRZ	0.2		TNZ	0.1	0.1
	MNG	1.2	12	WEL	1.5		CIZ	0.3	2.5
	KAI	0.2		MJZ	1.0	1.4	OMZ		0.1
	ROX	1.0	0.7	MSZ	1.3	0.6			

	Sn		34	37		-0.4	100						
	e			42									
WIZ	Pn	09	33	45.5		2.3	99	5.76	210				
	Sn		34	47		1.6	100						
ONE	ePn	09	33	48.5		-1.0	100	6.22	237				
WTZ	Pn	09	33	49		-0.6	100	6.23	209		5.4	5.1	
	Sn		34	57		0.3	100						
	i		35	50.6									
GNZ	Pn	09	33	52.5		-0.3	100	6.46	200		5.4	5.1	
	Sn		35	03		0.7	100						
KRP	Pn	09	33	58		-0.2	100	6.85	217		5.2		
	Sn		35	12		0.3	100						
TUA	e(Sn)	09	35	10		-2.5	98	6.88	205		4.9	5.0	
TRZ	Pn	09	34	07		-2.3		7.67	204		4.8	5.4	
	Sn		35	27		-4.3							
NGZ	Pn	09	34	09.5		-1.8		7.82	211				
	Sn		35	31		-3.9							
MNG	Pn	09	34	19		-9.7		9.09	207		5.2	5.1	
	Sn		35	54		-11.5							
WEL	Sn	09	36	11		-14.9		9.94	207	4.9			
COB	Pn	09	34	40		-10.2		10.66	215		4.6	4.6	
	Sn		36	27		-16.4							
CIZ	Sn	09	37	21		16.5		11.55	170				
KAI								12.41	214	4.6			
MJZ	Sn	09	37	39		-23.9		13.98	212			4.3*	

AMPLITUDES:									
ECZ	1.0	1.0	WTZ	6.5	2.9	GNZ	5.3	4.0	
KRP	0.9		TUA	0.6	0.7	TRZ	0.4	2.3	
MNG	3.4	3.7	WEL	0.3		COB	0.2	0.8	
CIZ		0.3	KAI	0.1		MJZ		0.3	

78/ 302

JUN 02 $21^h41^m21^s.3$ $49°.94S$ $164°.71E$ 12 km M = 4.2

± 0.9 0.07 0.14 R S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	Pn	21	42	19		0.5	100	3.79	38			
	e			59.5								
	Sn		43	01.5		-0.2	100					
ROX	Pn	21	42	41		-0.1	100	5.44	37		4.3	4.2
	e(Sn)		43	41		-0.4	100					
MSZ	Pn	21	42	44		-0.6	99	5.71	24		4.3	4.0
	eSn		43	48		0.3	100					
RHP	Pn?	21	42	59		-1.9		6.90	34			
MJZ	e(Pn)	21	43	08		3.8		7.14	36		4.1*	4.0*
	e		44	15								
	Sn			21		-1.2						
COB	Pn	21	43	50		0.1		10.48	35		4.3	

AMPLITUDES:									
ROX	0.4	0.8	MSZ	0.9	0.8	MJZ	0.5	0.6	
COB	0.1								

78/ 303

JUN 03 $19^h03^m41^s.0$ $38°.76S$ $176°.13E$ 99 km M = 4.0

± 0.6 0.03 0.03 5 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	P	19	03	54.5		-0.6	100	0.13	350			
	e		04	01								
	S			05		-0.7	100					
NGZ	P	19	03	57.7		0.2	100	0.58	224			

	(S)		04	10		-0.1	100						
CNZ	P	19	03	58		0.1	100	0.63	226				
	eS		04	13.5		2.7							
GSZ	iP	19	03	58.6		0.4	100	0.67	219				
TUA	P	19	03	59		-0.4	100	0.80	94		4.0	4.1	
	S		04	14.5		1.2	99						
TRZ	P	19	04	01		-0.1	100	0.95	146		4.3	4.0	
	e			12.5									
	S			20.5		4.3							
KRP	P	19	04	01		-0.1	100	0.96	331		2.1*	2.6*	
	e			03.5									
	S			15.5		-0.8	100						
WTZ	iP	19	04	01.5	D	-0.4	100	1.03	41		3.7	3.9	
	S			19		1.3	99						
TNZ	P	19	04	08.5		1.8	98	1.43	252		2.9*	2.8*	
	e(S)			28		1.7							
	e			31									
GNZ	P	19	04	07.5		0.1	100	1.48	86		3.8	3.7	
	e			11									
	e			13									
	S			26.5		-1.0	100						
MNG	P	19	04	11.7		-1.3	99	1.92	195		3.9	4.3	
	e			16									
	S			42		5.3							
WEL	e	19	04	46				2.73	202	4.1			
	S		05	05		8.7							
COB	P	19	04	33		-1.6		3.50	227		3.8*	3.3*	
	S		05	20		4.8							
MJZ	S	19	06	30		-4.9		6.74	217			2.3*	

AMPLITUDES:								
WNZ	0.1	0.3	TUA	3.2	4.1	TRZ	5.0	4.7
KRP	0.2	0.6	WTZ	2.4	4.2	TNZ	0.2	0.2
GNZ	2.1	2.7	MNG	4.5	14	WEL	0.6	
COB	1.1	1.2	MJZ		0.1			

78/ 304

JUN 05 $13^h43^m19^s.3$ 44°.52S 167°.49E 12 km M = 4.2

± 0.3 0.01 0.02 R S.E. of RES. 0.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	iP*	13	43	26.0		-0.3	100	0.34	116			
ROX	iPn	13	43	47.1	D	0.3	99	1.61	127		4.7	4.4
	Sn		44	07.5		0.1	100					
RHP	iPn	13	43	51.0	D	0.1	100	1.91	78			
	Sn		44	14.5		-0.1	100					
MJZ	Pn	13	43	54.7		-0.2	100	2.20	77		4.6*	4.4*
	Sn		44	22		0.3	99					
OBZ	P*	13	44	02		0.1	100	2.43	170			
	S*			33.5		-0.2	100					
OMZ	Pn	13	43	58.9	D	-0.0	100	2.50	104		4.1	3.8
	eS*		44	35.5		-0.4						
KAI	P*	13	44	23		3.1		3.48	56	4.5		
	S*		45	05		-0.3						
COB	Pn	13	44	33		-2.3		5.17	50		4.5	3.9
	e			38								
	eSn		45	33		0.2						
	eSg		46	08		-5.3						
MNG	ePn	13	45	02		0.6		7.07	59		4.3	3.8
	Sn		46	19.5		0.8						

AMPLITUDES:	ROX		10	15	MJZ		13	16	OMZ		1.1	1.2
	KAI	1.2			COB		0.7	0.6	MNG		0.7	0.3

78/ 305

JUN 06 $02^h47^m57^s.2$ $35°.52S$ $178°.82E$ 283 km M = 4.4

± 1.4 0.12 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
ECZ	P	02	48	44.5		0.2	100	2.19	186		4.1	4.5
	S		49	21.5		0.6	100					
	e			34								
WIZ	P	02	48	46		-0.3	100	2.40	213			
WTZ	P	02	48	50.3	U	-0.5	100	2.87	210		4.9	4.4
	e(S)		49	40.5		7.9						
GNZ	iP	02	48	53.8	U	-0.2	100	3.19	191		4.5	4.5
	S		49	38		-0.4	100					
NGZ	P	02	49	09.2		0.9	99	4.46	214			
	(S)		50	19		15.0						
MNG	P	02	49	22		-1.4		5.73	206		4.4	4.1
	S		50	32		1.0						
	e			41.5								
WEL	S	02	50	56		6.5		6.58	208	4.1		
MJZ	S	02	52	24		4.1		10.63	215			

AMPLITUDES:	ECZ	0.4	1.0	WTZ	4.1	1.4	GNZ	1.6	2.4
	MNG	1.5	0.9	WEL	0.1				

78/ 306

JUN 06 $03^h08^m43^s.9$ $39°.24S$ $177°.30E$ 33 km M = 4.2

± 0.5 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
TUA	iP*	03	08	52.9	D	-0.7	100	0.45	345		3.8	4.2
	S*			59.5		-1.1	99					
TRZ	iP*	03	08	54.0	D	-0.2	100	0.49	230			
	(S*)			59.5		-2.1						
GNZ	P*	03	08	59.5		0.0	100	0.82	44		4.1	3.9
	e		09	03.5								
	(S*)			11.5		0.6						
	e			15								
WNZ	(P*)	03	09	03.5		-0.9		1.12	303		4.7	4.5
	S*			21		1.5						
WTZ	iPn	03	09	05.0	D	0.1	100	1.28	349		4.1	4.2
	eS*			24		-0.3						
NGZ	Pn	03	09	06.0		0.6	100	1.31	272			
WIZ	Pn	03	09	12		1.2	99	1.71	357			
	(P*)			17		2.5						
	S*			37.5		0.3						
ECZ	P*?	03	09	16		-0.4		1.83	33		3.9	3.7
	(S*)			54		13.4						
CAZ	Pn?	03	09	13		0.2		1.85	206			
	P*			22.5		5.6						
	e		10	06								
MNG	Pn	03	09	13.0	D	-1.2	99	1.96	225		4.2	4.2
	(P*)			22.5		3.8						
TNZ	Pn	03	09	19.5		1.1	100	2.27	270		4.4	4.6
	e(Sn)			40		-4.4						
WEL	eP*	03	09	34		0.8		2.82	223	3.8		
	Sn			57.5		-0.1	100					
	(S*)		10	15		4.9						

KAI								5.54	232	4.2			
CIZ	Sn	03	11	30		1.9		6.59	138				
MJZ	eP*	03	10	47		2.9		6.98	225		4.1*	4.0*	
	Sn		11	35		-2.7							

AMPLITUDES:

TUA		10	29	GNZ		14	15	WNZ		2.9	2.7		
WTZ		8.5	10	ECZ		0.5	0.4	MNG		8.0	10		
TNZ		0.8	1.2	WEL	0.3			KAI	0.2				
CIZ			1.3	MJZ		0.5	0.6						

78/ 307

JUN 06 $04^h38^m25^s.0$ 39°.94S 175°.30E 12 km M = 3.8

± 0.5 0.02 0.04 R S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iPg	04	38	38.8	U	-0.3	100	0.69	168		3.9	4.0
	Sg			48		-0.6	100					
NGZ	iPg	04	38	41.8		0.6	100	0.79	18			
	Sg			54		2.0						
TNZ	iPg	04	38	46.6	U	0.6	100	1.03	316		3.7	4.3
	Sg		39	02.5		2.4	99					
CAZ	P*	04	38	47.5		0.9	100	1.20	144			
	Sg		39	09		3.6	98					
TRZ	eSg	04	39	09		2.2	100	1.23	72			3.7
WEL	P*	04	38	49.5		-0.6	100	1.40	197	3.8		
	S*		39	06.5		-2.3	100					
	Sg			12.5		0.0	100					
TUA	P*	04	38	57.5		0.1		1.83	52		3.7	3.8
	S*		39	21.5		0.1						
WTZ	Pn	04	39	02		-0.6	100	2.36	35		3.7	4.1
	Sn			29		-2.0	100					
	S*			32		-5.3						
GNZ	ePg	04	39	14		-1.1		2.47	59		3.6	3.5
	Sn			31		-2.9	99					
	Sg			48		-0.6	100					
KAI								3.91	227	3.9		
MJZ	P*	04	39	53		-5.6		5.42	220		3.7*	3.7*
	Sn		40	42		-2.6						
	S*		41	09		-0.1						

AMPLITUDES:

MNG		33	45	TNZ		1.7	8.0	TRZ		2.1			
WEL	1.3			TUA		0.5	0.7	WTZ		0.6	1.2		
GNZ		0.5	0.6	KAI	0.2			MJZ		0.3	0.5		

78/ 308

JUN 06 $05^h44^m10^s.4$ 44°.09S 168°.30E 12 km M = 3.9

± 0.6 0.04 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
MSZ	P*	05	44	22		-0.5	100	0.65	205		3.2	3.4
	(Pg)			24		0.4						
	eSg			32		-0.4	100					
RHP	iP*	05	44	32.5	D	-1.0	99	1.29	91			
	e(Sn)			49.5		-1.1						
	Sg			54		0.1						
MJZ	Pn	05	44	38.0		0.7	99	1.57	87		3.8*	4.0*
	Sn			57		-0.4	100					
	eS*		45	00		1.0						
ROX	Pn	05	44	38.0	D	0.7	99	1.57	153		4.1	4.3
	Sn			57.5		0.1	100					
MNW	P*	05	44	42		0.4	100	1.76	196		4.2	

	eSg		45	09		-0.8							
OMZ	Pn	05	44	45		0.3	100	2.12	119		3.9		
	P*			47.6		0.0	100						
	e(Sn)		45	11.5		1.0							
	e(S*)			16		0.6							
KAI	P*	05	45	03		4.4		2.75	57	4.0			
	S*			40		5.3							
	Sg			47		3.7							
OBZ	Pn	05	44	57		2.6		2.83	183				
	e(S*)		45	33		-3.6							

AMPLITUDES: MSZ 5.5 17 MJZ 4.5 14 ROX 2.9 13
MNW 5.0 OMZ 1.0 1.1 KAI 0.6

78/ 309

JUN 06 $19^h12^m40^s.3$ $38°.48$S $176°.03$E 177 km M = 4.1
± 0.8 0.05 0.06 7 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	P?	19	13	01		-3.0		0.16	159			
	e			10								
NGZ	P	19	13	07		0.8	100	0.77	205			
	S			26.5		0.1	100					
WTZ	iP	19	13	06.5	D	-0.6	100	0.90	57		3.8	
TUA	P	19	13	07.7	U	0.4	100	0.94	111		3.7	3.4
	S			27.5		-0.7	100					
TRZ	P	19	13	10.9	U	1.2	99	1.23	150		4.3	4.2
	S			34		1.5	99					
TNZ	P	19	13	12		0.0	100	1.47	241		3.2*	
GNZ	P	19	13	13.5		0.6	100	1.57	97		3.7	3.9
	S			37.5		-0.6	100					
ECZ	P	19	13	19		0.0	100	2.13	69		4.3	4.2
	e			21								
	eS			49		0.2						
	e			51								
MNG	iP	19	13	18.7	U	-0.8	100	2.18	191		4.8	4.8
	S			48.5		-1.2	99					
WEL	P	19	13	27.5		-1.5		2.97	199	4.2		
	S		14	05		-1.5						
KAI	S	19	14	55		-6.3		5.36	220	3.6*		
MJZ	eP	19	14	18		-2.3		6.92	216		2.8*	3.4*
	S		15	30		-8.0						
MSZ								8.68	222		3.0*	3.2*

AMPLITUDES: WNZ 0.2 WTZ 1.8 TUA 0.6 0.3
TRZ 1.7 3.3 TNZ 0.3 GNZ 1.1 2.5
ECZ 1.0 0.9 MNG 20 25 WEL 0.6
KAI 0.3 MJZ 0.2 1.2 MSZ 0.2 0.5

78/ 310

JUN 07 $04^h37^m10^s.1$ $30°.49$S $177°.28$W 33 km M = 5.3
± 2.5 0.10 0.30 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	04	39	04		1.4	100	7.98	205		5.4	5.9
	(Sn)		40	27.5		-0.3						
	e			33.5								
WIZ	eP*	04	39	36		1.7		8.40	212			
	eSn		40	38		0.3						
WTZ	Pn	04	39	12		-2.5	98	8.86	211		5.0	5.5
	Sn		40	48		-0.9	100					

GNZ	Sn	04	40	52		-0.6	100	9.02	204		5.0	5.6
CRZ	Pn	04	39	21.5		0.2	100	9.35	243		5.8	
TUA	P*	04	39	55		2.1		9.49	207		4.9	5.7
	Sn		41	04		0.0	100					
KRP	Pn	04	39	24		0.6	100	9.51	217		5.4	
	P*			50.5		-2.8						
TRZ	Sn	04	41	24		1.4	100	10.26	207			5.6
TNZ								11.06	216			5.3
MNG	Pn	04	39	46.5		-6.8		11.70	208		4.9	5.5
	Sn		41	50		-7.2						
WEL	Sn	04	42	09		-8.8		12.55	209	5.5		
COB	eSn	04	42	27		-9.2		13.32	215		4.5	4.8
CIZ	ePn	04	40	24		6.6		13.46	178			
	Sn		42	48		8.4						
KAI								15.06	214	5.0		

AMPLITUDES:

ECZ		0.8	3.0	WTZ		1.3	3.8	GNZ		1.0	5.7
CRZ		0.3		TUA		0.3	2.2	KRP		0.7	
TRZ			2.1	TNZ			0.1	MNG		1.0	5.2
WEL	0.8			COB		0.1	0.8	CIZ		0.7	
KAI	0.2										

78/ 311

JUN 07 $04^h56^m40^s.5$ $39°.19S$ $177°.12E$ 12 km M = 3.7

± 0.6 0.03 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
TUA	iPg	04	56	48.6	U	0.1	100	0.38	4		3.3	3.8
	Sg			55.5		1.6	100					
TRZ	iPg	04	56	49.7	D	0.2	100	0.43	212		3.3	3.4
	Sg			58		2.5	99					
GNZ	P*	04	56	56		-0.9	100	0.89	53		4.0	3.9
	Pg			59		0.4						
	S*		57	10	N	1.1	100					
	Sg			14		3.3						
WNZ	P*	04	56	59		0.8	100	0.97	305		4.2	
NGZ	P*	04	57	02.0		0.3	100	1.17	270			
	Sg			20		-0.1						
WTZ	iP*	04	57	00.7	D	-1.6	100	1.21	355		3.5	3.8
	S*			19		0.6	100					
CNZ	P*	04	57	02.5		-0.0		1.22	269			
	Pg			03.5		-1.8						
	Sg			22.5		0.7						
KRP	Pn	04	57	08.5		-1.7	100	1.77	315		3.9	
	P*			13		1.1						
	(Sn)			25		-7.4						
ECZ	Pg	04	57	19		0.7		1.87	37		3.5	3.6
	S*			38		-0.2						
MNG	Pn	04	57	08.5		-3.5	97	1.91	221		3.5	3.5
	Pg			18		-1.0						
	Sg			50		5.3						
TNZ	Pn	04	57	15.5		0.4	100	2.13	269		4.0	4.0
	P*			20		2.0						
	Sg			58		5.7						
WEL	Sn	04	57	52.5		-3.7		2.76	220	3.3		
COB	P*	04	57	45		-2.6		3.86	239		3.9	3.5
	S*		58	37		-0.9						
	Sg			50		-0.6						
CIZ	Sn	04	59	24		-7.3		6.71	137			

AMPLITUDES:											
	TUA		4.3	18	TRZ		4.5	8.0	GNZ	11	12
	WNZ		1.3		WTZ		2.5	4.3	KRP	1.6	
	ECZ		0.2	0.3	MNG		1.5	1.9	TNZ	0.3	0.4
	WEL	0.1			COB		0.3	0.4	CIZ		0.4

78/ 312

JUN 08 $08^h27^m11^s.7$ $38°.36S$ $175°.92E$ 171 km M = 3.9
± 0.8 0.04 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
KRP	iP	08	27	35.5	UNW	-0.2	100	0.52	325		3.5*	2.5*
	S			54		-0.2	100					
NGZ	iP	08	27	38.9		1.3	99	0.85	196			
	e(S)		28	01		3.4						
CNZ	P	08	27	38.7		0.9	100	0.89	199			
	S		28	03		5.0						
WTZ	iP	08	27	36.8	U	-1.2	100	0.93	67		3.6	3.5
	S			57.5		-0.9	100					
TUA	P	08	27	39.3		0.1	100	1.07	115		4.1	4.1
	S		28	00.5		0.1	100					
TRZ	P	08	27	43		1.0	100	1.39	150		3.6	4.3
	S		28	06.5		1.0	100					
TNZ	P	08	27	43.5		0.7	100	1.46	235		3.0*	
GNZ	P	08	27	44.5		-0.5	100	1.67	100		3.9	3.8
	S		28	10		-0.6	100					
ECZ	eP	08	27	50		-0.6	100	2.18	73			4.0
	e(S)		28	22		1.5	99					
MNG	iP	08	27	50.9	D	-0.9	100	2.29	188		4.5	4.5
	S		28	21		-1.7	99					
WEL	S	08	28	36		-3.4		3.06	196	3.4		
COB	eP?	08	28	05		-4.0		3.67	221		3.3*	2.7*
	S			51		-2.2						
MJZ	P	08	28	48		-4.3		6.97	214		2.5*	2.3*
	S		30	03		-7.6						
RHP	P	08	28	52.5		-3.3		7.24	216			
MSZ								8.71	221		2.7*	2.5*

AMPLITUDES:											
	KRP		4.0	0.4	WTZ		1.1	1.0	TUA	1.4	1.6
	TRZ		0.3	3.8	TNZ		0.2		GNZ	1.6	1.7
	ECZ			0.5	MNG		8.7	11	WEL	0.1	
	COB		0.3	0.3	MJZ		0.1	0.1	MSZ	0.1	0.1

78/ 313

JUN 08 $23^h34^m10^s.6$ $33°.36S$ $179°.12W$ 12 km M = 5.2
± 1.4 0.06 0.15 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	Pn	23	35	27		0.8	100	5.14	215			
	Sn		36	23		-0.4	100					
GBZ								5.28	236			
WTZ	Pn	23	35	32.2	D	-0.3	100	5.60	213		5.6	5.3
	Sn		36	34		-0.5	100					
GNZ	Pn	23	35	34		-0.7	100	5.76	203		5.6	5.4
	Sn		36	40		1.5	99					
ONE	Pn	23	35	37		0.4	100	5.89	244			
AUC	Pn	23	35	42.2		2.8	95	6.10	233			
TUA	Pn	23	35	40		-1.0	100	6.22	208		5.5	5.4
	Sn		36	49		-0.5	100					
KRP	Pn	23	35	42.5		0.4	100	6.30	222		5.7	
WNZ	Pn	23	35	46.3		1.0	100	6.53	215		5.4	

CRZ	Pn	23	35	49	-1.4	100	6.90	259		5.2	
	P*		36	01	-8.6						
TRZ	e(Pn)	23	35	50	-1.6		6.99	207		5.4	5.4
	e(Sn)		37	09	0.9						
	eSg		38	15	8.8						
NGZ	Pn	23	35	53.5	-0.9	100	7.21	215			
	e(Sn)		37	12	-1.1						
TNZ	Pn	23	36	03.5	0.4		7.84	220		5.6	
	P*			21	-4.5						
MNG	Pn	23	36	05.5	-5.8		8.44	209		5.3	5.4
	Sn		37	37.5	-5.2						
WEL	Pn	23	36	18	-4.9		9.30	210	5.2		
	Sn		37	57	-6.2						
COB	Pn	23	36	27	-6.7		10.09	218		5.1	5.1
	Sn		38	14.5	-7.8						
CIZ	Pn	23	36	48.5	5.4		10.77	170			
	Sn		38	42.5	3.7						
KAI	Sn	23	38	52	-11.9		11.82	216	5.1		
MJZ	ePn	23	37	10.5	-8.0		13.36	214		4.9*	4.8*
	Sn		39	28	-13.2						
RHP	Pn	23	37	17	-5.2		13.63	215			
	Sn		39	34	-13.6						
OMZ							14.01	210		4.5	4.5
ROX							15.03	213		5.4	4.5
MSZ	ePn	23	37	32	-10.5		15.12	218		5.3	4.8
	Sn		40	08	-15.4						

AMPLITUDES:										
GBZ	15		WTZ		12	5.7	GNZ	11	10
TUA	2.8	2.5	KRP		3.5		WNZ	0.3	
CRZ	0.3		TRZ		2.2	3.0	TNZ	0.5	
MNG	5.1	7.4	WEL	0.7			COB	0.7	2.5
CIZ	2.0	1.1	KAI	0.4			MJZ	0.8	1.1
OMZ	0.1	0.2	ROX		0.6	0.2	MSZ	1.2	0.7

78/ 314

JUN 09 $07^h53^m00^s.6$ 45°.22S 166°.96E 12 km M = 3.4

± 0.7 0.02 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
MNW	iP*	07	53	15.3		1.1	99	0.73	141			
MSZ	P*	07	53	16.0		-0.7	100	0.87	51		2.9	3.4
	S*			28.1		-0.4	100					
ROX	P*	07	53	30.1		-0.4	100	1.68	100		3.6	3.6
	S*			52.7		-0.1	100					
OBZ	eP*	07	53	32.8		-0.8	100	1.87	155			
	eS*			58		-0.3	100					
RHP	Pn	07	53	41.0		0.8	100	2.49	64			
MJZ	ePn	07	53	47.5		3.3		2.79	65			
	eP*			52.5		3.1						
	eSn		54	18.5		1.4						
OMZ	Pn	07	53	45.0		0.6	100	2.81	88		3.7	3.3
	eSn		54	18		0.6	100					

AMPLITUDES:									
MSZ	1.6	9.0	ROX		0.8	2.2	OMZ	0.4	0.3

78/ 315

JUN 09 $19^h59^m25^s.4$ 36°.27S 176°.90E 33 km M = 4.1

± 2.7 0.14 0.27 R S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	eP	19	59	46.8		0.4	100	1.28	170			

	e	20	00	02								
	eS			06		3.9						
WTZ	P	19	59	53.8		1.4	100	1.71	178		3.6	4.1
	eS	20	00	10.8		-1.7	99					
ECZ	P	19	59	54.2		-1.2	100	1.94	138		4.3	4.3
	eS	20	00	21.5		3.5						
GNZ	eP	20	00	03		-0.5	100	2.54	160		4.0	4.3
	S			33.8		1.5	100					
MNG	e(P)	20	00	38.5		8.3		4.48	194		3.9	4.2
	e(S)		01	28.6		9.5						

AMPLITUDES: WTZ 0.4 0.7 ECZ 0.5 0.6 GNZ 0.5 1.2
MNG 0.2 0.3

78/ 316

JUN 09 $21^h00^m23^s.8$ 36°.24S 177°.14E 33 km M = 4.1
± 1.4 0.07 0.09 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	eP	21	00	45.5		0.5	100	1.29	178			
	eS			59.5		-1.2	99					
	i		01	03.5								
WTZ	eP	21	00	52.0		0.8	100	1.75	184		3.9	4.3
	eS		01	11.5		-0.3	100					
ECZ	eP	21	00	51.2		-1.3	99	1.84	143		4.3	4.4
	e			52.8								
	eS		01	14.2		0.2	100					
GNZ	eP	21	01	01.5		-0.0	100	2.50	164		3.9	4.3
	S			31.0		1.0	100					
MNG	eP	21	01	32		2.3		4.57	196		3.8	4.1
	e			57								
	e(S)		02	27		7.5						

AMPLITUDES: WTZ 0.9 1.5 ECZ 0.7 0.9 GNZ 0.5 1.6
MNG 0.2 0.3

78/ 317

JUN 09 $23^h49^m23^s.6$ 36°.39S 177°.32E 33 km M = 4.2
± 2.6 0.14 0.15 R S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	P	23	49	43.0		0.2	100	1.14	185			
	S			58.0		0.9	100					
WTZ	P	23	49	49.0		-0.2	100	1.62	189		3.9	4.2
	S		50	06.0		-2.4	99					
ECZ	P	23	49	50.0		0.5	100	1.63	143		4.4	4.5
	i		50	01.0								
	iS			06.8		-2.0	100					
GNZ	eP	23	49	59.0		0.1	100	2.32	166		4.0	4.3
	S		50	28.2		2.8	99					
TUA	e	23	50	11				2.42	183			4.4
	eS			37		9.2						
MNG	eP	23	50	29.5		1.4		4.46	198		3.9	4.1
	e			39.8								
	e			48								
	(S)		51	23		6.1						

AMPLITUDES: WTZ 1.4 1.8 ECZ 1.3 1.6 GNZ 0.8 2.1
TUA 0.6 MNG 0.3 0.5

78/ 318

JUN 10 $01^h13^m29^s.1$ 37°.38S 176°.74E 332 km M = 4.5

± 0.9 0.07 0.09 8 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	P	01	14	13.1		-0.4	100	1.10	240		3.5*	
TUA	P	01	14	16.0		0.5	100	1.47	167		4.5	4.4
	S			52.0		0.3	100					
ECZ	P	01	14	15.0		-0.5	100	1.48	103		4.2	4.5
	eS			50.0		-1.8	99					
	e			54.8								
GNZ	P	01	14	17.0		0.6	100	1.62	142		4.8	4.5
	S			53.6		0.1	100					
NGZ	P	01	14	19.8		0.7	100	2.01	206			
	e(S)		15	02.2		4.0						
CNZ	P	01	14	20.0		0.7	100	2.04	207			
	e		15	11.0								
GSZ	P	01	14	21.0		1.2	100	2.11	205			
	eS			59.5		0.0	100					
	e		15	05.3								
TRZ	P	01	14	22.0		1.6	99	2.17	178		4.3	4.3
	eS		15	05.3		4.9	0					
TNZ	eP	01	14	24.5		0.7	100	2.59	225		3.3*	
MNG	P	01	14	30.8		-0.3	100	3.38	196		4.6	4.8
	S		15	19.5		-0.3	100					
WEL	P	01	14	39		-0.5	100	4.19	201	4.3		
	S		15	35		0.2	100					
COB	eP	01	14	44		-2.6	91	4.84	219		3.4*	3.3*
	S		15	46.7		-0.7	100					

AMPLITUDES: KRP 1.7 TUA 1.1 0.8 ECZ 0.5 1.1
GNZ 4.7 4.0 TRZ 0.5 1.1 TNZ 0.2
MNG 4.1 7.8 WEL 0.3 COB 0.3 0.9

78/ 319

JUN 10 $02^h15^m49^s.1$ 36°.19S 178°.79E 292 km M = 4.1

± 1.1 0.08 0.13 7 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	02	16	32.7		0.9	100	1.51	187		4.1	4.0
	eS		17	05		-0.1	100					
WTZ	P	02	16	37.0		-1.0	100	2.30	218		3.9	3.9
	e		17	11.5								
	eS			16		-0.1	100					
GNZ	P	02	16	41.0		0.9	100	2.53	194		4.5	4.2
	e		17	17.0								
	S			19.0		-0.8	100					
KRP	eP	02	16	45.5		-0.5	100	3.13	235		2.7*	
TRZ	eP	02	16	51		-1.1	100	3.71	204		4.3	4.2
	eS		17	43		1.7	99					
NGZ	eP	02	16	55.0		0.6	100	3.91	219			
MNG	P	02	17	08.3		-0.1	100	5.13	209		4.1	3.9
	S		18	09.5		-1.1	100					
WEL	eS	02	18	28		-0.8	100	5.98	211	4.3		
COB	eS	02	18	48		1.0	100	6.81	222			3.0*

AMPLITUDES: ECZ 0.5 0.4 WTZ 0.5 0.6 GNZ 2.2 1.7
KRP 0.2 TRZ 0.3 0.6 MNG 0.9 0.6
WEL 0.2 COB 0.3

78/ 320

JUN 11 $19^h37^m16^s.1$ 38°.92S 175°.25E 112 km M = 3.6

± 1.5 0.04 0.05 16 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	P	19	37	33.5		0.5	100	0.44	144			
TNZ	eP	19	37	36.8		1.8	99	0.73	249		2.9*	
KRP	P	19	37	37.0		-1.0	100	1.03	13		2.2*	2.8*
	S			53.2		-1.4	100					
TRZ	P	19	37	43.1		1.2	100	1.37	118		3.5	3.7
	S		38	03		1.5	100					
TUA	e	19	37	59				1.48	86			3.9
	eS		38	04.5		0.5	100					
WTZ	eS	19	38	09.0		1.6	100	1.66	56			3.1
MNG	P	19	37	45.0		-0.9	100	1.70	174		3.5	4.0
	i		38	06.0								
	S			07.4		-1.0	100					
GNZ	eP	19	37	52.8		0.8	100	2.19	84		3.3	3.7
	i		38	13.8								
	S			16.2		-2.8	98					
WEL	eS	19	38	22.8		-1.0	100	2.39	189	3.6		
COB	eS	19	38	36.5		0.3	100	2.90	221			2.9*

AMPLITUDES:

TNZ	0.3		KRP	0.2	1.0	TRZ		0.4	1.3
TUA		0.9	WTZ		0.3	MNG		1.8	7.6
GNZ	0.3	1.1	WEL	0.2		COB			0.6

78/ 321

JUN 12 $11^h35^m35^s.4$ 42°.32S 172°.97E 12 km M = 4.9

± 0.3 0.04 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
KKY	P*	11	35	45.3		-0.6	100	0.55	101			
KAI	eP*	11	35	57.4		0.7	100	1.17	259	4.9		
	i			58.6								
	i		36	00.8								
	S*			13.3		1.0	100					
CHR	P*	11	35	57.8		-0.0	100	1.24	192			
	i		36	02.2								
	e			18.8								
COB	Pn	11	35	55.4		-2.5	98	1.24	352			
	eP*			58.0		0.2						
WEL	ePn	11	36	03.3		-0.8	100	1.69	53	4.7		
	eP*			06.8		1.2	100					
	S*			30.0		2.1	99					
	i			33.0								
MJZ	Pn	11	36	15.0		0.2	100	2.48	227			
	ePg			23.0		-2.6						
MNG	Pn	11	36	14.0		-1.6	99	2.54	49		5.2	
	i			17.4								
	iP*			21.0		1.0	100					
RHP	Pn	11	36	18.8		0.1	100	2.76	229			
	iP*			23.5		-0.3						
	i(Pg)			27.8		-3.5						
OMZ	ePn	11	36	23.2		-0.5	100	3.13	208		4.7	
	eP*			31		0.9						
	ePg			37.1		-1.7						
TNZ	ePn	11	36	26.5		0.4	100	3.30	19		5.2	
	e			27.8								

	eP*			33.0	-0.0					
	i(Pg)			37.1	-5.2					
GSZ	Pn	11	36	33.0	2.5		3.63	34		
	eP*			37.4	-1.2					
CNZ	Pn	11	36	30.2	-1.0	100	3.68	33		
	iP*			37.4	-2.0					
NGZ	Pn	11	36	32.3	0.6		3.72	34		
	eP*			38.5	-1.6					
TRZ	P*	11	36	46.0	0.8		4.02	48	4.8	4.6
ROX	ePn	11	36	36.5	-0.6		4.11	219	4.9	
	eP*			45.0	-1.9					
KRP	Pn	11	36	46.1	-0.5		4.81	25	5.1	
	i			50.6						
	iP*			59.0	0.3					
	Sn		37	44	3.6					
	eS*		38	06	4.7					
WTZ	ePn	11	36	53.0	-0.5		5.31	37	5.1	
	eP*		37	05.3	-2.0					
GNZ	e(Pn)	11	36	59.8	6.2		5.33	48	5.0	
	eP*		37	07.8	0.3					
	e			17.4						
	iPg			23.3	0.3					
	eSn			51	-1.7					

AMPLITUDES:							
KAI	22	WEL	7.2	MNG	41		
OMZ	3.2	TNZ	4.7	TRZ	1.5	1.6	
ROX	2.5	KRP	7.5	WTZ	1.4		
GNZ	3.2						

FELT: Maruia (87) MM IV, Middlehurst (82). Shocks 78/322 and 78/331 possibly related. No other aftershocks

78/ 322

JUN 12 $23^h37^m17^s.7$ 42°.18S 173°.04E 12 km M = 3.5

± 0.3 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
KKY	P*	23	37	27.2		-0.9	100	0.54	117			
	i			28.4								
COB	P*	23	37	36.5		-1.4	98	1.12	348		3.7	3.5
	S*			53.0		0.2	100					
KAI	eP*	23	37	41		0.6	100	1.26	253			
	S*			57		-0.1	100					
WEL	eP*	23	37	46		0.3	100	1.57	56	3.3		
	eS*		38	07		0.5	100					
	e			11								
MNG	Pn	23	37	55.6		-0.5	100	2.41	51		3.7	
	eP*		38	00.7		0.7	100					
MJZ	eP*	23	38	04		0.5	100	2.62	225		3.0*	
TNZ	eP*	23	38	13		0.2		3.16	19			3.6
KRP	ePn	23	38	29		2.1		4.66	25		3.5	
	e(Sn)		39	25		5.9						

AMPLITUDES:							
COB	2.2	5.7	KAI	1.0	WEL	0.3	
MNG	1.6	MJZ	0.3	TNZ		0.2	
KRP	0.2						

78/ 323

JUN 13 $21^h55^m03^s.3$ 33°.93S 179°.07W 33 km M = 4.6

± 2.2 0.10 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
GBZ								5.02	241					
WTZ	P	21	56	17.5		0.2	100	5.16	217			4.7		4.2
	i			24										
	eS		57	13		-0.2	100							
GNZ	eP	21	56	20		1.3	100	5.26	206					
	e			37										
	S		57	16.0		0.3	100							
ONE	eP	21	56	25		0.2	100	5.71	249					
KRP	eP	21	56	28.0		0.3	100	5.92	226			4.8		
TNZ	e(P)	21	56	57		8.6		7.44	223			5.2		
MNG	eP	21	56	53		-2.6	97	7.96	211			4.3		4.3
	e		57	09.5										
	e(S)		58	16		-4.7								

AMPLITUDES: GBZ 0.8 WTZ 2.0 0.6 KRP 0.5
TNZ 0.2 MNG 0.6 0.7

78/ 324

JUN 14 $01^h35^m00^s.1$ 44°.22S 168°.53E 12 km M = 4.2
± 0.7 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
MSZ	P*	01	35	11.8		-0.2	100	0.63	224					
	iS*			20.8		0.2	100							
RHP	P*	01	35	18.8		-1.7	100	1.13	84					
	eS*			37.8		2.2	99							
ROX	ePn	01	35	23.0		-1.4	100	1.38	156			4.6		
	iP*			24.4		-0.4	100							
	S*			41.5		-1.5	100							
OBZ	Pn	01	35	43.8		1.3	100	2.70	186					
	iP*			46.7		-0.7	100							
	i			49.3										
	Sn		36	17		2.6	99							
KAI	eP*	01	35	50		2.6		2.70	52	3.9				
	eS*		36	21		-1.8								
	e			27										
COB	Pn	01	36	05.0		-0.8	100	4.41	46			4.4		3.8
	i			07.2										
	eSn			56		0.5	100							
	e		37	24.5										
MNG	Pn	01	36	34.7		3.3		6.28	57					

AMPLITUDES: ROX 12 KAI 0.4 COB 0.7 0.7

78/ 325

JUN 15 $12^h26^m13^s.6$ 44°.55S 167°.82E 12 km M = 3.8
± 1.3 0.05 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
MSZ	Pg	12	26	17.4		0.2	100	0.13	150					
ROX	P*	12	26	39.2		0.3	100	1.41	132			3.7		3.7
	S*			59.2		1.6	99							
RHP	P*	12	26	42.6		-0.9	100	1.68	75					
	S*		27	06.0		0.2	100							
MJZ	Pn	12	26	47.0		0.8	100	1.98	74			3.6*		3.4*
	iP*			49.5		0.9	100							
	S*		27	12.8		-1.9	99							
OMZ	ePn	12	26	51		1.0		2.27	104			3.5		
OBZ	P*	12	26	56.0		0.8	100	2.37	175					

	eS*		27	24.0		-2.2	99						
KAI	eS*	12	27	55		0.7		3.30	53	3.9			
COB	ePn	12	27	29		1.6		5.00	48		4.1	3.6	
	eSn		28	18		-5.3							

AMPLITUDES: ROX 1.6 3.5 MJZ 2.0 2.0 OMZ 0.4
KAI 0.3 COB 0.3 0.3

78/ 326

JUN 15 $18^h16^m27^s.9$ $37°.85S$ $176°.27E$ 218 km M = 4.8
± 1.2 0.06 0.06 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	18	16	57.2		-0.3	100	0.58	263		3.9*	3.3*
	iS		17	21.0		0.6	100					
WTZ	P	18	16	55.9		-1.6	99	0.58	103		4.6	4.5
	S		17	18.2		-2.2	99					
WNZ	eP	18	16	58.7		0.3	100	0.79	190		4.5	
TUA	P	18	17	00.4		-0.5	100	1.18	144		4.8	5.1
	S			28.5		2.1	99					
NGZ	eP	18	17	04.0		1.2	100	1.42	201			
	e(S)			34.0		4.2						
CNZ	P	18	17	04.8		1.7		1.46	203			
	e(S)			36.2		5.9						
GSZ	P	18	17	05.2		1.6		1.52	200			
GNZ	P	18	17	05.2		1.0	100	1.59	120		5.2	5.2
	S			32.5		0.2	100					
TRZ	P	18	17	06.6		0.9	100	1.75	166		4.9	
	eS			33.5		-1.4	100					
	e			40								
TNZ	P	18	17	10.0		1.9	99	2.00	227		4.0*	
WEL	eP	18	17	26		-0.3	100	3.62	198	4.7		
	S		18	11.8		0.3	100					
COB	P	18	17	33		-0.8	100	4.24	219		3.6*	4.2*
	S		18	25.0		-0.0	100					
KAI	eS	18	19	03		-1.2	100	5.98	217	4.2*		

AMPLITUDES: KRP 6.5 2.1 WTZ 10 7.7 WNZ 0.4
TUA 5.5 10 GNZ 25 37 TRZ 3.5
TNZ 1.5 WEL 1.3 COB 0.6 7.4
KAI 1.1

78/ 327

JUN 17 $19^h16^m26^s.4$ $38°.62S$ $176°.68E$ 46 km M = 3.9
± 0.4 0.02 0.03 6 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TUA	P	19	16	36.1		-0.6	100	0.41	117		4.0	3.9
	S			45.8		1.2	100					
WNZ	P	19	16	37.5		0.2	100	0.45	269		3.9	
	i			40.5								
WTZ	P	19	16	40.1		0.1	100	0.68	21			
	S			50.3		0.2	100					
TRZ	P	19	16	42.0		-1.5	99	0.94	173		4.3	
NGZ	P	19	16	43.9		-0.6	100	1.01	236			
	S			57.0		-0.9	100					
GNZ	P	19	16	44.8		-0.2	100	1.05	92		3.6	3.8
	i			48.2								
	i			53.0								
	S			58.8		-0.2	100					
CNZ	P	19	16	44.4		-0.7	100	1.06	237			

GSZ	P	19	16	44.5		-0.9	100	1.08	232				
KRP	P	19	16	46.4		0.1	100	1.13	307		3.1*	3.1*	
	S		17	01.5		0.3	100						
ECZ	P	19	16	55.0		0.3	100	1.74	58		4.2		
TNZ	P	19	16	56.7		0.1	100	1.88	252		3.3*		
MNG	iP	19	17	01.4		0.1	100	2.20	205		3.9		
	S			28		0.6	100						
WEL	eP	19	17	15		1.7	99	3.04	208	3.9			
	e(S)			55		6.2							
COB	P	19	17	24.0		-1.5	99	3.91	230		3.7*	3.6*	
	eS		18	13		2.2	96						

AMPLITUDES:									
TUA	19	16	WNZ	1.5		TRZ	6.3		
GNZ	3.0	8.0	KRP	1.9	2.2	ECZ	1.6		
TNZ	0.4		MNG	3.0		WEL	0.3		
COB	0.8	2.2							

78/ 328

JUN 17 $22^h19^m22^s.9$ 38°.07S 175°.69E 326 km M = 5.4
± 0.7 0.04 0.07 5 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	P	22	20	04.0		-0.2	100	0.19	320			
	S			35.5		-0.9	100					
WNZ	eP	22	20	05.3		0.4	100	0.65	150		4.7	
NGZ	P	22	20	08.0		1.2	100	1.12	183			
GSZ	P	22	20	08.4		1.2	100	1.21	184			
	eS			41.7		-0.3	100					
TUA	P	22	20	08.0		-0.1	100	1.37	123		5.7	5.8
	e			29.8								
	e			37.0								
TNZ	P	22	20	10.3		1.3	99	1.52	222		4.2*	4.0*
	S			47.0		2.0	98					
TRZ	iP	22	20	11.0		0.6	100	1.73	150		5.4	
ECZ	P	22	20	13.8		-0.8	100	2.29	81			
	e			42.7								
MNG	iP	22	20	17.0		0.2	100	2.56	184		5.3	
	S			57.5		-1.4	99					
WEL	eP	22	20	24.0		0.4	100	3.29	192	5.5		
	eS		21	11		-0.2	100					
COB	P	22	20	28.5		-0.2	100	3.78	216		4.8*	4.5*
	S		21	19.0		-1.2	100					
CRZ	P	22	20	34.0		-1.0	100	4.37	325		3.8*	
MJZ	P	22	21	07.0		0.2		7.11	212			
	S		22	29.4		1.0						
RHP	P	22	21	11.0		1.1		7.37	213			
	eS		22	35		1.1						
ROX	P	22	21	27.2		0.1		8.80	211		4.3*	4.1*
	e		23	02.7								
	eS			08.0		2.9						

AMPLITUDES:									
KRP	4.3	11	WNZ	0.3		TUA	19	22	
TNZ	2.0	1.8	TRZ	7.8		MNG	27		
WEL	7.1		COB	8.3	14	CRZ	0.6		
ROX	1.5	2.1							

78/ 329

JUN 20 $05^h57^m44^s.5$ 34°.74S 178°.49E 33 km M = 4.4
± 5.3 0.32 0.38 R S.E. of RES. 3.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	05	58	28.3		0.0	100	2.95	179		4.7	
WTZ	P	05	58	36.1		0.8	100	3.46	200		4.4	4.3
	eS		59	18		4.4	99					
GNZ	P	05	58	41.0		-0.5	100	3.91	185			
	S		59	22.5		-2.1	100					
TRZ	eS	05	59	50		-0.3		4.99	195		4.5	
COB	S	06	00	55.5		-2.5	100	7.80	214			4.3

AMPLITUDES: ECZ 0.7 WTZ 1.2 0.7 TRZ 0.3 COB 0.3

78/ 330

JUN 20 $23^h10^m39^s.6$ 37°.48S 178°.91E 33 km M = 3.7

± 1.9 0.08 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	iP	23	10	48.2		0.2	100	0.36	233			
	eS			55.7		1.5	99					
GNZ	e(P)	23	11	05.0		3.3		1.36	211			
	S			17.5		-0.7	100					
WTZ	P	23	11	04.8		-0.3	100	1.60	251		3.6	3.9
	S			23.2		-0.9	100					
KRP	eP	23	11	20.5		0.3	100	2.71	259		3.5	

AMPLITUDES: WTZ 1.7 3.0 KRP 0.2

78/ 331

JUN 21 $15^h22^m18^s.3$ 42°.27S 172°.93E 12 km M = 4.7

± 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
KKY	P*	15	22	29.3		-0.1	100	0.58	105			
KAI	eP*	15	22	41.0		1.8	99	1.15	257	4.6		
	i			45.8								
	Sg			56.7		-0.7	100					
COB	P*	15	22	38.9		-0.9	100	1.19	353		4.6	
	S*			55.0		-0.6	100					
CHR	eP*	15	22	41.0		-0.3	100	1.29	190			
	iPg			43.7		-0.6	100					
WEL	P*	15	22	46.0		-2.3	96	1.69	55	4.5		
	S*		23	11.5		0.8	100					
	i			16.0								
MJZ	Pn	15	22	58.0		0.2	100	2.49	226		4.7*	
	eP*		23	02.5		0.5						
	ePg			06.5		-2.2						
RHP	Pn	15	23	02.2		0.5	100	2.77	228			
	iP*			07.2		0.4						
OMZ	Pn	15	23	06.8		-0.1	100	3.16	207			
	ePg			20.2		-2.0						
GSZ	P*	15	23	21.2		0.1		3.61	35			
NGZ	ePn	15	23	18.0		3.7		3.70	34			
	iP*			23.0		0.4						
TRZ	eP*	15	23	28.0		0.1		4.01	49		4.4	
	ePg			40.3		0.9						
ROX	ePn	15	23	20.0		-0.2		4.14	218			
	e			34.9								
	eSn		24	10.3		3.3						
TUA	eP*	15	23	37.5		-2.6		4.72	44		4.7	
	e			45								

KRP	Pn	15 23 30.0	0.9	100	4.78	26	4.7		
	eP*	43.5	2.4						
	Sn	24 26.2	3.6						
WTZ	ePn	15 23 36.5	0.4		5.29	37	5.2		
	eP*	51.5	1.7						
GNZ	e(P*)	15 23 58.5	8.4		5.31	49			
	ePg	24 04.3	-1.4						
	Sn	36	0.6	100					

AMPLITUDES: KAI 13 COB 18 WEL 4.0
MJZ 16 TRZ 0.6 TUA 0.7
KRP 3.2 WTZ 1.7

FELT: Middlehurst (82)

78/ 332

JUN 22 $13^h47^m23^s.1$ 38°.08S 176°.98E 60 km M = 3.0
± 1.2 0.06 0.06 10 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	13	47	31.7		-0.7	100	0.09	2			
	i			36.3								
	S			39.7		0.4	100					
TUA	P	13	47	37.8		-0.5	100	0.75	170		3.0	3.1
	S			50.0		0.4	100					
GNZ	P	13	47	43.6		2.0	98	1.00	125			
	S			54.0		-1.3	99					
KRP	P	13	47	43.1		-0.5	100	1.15	277		3.0*	
	S			59.2		0.2	100					
TRZ	e(S)	13	48	12.5		5.5		1.48	185			3.0

AMPLITUDES: WTZ 2.5 10 TUA 0.5 0.7 KRP 1.5
TRZ 0.3

78/ 333

JUN 22 $17^h54^m37^s.8$ 45°.00S 166°.58E 33 km M = 4.5
± 1.3 0.06 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
MNW	S-P			12.0		-1.5	99	1.07	137			
ROX	P	17	55	07.8		-0.8	100	2.00	105		4.6	4.5
	i			09.0								
	S			32.3		0.6	100					
OBZ	P	17	55	10.3		-0.9	100	2.19	151			
	i			11.1								
	i			35.2								
	S			37.2		0.9	100					
RHP	P	17	55	18.2		0.5	100	2.66	71			
OMZ	P	17	55	22.5		-0.8	100	3.08	93		4.4	
	e		56	14.0								
COB	eP	17	56	02		-0.8		5.98	51			
	e			06								
	eS		57	07		-0.2						
	e			17.5								

AMPLITUDES: ROX 6.1 12 OMZ 1.7

78/ 334

JUN 22 $18^h32^m17^s.9$ 36°.22S 179°.52E 176 km M = 4.3
± 1.0 0.07 0.09 10 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	18	32	50.8		-0.7	100	1.67	208			
WTZ	P	18	33	02.9		-0.2	100	2.69	228		4.6	4.2
	eS			36		-1.8	99					
GNZ	P	18	33	03.4		0.1	100	2.70	206			
	S			38.7		0.5	100					
TUA	P	18	33	10.3		0.8	100	3.20	215		4.8	
KRP	P	18	33	14.7		-0.0	100	3.62	241		3.3*	
	eS			59.3		0.9	100					
TRZ	eP	18	33	19.2		0.1	100	3.96	212		4.4	4.3
	e(S)		34	11		4.7						
NGZ	P	18	33	23.7		0.3	100	4.29	225			
	S		34	15		1.2	100					
CNZ	P	18	33	25.2		1.3	100	4.34	225			
MNG	eP	18	33	36.5		-1.6	99	5.43	215		4.0	4.0
	eS		34	41.4		1.1	100					
CRZ	eP	18	33	41		-2.9		5.88	286		3.4*	
WEL	eS	18	35	00		-0.5	100	6.28	215	4.4		
COB	eS	18	35	21		-1.4	99	7.21	225			3.1*

AMPLITUDES: WTZ 3.6 1.6 TUA 1.6 KRP 0.8
TRZ 0.4 0.7 MNG 0.6 0.8 CRZ 0.2
WEL 0.2 COB 0.4

78/ 335

JUN 22 $21^h00^m23^s.0$ 45°.95S 166°.00E 33 km M = 4.2
± 1.9 0.09 0.16 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNW	S-P			12		-2.3	99	1.14	82			
OBZ	P	21	00	50.0		-0.4	100	1.75	124			
	i			52.2								
	S		01	11.0		0.1	100					
ROX	P	21	00	59.0		0.1	100	2.38	80		4.8	4.3
	i		01	01.8								
	S			28		2.0	99					
RHP	P	21	01	13.0		-0.4	100	3.44	59			
	i			15.5								
	e			19.2								
OMZ	eP	21	01	13.8		-1.4	100	3.56	77		3.8	
COB	eP	21	02	02		1.3		6.90	48		4.4	3.8
	eS		03	17		2.3						

AMPLITUDES: ROX 5.8 5.7 OMZ 0.3 COB 0.3 0.3

78/ 336

JUN 23 $00^h12^m14^s.4$ 36°.64S 177°.88E 247 km M = 4.8
± 0.7 0.05 0.06 4 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	00	12	50.0		-0.3	100	1.18	153		4.2	5.0
	e		13	12.3								
	S			18		-0.2	100					
WTZ	P	00	12	51.9		-0.8	100	1.51	208		4.6	4.7
	i		13	10.2								
	S			21		-1.4	99					
GNZ	P	00	12	58.0		1.2	99	2.01	177			
	S		13	30		0.2	100					
TUA	P	00	12	59.3		0.2	100	2.24	195		4.6	4.7
	eS		13	34		0.2	100					

KRP	iP	00	13	00.0	DE	0.7	100	2.27	235				
	S			35		0.8	100						
TRZ	P	00	13	08.2		0.8	100	3.02	196		4.8	5.0	
	eS			48		-0.5	100						
NGZ	P	00	13	09.9		1.7		3.10	215				
CNZ	P	00	13	10.1		1.4	99	3.15	215				
GSZ	P	00	13	10.8		1.6		3.19	214				
MNG	iP	00	13	23.1	D	-0.2	100	4.39	205		5.3	4.9	
	S		14	17		0.1	100						
WEL	P	00	13	32.8		-0.8	100	5.24	207	4.9			
	S		14	35.7		0.4	100						
COB	eP	00	13	41		-1.9	97	5.98	221		4.1*	3.5*	
	eS		14	52		0.0	100						
CIZ	eS	00	15	59		11.0		8.45	152				
RHP	eP	00	14	28		0.1		9.53	216				

AMPLITUDES:											
	ECZ	1.0	5.9	WTZ	4.5	7.2	TUA		1.6	2.0	
	TRZ	1.3	5.0	MNG	19	9.7	WEL	1.0			
	COB	1.2	1.1								

78/ 337

JUN 23 $07^h39^m15^s.2$ $35°.37S$ $179°.30W$ 194 km M = 4.4

± 1.4 0.06 0.13 15 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ								2.90	216		4.3	4.4
GNZ	eP?	07	40	18		1.7		3.91	212			
	eS		41	04		0.5	100					
WTZ	eP	07	40	16		-1.0	100	3.97	228		4.4	4.3
	S		41	04		-0.8	100					
TUA	eP	07	40	24		0.8	100	4.45	219		4.6	4.6
KRP	P	07	40	28.8		0.3	100	4.88	237		3.3*	3.1*
	eS?		41	25		-0.4	100					
ONE	eP	07	40	34		1.4	99	5.18	264	3.8*		
CRZ	eP	07	40	51		-0.8	100	6.66	276		4.0*	
MNG	eP	07	40	51		-0.9	100	6.67	217		4.4	4.0
	e(S)		42	09		1.8	99					
WEL	eS	07	42	26		-1.4	99	7.52	217	4.6		
COB	eS	07	42	50		0.3	100	8.48	225			3.1*
CIZ	eS	07	43	00		2.1		8.84	167			

AMPLITUDES:											
	ECZ	0.6	0.7	WTZ	1.0	0.9	TUA		0.6	0.6	
	KRP	0.7	0.4	ONE	0.8		CRZ		0.7		
	MNG	1.1	0.6	WEL	0.2		COB			0.3	

78/ 338

JUN 24 $02^h22^m36^s.4$ $38°.65S$ $175°.64E$ 176 km M = 4.1

± 1.7 0.06 0.08 13 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
NGZ	P	02	23	02.5		1.4		0.53	182			
	S			23		3.0						
CNZ	P	02	23	02.8		1.6	100	0.56	188			
KRP	P	02	23	02.8		0.8	100	0.73	353		3.2*	2.7*
	S			21		-0.7	100					
TUA	S	02	23	26.5		-1.2	100	1.19	98			4.0
TRZ	P	02	23	07.8		1.6	100	1.29	135		4.1	4.0
	S			32		2.7	98					
GNZ	S	02	23	37.2		-2.3	99	1.86	91			
MNG	iP	02	23	13.3	U	0.1	100	1.97	184		4.1	4.0
	S			41		-0.6	100					

WEL	P	02	23	21.9		0.0	100	2.72	194	4.2	
	S			56		-0.9	100				
COB	P	02	23	29		-0.2	100	3.31	222		3.5* 3.5*
	S		24	09		-0.9	100				
RHP	eP	02	24	14		-1.5		6.87	216		
	eS		25	29		-3.9					

AMPLITUDES: KRP 1.6 0.6 TUA 1.1 TRZ 1.0 2.1
MNG 5.1 4.9 WEL 0.7 COB 0.6 1.9

78/ 339

JUN 24 $20^h38^m41^s.9$ 39°.55S 173°.57E 12 km M = 3.7
± 0.3 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
TNZ	eP*	20	38	56		0.6	100	0.73	60		3.4	
CNZ	Pn	20	39	08.5		-0.4	100	1.57	78			
	Pg			14		0.2	100					
	Sn			29		-0.1	100					
GSZ	Pn	20	39	08.9		-0.2		1.58	81			
	Sn			29.6		0.2						
NGZ	Pn	20	39	09.0		-0.6		1.63	78			
	Pg			14.5		-0.3						
	Sn			29.6		-0.7						
COB	Pn	20	39	10		-0.1	100	1.66	202		4.0	3.6
	P*			11.6		0.1	100					
	Pg			14.8		-0.8	99					
	Sn			30.8		-0.5	100					
	S*			34		0.5	100					
MNG	Pn	20	39	12.2		0.0	100	1.82	127		3.9	3.9
	P*			14.0		-0.0	100					
	Pg			19.1		0.5	100					
	Sn			34.3		-0.6	100					
WEL	Pn?	20	39	15		0.8	99	1.96	153	3.4		
	eSn			38		-0.4	100					
	eSg			48.5		0.4	100					
KRP	ePn	20	39	19		1.1	99	2.24	44			
	eSn			44		-1.0	99					

AMPLITUDES: TNZ 1.5 COB 2.0 3.0 MNG 4.1 5.5
WEL 0.2

78/ 340

JUN 27 $22^h33^m32^s.4$ 37°.74S 177°.46E 33 km M = 4.0
± 1.2 0.08 0.08 R S.E. of RES. 2.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPn!	22	33	42.1		-0.0	100	0.45	237			
ECZ	Pn	22	33	47.3		-0.4	100	0.86	87		4.3	3.8
	S*		34	03.2		2.5						
GNZ	iPn	22	33	47.2	D	-2.5	99	1.01	154		3.8	3.6
	eSn		34	05		2.4	99					
TUA	eP*?	22	33	53		0.4		1.10	193		3.6	3.8
	Sn		34	06		1.3	100					
KRP	iPn	22	33	57.4	D	0.4	100	1.54	262		4.0	4.0
	Sn		34	16.1		0.8	100					
NGZ	ePn	22	34	04		0.1		2.05	225			
CNZ	Pn	22	34	05.9		1.3	100	2.10	225			
GSZ	Pn	22	34	06.1		1.0		2.13	223			
TNZ	ePn?	22	34	16		1.5		2.83	238		4.3	4.3
MNG	ePn?	22	34	22		1.5		3.27	208		3.8	3.7

WEL	Sn	22	35	14		-3.2	99	4.11	210	4.2			
COB	ePn?	22	34	42		-1.7		4.96	226		4.5	3.9	
	eSn?		35	39.5		1.8							
AMPLITUDES:		ECZ			5.3	2.2	GNZ		4.7	4.8	TUA	1.2	1.9
		KRP			2.1	1.9	TNZ		0.2	0.2	MNG	1.2	1.2
		WEL	0.3				COB		0.8	0.6			

78/ 341

JUN 29 $01^h52^m15^s.8$ 43°.74S 172°.68E 12 km M = 4.4

± 0.5 0.03 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
CHR	iP*	01	52	20.5	D	-0.1	100	0.21	349			
	e			33.8								
KKY	iPn	01	52	42.0		0.0	100	1.51	30			
	iPg			47.8		1.3	100					
	eSn		53	02		0.4	100					
KAI	eP*	01	52	43.5		0.4	100	1.53	322	4.4		
	Sn		53	02		0.1	100					
MJZ	ePn	01	52	43.8		0.4	100	1.62	260		4.4*	4.5*
	P*			46.1		1.5	100					
	S*		53	06		-0.1	100					
MJP	Pn	01	52	43.5		0.0		1.63	260			
	iP*			46.0		1.3						
MMP	Pn	01	52	46.0		0.4		1.78	256			
	iP*			48.9		1.5						
HHP	Pn	01	52	46.1		0.4		1.78	250			
OMZ	iPn	01	52	47.2		0.8	100	1.84	223			
	i(Pg)			51.5		-1.5	100					
BSP	Pn	01	52	47.1		0.3		1.87	265			
	iP*			50.8		1.9						
RHP	Pn	01	52	47.6		0.2	100	1.91	258			
	i(Pg)			53.5		-1.0	100					
	e(S*)		53	14.5		-0.2	100					
	e			18								
HGP	Pn	01	52	50.4		0.7		2.08	259			
DMP	Pn	01	52	51.3		0.4		2.17	251			
	iP*			56.2		2.3						
COB	ePn	01	52	58		0.5	100	2.65	1		4.4	3.9
	e(Pg)		53	08		-1.4	100					
	Sn			29		0.1	100					
	Sg			46.7		1.5	100					
WEL	eSn	01	53	33		-1.8	100	2.90	33	4.1		
ROX	ePn	01	53	02.5		0.7	100	2.96	233		4.8	4.7
	e			13.0								
	ePg			16.5		0.8	100					
	e(S*)			49.5		3.2	98					
	(Sg)			52.5		-3.1	98					
MSZ	ePn	01	53	12		2.2	99	3.55	253		4.6	4.8
	e			23.8								
	ePg			26		-1.6	100					
	eS*		54	05		1.1	100					
	Sg			13		-2.4	99					
MNG	ePn	01	53	11.7		-0.8	100	3.75	35		4.1	3.9
	Pg			33		1.4	100					
	eSn			52.5		-2.8	99					
MNW	e(S*)	01	54	24		2.3		4.15	239	4.4		
KRP	ePn	01	53	48		2.0		6.20	21			
	eSn		54	52		-2.2						

AMPLITUDES: KAI 4.5 MJZ 16 39 COB 1.9 2.3
WEL 0.6 ROX 3.8 9.0 MSZ 4.5 13
MNG 1.6 1.2 MNW 0.8

FELT: In Christchurch region, maximum intensity MM V at Ashburton (108)

78/ 342

JUN 29 $13^h24^m59^s.1$ 40°.13S 174°.97E 12 km M = 3.6
± 0.2 0.01 0.02 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iP*	13	25	11.4	U	0.5	100	0.62	142		3.5	3.5
	Pn			13		-0.1	100					
	S*			19.4		0.0	100					
KIW	iP*	13	25	12.5	D	-0.3	100	0.73	184			
GSZ	P*	13	25	16.0		-1.0		0.98	29			
CNZ	iP*	13	25	17.0		-0.9	99	1.03	26			
	S*			31.9		0.1	100					
WEL	ePn	13	25	21		0.5	100	1.16	188	3.6		
	S*			35.2		-0.5	100					
WHW	P*	13	25	20.6		0.2	100	1.18	189			
TCW	iP*	13	25	20.1	D	-0.7	100	1.21	206			
TRZ	ePg	13	25	29		-1.2		1.54	68		3.1	3.3
	eSg			54		3.0						
COB	ePn	13	25	32.8		1.5	95	1.95	240		3.9	3.5
	P*			33.7		0.0	100					
	S*			59		-0.4	100					
KRP	eP*	13	25	38.0		-0.7		2.25	11		4.0	4.1
	eS*		26	05.5		-2.7						

AMPLITUDES: MNG 16 18 WEL 1.1 TRZ 0.2 0.5
COB 1.2 1.9 KRP 0.9 1.0

FELT: Wanganui (57) MM IV

78/ 343

JUN 29 $13^h28^m00^s.3$ 37°.24S 177°.23E 202 km M = 4.5
± 1.0 0.05 0.08 7 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	28	28.2	U	-0.7	100	0.77	195		4.3	4.2
	S			48.7		-2.4	99					
ECZ	P	13	28	30.7		-0.6	100	1.14	114		4.2	4.4
	eS			57		1.6						
KRP	P	13	28	34.9	U	0.5	100	1.51	243		3.4*	3.1*
	eS		29	02		1.1	100					
GNZ	iP	13	28	35.1	U	0.4	100	1.54	156		4.7	4.6
	S		29	01.2		0.0	100					
TUA	eP?	13	28	35		0.0		1.57	182		4.2	4.4
	eS		29	02		0.2	100					
TRZ	eP	13	28	44.5		1.7	100	2.33	188		4.4	4.7
	eS		29	17		1.3	100					
CNZ	eP	13	28	45.8		2.7	98	2.37	214			
GSZ	P	13	28	45.0		1.3	100	2.41	212			
ONE	eP	13	28	47		-0.4	100	2.74	301			
MNG	P	13	28	57.9		-0.4	100	3.64	201		4.7	4.6
	e(S)		29	44		0.8						
WEL	eP	13	29	08		-0.8	100	4.47	205	4.7		
	eS		30	00		-1.7	100					
COB	eP	13	29	16		-2.0	99	5.20	221		3.4*	3.7*

	eS		30	18		-0.3	100						
MJZ	eP	13	30	01.5		0.8		8.49	215				
	eS		31	33		-1.7							

AMPLITUDES:											
	WTZ	5.1	4.2	ECZ	1.4	2.2	KRP	2.0	1.0		
	GNZ	8.0	11	TUA	1.0	1.6	TRZ	1.0	3.9		
	MNG	6.0	6.2	WEL	0.9	0.9	1.0	COB	0.3	2.0	

78/ 344

JUN 29 $17^h24^m00^s.6$ 41°.34S 174°.91E 30 km M = 3.1

± 0.2 0.02 0.02 1 S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
BHW	iP*	17	24	05.5		-0.2	100	0.07	202			
WDW	P*	17	24	05.6		-0.2	100	0.10	41			
WEL	P*	17	24	05.9		-0.1	100	0.12	298			
	S*			09.6		-0.2	100					
WHW	iP*	17	24	06.1	U	0.0	100	0.13	290			
MRW	iP*	17	24	06.5	U	-0.1	100	0.19	306			
CAW	iP*	17	24	07.4		-0.1	100	0.26	27			
MOW	iP*	17	24	07.8		0.2	100	0.27	107			
KIW	Pn	17	24	10.5		-0.5	100	0.48	0			
MNG	Pn	17	24	15.9		-0.1	100	0.85	31		3.1	3.4
	Sn			27		-0.4	100					
	S*			29		0.8	98					
COB	ePn	17	24	28.0		0.8	98	1.66	278		3.3	2.8
	eS*			50		-2.2						

AMPLITUDES:											
	WEL	15		MNG	3.0	7.6	COB	0.4	0.5		

Wellington net location: 17 24 00.83 41.336S 174.914E 29.1km
Magnitude 3.5 Felt Wellington area (68), maximum intensity MM IV at Eastbourne and Wainuiomata

78/ 345

JUN 29 $19^h25^m44^s.5$ 48°.82S 164°.83E 12 km M = 4.4

± 1.6 0.04 0.20 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	ePn	19	26	29.3		-0.6	100	2.92	50			
	eSn		27	02		-2.2	99					
MNW	ePn	19	26	39		0.1	100	3.59	33	4.5		
	eSn		27	22		2.0	99					
ROX	ePn	19	26	51		-0.9	100	4.54	44		4.6	4.2
	eSn		27	44		1.1	100					
CBZ	ePn	19	26	55		1.7	100	4.64	145			
	eSn		27	45		-0.3	100					
MSZ	ePn	19	26	54		0.4	100	4.66	28		4.7	4.2
	e(Sn)		27	44		-1.9						
RHP	ePn	19	27	08.5		-2.8	99	5.96	39			
	eSn		28	18		1.0	100					
COB	ePn	19	27	59		-1.3		9.55	39		4.5	3.9
	eSn		29	43		-0.3						

AMPLITUDES:											
	MNW	1.3		ROX	1.1	1.1	CBZ	0.5	1.0		
	MSZ	3.1	2.0	COB	0.2	0.2					

78/ 346

JUN 29 $22^h27^m27^s.3$ 38°.04S 176°.09E 194 km M = 5.0

± 0.6 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
KRP	iP	22	27	54.0	U	0.3	100	0.45	285		4.1*	3.6*
	iS		28	14.2		0.3	100					
WNZ	eP	22	27	55		0.8	100	0.59	179		4.8	
WTZ	iP	22	27	54.1	U	-0.6	100	0.71	86			
	eS		28	15		-1.1	100					
WIZ	P	22	27	56		-0.6	100	1.01	60			
TUA	iP	22	27	58.1	U	0.5	100	1.13	133		5.0	5.2
	S		28	21.0		0.1	100					
NGZ	P	22	27	59.8		1.7		1.21	198			
CNZ	iP	22	28	00.0		1.7	99	1.23	200			
GSZ	P	22	28	01		2.1	98	1.30	198			
TRZ	P	22	28	04.0	U	2.2	98	1.62	160			
	S			28.5		0.0	100					
GNZ	iP	22	28	02	U	0.0	100	1.64	112			
	S			28		-0.8	100					
ECZ	P	22	28	06.0		0.6	100	1.98	81		4.8	4.9
	e			32.1								
	S			36.2		1.4						
MNG	iP	22	28	12.9	U	0.3	100	2.62	190			
ONE	eP	22	28	13.0		0.0	100	2.65	328			
WEL	eP	22	28	21.6		-0.4	100	3.40	197	5.3		
	eS		29	02		-2.2	98					
COB	eP	22	28	28.5		-1.0	100	4.00	219		4.3*	4.3*
	eS		29	17.5		-0.1	100					
CRZ	P	22	28	35.5		-0.9	100	4.54	322		3.9*	
KAI	eS	22	29	52		-5.5		5.74	217	4.6*		
MJZ	eP	22	29	10		-2.4		7.31	214		3.7*	4.2*
	e			54								
	S		30	28		-6.3						
RHP	eP	22	29	13.3		-2.4		7.57	215			
	e			57.7								
	eS		30	32		-8.4						
OMZ	eP	22	29	21		-0.8		8.03	207		3.6*	3.7*
	eS		30	46		-5.2						
ROX	eS	22	31	06		-7.6		8.99	212			4.0*
MSZ	eP	22	29	32		-2.9		9.04	220		3.8*	4.0*
	e		30	12								
	S		31	08		-6.7						
MNW	eS	22	31	29		-7.8		9.99	217	4.2*		

AMPLITUDES:

KRP	12	5.0	WNZ	1.0		TUA	8.8	14
ECZ	3.8	4.5	WEL	6.4		COB	3.3	11
CRZ	0.9		KAI	3.0		MJZ	1.5	7.3
OMZ	0.3	0.8	ROX		1.7	MSZ	1.0	3.1
MNW	0.8							

FELT: Wellington (68), MM III.

78/ 347

JUN 30 $07^h35^m30^s.0$ 33°.56S 179°.70W 356 km M = 5.2

± 2.6 0.26 0.57 36 S.E. of RES. 2.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	(P)	07	36	51.9		8.3		4.36	199		5.2	4.9
	S		37	45.0		3.6	99					
WTZ	P	07	36	48.8		-3.5	99	5.17	210			5.2
	?			51.6								
	S		37	53.5		-3.5	99					
GNZ	P	07	36	53.8		-1.1	100	5.40	199		5.3	5.3

	?			55.4									
	S		38	00.3		-1.1	100						
TUA	P	07	37	00.0		0.4	100	5.83	205		5.2	5.4	
	S		38	09.8		-0.3	100						
KRP	P	07	37	01.0		1.3	100	5.83	220		3.6*		
WNZ	P	07	37	04.2		1.4	100	6.10	213		5.5		
TRZ	P	07	37	08.9		0.2	100	6.61	204		5.3	5.2	
	eS		38	28		1.8	100						
TNZ	P	07	37	21.2		3.6	99	7.37	219		3.3*		
MNG	P	07	37	23.1		-2.3	100	8.04	207		5.5	5.1	
	?			25.0									
	S		38	54.5		-1.8	100						
WEL	S	07	39	15.8		1.3	100	8.88	208	4.9			
COB	P	07	37	44.0		-0.4		9.63	217		4.2*	3.5*	
	S		39	34.3		3.6							
RHP	P	07	38	31.0		4.2		13.19	214				
MSZ	P	07	38	47.9		4.7		14.67	217		3.7*	3.0*	
	(S)		41	28.3		10.0							

AMPLITUDES:											
ECZ		1.9	1.0	WTZ		4.1	GNZ		4.1	6.2
TUA		1.1	1.8	KRP	1.1		WNZ		0.3	
TRZ		1.1	2.0	TNZ	0.1		MNG		8.0	4.3
WEL	0.4			COB	0.9	0.7	RHP		1.5	
MSZ		0.5	0.2							

78/ 348

JUL 01 $04^h16^m38^s.3$ 34°.84S 166°.75E 33 km M = 4.7

± 0.7 0.05 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
CRZ	S-P			54.0		0.6	100	4.91	87		4.8	4.6
GBZ	S-P		1	17.4		-0.4	100	7.26	103			
KRP	eP	04	18	28.0		0.6	100	7.74	116		4.6	4.6
	e		19	07.3								
	eS			49.0		-1.2	100					
COB	P	04	18	28.1		-0.7	100	7.84	145		5.0	4.6
	?			52.5								
	eS		19	51		-1.5	100					
MNG	eP	04	18	46.0		1.1	100	9.02	132		4.6	4.6
	?		19	08.0								
	eS		20	20.7		-0.2	100					
WEL	eS	04	20	24.0		2.7	99	9.03	138	4.5		
RHP	P	04	18	53.1		0.1	100	9.61	165			
	eS		20	35		-0.2	100					
MSZ	eP	04	18	54.5		-2.0	99	9.87	175		4.9	4.5
	S		20	39.0		-2.4	99					
MNW	eP	04	19	12		0.6	100	10.96	177		5.2	4.9
	eS		21	11		3.4	97					
COO	eS	04	22	02		0.1	100	13.22	285			
BRS	iP	04	19	54		-0.0	100	14.08	298			
TOO	eP	04	20	43		-17.7		18.97	255			

AMPLITUDES:											
CRZ		1.2	0.8	GBZ		4.3	1.0	KRP		1.0	1.2
COB		1.0	1.3	MNG		1.0	1.1	WEL	0.1		
RHP		19	3.0	MSZ		1.3	0.8	MNW		1.1	1.3

78/ 349

JUL 01 $09^h47^m55^s.0$ 39°.93S 174°.00E 126 km M = 3.8

± 0.9 0.04 0.06 9 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	P	09	48	17.2		1.3	100	0.80	22		3.0*	2.7*
	eS			32.5		0.6	100					
MNG	iP	09	48	22.6	D	1.4	100	1.32	122		4.2	4.2
	iS			41.5		0.4	100					
WEL	iS	09	48	43.5		-0.7	100	1.48	157	3.7		
COB	iP	09	48	22.2		-1.0	100	1.50	220			3.5*
	iS			42.9		-1.9	99					
TRZ	e(P)	09	48	43.1		11.2		2.21	81		3.3	3.4
	S		49	01.5		1.8	100					
	e			08.0								
KRP	eP	09	48	34.5		0.9	100	2.34	31		2.5*	2.6*
	e			41.7								
	e			48.0								
	S		49	01.5		-1.1	100					
	e			09.0								
	e			19.5								
WTZ	eS	09	49	19.0		-0.2	100	3.04	51			3.6
GNZ	eP	09	48	46.5		-1.0	100	3.38	69		3.9	4.2
	eS		49	24.5		-2.8	98					
RHP	eP	09	49	12.0		1.7	100	5.08	214			

AMPLITUDES:								
TNZ	0.3	0.2	MNG	14	15	WEL	0.8	
COB	3.8		TRZ	0.1	0.3	KRP	0.2	0.3
WTZ	0.3		GNZ	0.5	1.9	RHP	0.4	

78/ 350

JUL 01 $19^h36^m43^s.1$ 33°.53S 179°.12W 279 km M = 4.2

± 1.8 0.17 0.36 33 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	19	38	05.0		-0.9	100	5.46	214		4.6	4.3
	eS		39	09.5		-1.2	100					
GNZ	eP	19	38	07.5		-0.2	100	5.61	204		4.1	4.4
	eS		39	15.5		1.6	99					
KRP	eP	19	38	16.5		1.9	99	6.17	223			
	e			23.0								
TRZ	eP	19	38	21.7		-1.2	100	6.85	207		4.3	4.2
	eS		39	40.5		-0.6	100					
MNG	eP	19	38	41.0		0.1	100	8.29	210		3.6	3.9
	e		39	03.0								
	eS		40	13.5		0.1	100					

AMPLITUDES:								
WTZ	0.8	0.5	GNZ	0.3	0.9	TRZ	0.1	0.2
MNG	0.1	0.3						

78/ 351

JUL 02 $08^h55^m13^s.0$ 35°.16S 178°.72E 341 km M = 4.6

± 1.8 0.16 0.27 17 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	08	56	08.0		0.0	100	2.54	183		4.1	4.4
	eS			53.0		2.0	99					
WTZ	P	08	56	12.1		-1.4	100	3.15	206		5.1	4.4
	i			14.0								
	eS			59.5		-1.3	100					
GNZ	P	08	56	15.8		-1.3	100	3.53	189		4.6	4.5
	i			18.0								
	S		57	06.0		-1.3	100					
KRP	P	08	56	21.0		1.5	100	3.77	222		3.7*	

TRZ	P	08	56	29.9		1.0	100	4.64	198		4.9	4.6
	eS		57	31.5		3.2						
MNG	eP	08	56	44.2		-0.3	100	6.03	204		5.0	4.5
	i			45.2								
	eS		57	57.0		0.7	100					

AMPLITUDES: ECZ 0.3 0.6 WTZ 5.8 1.2 GNZ 1.7 2.2
KRP 1.6 TRZ 0.8 0.9 MNG 4.2 1.8

78/ 352

JUL 02 $12^h24^m14^s.5$ 37°.18S 177°.35E 187 km M = 3.7
± 1.6 0.07 0.09 10 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	12	24	41.9	U	-0.1	100	0.85	200		3.6	3.9
	eS		25	02.5		-0.8	100					
ECZ	eS	12	25	06.0		-0.1	100	1.08	119			3.7
GNZ	iP	12	24	48.1	U	0.2	100	1.56	160		4.0	4.2
	eS		25	13.0		-0.6	100					
KRP	P	12	24	49.9		1.4	99	1.62	242		3.1*	2.1*
	eS		25	17.5		2.8						
TRZ	eP	12	25	00		3.1		2.41	190		3.4	3.1
	eS			32.5		2.8	92					
MNG	P	12	25	12.4		-0.7	100	3.73	202		3.6	3.8
	eS			58		-0.4	100					
WEL	eS	12	26	17.0		-0.3	100	4.56	205	4.0		
COB	eS	12	26	33.5		-0.9	100	5.30	221			2.9*

AMPLITUDES: WTZ 1.1 2.2 ECZ 0.5 GNZ 2.0 4.9
KRP 1.0 0.1 TRZ 0.1 0.1 MNG 0.5 1.0
WEL 0.2 COB 0.3

78/ 353

JUL 03 $02^h30^m21^s.9$ 38°.24S 175°.97E 133 km M = 3.8
± 2.2 0.12 0.14 14 S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	S-P			17.1		2.3	99	0.47	313			
WTZ	iP	02	30	43.6	D	-0.2	100	0.85	73		3.6	3.5
	eS			58.5		-2.1	99					
TRZ	iP	02	30	52.0		1.8	99	1.47	153		3.9	3.4
	e(S)		31	17.0		5.1						
ECZ	eS	02	31	26.0		1.1	100	2.11	76			3.8
MNG	iP	02	31	01.7	U	0.1	100	2.40	189		4.4	3.9
	i			09.5								
	eS			31.0		-0.7	100					
WEL	eS	02	31	50.0		0.2	100	3.19	197	3.7		
COB	eS	02	32	04.3		0.1	100	3.79	220			3.1*

AMPLITUDES: WTZ 2.1 1.8 TRZ 0.8 0.5 ECZ 0.4
MNG 8.0 2.8 WEL 0.2 COB 0.7

78/ 354

JUL 03 $11^h51^m02^s.8$ 36°.44S 177°.55E 257 km M = 3.9
± 1.7 0.13 0.19 12 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eS	11	52	11.5		-0.8	100	1.48	148			3.8
WTZ	P	11	51	42.9		0.0	100	1.61	196		3.9	3.6
	eS		52	14.0		0.1	100					
KRP	P	11	51	49.5		1.6		2.19	227		2.7*	
GNZ	P	11	51	49.2		1.0	100	2.23	171			

	eS		52	23.0		-0.6	100						
TRZ	eP	11	51	58		0.1	100	3.17	190			3.7	4.3
	eS		52	43		2.2	98						
MNG	eP	11	52	12.5		-0.6	100	4.48	201			3.8	4.1
	S		53	06.5		-1.4	99						
COB	eP	11	52	34		2.5		5.98	218			3.0*	2.7*
	eS		53	41		0.2							

AMPLITUDES: ECZ 0.3 WTZ 0.8 0.5 KRP 0.3
TRZ 0.1 0.9 MNG 0.5 1.3 COB 0.1 0.2

78/ 355

JUL 04 $01^h44^m16^s.3$ $38°.74S$ $176°.35E$ 12 km M = 3.0
± 1.3 0.02 0.11 R S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	Pg	01	44	20.9		-0.4	99	0.22	299			
CNZ	iPg	01	44	32.3		0.1	100	0.77	234			
KRP	ePg	01	44	37.5		0.1	100	1.03	322		2.9	3.1
	eSg			51.5		0.1	100					

AMPLITUDES: WNZ 16 KRP 0.5 0.7

FELT: Taupo (41)

78/ 356

JUL 04 $09^h02^m13^s.7$ $36°.66S$ $177°.89E$ 12 km M = 4.7
± 1.2 0.06 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
WIZ	iPg	09	02	36.2	U	1.4	100	1.03	213			
	iSg			50.0		1.2	100					
ECZ	iPg	09	02	37.1	U	-0.2	100	1.16	153		4.5	4.7
	Sg			55.0		2.0	99					
WTZ	iP*	09	02	42.0		1.3	100	1.51	208			
GNZ	iPn	09	02	46.0		-0.4	100	1.99	177		4.4	4.5
	iSn		03	09.0		-1.9	100					
GBZ	(Sg-Pn			34.0		)-0.5		2.00	282			
TUA	iP*	09	02	51.3		-1.6	100	2.23	195		4.7	4.5
	eSn		03	15.5		-1.1	100					
KRP	iP*	09	02	54.4	D	0.8	100	2.27	235		5.0	5.0
	iS*		03	23.5		0.2	100					
WNZ	P*	09	02	55.8	U	-0.6	100	2.43	215		4.8	4.4
	eS*		03	27.0		-1.3	100					
TRZ	iPn	09	03	00.8	U	0.4	100	3.01	196		4.6	4.5
	eP*			08.5		2.1	99					
	eSn			37		1.5						
TNZ	ePn	09	03	13		2.5	99	3.75	227		5.3	5.2
	e(S*)		04	06		-2.0						
MNG	ePn	09	03	17.2		-1.9	100	4.38	205		4.8	4.9
	i			20.5								
	iP*			28.0		-1.7	100					
	i(Sn)		04	15		6.5						
	e(S*)			25.0		-1.8						
WEL	ePn	09	03	29.2		-1.4	100	5.23	207	4.6		
	e		04	23.5								
COB	(Pn)	09	03	31.2		-9.7		5.98	221		5.3	4.5
	e(Sn)		04	46.5		-0.4						
CIZ	(Sn-Pn		1	23		)-8.4		8.43	152			

AMPLITUDES: WIZ 9.5 3.9 ECZ 5.3 9.0 GNZ 4.9 9.3
TUA 3.1 2.1 KRP 4.8 3.0 WNZ 0.6 0.3

		TRZ			2.0	1.9	TNZ		1.1	0.8	MNG		6.2	8.9
		WEL	0.6				COB		3.1	1.8				

78/ 357

JUL 04 $20^h00^m59^s.3$ 45°.02S 167°.70E 101 km M = 4.5

± 0.8 0.03 0.06 7 S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	iP	20	01	15.2		0.5	100	0.39	23			
MNW	iP	20	01	17.8		0.3	100	0.76	184			
	iS			30.9		-0.5	100					
ROX	iP	20	01	23.8		1.1	99	1.23	112		4.5	4.4
	iS			41.0		0.6	100					
OBZ	eP	20	01	31.0		-0.2	100	1.91	171		4.1*	4.2*
	S			54.2		-0.6	100					
RHP	(S-P)			24.8		0.9		1.93	62			
MJZ	iP	20	01	34.9	U	-0.6	100	2.23	63		3.7*	3.8*
	iS		02	01.6		-0.9	99					
OMZ	iP	20	01	36.5		0.4	100	2.28	92			
COB	e(P)	20	02	16.0		-2.8		5.39	45		4.7	4.6
	e(S)		03	14.0		-6.1						

AMPLITUDES:												
	ROX		9.0	16	OBZ		5.1	14	MJZ		4.9	10
	COB		0.7	1.2								

78/ 358

JUL 05 $08^h32^m15^s.9$ 40°.95S 174°.04E 33 km M = 3.6

± 0.4 0.03 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
WEL	Pn	08	32	28.2		-0.1	100	0.65	122	3.6		
	Sn			38.5		1.1	100					
COB	iPn	08	32	32.2	D	-0.9	100	1.00	262		4.1	3.7
	iSn			46.0		0.1	100					
MNG	Pn	08	32	34.0		-1.1	100	1.14	74		3.7	3.7
	P*			37.0		0.1	100					
	i			41.4								
	eSn			50.5		1.1	100					
	S*			55.4		3.0						
CAZ	eSn	08	33	01		-0.7	100	1.66	89			
TNZ	ePn	08	32	44		0.2	100	1.78	9		3.3	3.9
	eSn		33	06		1.3	99					
	S*			24.5		13.3						
KRP	ePn	08	33	05		1.4	99	3.24	21		3.2	3.3
	eSn			38.5		-1.2	100					
	S*		34	01.0		6.3						
GNZ	eSn	08	33	52.5		-1.6	99	3.84	54			
RHP	e(Pn)	08	33	05.0		-13.1		4.30	222			

AMPLITUDES:												
	WEL	3.8			COB		7.1	11	MNG		7.0	8.9
	CAZ			1.1	TNZ		0.2	1.2	KRP		0.2	0.3
	RHP		0.5									

78/ 359

JUL 07 $01^h22^m09^s.3$ 38°.62S 175°.87E 168 km M = 4.3

± 0.8 0.04 0.04 5 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	S	01	22	49		-0.3	100	0.18	93			
NGZ	iP	01	22	33.6		0.2	100	0.59	199			
	S			52.5		0.6	100					

CNZ	iP	01	22	33.7		0.2	100	0.63	203				
	S			58		5.8							
GSZ	P	01	22	34.3		0.5	100	0.69	198				
	e(S)			56		3.3							
KRP	iP	01	22	34.6	DSE	0.5	100	0.74	339		3.9*	3.1*	
	S			52.5		-0.8	100						
TUA	P	01	22	36.6	D	0.5	100	1.02	101		4.1	4.4	
	S			56		-0.8	100						
WTZ	iP	01	22	35.9		-0.8	100	1.09	55		4.2	4.1	
	S			58		0.2	100						
TRZ	P	01	22	38.5		0.9	100	1.19	142		4.5	4.2	
	S		23	01.5		2.1	97						
TNZ	iP	01	22	38.8	U	0.3	100	1.30	244		4.1*		
GNZ	iP	01	22	42.5	D	0.0	100	1.69	91		4.1	4.2	
	S		23	07		-1.0	100						
MNG	iP	01	22	45.6	U	-0.5	100	2.02	188		4.9	4.7	
	S		23	11.5		-3.0	74						
ECZ	P	01	22	49		-0.5		2.30	67		3.9	4.1	
	S		23	20		-0.4							
WEL	P	01	22	54		-1.5		2.80	197	4.7			
	S		23	28.5		-2.4							
COB	P	01	23	00.4	U	-3.3		3.45	223		4.2*	4.1*	
	S			42		-3.6							
KAI	S	01	24	21.5		-4.1		5.17	220	3.7*			
MJZ	P	01	23	43		-3.7		6.73	215		3.6*	3.5*	
	S		24	54		-8.5							
RHP	P	01	23	47		-3.3		6.99	217				
	S		25	01		-7.8							
MSZ								8.49	222				3.4*

AMPLITUDES:

WNZ			0.4	KRP		10	1.6	TUA		1.6	3.5
WTZ		4.5	3.7	TRZ		3.3	3.9	TNZ		2.5	
GNZ		2.5	4.5	MNG		28	23	ECZ		0.4	0.6
WEL	2.0			COB		2.7	7.6	KAI	0.4		
MJZ		1.1	1.5	MSZ			0.8				

FELT: Wellington (68) MM III

78/ 360

JUL 07 $12^h00^m28^s.0$ 39°.38S 175°.24E 12 km M = 3.2

± 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
GSZ	iP*	12	00	32.4		-1.7	99	0.29	69			
CNZ	iP*	12	00	33.1		-1.2	100	0.30	53			
NGZ	iP*	12	00	33.9		-1.2	100	0.35	56			
TNZ	Pg	12	00	44		1.7	99	0.69	286		2.5	2.6
	(Sg)			59		7.2						
TRZ	Pg	12	00	54		0.9	100	1.23	99		2.9	2.9
	Sg		01	11.5		1.7	99					
MNG	iP*	12	00	49.8	U	-0.8	100	1.25	172		3.7	3.3
	S*		01	07.5		0.3	100					
KRP	P*	12	00	54.5		0.2	100	1.48	9		3.7	3.9
	Pg			56		-1.8						
	S*		01	14.5		0.7	100					
	Sg			20		2.3						
WEL	eP*	12	01	02.5		0.2	100	1.94	191	3.2		
	S*			28		0.1	100					
WTZ	(Pg)	12	01	05		-2.5		1.95	45		3.0	
COB	ePn	12	01	11		2.4		2.57	228		3.5	3.1

	P*			13			-0.1	100						
	S*			46			-0.7	100						
MJZ	Sn	12	02	58			0.4		5.83	216				3.6*

AMPLITUDES: TNZ 0.2 0.4 TRZ 0.2 0.3 MNG 6.2 3.2
KRP 1.1 1.4 WEL 0.1 WTZ 0.1
COB 0.3 0.4 MJZ 0.4

FELT: Ohakune (49) MM IV

78/ 361

JUL 07 $13^h48^m20^s.7$ 37°.12S 177°.30E 217 km M = 3.9
± 0.5 0.04 0.04 3 S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	13	48	51.1	U	-0.6	100	0.90	196		4.0	3.4
	S		49	15.5		-0.3	100					
ECZ	P	13	48	54		0.6	100	1.15	120		4.0	3.6
	(S)		49	22		3.3						
KRP	P	13	48	57		-0.1	100	1.61	239		2.6*	
	S		49	26		0.7	99					
GNZ	iP	13	48	57.8	U	0.5	100	1.63	160		4.2	4.0
	S		49	25.5		-0.1	100					
TUA	P	13	48	57.5		-0.4	100	1.69	184		3.9	3.9
	S		49	26		-0.5	100					
NGZ	P	13	49	05		-0.5	100	2.46	212			
TRZ	P	13	49	05.5		-0.1	100	2.47	189		3.8	3.9
	S			41		0.6	100					
GSZ	P	13	49	06.7		0.2	100	2.55	211			
MNG	P	13	49	19		-1.9		3.77	201		4.0	3.9
	S		50	05.5		-2.0						
WEL	S	13	50	23		-2.9		4.61	204	3.8		
COB	S	13	50	37.5		-4.6		5.33	220			2.4*

AMPLITUDES: WTZ 2.0 0.6 ECZ 0.8 0.3 KRP 0.3
GNZ 2.5 2.5 TUA 0.5 0.5 TRZ 0.2 0.6
MNG 1.2 1.1 WEL 0.1 COB 0.1

78/ 362

JUL 07 $23^h59^m03^s.7$ 45°.14S 170°.46E 12 km M = 4.2
± 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
OMZ	iP*	23	59	09.6	U	-0.9	100	0.33	78			
THP	iP*	23	59	17.1	D	-0.1	100	0.72	325			
HHP	iP*	23	59	18.9	U	0.1	100	0.82	354			
DMP	iP*	23	59	19.9	D	0.4		0.85	328			
TMP	P*	23	59	20.0		0.4		0.86	344			
ROX	iP*	23	59	18.6	U	-1.1	99	0.87	247		4.3	4.1
	S*			32		0.5	100					
MMP	iP*	23	59	22.4	U	0.3		1.01	353			
RHP	iP*	23	59	23.5	U	0.3		1.07	345			
HGP	P*	23	59	24.4	U	0.3		1.13	337			
MJZ	iP*	23	59	24.2	U	-0.3	100	1.15	0			
	S*			41		1.1	99					
BSP	P*	23	59	26.4	U	-0.6		1.30	349			
MSZ	Pn	23	59	34.8		0.1	100	1.87	284			
	P*			37		0.2						
	S*	24	00	01		-0.4	100					
MNW	Pn	23	59	38		0.1	100	2.10	251	4.3	4.5	4.4
	P*			41		0.3						

	S*	24	00	07.5		-0.8	100				
OBZ	Pn	23	59	42.5		0.4	100	2.40	222		
	P*			45		-0.9					
	Sn	24	00	12.5		1.6	98				
KAI	Pn	23	59	47		0.9		2.70	15	4.0	
	Pg	24	00	04		5.6					
	S*			23.5		-2.9					
	eSg			37		2.2					
COB	ePn	24	00	08		-1.0		4.38	23	4.4	3.7
	e(Pg)			37		4.7					
	(Sn)		01	03.5		5.1					
	eSg			30		-1.3					
TCW	Pn	24	00	14		-0.9		4.81	37		
	Sn		01	08		-0.8					
BHW	Pn	24	00	15.2		-1.3		4.93	42		
WHW	Pn	24	00	17		0.2		4.96	41		
	Sn		01	11		-1.1					
WEL	Pn	24	00	16.5		-0.6		4.98	41	3.8	
	Sn		01	11.5		-1.2					
MRW	Pn	24	00	16.5		-0.8		4.99	40		
	Sn		01	13		0.0					
WDW	Pn	24	00	17.3		-1.5		5.09	42		
	Sn		01	14		-1.5					
MOW	Pn	24	00	17.5		-1.4		5.10	45		
	Sn		01	13		-2.8					
CAW	Pn	24	00	19.7		-1.2		5.26	42		
	Sn		01	15		-4.4					
KIW	Pn	24	00	22.3		-0.3		5.38	39		
	Sn		01	21.5		-0.9					
MNG	Pn	24	00	27		-1.8		5.84	41	4.1	
NGZ	Pn	24	00	46		0.2		7.08	35		

AMPLITUDES: ROX 17 22 MNW 2.5 6.5 12 KAI 0.6
COB 0.8 0.5 WEL 0.1 MNG 0.7

FELT: Oamaru district (136) MM IV

78/ 363

JUL 08 $16^h10^m01^s.9$ 32°.00S 180°.00E 33 km M = 4.9
± 2.1 0.14 0.39 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	e(Sn)	16	12	33		5.6		5.80	191			5.5
WTZ	Pn	16	11	33		-0.7	100	6.46	202		5.0	4.9
	Sn		12	45		1.8	100					
GNZ	Pn	16	11	39		0.4	100	6.83	193		4.9	5.1
	e		12	50								
	Sn			53		1.1	100					
KRP	Pn	16	11	43		2.6	99	6.96	211		5.0	
TUA	ePn	16	11	42		-1.5	100	7.18	198		4.5	4.8
	e		12	59								
	Sn		13	01		0.5	100					
TRZ	Sn	16	13	18		-1.4	100	7.97	198			5.1
NGZ	Pn	16	11	54		-0.8	100	8.01	205			
	Sn		13	18.5		-1.9	100					
MNG	iPn	16	12	07.4	D	-5.6		9.35	202		4.9	4.9
	Sn		13	45		-7.4						
WEL	Sn	16	14	04		-8.5		10.18	203	4.8		
COB	Sn	16	14	18.5		-8.7		10.79	211			4.4
MJZ	Sn	16	15	32		-15.4		14.13	209			4.1*

AMPLITUDES:											
	ECZ		1.0	WTZ		1.2	0.7	GNZ		0.7	1.5
	KRP	0.3		TUA		0.1	0.2	TRZ			0.5
	MNG	0.8	1.0	WEL	0.1			COB			0.2
	MJZ		0.1								

78/ 364

JUL 08 $17^h 53^m 22^s.0$ $39°.44$S $177°.20$E 33 km M = 4.2

± 0.3 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
TRZ	iP*	17	53	29.8	U	-0.0	100	0.31	249					
	S*			36		0.6	100							
TUA	iP*	17	53	34.7	U	0.1	100	0.63	357			4.1		4.4
	S*			44.5		0.7	99							
GNZ	P*	17	53	41		0.0	100	1.03	39					
	e			47										
WNZ	P*	17	53	42.5		-1.0	99	1.17	313			4.7		4.7
	S*			59		-0.3	100							
GSZ	Pn	17	53	43.5		0.7	99	1.26	277					
	S*		54	02		0.1	100							
CNZ	iPn	17	53	43.6		0.3	100	1.30	280					
WTZ	iPn	17	53	45.7	U	0.1	100	1.47	354			4.1		4.2
	Sn		54	04.5		1.4								
	S*			07		-0.9								
MNG	iPn	17	53	49.0	D	-0.7	100	1.76	228			4.2		4.1
	(P*)			58.5		5.0								
	e(Sn)		54	12		1.6								
	S*			17		0.1	100							
KRP	Pn	17	53	52		-0.8	99	2.00	319			4.2		
	e(P*)			58		0.7								
	S*		54	34		10.3								
WEL	(P*)	17	54	09.5		1.6		2.62	224	3.8				
	Sn			31		0.1								
	S*			53		10.8								
COB	Pn	17	54	15.5		-1.8		3.79	243			4.3		3.9
	P*			31		3.1								
	Sn			59.5		0.4								
	S*		55	20		2.7								
CIZ	e(Pn)	17	54	56		1.8		6.50	136					
	Sn		56	06		1.9								
MJZ	Pn	17	54	57		-1.2		6.79	226			3.7*		3.8*
	Sn		56	08		-3.0								
MSZ	ePn	17	55	23		-0.8		8.66	230			4.0		3.9
	P*			54		3.2								
	Sn		56	49.5		-6.6								

AMPLITUDES:											
	TUA	10	24	WNZ		2.6	3.7	WTZ		6.0	7.0
	MNG	8.8	8.3	KRP		2.2		WEL	0.3		
	COB	0.8	1.1	CIZ		0.2	0.9	MJZ		0.2	0.4
	MSZ	0.2	0.3								

FELT: Napier (52) MM IV

78/ 365

JUL 09 $11^h 28^m 50^s.5$ $44°.19$S $168°.89$E 12 km M = 4.4

± 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
MSZ	iP*	11	29	05.0	D	-1.1	99	0.85	235					
	eS*			17.5		-0.0								
RHP	iP*	11	29	06.0	D	-0.4	100	0.86	84					

	e			11									
	(S*)			18		-0.1							
MJZ	iP*	11	29	11.2	DSE	-0.2	100	1.15	80		4.4*	4.4*	
	Pg			15		1.1							
	S*			25		-1.8	96						
ROX	iP*	11	29	14.5	D	0.3	100	1.32	167		4.8		
	S*			32		0.2	100						
OMZ	Pn	11	29	19.9		0.8	100	1.69	122				
	e(S*)			43		0.1							
MNW	P*	11	29	22.8		-0.1	100	1.83	209	4.3	4.7	4.6	
	Pg			26		-1.5							
	S*			49		2.0							
	Sg			52		-0.2	100						
KAI	P*	11	29	34		0.0	100	2.48	49	4.4			
	S*		30	07.5		1.0	99						
	e(Sg)			17		2.9							
OBZ	Pn	11	29	34.5		0.7	100	2.77	191				
	P*			39		0.0	100						
	(S*)		30	12.5		-2.7							
COB	Pn	11	29	51.5		-1.9		4.20	44		4.8	4.2	
	Sn		30	42		1.1							
	e(S*)		31	04		5.8							
WEL	P*	11	30	19		-1.6		5.21	58				
MNG	Pn	11	30	22.5		3.9		6.05	56		4.7	4.0	
TNZ								6.47	41		4.1	4.0	
KRP	Pn	11	30	44.5		-1.0		8.03	41		4.4		
	Sn		32	10		-2.8							

AMPLITUDES: MJZ 32 67 ROX 20 MNW 3.0 14 26
KAI 1.8 COB 2.2 1.8 MNG 2.3 0.6
TNZ 0.1 0.1 KRP 0.6

FELT: Matukituki Valley (113) MM IV

78/ 366

JUL 10 $05^h29^m09^s.6$ 32°.84S 178°.46W 12 km M = 4.6
± 1.8 0.09 0.23 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	(P*)	05	30	40.5		-2.9		5.43	206		5.0	5.0
	e(S*)		31	55		1.0						
WTZ	Pn	05	30	40.8		-0.8	100	6.34	215		4.8	4.5
	Sn		31	50		-1.3	100					
GNZ	Sn	05	31	54		-0.3	100	6.46	205		4.6	4.5
	Sg		32	44		-3.3						
ONE	Pn	05	30	46.5		1.0	100	6.62	242			
TUA	Pn	05	30	49.5		-0.4	100	6.95	210		4.9	
	e(Sn)		32	07		1.2						
KRP	Pn	05	30	51		-0.4	100	7.06	222		4.9	
	e(P*)		31	11		-0.2						
TRZ	(P*)	05	31	25		2.6		7.71	208		4.5	4.7
	Sn		32	26		1.7	99					
NGZ	Pn	05	31	03		-0.6	100	7.95	216			
	Sn		32	28.5		-1.5	99					
MNG	Pn	05	31	17		-3.1		9.16	210		4.3	4.5
	Sn		32	50.5		-8.7						
	S*		33	35		-10.9						
WEL	Sn	05	33	12		-7.7		10.02	211	4.4		
COB	Sn	05	33	38		-1.4		10.84	218			4.2
CIZ	Sn	05	33	49		0.8		11.20	173			

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MJZ	Sn	05	34	46		-12.0		14.11	215			4.1*

AMPLITUDES:

ECZ	0.7	0.8	WTZ	1.7	0.7	GNZ	0.8	1.1
TUA	0.5		KRP	0.4		TRZ	0.2	0.5
MNG	0.4	0.9	WEL	0.1		COB		0.3
CIZ	0.1	0.3	MJZ		0.2			

78/ 367

JUL 10 19^h 02^m 43^s.2 38°.28S 176°.41E 122 km M = 3.7

± 0.6 0.02 0.02 4 S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	P	19	03	01		-0.1	100	0.42	215		3.3	
WTZ	iP	19	03	02.0		0.3	100	0.54	57		3.5	
	S			15.5		-0.5	100					
KRP	iP	19	03	04.1	DE	0.6	100	0.77	297		3.1*	2.5*
	S			19.5		0.4	100					
TUA	P	19	03	03.7	U	0.1	100	0.78	133		3.4	3.5
	S			19		-0.1	100					
NGZ	P	19	03	06.1		-0.5	100	1.10	215			
	S			23.5		-0.9	99					
CNZ	iP	19	03	06.5		-0.5		1.14	216			
	(S)			25		-0.2						
GSZ	P	19	03	07.4		-0.1	100	1.19	213			
TRZ	P	19	03	08.3		-0.6	100	1.31	166		4.1	3.6
	S			30		1.5	93					
GNZ	P	19	03	09		0.0	100	1.31	107			
	S			28.5		-0.1	100					
MNG	iP	19	03	19.3	U	-3.7		2.45	197		4.1	4.0
	S			48		-5.0						
WEL	S	19	04	05.5		-6.9		3.26	202	3.7		
COB	P	19	03	39.4		-4.3		4.00	224		3.1*	3.0*
	S		04	26		-4.0						
MJZ	S	19	05	39		-10.3		7.26	216			

AMPLITUDES:

WNZ	0.1		WTZ	2.5		KRP	1.7	0.5
TUA	0.6	0.8	TRZ	1.6	1.2	MNG	3.6	3.7
WEL	0.2		COB	0.2	0.6			

78/ 368

JUL 10 21^h 00^m 42^s.8 39°.65S 174°.11E 197 km M = 4.1

± 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
TNZ	eP	21	01	09.5		-0.1	100	0.50	24		2.6*	2.5*
	eS			31		0.6	100					
CNZ	P	21	01	13.8		-0.0	100	1.20	69			
	S			36		-1.8	97					
GSZ	P	21	01	14.5		0.6		1.20	73			
	(S)			37.5		-0.3						
NGZ	P	21	01	14.2		-0.0	100	1.25	69			
	S			40		1.4	99					
MNG	iP	21	01	16.5	U	0.6	100	1.43	133		4.6	4.2
	S			41		-0.3	100					
WEL	eP	21	01	19		0.6		1.71	163	3.5		
	S			45.5		-0.4	100					
COB	P	21	01	19.8	D	0.6	100	1.78	216		3.3*	3.3*
	S			47		-0.2	100					
KRP	P	21	01	21		-0.9	100	2.05	33		2.5*	
TRZ	S	21	01	53.5		0.6	100	2.10	88			4.0
TUA	e(S)	21	01	57		-4.0		2.50	71			4.0

GNZ	P	21	01	33		-2.2		3.20	73		
	S		02	10		-5.6					
MJZ	eP	21	01	59		-0.4		5.12	211		2.7* 2.2*
	S		02	57		-1.9					

AMPLITUDES: TNZ 0.1 0.1 MNG 18 10 WEL 0.2
COB 0.5 1.8 KRP 0.2 TRZ 1.0
TUA 0.4 MJZ 0.2 0.1

78/ 369

JUL 11 $21^h50^m20^s.4$ 46°.38S 166°.20E 12 km M = 4.2
± 0.4 0.02 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
MNW	P*	21	50	41.5		0.2	100	1.15	59	4.2		
	Sg			59.5		0.0						
OBZ	Pn	21	50	45.2	D	-0.1	100	1.42	112			
	(Pg)			51		1.8						
	Sn		51	04		0.1	100					
MSZ	Pn	21	50	54		-0.5	100	2.10	36			
ROX	Pn	21	50	58.5		0.4	100	2.36	69		4.7	4.4
	Sn		51	26		-0.4	100					
	Sg			40.5		0.6	99					
OMZ	(Pg)	21	51	38.5		6.2		3.55	70		4.0	3.9
	S*		52	08		-0.6	99					
RHP	Pn	21	51	15		0.4	100	3.57	52			
	(P*)			25		2.5						
MJZ	Pn	21	51	18		-0.5		3.85	53		4.5*	4.1*
	P*			28		0.7						
	Pg			38.5		0.2						
	Sg		52	28		-2.2						
KAI	e(S*)	21	52	59		-3.9		5.36	46	4.1		
COB	Pn	21	52	03		0.2		7.10	44		4.2	3.9
	Sn		53	21		0.6						

AMPLITUDES: MNW 5.7 ROX 5.0 6.0 OMZ 0.5 0.8
MJZ 3.6 3.0 KAI 0.2 COB 0.2 0.3

78/ 370

JUL 12 $08^h21^m11^s.0$ 32°.08S 177°.47W 33 km M = 4.7
± 1.5 0.09 0.15 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P*	08	23	04		1.2	99	6.49	209		5.0	
WTZ	Pn	08	22	55		-1.1	99	7.44	216		4.6	4.7
	e(P*)		23	12		-7.0						
	Sn		24	16.5		0.7	100					
GNZ	ePn	08	22	57		-0.1	100	7.51	208		5.0	4.8
	Sn		24	16.5		-1.1	99					
ONE	P*	08	23	23.5		-0.4	100	7.73	239			
TUA	Pn	08	23	04		-0.1	100	8.03	212		5.0	4.8
KRP	Pn	08	23	07		0.8	100	8.18	223		5.0	
	P*			25		-6.6						
TRZ	(Pn)	08	23	14		-0.4		8.78	210		4.3	4.6
	eSn		24	47		-1.0						
MNG	ePn	08	23	33		-1.4		10.24	212		4.2	4.7
	eSn		25	19		-4.2						
WEL	Sn	08	25	35.5		-8.3		11.11	212	4.5		
CIZ	eSn	08	26	07		4.4		11.89	177			
COB	eSn	08	25	55		-9.1		11.95	218			4.3
MJZ	Sn	08	27	10		-12.4		15.21	215			4.3*

MSZ								16.99	218		4.8		
AMPLITUDES:	ECZ		0.5		WTZ		0.7	0.8	GNZ		1.3	1.3	
	TUA		0.5	0.4	KRP		0.4		TRZ		0.1	0.3	
	MNG		0.3	1.0	WEL	0.1			COB			0.3	
	MJZ			0.3	MSZ		0.3						

78/ 371

JUL 12 $17^h52^m11^s.8$ 37°.80S 176°.28E 175 km M = 3.8
± 1.0 0.06 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
WTZ	eP	17	52	36.5		0.0	100	0.58	108		3.0	3.6
	S			55.5		-0.1	100					
KRP	P	17	52	36.6		0.0	100	0.60	258		3.0*	2.2*
	S			55.5		-0.2	100					
WNZ	P	17	52	38.5		0.5	100	0.84	190		3.8	
	e			44								
TUA	P	17	52	40		-0.9	100	1.21	146		3.7	3.8
	S		53	00.5		-2.9						
	e			06								
NGZ	P	17	52	43		-0.4	100	1.48	201			
GNZ	P	17	52	44.4		-0.2	100	1.61	122		3.7	4.0
	S		53	09		-1.0	100					
TRZ	iP	17	52	45.5	D	-1.2	99	1.80	167		4.1	3.7
	S		53	15		1.5	99					
ECZ	P	17	52	48		1.4	99	1.80	87		4.1	
MNG	iP	17	52	55.6	U	-3.7		2.88	192		4.6	4.2
	S		53	29.5		-6.4						
WEL	S	17	53	46.5		-7.0		3.67	198	3.6		
COB	S	17	53	59.5		-8.0		4.28	219			2.9*
MJZ	S	17	55	13		-12.5		7.60	214			2.3*

AMPLITUDES:	WTZ		0.4	1.7	KRP		1.1	0.2	WNZ		0.1		
	TUA		0.5	0.6	GNZ		1.0	3.2	TRZ		0.8	0.7	
	ECZ		0.9		MNG		7.8	3.7	WEL	0.1			
	COB			0.4	MJZ			0.1					

78/ 372

JUL 13 $09^h36^m46^s.1$ 39°.37S 174°.57E 223 km M = 3.8
± 1.1 0.06 0.07 8 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	P	09	37	16		0.6	100	0.23	320			
	eS			38.5		0.6	100					
NGZ	P	09	37	18.4		1.0	100	0.83	78			
	S			41.5		-0.2	100					
MNG	iP	09	37	23.2	U	1.6	100	1.43	151		4.1	4.3
	S			48.5		-0.5	100					
KRP	P	09	37	23.0		-0.2	100	1.63	28		2.9*	
TRZ	P	09	37	26		1.7	99	1.75	97		3.3	3.7
	S			54.5		0.6	100					
WEL	S	09	37	57		0.3	100	1.93	176	3.8		
TUA								2.08	75		3.7	3.7
COB	iP	09	37	28.4	U	-0.5	100	2.22	219		3.8*	3.3*
	S		38	00		-2.0	99					
WTZ	P	09	37	29		-1.1	100	2.34	55		3.8	3.3
	e(S)		38	03		-1.2						
GNZ	iP	09	37	35.4	U	0.5	100	2.78	76		4.2	3.8
	S		38	10		-2.8	97					
ECZ	P	09	37	44		0.4		3.54	63		4.2	

KAI									3.97	216	3.0*		
MJZ	S	09	39	09		-4.0			5.55	212			2.7*

AMPLITUDES:													
	TNZ	0.2	0.2	MNG		5.5	9.5	KRP		0.5			
	TRZ	0.1	0.5	WEL	0.3			TUA		0.2	0.2		
	COB	1.6	1.7	WTZ		0.5	0.2	GNZ		1.3	0.8		
	ECZ	0.3		KAI	0.1			MJZ			0.3		

78/ 373

JUL 13 $17^h09^m52^s.6$ $41°.62S$ $172°.99E$ 109 km M = 3.5

± 0.8 0.04 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
COB	iP	17	10	10.1		0.1	100	0.57	340		3.7*	3.3*
	S			23		-0.3	100					
KKY	eS	17	10	27.5		-1.8	99	0.96	147			
WEL	P	17	10	19.5		1.3	100	1.38	77	3.4		
	S			39.5		1.7	99					
KAI	S	17	10	41		0.8	100	1.48	232	3.0*		
MNG	P	17	10	27		-0.7	100	2.13	63		3.1	3.6
	S			54		0.1	100					
TNZ	eP	17	10	33		-1.8	99	2.65	24			3.0*
	S		11	04		-2.5						
MJZ	e(P)	17	10	43.5		3.8		3.01	217		2.2*	2.4*
	S		11	15.5		0.3	100					
NGZ	P	17	10	42		0.4	100	3.15	40			
	eS		11	16		-2.6						
MSZ								4.81	229			2.7*
GNZ	S	17	11	55.5		-5.0		4.87	54			3.7

AMPLITUDES:													
	COB	4.0	5.0	WEL	0.4			KAI	0.3				
	MNG	0.5	2.2	TNZ		0.2		MJZ		0.1	0.3		
	MSZ		0.3	GNZ		0.3							

FELT: Murchison (80) MM IV

78/ 374

JUL 13 $22^h52^m53^s.7$ $38°.85S$ $175°.83E$ 12 km M = 3.2

± 0.5 0.03 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
WNZ	ePg	22	53	02		1.8	99	0.31	45			2.5
	e(Sg)			05.5		0.9						
	e			11								
NGZ	iPg	22	53	01.7		0.2	100	0.37	206			
	e(S)			03		-3.5						
CNZ	Pg	22	53	02.7		0.4	100	0.41	212			
GSZ	Pg	22	53	03.6		0.2	100	0.47	203			
	e(S)			06		-3.3						
KRP	Pg	22	53	12		-1.0	100	0.95	346		3.2	3.2
	Sg			25		-0.9	100					
TUA	Pg	22	53	14.5		-0.2	100	1.03	88		3.2	3.5
	Sg			29.5		0.7	100					
TRZ	Sg	22	53	34.5		5.4		1.04	133			3.3
TNZ	Pg	22	53	17		-0.5	100	1.18	253		3.6	3.2
	Sg			35.5		2.0	99					
WTZ	ePg	22	53	21.5		2.3		1.26	47		2.5	
GNZ	Sg	22	53	56.5		4.4		1.73	84			3.2
MNG	Pg	22	53	27.1	D	-2.8	98	1.79	188		3.5	

AMPLITUDES:													
	WNZ		0.4	KRP		1.1	1.1	TUA		0.3	0.6		
	TRZ		0.6	TNZ		0.5	0.3	WTZ		0.1			

GNZ 0.4 MNG 1.1

FELT: Omori (40) MM III

78/ 375

JUL 14 $20^h19^m14^s.4$ 32°.48S 177°.93W 33 km M = 5.1

± 2.1 0.09 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	ePn	20	20	41.5		2.3	99	5.96	208		5.6	
GBZ								6.61	234			
WTZ	ePn	20	20	49.5		-2.5	98	6.89	216		5.2	
	P*		21	10		-3.0						
GNZ	Pn	20	20	53		-0.2	100	6.98	207		5.3	5.2
	e(P*)		21	16		1.4						
	Sn		22	08		-0.1	100					
ONE	Pn	20	20	56.5		0.4	100	7.19	241			
TUA	Pn	20	20	59.5		-0.5	100	7.48	211		5.3	5.3
	P*		21	07		-16.0						
	Sn		22	20		-0.1	100					
	S*			58		-2.0						
KRP	Pn	20	21	01.5		-0.5	100	7.62	223		5.5	
	P*			12		-13.5						
	Sn		22	32.5		8.9						
WNZ	e(Pn)	20	21	06		1.1		7.83	217		5.0	
	(P*)			41		11.9						
CRZ	Pn	20	21	08.5		0.1	100	8.09	254		5.7	
TRZ	(Pn)	20	21	09.5		-0.9		8.24	210		5.0	5.1
	e(Sn)		22	36		-2.5						
	e			42								
	e(S*)		23	22		-0.8						
MNG	Pn	20	21	25		-5.3		9.70	211		4.7	5.0
	P*			45		-15.8						
	Sn		23	06		-7.5						
	eS*			50		-16.4						
WEL	Sn	20	23	24		-10.1		10.56	212	4.7		
COB								11.39	218		4.7	4.6
CIZ	Sn	20	23	58		0.9		11.51	175			
KAI								13.12	217	4.9		
MJZ	Sn	20	24	58		-14.6		14.66	215		4.8*	4.6*
MSZ								16.43	218		4.9	4.5

AMPLITUDES:

ECZ	2.3		GBZ	2.1	1.0	WTZ	3.3		
GNZ	3.1	4.1	TUA	1.1	1.2	KRP	1.4		
WNZ	0.1		CRZ	0.6		TRZ	0.6	1.1	
MNG	0.9	2.5	WEL	0.2		COB	0.2	0.6	
KAI	0.2		MJZ	0.5	0.6	MSZ	0.4	0.3	

78/ 376

JUL 15 $18^h41^m52^s.2$ 38°.04S 176°.72E 12 km M = 3.2

± 0.8 0.08 0.04 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPg	18	41	56.6		-0.5	100	0.22	75			
WNZ	Pg	18	42	07.5		-0.3	100	0.76	219		3.1	3.0
	e(Sg)			21.5		3.3						
TUA	Pg	18	42	08		-1.3	100	0.84	156		3.2	
KRP	Pg	18	42	10		-1.4	100	0.94	277		3.0	2.9
	Sg			26		1.9	99					
GNZ	Pg	18	42	16		-0.3	100	1.19	121		3.6	3.1
	e(Sg)			34.5		2.1	99					

	e			41.5							
CNZ	Pg	18	42	22		-0.2		1.48	218		
ECZ	ePg	18	42	24		1.7		1.48	77	3.4	
TRZ	ePg	18	42	20		-2.9		1.51	177	3.5	
GBZ								2.07	331		
MNG	eP*	18	42	40		-0.3		2.75	200	3.3	
	(Pg)			44		-3.8					

AMPLITUDES: WNZ 0.1 0.1 TUA 0.6 KRP 0.8 0.5
GNZ 1.9 1.0 ECZ 0.2 TRZ 0.4
GBZ 0.4 MNG 0.4

FELT: Kawerau (34)

78/ 377

JUL 15 $18^h42^m25^s.0$ 38°.07S 176°.69E 12 km M = 3.2
± 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
WTZ	Pg	18	42	30		-0.5	100	0.25	71			
WNZ	e(Pg)	18	42	46		6.1		0.73	219			
TUA	Pg	18	42	41		-0.8	99	0.83	154		3.3	3.1
	e(Sg)			55		1.9						
KRP	Pg	18	42	44		0.3	100	0.92	278		2.8	
GNZ	Pg	18	42	49.8		0.5	100	1.20	119		3.4	3.2
	Sg		43	06		0.5	100					
	e			09								
TRZ								1.49	176		3.2	
GBZ								2.08	332			
MNG	e(P*)	18	43	09.5		-3.0		2.72	200		3.2	
	Pg			14		-5.9						

AMPLITUDES: TUA 0.8 0.6 KRP 0.5 GNZ 1.3 1.3
TRZ 0.2 GBZ 0.1 MNG 0.3

78/ 378

JUL 15 $18^h42^m55^s.6$ 38°.04S 176°.69E 12 km M = 3.3
± 0.8 0.09 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
WTZ	Pg	18	43	00.1		-0.9	100	0.24	77			
WNZ	e(Pg)	18	43	15		4.2		0.75	218			
TUA	Pg	18	43	11		-1.8	99	0.85	155		3.5	
KRP	Pg	18	43	14		-0.2	100	0.92	277		3.0	2.7
	Sg			27.5		0.8	100					
GNZ	Pg	18	43	20		-0.1	100	1.21	120		3.6	3.2
	Sg			38.5		2.0	99					
	e			45								
TRZ	ePg	18	43	24		-2.3		1.51	176		3.5	
GBZ								2.06	332			
MNG	Pg	18	43	47		-4.0		2.74	200		3.3	

AMPLITUDES: TUA 1.2 KRP 0.8 0.4 GNZ 2.1 1.1
TRZ 0.4 GBZ 0.5 MNG 0.4

78/ 379

JUL 15 $19^h35^m39^s.4$ 37°.98S 176°.72E 12 km M = 3.9
± 0.6 0.04 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
WTZ	iPg	19	35	43.9		-0.3	100	0.21	92			
WNZ	Pg	19	35	55		-1.0	100	0.82	217		3.7	3.6

	eSg		36	08		0.9	100						
TUA	iPg	19	35	55.2	U	-2.4	98	0.89	158		4.3	3.9	
	e		36	08									
	Sg			09.5		-0.3	100						
KRP	Pg	19	35	57		-1.5	100	0.94	273		3.7	3.5	
	Sg		36	12		0.7	100						
GNZ	Pg	19	36	03.3	U	-0.9	100	1.22	123		4.3	3.9	
	Sg			22.5		1.8	99						
	e			29.5									
ECZ	Pg	19	36	10		0.7	100	1.48	79		3.9		
CNZ	P*	19	36	06.7		-0.0	100	1.53	217				
TRZ	P*	19	36	07.9		0.4	100	1.57	177		4.1	3.7	
	e(Sg)			42		9.4							
GBZ								2.02	330				
TNZ	P*	19	36	20		1.9	99	2.20	236		4.0		
MNG	P	19	36	22.5		-0.8		2.81	200		4.1	3.5	
	P*			31		2.5							
	e(S*)		37	06.5		1.2							
ONE	ePg	19	36	37.5		-0.6		2.91	319				
	e			40.5									
COB	eP	19	36	47		2.3		4.38	224		3.7		
	eP*		37	01.5		6.2							

AMPLITUDES:										
WNZ	0.4	0.4	TUA	6.3	3.0	KRP	3.5	2.1
GNZ	9.5	5.7	ECZ	0.6		TRZ	1.6	0.8
GBZ	1.1		TNZ	0.2		MNG	2.1	0.6
COB	0.1							

FELT: Kawerau (34)

78/ 380

JUL 15 $20^h57^m11^s.8$ 38°.05S 176°.88E 12 km M = 2.9

± 0.7 0.05 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
WTZ	iPg	20	57	14.8		-0.1	100	0.11	53			
TUA	Pg	20	57	26		-1.8	99	0.78	164		3.0	2.9
	Sg			39		0.5	100					
KRP	Pg	20	57	33		-0.5	100	1.07	276		2.6	
	Sg			49		1.0	100					
GNZ	Pg	20	57	32.6	U	-1.1	100	1.08	124		3.6	2.9
	Sg			50		1.8	99					
	e			53.5								
MNG	Pg	20	58	06		-2.1		2.79	202		2.7	

AMPLITUDES:									
TUA	0.5	0.4	KRP	0.2		GNZ	2.7	0.8
MNG	0.1							

FELT: Waingarara (35)

78/ 381

JUL 16 $11^h42^m04^s.0$ 39°.50S 177°.18E 33 km M = 4.2

± 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*	11	42	11.4		-0.0	100	0.28	259			
TUA	iPn	11	42	16.8	U	-0.2	100	0.69	358		4.2	4.6
	Sn			26.5		-0.1	100					
GNZ	Pn	11	42	22.5		0.2	100	1.08	38		4.1	4.1
	(P*)			30		6.1						
	S*			42.5		4.0						
WNZ	Pn	11	42	23.7	D	-0.3	100	1.21	316		4.8	4.6

	e(Sn)			40		1.0						
GSZ	Pn	11	42	25.1		0.4	100	1.25	280			
NGZ	iPn	11	42	24.8		0.1	100	1.26	284			
CNZ	iPn	11	42	25.3		-0.0	100	1.30	283			
WTZ	iPn	11	42	27.6	U	-0.7	100	1.52	354		4.2	4.4
	P*			33		1.7						
	Sn			46		-0.5	100					
MNG	iPn	11	42	30.3	D	-0.7	100	1.72	229		3.7	4.1
	P*			42		7.4						
	e(Sn)			55		3.8						
KRP	Pn	11	42	34		-1.3	99	2.03	320		4.3	4.2
	P*			40.5		0.5						
	Sn		43	00		1.2	99					
ECZ	Pn	11	42	37.5		1.3	98	2.10	31		3.8	
TNZ	Pn	11	42	37.8		0.3	100	2.20	277		4.6	4.5
	P*			44		1.3						
	e(Sn)		43	06		3.3						
	S*			18		6.4						
WEL	ePn	11	42	42		-0.6		2.56	225	4.0		
	e(P*)			46		-3.0						
	e			56								
	Sn		43	12		0.4	100					
	S*			34		11.3						
COB	Pn	11	42	57.5		-1.3		3.75	244		4.4	4.0
	P*		43	08		-1.2						
	e			18								
	Sn			40.5		0.3						
	e(S*)		44	06		7.8						
KAI	e(Sn)	11	44	16		-1.6		5.31	233	3.8		
CIZ	Pn	11	43	37.5		1.8		6.46	136			
	Sn		44	47.5		2.3						
MJZ	Pn	11	43	37.5		-2.0		6.73	226		3.9*	3.8*
	eP*			57		-2.9						
	e		44	15								
	Sn			51		-0.8						
OMZ	Sn	11	45	03.5		-0.7		7.25	218			4.1
MSZ	eSn	11	45	33.5		-3.4		8.61	230		4.0	4.1

AMPLITUDES:											
TUA		11	28	GNZ		9.7	14	WNZ		2.9	3.0
WTZ		6.9	11	MNG		3.3	11	KRP		3.1	2.0
ECZ		0.3		TNZ		1.4	1.1	WEL	0.6		
COB		1.1	1.4	KAI	0.1			MJZ		0.3	0.5
OMZ			0.3	MSZ		0.2	0.4				

78/ 382

JUL 16 $12^h30^m34^s.6$ 38°.56S 176°.06E 12 km M = 2.9

± 0.8 0.05 0.06 R S.E. of RES. 2.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	iPg	12	30	36.0	D	-1.3	100	0.08	155			
	e			39								
NGZ	Pg	12	30	48		-1.2	100	0.71	209			
KRP	Pg	12	30	52		2.0	100	0.76	327		2.7	
	eSg		31	09		8.7						
TUA	Pg	12	30	50		-2.7	99	0.89	107		2.5	2.5
	e			54								
	Sg		31	03		-1.8	100					
WTZ	ePg	12	30	54		0.5	100	0.93	52			
TRZ	Pg	12	30	59		0.9	100	1.15	149		3.0	3.0
	Sg		31	17		3.3	99					

TNZ	Pg	12	31	03		-1.0	100	1.46	244		
GNZ	Pg	12	31	07		1.2	100	1.54	94	3.1	
MNG	eP*	12	31	10		-1.7		2.11	192	3.4	
	Pg			13		-4.2					
	e(Sg)			44		-1.6					

AMPLITUDES: KRP 0.7 TUA 0.1 0.1 TRZ 0.2 0.3
GNZ 0.3 MNG 0.6

FELT: Taupo (41) MM IV

78/ 383

JUL 16 $12^h37^m11^s.8$ 38°.57S 176°.02E 12 km M = 2.9
± 0.7 0.04 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
WNZ	iPg	12	37	13.7	D	-0.9	100	0.09	130			
	e(Sg)			19		2.5						
NGZ	ePg	12	37	24		-1.8	100	0.68	207			
KRP	Pg	12	37	29		1.9	100	0.75	330		2.8	2.2
	Sg			44		6.7						
TUA	Pg	12	37	29		-1.5	100	0.92	105		2.6	2.6
	e			32								
	Sg			42		-0.9	100					
WTZ	Pg	12	37	32		0.6	100	0.96	53		2.5	
	e			35								
TRZ	Pg	12	37	36		0.6	100	1.16	148		3.0	3.1
	Sg			54		2.9	98					
TNZ	Pg	12	37	40		-0.5	100	1.41	244		3.1	
GNZ	Pg	12	37	43		-0.7	100	1.57	93		2.9	
MNG	eP*	12	37	47.5		-1.0		2.09	191		3.6	3.1
	Pg			51		-3.0						
	Sg		38	22		-0.1						

AMPLITUDES: KRP 1.0 0.2 TUA 0.1 0.1 WTZ 0.2
TRZ 0.2 0.3 TNZ 0.1 GNZ 0.2
MNG 0.8 0.3

FELT: Taupo (41) MM IV

78/ 384

JUL 16 $12^h39^m28^s.0$ 38°.60S 176°.00E 12 km
± R R R R S.E. of RES. 2.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	Pg	12	39	29		-1.8	100	0.09	111			
	eSg			34.5		1.8	100					

AMPLITUDES: WNZ 0.6 1.0

FELT: Taupo (41) MM IV

78/ 385

JUL 17 $03^h23^m28^s.2$ 39°.70S 174°.13E 182 km M = 4.2
± 1.3 0.04 0.06 11 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	iP	03	23	55.0	U	1.5	99	0.55	21		3.6*	
NGZ	P	03	23	58.9		0.5	100	1.26	66			
	S		24	22.5		0.9	100					
MNG	iP	03	24	00.3	U	0.9	100	1.39	132		4.3	4.4
	S			23		-0.6	100					
WEL	S	03	24	28		-0.3	100	1.66	163	4.1		

COB	iP	03	24	03.1	D	0.1	100	1.75	217	3.9*	3.7*
	S			29		-0.9	100				
TRZ	S	03	24	37.5		1.2	100	2.09	87		4.2
KRP	e(S)	03	24	35		-1.4	100	2.09	32	2.7*	2.6*
TUA	S	03	24	43		-1.9	99	2.51	70		4.2
KKY	eP	03	24	13.9		-0.4	100	2.74	187		
	e			42.2							
	(S)			49.5		-0.3					
WTZ	S	03	24	49		-2.5		2.82	53		3.8
GNZ	S	03	24	55.1		-4.9		3.20	72		
MJZ	P	03	24	42		-2.0		5.08	211	3.3*	2.8*
	S		25	39		-3.8					
RHP	P	03	24	46		-1.3		5.34	213		
MSZ	P	03	25	02		-4.3		6.79	221	3.1*	

AMPLITUDES:

TNZ	1.0		MNG	10	17	WEL	1.2		
COB	2.1	5.5	TRZ		1.7	KRP		0.3	0.3
TUA		0.6	WTZ		0.5	MJZ		0.7	0.4
MSZ	0.3								

78/ 386

JUL 17 $04^h35^m20^s.9$ 42°.29S 173°.03E 0 km M = 4.4

± 0.9 0.03 0.04 7 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KKY	iPg	04	35	32.3	D	1.2	100	0.50	105			
KAI	P*	04	35	45		0.8	100	1.22	258	4.5		
	Pg			50		4.3						
	Sg		36	02.5		0.3	100					
COB	iP*	04	35	42.4		-1.7	100	1.22	349			
	e(S*)			58		-2.8						
CHR	eP*	04	35	44.5		-0.6	100	1.28	193			
	Pg			47		0.2	100					
WEL	Pn	04	35	49		-1.4	100	1.64	53	4.2		
	Pg			54		-0.0						
	S*		36	15.5		2.1	99					
	Sg			18		1.9						
MNG	iPn	04	36	00.1	U	-1.8	100	2.48	49		4.6	4.5
	P*			07		1.3						
	eSg			46		1.4						
MJZ	Pn	04	36	01.5		-1.1	100	2.54	227		4.4*	4.2*
	(Pg)			10		-2.1						
	Sn			36		2.3	99					
	S*			43		2.8						
RHP	Pn	04	36	06.5	D	0.0	100	2.82	229			
	S*			50		1.3	100					
OMZ	Pn	04	36	11		-0.4	100	3.18	208		3.9	3.6
	Pg			25		-0.1						
	e(S*)		37	01.5		2.0						
TNZ	Pn	04	36	13		0.4	100	3.27	19		4.6	4.4
	P*			20.5		1.6						
	S*		37	04.5		2.4	99					
NGZ	Pn	04	36	18.5		0.4		3.67	33			
TRZ	eP*	04	36	32		1.1		3.97	48		4.5	4.6
	ePg			48		7.0						
	S*		37	26		2.9						
ROX								4.17	219		4.3	
WNZ								4.34	34		5.1	
MSZ	Pn	04	36	25.5		-2.8		4.42	236		4.3	4.4
	Sn		37	21		1.9						

TUA	P*	04	36	45		1.8		4.69	43		4.4	
KRP	Pn	04	36	31.5		-1.5		4.77	25		4.6	4.3
	eSn		37	27		-0.3						
MNW	Sn	04	37	38		-0.7		5.24	226	4.0		4.3
WTZ	P*	04	36	55		2.0		5.26	36		4.5	
GNZ	Pg	04	37	08		0.6		5.27	48			
ONE								6.59	9	4.2		

AMPLITUDES:										
KAI	8.0			WEL	2.3		1.7	MNG		13	11
MJZ		8.0	7.5	OMZ		0.5	0.5	TNZ		1.3	1.1
TRZ		0.8	1.4	ROX		0.7		WNZ		0.3	
MSZ		1.6	3.5	TUA		0.4		KRP		2.6	1.3
MNW	0.2		1.4	WTZ		0.4		ONE	0.2		

78/ 387

JUL 18 $00^h33^m30^s.5$ 41°.68S 174°.20E 12 km M = 4.0

± 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
WEL	iP*	00	33	42.1	UNE	0.5	100	0.58	48	4.4		
	S*			51		1.4	100					
KKY	iP*	00	33	47.0	U	1.1	100	0.83	207			
	(S*)			59		1.9						
COB	P*	00	33	52.3		-0.7	100	1.25	298		4.3	3.8
	S*		34	09.5		-0.2	100					
MNG	iPn	00	33	54.0	D	-1.6	100	1.44	43		4.4	4.3
	(Pg)		34	02.5		2.9						
	Sg			17.5		-1.5	100					
CAZ	ePg	00	34	05		-0.2	100	1.71	64			
	eSg			37		8.7						
KAI	ePn	00	34	08		1.4	100	2.24	247	4.0		
	e(Pg)			16		0.1						
	S*			40.5		1.1	100					
	eSg			50.5		4.3						
TNZ	P*	00	34	12		-2.2	99	2.49	3		3.9	4.1
	ePg			19		-2.0						
	eS*			45		-2.0						
	Sg			56		1.4	100					
NGZ	Pn	00	34	15		1.9	99	2.72	24			
	P*			19		0.9						
	Pg			25		-0.5						
	eS*			58		4.3						
TRZ	eP*	00	34	25.5		4.1		2.92	44		4.0	3.9
	Pg			30		0.5	100					
MJZ	Pn	00	34	24.5		-0.5	100	3.59	229		4.1*	3.7*
	P*			33		0.1						
	Sn		35	04		-2.1	99					
	S*			19		-0.7						
TUA	P*	00	34	38		4.0		3.65	39		3.9	
RHP	Pn	00	34	28		-0.9		3.88	230			
	P*			38		0.2						
	Sn		35	12		-1.0						
	S*			29		0.7						
KRP	e(Pn)	00	34	30		0.9		3.89	16			
	eP*			39		0.9						
	eS*		35	32		3.2						
GNZ	Sn	00	35	22		0.8		4.22	45		4.0	3.8
WTZ	P*	00	34	44.5		-0.1		4.27	31		3.9	
	ePg			54		-2.8						
MSZ	ePn	00	34	52		1.1		5.48	235		3.8	3.8

	Sn		35	50		-1.6					
	(S*)		36	01		-15.5					
AMPLITUDES:	WEL	32			COB	7.0	9.0	MNG	21	23	
	KAI	0.8			TNZ	0.4	1.0	TRZ	0.5	0.5	
	MJZ		1.6	1.3	TUA	0.2		GNZ	0.5	0.5	
	WTZ	0.3			MSZ	0.3	0.6				

FELT: Wellington (68) MM III

78/ 388

JUL 18 $07^h44^m13^s.5$ 39°.16S 175°.41E 6 km M = 3.5

± 0.6 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
CNZ	iPg	07	44	16.0		-0.1	100	0.11	108			
NGZ	iPg	07	44	16.6		-0.3	100	0.16	97			
GSZ	iPg	07	44	16.1		-1.2	100	0.18	130			
TNZ	P*	07	44	29		0.1	100	0.80	268		2.7	3.1
	S*			41		1.0	100					
TRZ	P*	07	44	36		0.9	100	1.16	110		3.0	3.1
	e(Pg)			40		3.0						
	Sg			54.5		1.8	99					
KRP	P*	07	44	36.0		-0.5	100	1.24	5		4.0	4.1
	S*			53		-0.2	100					
MNG	iPn	07	44	38.2	U	-1.5	100	1.46	178		4.2	3.7
	Sn			57		-2.1	99					
WEL	Pn	07	44	50		0.5	100	2.18	193	3.3		
	Sn		45	18		1.6	99					
COB	ePn	07	44	57.7		-0.5		2.82	226		3.5	3.3
	S*		45	39		-1.3						

AMPLITUDES:	TNZ	0.2	0.6		TRZ	0.2	0.3	KRP	3.2	3.5	
	MNG	13	5.0		WEL	0.1		COB	0.2	0.4	

FELT: Ohakune (49) MM IV

78/ 389

JUL 20 $14^h56^m14^s.6$ 35°.32S 179°.37E 12 km M = 5.0

± 2.0 0.08 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	Pn	14	56	56		2.3	98	2.47	195			
WTZ	Pn	14	57	03.5		-1.4	100	3.28	215			
GNZ	Pn	14	57	07		-0.7	100	3.49	198			
	P*			20		4.7						
	Sn			48		0.1	100					
TUA	Pn	14	57	12		-1.5	100	3.91	206		5.2	5.2
	P*			20.5		-2.0						
	Sn			58		0.1	100					
	S*		58	17		3.5						
AUC	Pn	14	57	16		0.9	100	4.02	246			
KRP	Pn	14	57	15.5		0.3	100	4.03	229			
ONE	Pn	14	57	16		-0.2	100	4.11	262			
WNZ	ePn	14	57	17		-0.7		4.22	217		5.0	4.8
	eP*			21		-6.7						
	eS*		58	24		1.3						
TRZ	Pn	14	57	20.5		-3.6		4.69	205		5.1	5.0
	P*			34		-1.8						
	Sn		58	18		1.3						
	S*			41		4.2						
NGZ	Pn	14	57	25.3		-1.5		4.89	217			

	P*			32		-7.1						
	e(Sn)		58	25		3.6						
	(S*)			30		-12.7						
TNZ	Pn	14	57	35		-0.8		5.54	224		5.6	
	P*			41		-9.4						
CRZ	Pn	14	57	36		-0.2		5.57	277		4.7	
MNG	eSn	14	58	50		-1.0		6.12	209			5.1
	S*		59	16.5		-3.2						
WEL	e(Pn)	14	57	52		-3.3		6.97	210	4.8		
	P*		58	15		0.2						
	Sn		59	07		-4.5						
MJZ	Pn	14	58	45		-5.9		11.05	216		4.5*	4.5*
	P*		59	20		-4.3						
	Sn	15	00	41		-8.4						
MSZ	Pn	14	59	13.5		-1.5		12.82	220		4.5	4.4
	Sn	15	01	22.5		-9.4						
	e			34								

AMPLITUDES:									
TUA		3.5	3.7	WNZ	0.3	0.3	TRZ	2.4	2.4
TNZ		1.0		CRZ	0.2		MNG	8.3	
WEL	0.5			MJZ	0.5	0.9	MSZ	0.3	0.4

78/ 390

JUL 20 $14^h56^m42^s.2$ 42°.74S 177°.40E 12 km M = 4.1

± 0.9 0.06 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
MOW	Pn	14	57	16.0		0.0	100	2.07	309			
	P*			17.5		-1.2						
	Sn			43.5		2.1						
BHW	e(Pn)	14	57	19		-0.2	100	2.30	304			
	e			20.1								
	eSn			49.4		2.4						
WDW	Pn	14	57	19.2		-0.2	100	2.32	309			
	(Sn)			47		-0.3						
	e(Sg)		58	05		4.6						
CAW	iPn	14	57	20.7	D	0.4	100	2.38	312			
	P*			22		-2.1						
WEL	Pn	14	57	21.0		-0.0	100	2.44	306	3.6		
	(Sn)			48.4		-1.8						
	e			51								
WHW	Pn	14	57	21.0		-0.2	100	2.46	305			
MRW	iPn	14	57	22.0	U	0.0	100	2.51	306			
	e(Sn)			51		-0.9						
MNG	iPn	14	57	23.9	U	1.2	98	2.56	325		4.2	4.4
	iSn			52.7		-0.4	100					
KIW	Pn	14	57	24.6		0.8	99	2.65	314			
KKY	e(P*)	14	57	34		3.5		2.76	275			
TCW	Pn	14	57	24.7		-1.0	99	2.79	302			
	P*			25.5		-5.4						
	Sn			58.6		0.1						
COB	e(Sn)	14	58	25		0.8	100	3.85	294			
MJZ	Pn	14	57	59		0.2		5.21	254		3.8*	
MSZ	Pn	14	58	25.5		0.3		7.15	251			

AMPLITUDES:								
WEL	0.2		MNG	4.5	8.8	MJZ	0.4	

78/ 391

JUL 20 $17^h25^m30^s.5$ 45°.26S 167°.08E 12 km M = 5.3

± 1.2 0.03 0.14 R S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNW	P*	17	25	42.0		-0.6	100	0.64	144			
MSZ	iP*!	17	25	45.1		-0.8	99	0.84	45			
ROX	iPn	17	25	58.1	D	0.4	100	1.59	99			
OBZ	Pn	17	26	00.8		0.3	100	1.80	157			
	P*			02.2		-0.1	100					
	Sn			23		0.0	100					
THP	Pn	17	26	05.5	D	0.6		2.12	71			
DMP	Pn	17	26	05.9	D	0.9		2.13	68			
HGP	Pn	17	26	08.3	D	1.1		2.29	61			
RHP	Pn	17	26	10.0	D	0.8	99	2.44	63			
HHP	Pn	17	26	10.1	D	-0.1		2.50	69			
MMP	Pn	17	26	10.9	D	0.2		2.54	65			
BSP	Pn	17	26	12.0	D	0.9		2.57	58			
OMZ	Pn	17	26	13.0	D	-0.1	100	2.72	87			
MJP	Pn	17	26	13.1	D	-0.1		2.73	63			
MJZ	Pn	17	26	13.0	D	-0.3		2.74	63			
WEL	ePn	17	27	12		2.2		6.88	57	5.1		
	Sn		28	29		3.9						
MNG	ePn	17	27	20		-1.3		7.72	56		5.4	5.4
TNZ	ePn	17	27	29		2.0		8.14	44		5.3	5.5
TRZ								9.19	55		4.9	5.2
TUA	ePn	17	27	59		8.1		9.88	53		5.3	5.1
GNZ	Sn	17	29	55		3.0		10.49	55			
ONE	Pn	17	28	07		1.2		10.98	33	5.4		
	Sn		30	05		1.4						

AMPLITUDES: WEL 1.0 MNG 7.7 10 TNZ 1.1 2.0
TRZ 0.4 1.1 TUA 0.6 0.5 ONE 1.1

FELT: Te Anau Downs (130) MM IV and Mahitahi (104) MM III

78/ 392

JUL 20 $22^h00^m14^s.4$ 39°.82S 175°.30E 33 km M = 3.7
± 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
GSZ	iPn	22	00	25.5		-0.5	100	0.59	22			
	S*			36		1.0	99					
CNZ	Pn	22	00	26.2		-0.6		0.66	17			
	Sn			37		1.0						
NGZ	iPn	22	00	26.6		-0.7	100	0.68	21			
	S*			38		0.4	100					
MNG	iPn	22	00	28.6	U	-0.3	100	0.81	170		3.5	4.1
	S*			41		-0.0	100					
TNZ	Pn	22	00	30.5	D	-0.5	100	0.95	312		3.3	3.9
	Sn			43.5		0.2	100					
	S*			45		-0.3	100					
TRZ	P*	22	00	35.5		-0.9	100	1.21	77		3.5	3.8
	S*			57.5		4.8						
WEL	Pn	22	00	39.5		0.9	100	1.51	195	3.6		
	Sn			57		0.2	100					
	S*		01	02		0.2						
TUA	Pn	22	00	43.5		1.5	98	1.76	55		3.5	3.9
	S*		01	08		-1.0	99					
KRP	ePn	22	00	42		-2.0		1.91	6		3.7	3.9
	eSn		01	07		0.8						
WTZ	Pn	22	00	47		-1.8		2.26	36		3.2	3.9
	eS*		01	22		-2.0						
COB	Pn	22	00	49.5		-0.2	100	2.33	236			

GNZ	(Pn)	22	00	50		-1.0		2.42	62				
	Sn		01	19		0.4	100						
KAI								3.99	226	3.9			
MJZ	Sn	22	02	30		-2.7		5.51	219		3.2*	3.6*	
MSZ								7.32	226		3.6	3.3	

AMPLITUDES: MNG 8.0 40 TNZ 0.7 3.9 TRZ 0.9 2.5
WEL 0.6 TUA 0.3 0.9 KRP 0.7 0.8
WTZ 0.2 0.7 KAI 0.2 MJZ 0.1 0.4
MSZ 0.1 0.1

78/ 393

JUL 21 $08^h28^m22^s.1$ 32°.21S 178°.22W 418 km M = 4.9
± 3.5 0.28 0.50 19 S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
GNZ	S	08	31	33.0		0.8	100	7.11	204					
KRP	eS	08	31	43		-0.1	100	7.66	220					
TRZ	eS	08	31	59		1.6	100	8.36	207					4.8
MNG	P	08	30	37.2		-1.6	100	9.81	209			4.8		4.9
	S		32	27.0		-0.2	100							
WEL	eS	08	32	42		-2.9	99	10.66	210	4.9				
MJZ	eS	08	34	08		1.2	100	14.74	214					
MSZ	eP	08	31	52		1.1	100	16.49	217			3.3*		

AMPLITUDES: TRZ 0.5 MNG 1.3 1.8 WEL 0.2
MSZ 0.2

78/ 394

JUL 21 $15^h02^m02^s.9$ 44°.65S 168°.27E 69 km M = 3.9
± 0.3 0.01 0.02 4 S.E. of RES. 0.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
MSZ	P	15	02	14.1		0.0	100	0.25	266					
ROX	P	15	02	23.7		0.5	99	1.11	138					
	eS			38.7		0.2	100							
MNW	P	15	02	25.0		0.4	99	1.22	202					
	S			40.6		-0.4	100							
RHP	P	15	02	27.4		0.2	100	1.41	68					
	eS			45.5		0.0	100							
MJZ	P	15	02	30.8		-0.3	100	1.71	68			4.0*		3.8*
	S			51.9		-0.5	99							
OMZ	P	15	02	34.3		0.2	100	1.93	103					
	eS			57		-0.2	100							
OBZ	P	15	02	38.9		0.1	100	2.26	183			3.8*		3.7*
	S		03	05.0		-0.3	100							
KAI	eP	15	02	50.5		-0.4		3.11	48	3.9				
	eS		03	23.5		-3.6								
	e			31										

AMPLITUDES: MJZ 13 13 OBZ 2.2 3.8 KAI 0.5

78/ 395

JUL 22 $04^h18^m56^s.4$ 40°.14S 174°.96E 12 km M = 4.0
± 0.4 0.02 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
MNG	iP*	04	19	08.2		0.0	100	0.62	140					3.8
	S*			16.2		-0.5	100							
GSZ	P*	04	19	13.2		-1.2	100	0.99	30					
	eS*			27.8		0.1	100							
CNZ	P*	04	19	14.1		-1.3	100	1.04	26					

	eS*			29.0		-0.3	100						
TNZ	P*	04	19	16.0		0.5	100	1.05	335		3.6	3.8	
	eS*			30.0		0.4	100						
	i			32.0									
NGZ	P*	04	19	14.7		-1.3	100	1.08	28				
	S*			29.8		-0.7	100						
WEL	P*	04	19	17.3		0.0	100	1.15	187	4.1			
	S*			32.0		-0.7	100						
CAZ	P*	04	19	21.3		2.7	97	1.23	129				
	(S*)			40.8		5.8							
TRZ	Pn	04	19	24.8		1.8	99	1.55	68		3.8	3.8	
	e(S*)			50		5.5							
TUA	eP*	04	19	35		0.6		2.16	53		3.9	3.9	
	eS*		20	06		3.3							
KRP	ePn	04	19	31.5		-1.2	100	2.26	12		4.5	4.6	
	iP*			34.8		-1.3							
	Sn		20	02.3		2.3	99						
KKY	eP*	04	19	40.5		0.7		2.47	202				
	e			43.3									
WTZ	ePn	04	19	40.5		2.1		2.67	37		4.0	4.0	
	eSn		20	12.0		2.0							
	eS*			15.5		-2.6							
GNZ	(P*)	04	19	51		5.5		2.81	59		3.9		
	e			55.0									
	Sn		20	15.0		1.8							

AMPLITUDES: MNG 37 TNZ 1.2 2.8 WEL 3.5
TRZ 1.1 1.7 TUA 0.5 0.6 KRP 2.8 2.6
WTZ 0.7 0.6 GNZ 0.8

FELT: Wanganui (57) MM IV

78/ 396

JUL 22 $04^h38^m41^s.1$ 39°.04S 175°.34E 162 km M = 3.8
± 1.1 0.04 0.05 9 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CNZ	P	04	39	03.9		0.9	100	0.22	135			
	eS			20.0		0.2						
	e			22.7								
NGZ	P	04	39	04.0		0.9	100	0.25	124			
	eS			20		0.1						
GSZ	P	04	39	04.1		0.9	100	0.30	141			
TNZ	P	04	39	05.3		-0.1	100	0.76	259		3.2*	2.9*
	S			25.5		1.4	100					
KRP	P	04	39	08.1		-0.1	100	1.13	8		3.5*	2.7*
	S			28.0		-1.1	100					
TRZ	eP	04	39	10.7		1.3	100	1.25	114		3.7	3.5
	S			33.0		1.9	99					
TUA	P	04	39	12.0		0.8	100	1.43	81		3.8	3.8
	S			34.5		0.3	100					
MNG	P	04	39	13.2		0.6	100	1.57	176		4.4	4.0
	S			35.1		-1.8	99					
WTZ	eP	04	39	13.0		-0.6	100	1.66	51		3.4	3.5
	eS			36.0		-2.7	98					
GNZ	P	04	39	20.1		1.3	100	2.13	80			
	eS			46.8		-1.0	100					
WEL	eP	04	39	20.0		-0.6	100	2.29	191	3.8		
	eS			49.0		-2.1	99					

AMPLITUDES: TNZ 0.4 0.3 KRP 2.8 0.5 TRZ 0.5 0.7

TUA 0.6 0.6 MNG 12 7.0 WTZ 0.4 0.6
WEL 0.4

78/ 397

JUL 23 $01^h45^m18^s.6$ 40°.17S 174°.49E 96 km M = 3.5
± 0.6 0.02 0.03 7 S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	eP	01	45	37.3		-0.4	100	0.88	121		3.3	3.6
	e			40.7								
	S			52.0		-0.1	100					
TNZ	P	01	45	38.9		0.1	100	0.99	355		3.2*	3.8*
	S			52.6		-1.5	98					
WEL	eP	01	45	41		0.4	100	1.13	169	3.6		
	S			56.5		-0.7	100					
GSZ	P	01	45	42.0		0.3	100	1.23	44			
	eS		46	00		0.8	100					
CNZ	P	01	45	43.0		0.8	100	1.27	40			
	eS		46	00.7		0.7	100					
NGZ	P	01	45	43.2		0.5	100	1.31	42			
	S		46	02.0		1.0	100					
COB	eP	01	45	47		0.4	100	1.62	235			
	eS		46	07.5		-0.2	100					
KRP	P	01	45	56.8		0.0	100	2.38	20			
	S		46	24.8		-0.5	100					
GNZ	S	01	46	42.0		-1.7	97	3.13	62			3.5

AMPLITUDES: MNG 3.5 8.5 TNZ 0.5 2.6 WEL 0.9
GNZ 0.4

78/ 398

JUL 23 $03^h52^m44^s.5$ 49°.78S 164°.50E 33 km M = 4.3
± 1.2 0.12 0.24 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	03	53	40.3		1.0	99	3.75	41		4.0*	4.7*
	S		54	20.0		-0.7	100					
MNW	eP	03	53	50.0		0.2	100	4.52	29		4.6	4.6
	eS		54	39		-0.1	100					
ROX	eP	03	54	01		-0.8	100	5.40	39		4.3	4.1
	eS		55	01		0.7	100					
OMZ	e(S)	03	55	18		-6.6		6.42	45			3.9
RHP	P	03	54	21		-0.5	100	6.85	36			
	e			30.5								
	e(S)		55	29		-6.0						
MJZ	e(P)	03	54	34		9.1		7.09	37		3.9*	

AMPLITUDES: OBZ 0.5 6.0 MNW 1.7 3.6 ROX 0.4 0.7
OMZ 0.2 MJZ 0.3

78/ 399

JUL 23 $06^h03^m10^s.1$ 44°.52S 168°.75E 12 km M = 3.8
± 0.8 0.04 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
ROX	P*	06	03	28.7		-0.3	100	1.03	157		4.1	3.9
	S*			41.8		-1.1	100					
RHP	P*	06	03	29.0		-0.1	100	1.04	67			
MJZ	eP*	06	03	33.0		-1.2	100	1.34	67		3.9*	3.9*
	i			34.8								
	Sn			51.0		-0.7	100					

MNW	Pn	06	03	34.7	-1.3	100	1.49	212		3.6	3.6
	eSn			56	0.6	100					
OMZ	Pn	06	03	39.2	1.2	100	1.64	110			
	eS*		04	02.2	1.4	100					
OBZ	Pn	06	03	49.0	0.3	100	2.43	190		4.1*	3.3*
	eP*			55.7	3.0	98					
	e		04	20							
	eS*			22.5	-2.0	99					
KAI	eS*	06	04	37	1.9		2.78	45	4.0		
MNG	e(Pn)	06	04	48.0	6.1		6.32	54		3.8	

AMPLITUDES: ROX 6.3 11 MJZ 9.0 13 MNW 1.7 3.6
OBZ 1.6 0.6 KAI 0.5 MNG 0.3

FELT: Matukituki Valley (113) MM IV

78/ 400

JUL 23 $18^h05^m48^s.6$ 40°.37S 175°.58E 33 km M = 3.6
± 0.2 0.01 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	P*	18	05	56.2		0.4	100	0.26	197			
	S*		06	01.6		0.7	100					
CAZ	P*	18	06	02.0		-0.6	100	0.73	138			
	S*			14.3		1.3	99					
GSZ	P*	18	06	08.5		-0.2	100	1.09	0			
	S*			24.0		0.5	100					
WEL	P*	18	06	08.3		-0.6	100	1.11	214	3.7		
	S*			23.5		-0.4	100					
CNZ	P*	18	06	09.4		-0.6	100	1.17	359			
	eS*			26.0		0.2	100					
NGZ	P*	18	06	09.4		-0.9	100	1.19	1			
TRZ	P*	18	06	09.5		-1.9	96	1.26	50		3.4	3.5
	S*			29		0.6	100					
TNZ	P*	18	06	15.5		-0.1	100	1.50	322		3.8	4.1
	S*			36.3		0.7	100					
WNZ	eP*	18	06	23		2.6		1.78	13		4.2	
TUA	eP*	18	06	26		2.4		1.98	38		3.4	3.5
	eS*			55		5.2						
KRP	Pn	18	06	27.5		2.0		2.45	359			
	eP*			33.4		1.9						
	S*		07	01.5		-2.1						
KKY	eSn	18	06	52.3		-2.2		2.49	214			
GNZ	eP*	18	06	34		0.5		2.56	48		3.5	3.2
	Sn			55.0		-1.0						
WTZ								2.62	25		3.4	3.6

AMPLITUDES: WEL 1.6 TRZ 0.6 1.3 TNZ 1.0 2.5
WNZ 0.3 TUA 0.2 0.3 GNZ 0.4 0.3
WTZ 0.4 0.5

FELT: Palmerston North (62) MM III

78/ 401

JUL 24 $20^h42^m06^s.1$ 37°.67S 177°.53E 33 km M = 3.4
± 1.3 0.11 0.07 R S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	20	42	16.2		-0.7	100	0.53	233		3.4	3.4
	S			26.3		1.5	100					
ECZ	P	20	42	22.9		2.2	100	0.81	92		3.8	
GNZ	eP	20	42	22.3		-1.7	100	1.05	158		3.1	3.4

	S			39.0		1.7	100					
TUA	P	20	42	24.7		-1.0	100	1.18	194		3.6	3.4
	eS			42		1.7						
KRP	P	20	42	29.2		-2.2	100	1.59	260			
	S			53.7		3.3	99					
NGZ	P	20	42	37.8		-0.9	100	2.13	224			
	eS		43	04.0		0.7						
	e			08.0								
CNZ	P	20	42	38.5		-0.9	100	2.18	225			
GSZ	P	20	42	38.5		-1.4	100	2.21	223			

AMPLITUDES: WTZ 10 7.8 ECZ 1.9 GNZ 0.9 3.2
TUA 1.0 0.7

78/ 402

JUL 25 $01^h39^m55^s.4$ 46°.31S 166°.35E 33 km M = 3.6
± 0.4 0.04 0.03 R S.E. of RES. 0.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNW	P	01	40	13.0		0.0	100	1.03	60			
	S			26.3		0.2	100					
MSZ	P	01	40	25.7		-0.2	100	1.97	35		3.6	3.6
	e			28.8								
ROX	P	01	40	29.7		0.2	100	2.24	69		3.6	3.8
	S			54.8		-0.3	99					
MJZ	eS	01	41	31		0.1	100	3.73	53		3.4*	3.1*

AMPLITUDES: MSZ 1.4 2.6 ROX 0.5 1.7 MJZ 0.3 0.3

78/ 403

JUL 25 $11^h37^m41^s.7$ 37°.66S 179°.34E 33 km M = 3.7
± 1.3 0.06 0.10 R S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	11	37	53.6		-0.3	100	0.63	267		3.8	3.9
	iS		38	02.8		-0.0	100					
GNZ	P	11	38	05.2		0.4	100	1.43	226		3.6	3.6
	e			10.3								
	S			20.3		-1.7	98					
	i			24.0								
WTZ	P	11	38	11.5		0.4	100	1.89	259		3.7	3.9
	e			20.3								
TRZ	eP	11	38	22		-0.6	100	2.74	225		3.7	3.8
	eS			55		1.6	99					
KRP	eP	11	38	26.5		-0.0	100	3.02	264		3.5	
	eS			57		-3.4						
NGZ	eP	11	38	30.2		-0.1	100	3.30	241			

AMPLITUDES: ECZ 3.5 5.2 GNZ 1.7 2.6 WTZ 1.6 2.2
TRZ 0.3 0.5 KRP 0.2

78/ 404

JUL 26 $21^h18^m42^s.7$ 38°.29S 177°.35E 33 km M = 3.1
± 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
WTZ	P*	21	18	51.2		-0.7	100	0.41	317		2.9	3.4
	S*			59.2		0.6	100					
TUA	P*	21	18	52.8		-1.0	100	0.54	197		2.9	3.1
	S*		19	03.0		1.1	100					
GNZ	P*	21	18	53.2		-2.1	98	0.64	124		3.3	3.5
	S*		19	05.0		0.5	100					

ECZ	eP*	21	19	04.5		1.3	99	1.12	58	3.1	3.2
	eS*			18.5		0.1	100				
KRP	ePn	21	19	05.5		-0.8	100	1.48	284	2.8	
	eSn			24		-0.0	100				
NGZ	Pn	21	19	09.0		0.6	100	1.62	236		
MNG	eP*	21	19	31		0.4	100	2.74	211	3.1	
	e			36							

AMPLITUDES: WTZ 4.8 15 TUA 0.8 1.6 GNZ 4.2 11
ECZ 0.2 0.3 KRP 0.2 MNG 0.3

78/ 405

JUL 26 $21^h45^m28^s.6$ 38°.51S 175°.83E 178 km M = 4.2
± 1.2 0.05 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
KRP	P	21	45	54.0		0.1	100	0.62	339		3.5*	3.1*
	i			55.3								
	S		46	12.0		-1.4	100					
NGZ	P	21	45	56.0		1.7	100	0.69	194			
CNZ	P	21	45	56.0		1.6	100	0.73	197			
GSZ	P	21	45	56.5		1.6	100	0.79	193			
WTZ	P	21	45	55.0		-1.7	100	1.05	61		3.6	3.6
	e		46	12.8								
	iS			15.9		-2.5						
TUA	P	21	45	56.5		-0.4	100	1.08	107		4.3	4.2
	S		46	19.2		0.5	100					
TRZ	P	21	46	00.0		1.2	100	1.30	144		4.5	
	e			18								
	S			22.0		-0.1	100					
TNZ	P	21	46	01.0		2.1	99	1.32	238		3.3*	
GNZ	eP	21	46	03.0		0.0	100	1.73	95		3.8	4.1
	S			27.0		-2.5	99					
MNG	iP	21	46	08.2		0.9	100	2.13	187		4.9	4.7
	S			35.8		-1.4	100					
CAZ	P	21	46	12.2		1.5	100	2.42	173			
	S			44.5		1.4	100					
WEL	eP	21	46	16		-0.5	100	2.90	196	4.2		
	eS			52		-1.3	100					
COB	eP	21	46	23.0		-1.2	100	3.51	222		3.5*	3.5*
	S		47	07.0		0.0	100					
KAI	eS	21	47	44		-2.8	99	5.25	219	3.6*		

AMPLITUDES: KRP 3.2 1.7 WTZ 1.0 1.1 TUA 2.2 1.7
TRZ 3.0 TNZ 0.4 GNZ 1.1 3.2
MNG 29 19 WEL 0.6 COB 0.6 2.1
KAI 0.3

78/ 406

JUL 27 $01^h04^m36^s.4$ 36°.06S 178°.15E 287 km M = 4.4
± 1.0 0.08 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
ECZ	eP	01	05	19.4		-0.3	100	1.66	169		4.0	4.0
	eS			54.5		1.2	100					
WTZ	P	01	05	22.3		-1.2	100	2.13	206		5.0	4.2
	S			59.0		-1.1	100					
GNZ	P	01	05	27.9		0.4	100	2.58	182		4.7	4.2
	S		06	06.0		-1.4	99					
KRP	P	01	05	29.9		0.3	100	2.81	228		3.1*	
TUA	P	01	05	31.0		0.8	100	2.86	196		4.6	

NGZ	P	01	05	40.0		0.8	100	3.72	212				
CNZ	eP	01	05	40.5		0.8	100	3.76	213				
GSZ	P	01	05	40.7		0.5	100	3.81	212				
TNZ	eP	01	05	47		0.9	100	4.33	223		3.4*		
MNG	P	01	05	53.0		-1.1	100	5.01	204		4.9	4.4	
	e		06	52									
	eS			56.0		1.0	100						
WEL	eS	01	07	13		0.0	100	5.86	206	4.4			
COB	eP	01	06	11		-2.0	98	6.58	219		3.3*	3.0*	
	eS		07	29		0.2	100						

AMPLITUDES: ECZ 0.4 0.4 WTZ 7.8 1.3 GNZ 3.5 1.8
KRP 0.6 TUA 0.9 TNZ 0.2
MNG 5.1 2.0 WEL 0.2 COB 0.2 0.3

78/ 407

JUL 27 $12^h15^m13^s.7$ $37°.34$S $177°.64$E 68 km M = 3.7
± 0.8 0.05 0.04 10 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	12	15	28.9		-1.1	100	0.80	116		4.0	4.1
	S			43.7		1.4	99					
WTZ	P	12	15	29.5		-0.9	100	0.83	219		3.6	4.1
	S			42.5		-0.3	100					
GNZ	iP	12	15	35.8		-1.1	100	1.33	167		3.9	3.7
	S			55.0		0.6	100					
KRP	P	12	15	42.4		-0.4	100	1.77	250		3.0*	2.8*
	S		16	04.5		-0.0	100					
TRZ	eP	12	15	49		-1.2	99	2.30	196		3.6	3.4
	e(S)		16	22		4.7						
AUC	iP	12	15	51.4		0.6	100	2.34	281			
NGZ	eP	12	15	52.8		0.6	100	2.44	220			
	i			55.0								
	e(S)		16	25		4.3						
CNZ	eP	12	15	54.2		1.4	99	2.48	221			
GSZ	eP	12	15	54.0		0.6	100	2.52	219			
MNG	eP	12	16	08.0		-1.6		3.68	207		3.3	3.3
	eS			51		-1.1						
WEL	eS	12	17	08		-5.2		4.53	209	4.0		

AMPLITUDES: ECZ 4.1 5.6 WTZ 4.0 13 GNZ 3.6 3.5
KRP 0.8 0.7 TRZ 0.2 0.3 MNG 0.3 0.4
WEL 0.2

78/ 408

JUL 27 $21^h16^m32^s.2$ $44°.31$S $167°.83$E 12 km M = 3.4
± 1.3 0.06 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
MSZ	iP*	21	16	38.0		-1.5	99	0.36	171			
MNW	P*	21	16	57.3		-1.2	100	1.48	186			
	eS*		17	18.0		-0.1	100					
ROX	P*	21	17	01.0		0.8	100	1.57	138		3.4	3.5
	S*			20.2		-0.8	100					
HHP	P*	21	17	04.2		0.1	100	1.80	91			
	S*			28.0		0.1	100					
OBZ	ePn	21	17	14		0.8	100	2.60	176		3.3*	3.1*
	eSn			46		1.9	99					

AMPLITUDES: ROX 0.6 1.8 OBZ 0.2 0.3

78/ 409

JUL 28 $11^h37^m51^s.2$ 38°.38S 177°.08E 12 km M = 3.4
± 0.5 0.03 0.05 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*	11	37	59.6		0.4	100	0.40	350		3.3	3.2
	S*		38	06.5		1.6	100					
TUA	P*	11	37	59.7		-0.0	100	0.43	173		2.8	3.2
	S*		38	07.6		1.8	100					
GNZ	iP*	11	38	03.8	D	-2.0	100	0.78	110		3.9	3.5
	Pn			07.3		-0.1	100					
	S*			16.4		0.0	100					
TRZ								1.19	190		3.1	3.4
KRP	P*	11	38	12.3		-2.2	99	1.30	290		3.4	
	Pg			17.9		0.4	100					
NGZ	P*	11	38	14.1		-2.1	99	1.40	235			
MNG	P*	11	38	35.5		-0.5	100	2.56	208		3.3	3.3
COB	Pn	11	38	58.4		2.9	99	4.31	230		4.0	3.6

AMPLITUDES: WTZ 14 8.7 TUA 1.1 3.2 GNZ 10 6.7
TRZ 0.4 1.0 KRP 0.9 MNG 0.6 0.7
COB 0.3 0.4

78/ 410

JUL 28 $15^h01^m32^s.4$ 39°.10S 174°.84E 213 km M = 4.4
± 1.4 0.08 0.09 17 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	iP	15	02	06.8	U	1.0	100	1.30	25		3.6*	
MNG	iP	15	02	10.0	U	1.7	99	1.59	162		4.4	4.6
	e			29								
	S			36.3		0.2	100					
TRZ	iP	15	02	10.1	U	1.7	99	1.60	107		4.2	4.3
WTZ	iP	15	02	11.9	D	-0.5	100	2.02	57		4.3	
WEL	S	15	02	46.0		-0.3	100	2.19	181	4.1		
GNZ	iP	15	02	18.0	D	0.2	100	2.53	81		4.6	4.0
	S			51.9		-1.0	100					
COB	iP	15	02	18.2	U	-0.0	100	2.56	218		4.4*	3.6*
	S			52.4		-1.2	100					
ECZ	P	15	02	24.6		-1.3	100	3.23	65		4.9	

AMPLITUDES: KRP 2.9 MNG 10 22 TRZ 0.9 2.5
WTZ 2.3 WEL 0.6 GNZ 4.0 1.4
COB 5.1 3.3 ECZ 1.9

78/ 411

JUL 29 $10^h47^m16^s.7$ 44°.48S 168°.14E 12 km M = 3.2
± 0.4 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
MSZ	iPg	10	47	22.7	U	0.5	100	0.25	221			
	Sg			25.9		0.0	100					
ROX	Sg-Pg			18.3		0.7	99	1.30	140		3.3	3.1
MNW	Pg	10	47	44.0		-0.1	100	1.35	196	3.0	3.6	3.4
	Sg		48	02.0		-0.4	100					
HHP	Pg	10	47	49.3		0.4	100	1.58	85			
	Sg		48	10.0		-0.3	100					
MJZ								1.75	74		3.4*	3.3*
OMZ	eP*	10	47	54.8		1.8		2.06	108		3.2	3.0
	Pg			58.2		-0.2	100					

AMPLITUDES:	MSZ	9.4	18	ROX	0.7	1.0	MNW	0.3	1.8	2.6
	MJZ	1.5	2.0	OMZ	0.2	0.3				

78/ 412

JUL 31 $03^h23^m26^s.9$ $40°.28S$ $173°.59E$ 202 km M = 4.1

± 1.5 0.13 0.12 13 S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	iP	03	23	58.6	U	1.3	100	1.04	219		3.6*	3.4*
	S		24	20.6		-0.2	100					
WEL	S	03	24	25.0		0.1	100	1.35	139	4.0		
MNG	iP	03	24	03.2	U	2.4	99	1.48	104		3.9	4.1
	e			21.5								
	S			27.1		0.1	100					
TRZ								2.59	75			3.9
KAI	eS	03	24	49.2		-2.2	99	2.78	215	3.3*		
TUA	eS	03	24	58.0		-0.4	100	3.12	63			4.5
GNZ	S	03	25	11.7		-1.5	100	3.80	66			4.2
HHP	P	03	24	38.8		0.5	100	4.72	210			

AMPLITUDES:	COB	1.3	3.0	WEL	0.9		MNG		3.9	6.6
	TRZ		0.6	KAI	0.3		TUA			0.9
	GNZ		1.3							

78/ 413

AUG 02 $07^h43^m37^s.7$ $39°.12S$ $177°.75E$ 33 km M = 3.5

± 0.8 0.04 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
GNZ	iPn	07	43	48.3	D	-0.1	100	0.52	24		3.3	3.5
	i			53.3								
	iSn			57.2		1.0	100					
TUA	iPn	07	43	49.4	U	0.4	100	0.57	303		3.7	3.4
	Sn			58.2		1.0	100					
TRZ	iPn	07	43	53.6	U	0.8	100	0.85	239		3.3	3.2
WTZ	Pn	07	43	57.4		-1.4	100	1.29	332		3.3	3.8
	P*		44	03.9		2.9	98					
	iSn			11.8		-2.7	99					
ECZ	Pn	07	44	01.9		-0.6	100	1.56	24		3.8	
MNG	iPn	07	44	12.0	D	-0.7	100	2.30	229		3.9	3.3
	Sn			39.6		0.6	100					
COB	Pn	07	44	38.9		-1.4	100	4.32	241		3.8	3.4

AMPLITUDES:	GNZ	6.1	16	TUA	4.7	3.2	TRZ		1.1	1.2
	WTZ	1.2	3.9	ECZ	0.6		MNG		2.7	0.9
	COB	0.2	0.3							

78/ 414

AUG 02 $12^h57^m49^s.3$ $38°.11S$ $176°.02E$ 222 km M = 4.0

± 0.8 0.06 0.06 7 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	S-P			22.7		-0.1	100	0.42	296		2.8*	
WTZ	P	12	58	19.3		-0.8	100	0.77	81		3.6	3.6
TUA								1.13	129			4.1
TRZ	S	12	58	55.3		1.2	99	1.57	157		4.0	4.0
GNZ	P	12	58	27.2		0.6	100	1.66	109		4.3	4.3
	S			54.7		-0.7	100					
TNZ	eP	12	58	27.8		1.1	99	1.67	230		3.5*	
ECZ	eP	12	58	29.9		-0.3	100	2.04	79		4.1	
MNG	iP	12	58	35.7	U	0.3	100	2.54	189		4.3	3.9

	e		59	05.7									
	S			10.3		-0.7	100						
WEL								3.32	197	3.7			
COB	eS	12	59	38.8		-0.7	100	3.91	219				3.1*

AMPLITUDES:

KRP	0.6		WTZ	0.8	1.0	TUA				0.9
TRZ	0.5	1.3	GNZ	3.2	4.1	TNZ		0.5		
ECZ	0.6		MNG	4.3	2.4	WEL	0.1			
COB		0.7								

78/ 415

AUG 03 $04^h25^m09^s.3$ 39°.09S 174°.75E 12 km M = 3.4

± 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
CNZ	P*	04	25	21.3		0.1	100	0.63	100			
	S*			29.9		0.0	100					
NGZ	P*	04	25	21.8		-0.3	100	0.67	98			
	S*			30.6		-0.7	100					
GSZ	P*	04	25	21.7		-0.3	100	0.67	106			
	S*			31.3		0.0	100					
KRP	P*	04	25	33.1		0.1	100	1.32	28		3.3	3.4
	S*			50.7		0.1	100					
MNG	Pn	04	25	38.9		1.9	98	1.63	160		3.3	3.5
	P*			39.6		1.4	99					
WEL	eSn	04	26	10.3		-1.0	100	2.19	180	3.3		
COB	Pn	04	25	48.1		-1.2	99	2.52	217		3.6	3.4

AMPLITUDES:

KRP	1.5	2.3	MNG	1.4	2.9	WEL	0.1			
COB	0.4	0.8								

78/ 416

AUG 03 $14^h13^m54^s.3$ 40°.08S 174°.79E 33 km M = 3.5

± 0.7 0.03 0.08 R S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	iP*	14	14	11.1	D	2.3	99	0.76	136		3.2	3.9
	iS*			21.0		1.6	100					
NGZ	Pn	14	14	13.3		0.5	100	1.10	36			
	Sn			28.1		1.5	100					
WEL	Pn	14	14	13.6		-0.7	100	1.21	181	3.0		
	eSn			27.5		-1.7	100					
CAZ	Sn	14	14	33.3		0.2	100	1.37	127			
TRZ								1.65	72			3.4
COB	Pn	14	14	23.9		0.6	100	1.86	237		3.3	3.4
KRP	Pn	14	14	28.2		-0.1	100	2.23	15		3.8	3.7
	Sn			55.1		1.3	100					
WTZ								2.71	40			4.2
GNZ	Pn	14	14	34.0		-3.2	99	2.89	61		3.5	3.7
	Sn		15	07.3		-2.3	99					

AMPLITUDES:

MNG	5.4	35	WEL	0.2		TRZ				0.5
COB	0.3	1.6	KRP	0.6	0.4	WTZ				0.6
GNZ	0.3	0.7								

78/ 417

AUG 04 $01^h41^m53^s.0$ 40°.54S 175°.88E 33 km M = 3.8

± 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
MNG	iP*!	01	42	01.7		0.9	100	0.31	255		3.2	3.3
	eS*			08		1.5	100					

CAZ	Pn	01	42	03.0		0.3	100	0.45	144			
	eSn			11		1.2	100					
WEL	ePn	01	42	10		-1.9	99	1.13	228	4.0		
	Sn			24.8		-1.2	100					
TUA	eSn	01	42	45		-1.8	99	1.99	30			3.9
COB	ePn	01	42	29		-1.0	100	2.45	256		3.9	3.9
	e			42								
	eSn			58		0.1	100					
GNZ	eSn	01	43	00		0.6	100	2.52	42			3.7
KRP	ePn	01	42	34.5		2.1	99	2.63	354		4.0	4.1
	eS*		43	14.5		1.0	100					
WTZ	Pn	01	42	32.1		-1.2	100	2.69	19		3.3	4.1
	Sn		43	03.8		0.1	100					

AMPLITUDES:								
MNG	29	48	CAZ	8.4	31	WEL	3.0	
TUA		0.7	COB	0.8	2.5	GNZ		1.0
KRP	0.7	0.7	WTZ	0.3	1.5			

FELT: Pahiatua (62)

78/ 418

AUG 04 $10^h 57^m 31^s.2$ $37°.45S$ $176°.99E$ 200 km M = 4.8

± 0.9 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
WTZ	iP	10	57	58.0	U	-0.5	100	0.53	180		4.5	4.2
	eS		58	18		-1.6	100					
KRP	iP	10	58	03.1	SW	0.2	100	1.25	247		3.9*	3.0*
	eS			29		1.5	100					
ECZ	P	10	58	02.9		-0.1	100	1.26	102		4.6	4.8
	e			07								
	eS			27.5		-0.2	100					
TUA	P	10	58	05.0		1.1	100	1.36	175		4.6	4.7
	eS			29		-0.2	100					
GNZ	iP	10	58	06.2	USW	1.6	100	1.45	146		4.8	4.9
	eS			29		-1.5	100					
AUC	iP	10	58	07.2	U	-1.4	100	1.86	288			
TRZ	iP	10	58	12.2	U	1.1	100	2.11	184		4.8	4.7
	e			18								
	e			24								
	eS			45		3.0	96					
GSZ	P	10	58	12.8		1.4	100	2.13	211			
ONE	eP	10	58	17.5		-0.3	100	2.70	308	3.2*		
MNG	P	10	58	26.1		0.2	100	3.37	200		5.3	5.1
	eS		59	07		-1.1	100					
CAZ	(P)	10	58	37.3		10.0		3.50	190			
	eS		59	10		-0.9	100					
WEL	P	10	58	35		-1.1	100	4.20	204	4.9		
	S		59	25.5		-0.9	100					

AMPLITUDES:								
WTZ	8.5	5.5	KRP	6.0	1.0	ECZ	3.4	5.8
TUA	3.3	3.8	GNZ	11	22	TRZ	3.0	4.6
GSZ	13		ONE	0.3		MNG	29	21
CAZ	5.5	8.6	WEL	1.6				

78/ 419

AUG 04 $11^h 49^m 41^s.6$ $39°.11S$ $175°.19E$ 142 km M = 3.7

± 1.0 0.03 0.06 8 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	P	11	50	02.9		1.4	100	0.35	119			

	eS			17		0.2	100						
KRP	iP	11	50	08.8	D	1.0	100	1.21	13			2.9*	2.4*
	eS			28		0.1	100						
TRZ	P	11	50	10.3		1.2	100	1.34	110			3.5	3.6
	eS			32		1.8	99						
MNG	iP	11	50	12.1	U	0.9	100	1.52	172			4.0	3.5
	eS			32		-1.8	99						
WTZ	eP	11	50	14		-0.2	100	1.80	52				3.8
	eS			37		-2.1	99						
CAZ	eS	11	50	43		0.6	100	1.96	156				
WEL	eS	11	50	47		-0.6	100	2.20	188	3.6			
GNZ	iP	11	50	20.5	UE	0.7	100	2.26	79			4.1	3.8
	eS			46.5		-2.3	99						
COB	eP	11	50	25		-0.8	100	2.74	223			3.5*	2.7*
	e			26.8									
	eS			59		-0.6	100						

AMPLITUDES:											
GSZ		2.5	2.0	KRP		0.9	0.3	TRZ		0.3	0.9
MNG		5.8	2.5	WTZ			1.2	CAZ			0.8
WEL	0.2			GNZ		1.8	1.5	COB		0.7	0.4

78/ 420

AUG 04 $11^h59^m19^s.2$ 44°.80S 167°.46E 33 km M = 3.7

± 1.2 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
MSZ	iP*!	11	59	27.8		0.3	100	0.35	68			
MNW	iPn!	11	59	36.0		-0.2	100	0.99	174			3.3
	Sn			49.2		0.3	100					
ROX								1.48	118		3.7	3.5
HHP	ePn	11	59	52		0.3	100	2.12	78			
	eP*	12	00	00		3.4	91					
	eSn			16		-0.0	100					
MJZ	e(P*)	12	00	04		4.2		2.30	70		3.5*	3.2*
	eSn			21		0.5	100					
OMZ	eP*	12	00	00.5		-2.1	99	2.47	98		3.5	3.6
	eSn			24		-0.5	100					
COB	ePn	12	00	35		-1.0	100	5.36	48		4.2	4.1
	eSn		01	33.5		-0.6	100					

AMPLITUDES:											
MNW			4.0	ROX		1.2	2.3	HHP		3.5	4.3
MJZ		1.0	1.0	OMZ		0.3	0.7	COB		0.3	1.0

78/ 421

AUG 04 $15^h33^m51^s.2$ 41°.64S 171°.85E 12 km M = 4.3

± 0.6 0.05 0.07 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*	15	34	07.0		-0.1	100	0.86	51		4.4	4.0
	eS*			19		0.2	100					
KAI	P*	15	34	08.0		-0.6	100	0.94	200	4.6		
	eS*			20		-1.3	100					
WEL	ePn	15	34	28.5		1.4	100	2.22	82	4.3		
	eSn			55		1.0	100					
MJZ	iPn	15	34	31.6	U	-0.1	100	2.56	203		4.6*	4.3*
	eSn		35	04		1.8	99					
HHP	Pn	15	34	35.0		-1.4	100	2.91	202			
	e			45								
	eSg		35	28		-1.3	100					
MNG	ePn	15	34	37		0.3	100	2.92	71		4.7	4.6
	eS*		35	20		-0.7	100					

OMZ	Pn	15	34	43.2		-1.3	100	3.50	191		4.3	3.9
	eP*			54		1.8	99					
	eS*		35	38		0.1	100					
GSZ	eP*	15	34	52.5		-3.0	96	3.70	52			
KRP	ePn	15	35	01		0.5	100	4.67	39		4.3	
MNW	ePn	15	35	09		1.9	99	5.16	215	4.3	4.5	4.2
	eSn		36	05		0.5	100					

AMPLITUDES:									
COB	19	26	KAI	17		WEL	1.7		
MJZ	10	10	HHP	18	25	MNG	10	11	
OMZ	0.9	0.7	GSZ	2.5		KRP	1.2		
MNW	0.4	1.1	1.3						

FELT: Granity (79) and Murchison (80) MM IV

78/ 422

AUG 04 $17^h30^m58^s.8$ 38°.64S 175°.67E 170 km M = 4.4

± 0.6 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
WNZ	P	17	31	22.6		0.6	100	0.34	89		4.3	4.1
	S			40.9		1.1	100					
GSZ	iP	17	31	25.0	U	1.8	99	0.64	186			
	S			44.1		2.0	99					
KRP	iP	17	31	24.2	UNE	0.5	100	0.72	352		3.7*	3.0*
	eS			42		-0.9	100					
TUA	iP	17	31	28.1	U	1.1	100	1.17	99		4.2	4.8
	e			41.5								
	e			44.9								
	S			48.0		-0.9	100					
WTZ	iP	17	31	27.2	D	-0.3	100	1.22	58		3.5	4.2
	eS			47		-2.7	98					
TRZ	P	17	31	29.7		1.6	100	1.28	136		4.4	4.6
	e			33.2								
	S			50.8		0.2	100					
GNZ	iP	17	31	34.1	DSW	0.4	100	1.84	91		4.4	4.5
	e			53								
	eS			58.5		-2.3	99					
AUC	P	17	31	34.9		0.4	100	1.92	338			
MNG	iP	17	31	36.7	U	1.4	100	1.98	184		4.8	4.8
	e			58								
	eS		32	02		-1.5	100					
CAZ	P	17	31	40.2		1.1	100	2.30	169			
	e		32	05								
	eS			10		-0.1	100					
ECZ	iP	17	31	40.8	U	-0.1	100	2.46	68		4.4	4.3
	e			42.4								
	eS		32	14		0.7	100					
WEL	eP	17	31	44.5		0.2	100	2.74	194	4.5		
	eS		32	18		-1.3	100					
ONE	eP	17	31	48		-0.2	100	3.04	340	3.2*		
COB	P	17	31	50.2		-1.5	100	3.33	222		3.8*	3.8*
	e			51.9								
	S		32	31		-1.5	100					

AMPLITUDES:									
WNZ	0.5	0.3	GSZ	34	8.8	KRP	5.2	1.4	
TUA	1.6	7.0	WTZ	0.8	4.0	TRZ	2.3	8.0	
GNZ	4.0	8.0	MNG	25	31	CAZ	1.0	16	
ECZ	1.2	0.8	WEL	1.3		ONE	0.3		
COB	1.2	4.2							

78/ 423

AUG 05 $03^h53^m54^s.4$ 38°.64S 175°.68E 156 km M = 3.7

± 0.9 0.04 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
GSZ	P	03	54	19.2		1.9	99	0.64	187			
	eS			36		1.1	100					
KRP	eP	03	54	19		1.2	100	0.73	351		2.4*	2.3*
	eS			35.5		-0.3	100					
TUA	eS	03	54	41		-1.0	100	1.16	99			4.0
WTZ	P	03	54	21.6		-0.3	100	1.22	58		3.2	3.4
	S			41.2		-1.8	99					
TRZ	eP	03	54	24		1.7	99	1.27	136		3.7	3.9
	eS			45		1.2	100					
GNZ	iP	03	54	28.9	D	0.7	100	1.84	91		3.9	3.9
	eS			53		-1.3	100					
MNG	iP!	03	54	30.9		0.9	100	1.98	184			
	eS			56		-1.3	100					
ECZ	P	03	54	35.8		0.1	100	2.45	68		3.8	3.8
	e			58.5								
WEL	eS	03	55	13		-0.6	100	2.74	195	3.8		
COB	P	03	54	45.7		-1.3	100	3.34	222		3.2*	3.2*
	eS		55	26		-1.3	100					

AMPLITUDES:									
GSZ	4.5	2.0	KRP	0.3	0.3	TUA		1.3	
WTZ	0.4	0.7	TRZ	0.5	2.0	GNZ	1.3	2.1	
ECZ	0.3	0.3	WEL	0.3		COB	0.3	1.0	

78/ 424

AUG 05 $20^h18^m57^s.5$ 38°.77S 177°.29E 33 km M = 3.5

± 0.5 0.03 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
TUA	iP*	20	19	03.6	D	0.3	100	0.12	253			
	eS*			09		1.6	100					
GNZ	iPn	20	19	09.1	D	0.1	100	0.58	77		3.5	3.5
	e			13.5								
	eSn			18		0.5	100					
WTZ	iPn!	20	19	11.6		-0.6	100	0.83	343		3.4	3.8
	eSn			22.5		-0.7	100					
TRZ	ePn	20	19	11		-1.7	100	0.86	205		3.4	3.4
	P*			12.9		-0.8	100					
	eS*			28.5		2.8	99					
WNZ	e(P*)	20	19	18.5		3.5		0.94	278			3.7
	eS*			29		1.0	100					
GSZ	Pn	20	19	22.4		2.0	99	1.42	249			
ECZ	ePn	20	19	22		1.0	100	1.47	43		3.5	3.6
	e			31								
KRP	ePn	20	19	22		-1.1	100	1.62	301		3.5	3.6
	e			38								
MNG	Pn	20	19	30.8		-1.8	100	2.31	217		3.2	3.4
	e			45								
WEL	eSn	20	20	17		-2.6	99	3.17	217	3.9		

AMPLITUDES:									
TUA	8.9	20	GNZ	7.8	11	WTZ	4.0	9.0	
TRZ	1.3	2.0	WNZ		0.6	GSZ	3.8		
ECZ	0.3	0.5	KRP	0.8	0.9	MNG	0.6	1.0	
WEL	0.3								

78/ 425

AUG 07 $13^h13^m00^s.9$ 49°.33S 164°.34E 33 km M = 5.0

± 2.5 0.10 0.41 R S.E. of RES. 2.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNW	Pn	13	14	01.0		-0.6	100	4.19	33	5.1		
	eSn			47		-0.6	100					
CBZ	iPn	13	14	06.3	U	1.3	100	4.44	138			
ROX								5.13	43		5.3	5.2
MSZ	iPn	13	14	15.9	D	-0.4	100	5.26	29		5.4	5.2
	i			16.7								
	eSn		15	17		3.6	99					
OMZ	ePn	13	14	28		-0.9	100	6.18	49		4.7	4.4
	e		15	48								
HHP	iPn	13	14	30.0	D	-3.0	99	6.49	42			
	eSn		15	43		0.3	100					
KAI	ePn	13	15	02		2.9	99	8.41	39	4.8		
	e		16	54								
COB	ePn	13	15	21		-2.0	100	10.15	39		5.3	4.7
	eSn		17	09		-1.8	100					

AMPLITUDES: MNW 4.1 ROX 4.7 9.0 MSZ 12 13
OMZ 0.7 0.8 HHP 12 22 KAI 0.4
COB 1.0 0.9

78/ 426

AUG 07 $14^h04^m44^s.9$ 34°.13S 178°.11W 282 km M = 4.8

± 1.4 0.09 0.16 26 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	14	05	55.5		-0.7	100	4.48	216		4.7	4.8
	e(S)		06	59		7.1						
	e		07	38								
	e			45								
GNZ	eP	14	06	06		-2.2	99	5.49	214		4.9	4.7
	eS		07	13		-0.2	100					
WTZ	eP	14	06	06.8		-1.9	100	5.53	224		5.1	4.9
	e			07.5								
	e			37								
	eS		07	12		-2.3	99					
TUA	P	14	06	16.7		1.9	100	6.04	218		5.0	5.0
	eS		07	26		0.7	100					
ONE	eP	14	06	19		-0.2	100	6.40	253	3.7*		
KRP	eP	14	06	19		-0.2	100	6.40	232		3.6*	
	eS		07	33		-0.2	100					
TRZ	eP	14	06	24		0.2	100	6.78	215		4.7	4.7
	eS		07	44		2.5	99					
NGZ	eP	14	06	30		1.6	100	7.14	223			
	eS		07	51		1.4	100					
CRZ	eP	14	06	34.5		-0.1	100	7.64	265		3.8*	
TNZ	e(P)	14	06	44		6.4		7.87	228		3.8*	
MNG	P	14	06	42.2		-0.0	100	8.25	216		4.3	4.7
	eS		08	12		-2.3	99					
WEL	eS	14	08	32		-1.6	100	9.11	216	4.9		

AMPLITUDES: ECZ 0.6 0.8 GNZ 1.7 2.0 WTZ 2.8 1.8
TUA 0.8 0.8 ONE 0.5 KRP 0.9
TRZ 0.3 0.6 NGZ 0.9 1.6 CRZ 0.4
TNZ 0.3 MNG 0.5 1.8 WEL 0.4

78/ 427

AUG 07 $18^h04^m49^s.4$ 43°.62S 174°.53E 12 km M = 4.1

± 0.8 0.05 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
KKY	iPn	18	05	14.0	U	0.7	100	1.35	333			
	e			26								
	eSn			31		-0.2	100					
WEL	eSn	18	05	53		-2.0	99	2.34	4	3.6		
COB	Pn	18	05	35.8		1.8	100	2.86	332		4.3	4.1
	eSn		06	09		1.5	100					
OMZ	Pn	18	05	36.1		0.6	100	2.97	240			
	eSn		06	08		-2.2	99					
CAZ	eSn	18	06	10		-0.7	100	3.00	25			
MNG	Pn	18	05	37.0		0.0	100	3.09	14		3.9	3.9
	eP*			45		1.8	100					
	eSn		06	10		-2.9	99					
HHP	iPn	18	05	38.6	D	1.3	100	3.10	255			
	eSn		06	11		-2.4	99					
	eSg			35		1.0	100					
ROX								4.17	242		4.2	3.7
TRZ	eSn	18	06	46		1.2	100	4.42	24			4.0
MSZ	iPn	18	06	02.1	U	0.6	100	4.88	255		4.4	3.9
	eSg		07	33		-0.7	100					
MNW	Pn	18	06	10.0		1.6	100	5.38	244		4.3	4.1
	eSn		07	07.5		-0.6	100					
GNZ	eSn	18	07	12		-2.0	99	5.63	29			4.2
KRP	ePn	18	06	14		0.7	100	5.74	8		4.3	

AMPLITUDES: WEL 0.3 COB 1.3 3.0 CAZ 0.4
MNG 1.6 1.8 HHP 10 7.5 ROX 0.5 0.4
TRZ 0.3 MSZ 1.5 0.8 MNW 0.7 0.8
GNZ 0.6 KRP 0.3

78/ 428

AUG 08 $22^h09^m50^s.4$ 38°.92S 175°.54E 173 km M = 4.3

± 0.9 0.04 0.05 7 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	iP	22	10	15.3	U	1.3	100	0.36	174			
	eS			33		0.8	100					
	e			42								
WNZ	P	22	10	14.7		0.1	100	0.52	57		4.4	
TNZ	iP	22	10	17.8	U	0.7	100	0.94	253		3.7*	3.4*
	eS			41		3.3	97					
KRP	iP	22	10	17.0	DSE	-0.5	100	0.99	360		4.0*	
	eS			36		-2.3	99					
TRZ	P	22	10	21.0		2.0	99	1.18	123		3.9	4.2
	S			39.9		-1.2	100					
	e			43								
TUA	iP	22	10	21.0	D	1.2	100	1.26	85		4.1	4.3
	e			22.4								
	e			36								
	eS			42		-0.4	100					
WTZ	iP	22	10	21.1	D	-0.7	100	1.48	51		3.9	4.1
	S			44.8		-1.1	100					
MNG	iP	22	10	25.7	U	1.6	100	1.70	181		4.6	4.5
	e			43								
	eS			49		-1.0	100					

GNZ	iP	22	10	27.9	U	1.0	100	1.96	83		4.3	4.4
	e			28.7								
	e			47								
	e			50								
	eS			54		-1.0	100					
CAZ	P	22	10	29.9		2.0	99	2.05	165			
	eS			56		-0.8	100					
WEL	P	22	10	32.9		0.5	100	2.44	194	4.4		
	eS		11	03.5		-1.3	100					
ECZ	iP	22	10	35.1	D	-0.1	100	2.66	64		4.5	4.3
	i			36.8								
	eS		11	09		-0.6	100					
COB	iP	22	10	38.1	U	-1.9	100	3.06	224		3.8*	3.4*
	eS		11	15		-3.2	98					

AMPLITUDES:									
GSZ	8.3	10	WNZ	0.6		TNZ	1.2	0.9
KRP	10		TRZ	0.8	3.5	TUA	1.4	2.2
WTZ	1.5	2.5	MNG	19	16	GNZ	2.7	6.5
CAZ	2.2	5.2	WEL	1.2		ECZ	1.3	0.7
COB	1.2	1.9						

78/ 429

AUG 09 $03^h 39^m 37^s.9$ $38°.21S$ $176°.36E$ 164 km M = 4.2

± 0.8 0.04 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
KRP	P	03	40	02.2		0.2	100	0.71	293		3.0*	2.9*
	eS			20		-0.8	100					
TUA	P	03	40	03.8		0.8	100	0.85	134		3.7	4.1
	e			17.5								
	eS			22		-0.5	100					
GSZ	iP	03	40	07.8	U	1.7	99	1.22	209			
	e(S)			33		5.1						
GNZ	iP	03	40	07.8	U	0.3	100	1.38	109		3.9	4.2
	e			09.0								
	e			21								
	eS			29		-1.3	100					
TRZ	iP	03	40	09.0	D	1.4	100	1.39	165		4.3	4.3
	e			25								
	eS			32		1.5	99					
ECZ	P	03	40	11.2		-0.8	100	1.80	74		4.3	4.1
	i			13.2								
	eS			38		-0.2	100					
TNZ	P	03	40	14.7		2.4	98	1.84	237		3.4*	3.1*
	e(S)			43		4.1						
MNG	iP	03	40	20.2	U	-0.0	100	2.50	196		4.7	4.1
	eS			52		-0.7	100					
CAZ	iP	03	40	23.3	U	0.7	100	2.69	182			
	e(S)		41	01		4.0						
WEL	P	03	40	29.8		-0.6	100	3.31	201	4.1		
	eS		41	10		-0.8	100					
COB	eP	03	40	38		-1.5	99	4.01	223		3.5*	3.4*
	eS		41	26		-1.0	100					
	e			46								

AMPLITUDES:									
KRP	1.1	1.0	TUA	0.8	2.1	GSZ	7.0	2.0
GNZ	2.2	6.3	TRZ	1.9	4.0	ECZ	1.5	0.8
TNZ	0.4	0.3	MNG	13	4.4	CAZ	4.5	0.2
WEL	0.4		COB	0.5	1.3			

78/ 430

AUG 09 $07^h22^m24^s.7$ 32°.29S 178°.41W 301 km M = 4.8

± 2.0 0.10 0.21 34 S.E. of RES. 2.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	07	23	52.7		-1.3	100	5.95	204		4.9	4.4
	eS		25	07		2.9	99					
WTZ	iP	07	24	02.3	U	-2.4	100	6.83	212		5.3	4.6
	eS		25	21.8		-1.3	100					
ONE	eP	07	24	08		2.0	100	6.94	238	3.5*		
GNZ	P	07	24	04.8		-1.8	100	6.98	204		5.1	4.6
	eS		25	25		-1.6	100					
TUA	P	07	24	11.0		-1.3	100	7.45	208		5.1	5.1
	eS		25	37		0.2	100					
KRP	eP	07	24	13		-0.0	100	7.51	220		3.3*	
CRZ	eP	07	24	19		2.9	99	7.77	252		3.7*	
TRZ	eP	07	24	20		-1.8	100	8.23	207		4.9	4.7
	eS		25	57		3.2	99					
GSZ	P	07	24	26.1		0.8	100	8.51	213			
TNZ	eP	07	24	35		3.1	99	9.05	218			
MNG	eP	07	24	37		-2.5	100	9.67	209		4.5	4.4
	e			40.5								
	eS		26	25		-0.9	100					
WEL	eS	07	26	42		-2.9	99	10.52	209	4.9		
CIZ	e	07	25	20				11.74	173			
	eS		27	15		2.9	99					

AMPLITUDES:

ECZ	0.7	0.2	WTZ	2.5	0.6	ONE	0.3		
GNZ	1.8	1.0	TUA	0.7	0.7	KRP	0.4		
CRZ	0.3		TRZ	0.3	0.4	GSZ	2.0		
MNG	0.6	0.7	WEL	0.2		CIZ	0.2	0.2	

78/ 431

AUG 11 $02^h04^m22^s.6$ 31°.74S 179°.82E 491 km M = 5.4

± 1.8 0.11 0.28 24 S.E. of RES. 2.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	02	06	02.1		2.2	100	6.03	190		5.4	5.2
	e			03.9								
	e			13.8								
	eS		07	18.5		1.7	100					
	e			40								
ONE	eP	02	06	00.5		0.2	100	6.07	227	3.8*		
CRZ	eP	02	06	05		-0.2	100	6.57	244		3.9*	
	e			21								
WTZ	P	02	06	06.1		-0.0	100	6.65	200		5.9	5.4
	eS		07	26		-2.0	100					
GNZ	P	02	06	10.0		-0.0	100	7.05	192		5.5	5.6
	e		07	29								
	eS			34		-1.2	100					
KRP	eP	02	06	11.5		0.9	100	7.11	209		3.7*	3.4*
	eS		07	39		2.7	100					
TUA	eP	02	06	14		0.4	100	7.39	196		5.5	5.5
	e		07	32								
	eS			38		-3.5	99					
TRZ	eP	02	06	19		-2.8	99	8.17	197		5.5	5.7
	e		07	51								
	eS			56.5		-0.0	100					
GSZ	eP	02	06	21		-1.9	100	8.28	203			

MNG	P	02	06	33.1		-3.2	99	9.53	200		5.3	5.3	
	e		08	12									
	eS			23		0.4	100						
CAZ	eP	02	06	41		4.0	99	9.59	197				
	eS		08	27		3.2	99						
WEL	eS	02	08	38		-0.7	100	10.36	202	5.0			

AMPLITUDES:										
ECZ	1.7	1.0	ONE	0.5		CRZ	0.5			
WTZ	9.7	3.4	GNZ	3.5	8.5	KRP	1.0	0.5		
TUA	1.5	1.5	TRZ	1.1	3.6	GSZ	1.5			
MNG	3.8	4.5	CAZ	0.3	1.0	WEL	0.3			

78/ 432

AUG 12 $19^h14^m13^s.3$ 37°.16S 177°.16E 224 km M = 4.8

± 1.0 0.06 0.07 6 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	14	43.4	D	-1.4	100	0.84	189		4.4	4.5
	eS		15	07		-2.2	99					
ECZ	iP!	19	14	48.6		1.4	100	1.22	116			4.3
	eS		15	14		0.4	100					
KRP	iP	19	14	49.6	U	0.2	100	1.50	239		3.6*	3.3*
	eS		15	18		0.7	100					
GNZ	iP	19	14	50.3	DNW	-0.3	100	1.63	156		4.9	4.7
	eS		15	18		-1.3	100					
TUA	iP	19	14	50.8	U	0.1	100	1.65	180		4.8	4.9
	eS		15	20		0.5	100					
TRZ	iP	19	14	58.3	D	0.2	100	2.40	186		4.9	5.1
	eS		15	34		1.3	100					
	e			43.5								
GSZ	P	19	14	59.0		0.4	100	2.45	210			
	e		15	05.5								
TNZ	eP	19	15	06		1.6	100	2.99	226		3.7*	3.6*
	e(S)			49		4.8						
MNG	iP	19	15	11.1	D	-1.7	99	3.70	200		5.2	5.2
	i			11.7								
	e			49.5								
	eS			59		0.0	100					
CAZ	eP	19	15	14		-0.2	100	3.82	191			
	e			59								
	eS		16	03.5		2.0	99					
WEL	eP	19	15	21.5		-1.5	100	4.53	204	5.0		
	eS		16	15		-2.1	99					
CIZ	e(P)	19	16	25		13.8		8.31	147			
	e(S)		17	57		13.5						

AMPLITUDES:										
WTZ	4.6	7.2	ECZ		1.3	KRP	2.7	1.5		
GNZ	12	11	TUA	3.8	4.1	TRZ	2.5	8.9		
GSZ	10		TNZ	0.5	0.6	MNG	17	25		
CAZ	2.5	8.5	WEL	1.9		CIZ	0.3	0.5		

78/ 433

AUG 12 $19^h40^m26^s.7$ 37°.44S 176°.65E 245 km M = 4.1

± 1.7 0.07 0.11 9 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	19	40	58.8	U	-0.7	100	0.60	154		4.0	3.7
	eS		41	23.4		-1.5	100					
KRP	eP	19	41	02.0		0.7	100	1.01	241		2.8*	
	eS			29		0.7	100					
TUA	eS	19	41	33		-0.2	100	1.42	164			4.1

GNZ	P	19	41	06.0		0.4	100	1.62	138		4.2	4.3
	eS			35		-0.9	100					
TRZ	eP	19	41	11		0.9	100	2.12	176		3.9	4.1
	eS			46		2.3	99					
MNG	iP	19	41	22.1	D	-0.5	100	3.30	196		4.2	4.4
	e			58								
	eS		42	06		-0.1	100					
CAZ	eS	19	42	11		1.5	100	3.47	185			
WEL	eS	19	42	20		-2.9	98	4.11	200	4.2		

AMPLITUDES:

WTZ	1.8	1.0	KRP	0.5		TUA		0.8		
GNZ	2.2	3.8	TRZ	0.3	1.0	MNG	2.0	4.4		
CAZ		0.7	WEL	0.3						

78/ 434

AUG 13 $00^h21^m19^s.2$ 38°.26S 176°.12E 200 km M = 3.9

± 1.6 0.06 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
KRP	P	00	21	46.9		0.2	100	0.58	306		2.5*	2.3*
	eS		22	07.5		-0.4	100					
WTZ	iP	00	21	46.5	U	-1.0	100	0.74	68		3.5	3.7
	eS		22	07		-2.3	99					
TUA	eS	00	22	12		0.2	100	0.97	124			3.8
GSZ	P	00	21	51.3		1.6	100	1.10	202			
	eS		22	15		1.6	100					
TRZ	P	00	21	52.8		0.6	100	1.39	157		3.9	
	eS		22	21		3.3	98					
GNZ	P	00	21	54.0		0.5	100	1.54	105		4.2	4.0
	S		22	20.0		0.1	100					
MNG	iP	00	22	02.7	U	0.3	100	2.40	192		4.4	4.0
	e			30.5								
	eS			35		-0.7	100					
CAZ	P	00	22	06.0		1.0	100	2.64	178			
	eS			37		-3.5	97					
WEL	eS	00	22	51		-1.2	100	3.19	199	4.0		

AMPLITUDES:

KRP	0.3	0.2	WTZ	0.8	1.6	TUA		0.7		
GSZ	3.5	0.8	TRZ	0.6		GNZ	2.5	2.5		
MNG	6.6	3.0	CAZ	0.7	1.0	WEL	0.3			

78/ 435

AUG 14 $09^h55^m45^s.8$ 39°.74S 175°.59E 68 km M = 3.6

± 0.5 0.02 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
GSZ	iP	09	55	58.9	U	0.4	100	0.46	360			
	eS		56	07.5		-0.6	100					
MNG	iP	09	56	03.2	D	0.0	100	0.88	185		3.7	3.8
	eS			16.5		0.3	100					
TRZ	P	09	56	03.3		-0.8	100	0.97	79		3.3	3.5
	eS			19		0.9	100					
TUA	P	09	56	10.8		-0.7	100	1.53	53		3.6	3.8
	e(S)			35		4.0						
WEL	eP	09	56	13		-0.6	100	1.67	202	3.5		
	e			23								
	eS			34		-0.2	100					
	e			41								
KRP	eP	09	56	16		0.6	100	1.81	359		3.1*	
	e			24								
WTZ	P	09	56	18.7		-0.1	100	2.06	32		3.6	3.7

	eS			43.5		0.1	100						
GNZ	eP	09	56	23		2.5	90	2.19	61		3.4	3.5	
	eS			45		-1.4	99						

AMPLITUDES: GSZ 33 44 MNG 10 20 TRZ 0.6 2.0
TUA 0.5 0.9 WEL 0.4 KRP 1.0
WTZ 0.6 0.9 GNZ 0.4 0.8

78/ 436

AUG 14 $16^h19^m15^s.5$ 40°.14S 173°.86E 153 km M = 4.6
± 0.7 0.05 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
MNG	iP	16	19	45.8	U	2.1	99	1.32	112		4.5	4.6
	e		20	00								
	eS			04		-1.4	100					
WEL	iP	16	19	46.0	USE	2.2	99	1.33	149	4.5		
	eS		20	06		0.5	100					
GSZ	P	16	19	48.5		2.0	99	1.58	58			
	eS		20	10		-0.2	100					
CAZ	iP	16	19	52.2	D	1.7	100	1.96	114			
	e		20	12								
	eS			18.5		1.0	100					
TRZ	P	16	19	56.3		0.9	100	2.35	77		4.3	4.6
	e		20	17.9								
	eS			25		-0.9	100					
	e			29								
KRP	iP	16	19	58.3	DW	0.1	100	2.57	31		3.5*	3.9*
	eS		20	30		-0.7	100					
TUA	P	16	20	02.0		-0.0	100	2.87	63		4.6	4.7
	e			04.3								
	eS			37.5		-0.1	100					
KAI	eP	16	20	04		0.1	100	3.01	217	4.2*		
	S			38.0		-2.9	98					
WTZ	P	16	20	06.1	U	-0.8	100	3.25	49		4.2	4.1
	eS			46		-0.2	100					
GNZ	P	16	20	10.2		-0.6	100	3.55	66		5.0	4.8
	e			46								
	eS			50		-3.3	97					
ONE	eP	16	20	24		2.4	99	4.37	5	3.3*		
ECZ	P	16	20	21.7		-0.2	100	4.40	58		4.9	
HHP	P	16	20	27.7		-1.3	100	4.93	211			
	e		21	15								
	e(S)			19.5		-6.2						

AMPLITUDES: MNG 24 32 WEL 4.6 GSZ 44 65
CAZ 5.0 25 TRZ 0.8 4.3 KRP 1.7 4.8
TUA 1.3 1.7 KAI 2.5 WTZ 1.0 0.9
GNZ 6.5 6.5 ONE 0.3 ECZ 1.4
HHP 29 19

FELT: Eastbourne (68) MM IV

78/ 437

AUG 14 $19^h29^m51^s.8$ 36°.17S 179°.24E 274 km M = 4.3
± 1.6 0.12 0.25 12 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	19	30	34		0.5	100	1.62	200			4.4
	eS		31	05		-0.9	100					
WTZ	iP	19	30	40.7	U	-0.9	100	2.56	224		4.4	4.3

	e(S)		31	15		-5.5						
GNZ	eP	19	30	43.5		0.8	100	2.65	201		4.2	4.3
	eS		31	22		-0.2	100					
TUA	eS	19	31	33		2.4	97	3.11	212			4.6
KRP	eP	19	30	51		0.1	100	3.45	238		3.0*	
TRZ	eS	19	31	45		-0.8	100	3.89	209			4.3
ONE	e(P)	19	31	04		7.0		3.98	274	3.5*		
MNG	eP	19	31	12.5		-0.4	100	5.34	212		3.8	4.2
	eS		32	15		-1.4	99					
WEL	eS	19	32	36		0.7	100	6.19	213	4.4		

AMPLITUDES: ECZ 1.0 WTZ 1.8 1.5 GNZ 1.0 2.0; TUA 0.8 KRP 0.4 TRZ 0.6; ONE 0.4 MNG 0.4 1.3 WEL 0.2

78/ 438

AUG 15 $11^h28^m48^s.3$ 37°.65S 178°.38E 98 km M = 3.6

± 1.6 0.08 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
ECZ	iP!	11	29	00.7		-1.6	100	0.13	108			
GNZ	iP	11	29	10.1	D	0.9	100	1.03	196		3.6	3.4
	e			18.5								
	eS			26		1.0	100					
WTZ	iP	11	29	10.6	U	0.0	100	1.15	253		3.8	4.1
	S			26.7		-0.8	100					
TRZ	eP	11	29	27		2.2	99	2.26	212		3.9	3.4
	e(S)			57		5.1						
KRP	eS	11	29	53		0.8	100	2.28	262			2.6*
GSZ	eP	11	29	32.5		1.2	100	2.74	233			
MNG	eP	11	29	43.5		-1.5	100	3.73	216		3.3	3.3
	eS		30	26		-2.0	99					
COB	eS	11	31	13		-0.3	100	5.56	230			2.9*

AMPLITUDES: GNZ 2.5 2.5 WTZ 2.5 6.5 TRZ 0.4 0.3; KRP 0.3 GSZ 0.6 MNG 0.3 0.4; COB 0.3

78/ 439

AUG 15 $19^h18^m22^s.4$ 39°.10S 175°.41E 136 km M = 3.7

± 1.0 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
GSZ	eP	19	18	42		0.8	100	0.22	142			
	eS			56		0.5	100					
TNZ	eP	19	18	45		0.7	100	0.81	263		3.0*	
KRP	eS	19	19	07		-0.1	100	1.18	5			
TRZ	P	19	18	51.7		3.9	90	1.19	113		3.5	3.4
	eS		19	09		1.8	100					
TUA	iP	19	18	50.2	U	0.3	100	1.39	78		3.9	
MNG	iP	19	18	51.7	U	0.3	100	1.52	178		4.2	3.9
	S		19	11.3		-2.4	99					
WTZ	P	19	18	52.3		-0.8	100	1.66	49		3.3	3.5
	eS		19	15		-1.5	100					
GNZ	iP	19	18	58.9	U	0.7	100	2.09	78		4.1	3.6
	eS		19	23		-2.3	99					
WEL	eP	19	19	00		-0.1	100	2.24	192	3.7		
	eS			28		-0.6	100					
COB	eP	19	19	08		-0.2	100	2.86	225		3.4*	3.4*
	eS			42.5		-0.4	100					

AMPLITUDES:											
	GSZ	1.1	3.2	TNZ	0.3		TRZ	0.4	0.7		
	TUA	1.0		MNG	11	6.0	WTZ	0.4	0.7		
	GNZ	2.0	1.1	WEL	0.3		COB	0.5	2.0		

78/ 440

AUG 15 $23^h00^m40^s.1$ $31°.60S$ $179°.06W$ 271 km M = 5.3

± 3.0 0.15 0.30 52 S.E. of RES. 3.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	23	02	14		-0.1	100	6.40	197		5.1	5.5
	eS		03	27		-0.9	100					
ONE	e(P)	23	02	38		17.7		6.89	231	3.8*		
WTZ	eP	23	02	21		-2.6	100	7.15	206		5.2	5.5
	e			38								
	eS		03	48		3.1	100					
GNZ	eP	23	02	23		-4.0	99	7.42	198		4.9	5.6
	eS		03	51		0.1	100					
CRZ	P	23	02	32.9		5.0	99	7.50	246		3.9*	
KRP	eP	23	02	32		1.2	100	7.72	214		3.5*	
	e(S)		04	08		10.4						
TUA	eP	23	02	32		-0.2	100	7.84	202		5.0	5.8
	e		03	53.8								
	eS		04	03		2.9	100					
GSZ	eP	23	02	45.5		1.0	100	8.82	208			
	e?		04	05.5								
	eS			21		-1.2	100					
MNG	eP	23	02	56		-3.6	100	10.03	205		4.6	5.5
	eS		04	44		-5.5	99					
WEL	eS	23	05	09		0.5	100	10.87	205	5.5		
CIZ	e	23	03	35				12.50	172			
	eS		05	49		4.0	99					

AMPLITUDES:											
	ECZ	0.9	2.2	ONE	0.5		WTZ	2.3	4.8		
	GNZ	1.2	9.5	CRZ	0.5		KRP	0.6			
	TUA	0.5	2.8	GSZ	0.4	0.7	MNG	0.8	8.0		
	WEL	1.0		CIZ	0.5	1.4					

78/ 441

AUG 16 $04^h10^m56^s.3$ $38°.12S$ $176°.17E$ 183 km M = 3.8

± 1.2 0.05 0.06 8 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	iP	04	11	21.6	U	-0.1	100	0.53	291		2.9*	2.5*
	eS			41.5		0.3	100					
WTZ	P	04	11	21.0		-1.2	100	0.66	79		3.3	3.4
	eS			39.5		-2.8	98					
TUA	P	04	11	25.0		0.4	100	1.03	132		3.8	3.8
	e			42.5								
	eS			48		1.4	100					
GSZ	P	04	11	28.0		1.6	100	1.24	201			
	e(S)			55		5.4						
TRZ	eS	04	11	55		0.8	100	1.52	161			3.6
GNZ	P	04	11	29.7		0.5	100	1.55	110		3.7	4.2
	e			46								
	eS			54		-0.6	100					
TNZ	eP	04	11	34.0		2.6	99	1.76	232		3.3*	
ECZ	iP	04	11	32.0	U	-1.1	100	1.93	78		3.9	3.7
	eS		12	02		0.5	100					
MNG	iP	04	11	40.0	U	-0.2	100	2.56	192		4.6	4.0
	e		12	07								

	eS			14.5		0.4	100						
WEL	eS	04	12	29		-2.2	99	3.35	198	3.9			
COB	e	04	12	14				3.99	221			3.3*	3.1*
	eS			44		-1.6	100						

AMPLITUDES:

KRP	0.8	0.4	WTZ	0.6	0.9	TUA	0.7	0.7		
GSZ	3.0	0.6	TRZ		0.6	GNZ	1.0	4.6		
TNZ	0.3		ECZ	0.5	0.3	MNG	9.2	3.2		
WEL	0.2		COB	0.3	0.7					

78/ 442

AUG 16 $15^h09^m02^s.9$ 39°.21S 173°.75E 12 km M = 3.9
± 0.5 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
TNZ	iP*	15	09	12.6	D	0.1	100	0.49	88		3.3	3.3
	eS*			20.0		0.7	100					
GSZ	P*	15	09	27.8		-0.7	100	1.43	93			
	eS*			47		-0.5	100					
KRP	Pn	15	09	33.4		-0.9	100	1.90	48		3.5	3.8
	eSn			56		-1.9	99					
MNG	P?	15	09	36.2		1.3		1.94	137		4.0	4.6
	iPn			37.2	D	2.3	99					
	S*		10	02.0		-0.8	100					
COB	iPn	15	09	35.8	U	-0.4	100	2.03	202		4.0	3.8
	eSn			59		-2.2	99					
	eS*		10	06		0.4	100					
WEL	eSn	15	10	08		2.4	99	2.22	160	3.8		
TRZ	ePg	15	09	53		1.4	100	2.41	99		3.5	3.5
	e(Sg)		10	29		4.9						
CAZ	eSg	15	10	27.5		-1.3	100	2.55	133			
TUA	eP*	15	09	49		-0.8	100	2.68	83		4.2	
WTZ	eP*	15	09	55		2.8	98	2.82	65		3.7	
ONE	eP*	15	10	04		0.8	100	3.46	8	3.8		
	eSn			36		0.5	100					
ECZ	eP*	15	10	12		-1.4	100	4.06	70		4.9	
CRZ	ePn	15	10	14		-0.5	100	4.84	349		4.2	

AMPLITUDES:

TNZ	2.7	3.5	GSZ	9.5	22	KRP	1.3	3.0		
MNG	5.4	22	COB	1.3	3.0	WEL	0.5			
TRZ	0.2	0.3	CAZ	1.6		TUA	0.3			
WTZ	0.2		ONE	0.3		ECZ	0.3			
CRZ	0.3									

78/ 443

AUG 17 $08^h37^m30^s.7$ 38°.73S 176°.14E 12 km M = 2.8
± ND ND ND R S.E. of RES. ND

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	Pg	08	37	32.9		-0.7	100	0.10	341			
	Sg			34.4		-1.2	99					
	e			39								
KRP	eSg	08	38	02		-0.2	100	0.93	329			2.8

AMPLITUDES:

WNZ	1.7	4.8	KRP	0.5						

FELT: Wairakei (41)

78/ 444

AUG 17 $19^h36^m00^s.8$ 37°.86S 178°.30E 12 km M = 3.8
± 0.7 0.04 0.05 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*	19	36	05.5	U	-0.7	100	0.25	50			
GNZ	iP*	19	36	16.6	U	0.7	100	0.82	196		3.6	3.7
	e(Sg)			32.5		3.9						
WTZ	Pg	19	36	22.3		0.2	100	1.05	263			3.8
	e			28.5								
	S*			33.2		-0.7	100					
TUA	Pn	19	36	25.3		1.1	100	1.31	223		3.4	3.6
	(Sn)			38.0		-3.7						
	eSg			46		0.8	100					
TRZ	ePn	19	36	33		-1.3	100	2.05	214		3.9	3.8
	eSg		37	07.5		-2.6	99					
KRP	Pn	19	36	37.7		1.5	100	2.20	267		3.6	3.8
	eS*		37	08		-0.1	100					
GSZ	ePn	19	36	42.5		1.2	100	2.56	236			
	eSn		37	11		-0.7	100					
CAZ	eSn	19	37	35		2.0	99	3.45	207			
MNG	Pn	19	36	51.6		-2.8	98	3.53	218		3.9	4.0
	Sn		37	36.5		1.6	100					
WEL	eS	19	37	55		-0.5	100	4.38	217	4.1		

AMPLITUDES: GNZ 4.7 8.8 WTZ 5.8 TUA 0.5 0.9
TRZ 0.8 0.9 KRP 0.5 0.6 GSZ 0.7 0.5
CAZ 0.5 MNG 1.1 1.8 WEL 0.3

78/ 445

AUG 19 $05^h39^m39^s.1$ 45°.02S 167°.75E 64 km M = 3.3
± 0.3 0.01 0.02 3 S.E. of RES. 0.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNW	iP	05	39	54.7		-0.2	100	0.76	187	3.7	3.4	
	S		40	06.7		0.1	100					
OBZ	eS	05	40	33.0		0.1	100	1.91	172		3.7*	3.6*
MJZ	eP	05	40	14.0		0.0	100	2.20	63			3.1*
	eS			40.2		0.2	100					
OMZ	P	05	40	14.7		0.0	100	2.24	92		3.2	3.2
	eS			41		-0.2	100					

AMPLITUDES: MNW 5.1 4.0 OBZ 1.9 3.5 MJZ 1.9
OMZ 0.3 0.6

78/ 446

AUG 19 $10^h08^m22^s.4$ 37°.77S 177°.55E 51 km M = 3.3
± 0.9 0.07 0.06 6 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	10	08	34.3		0.1	100	0.49	243		3.3	3.4
	eS			42.8		0.1	100					
GNZ	iP	10	08	39.6	D	-0.4	100	0.95	157		3.2	3.3
	iS			53.0		-0.0	100					
TUA	eP	10	08	42.5		0.7	99	1.09	197			3.3
KRP	eP	10	08	49.1		0.3	100	1.60	264		2.5*	2.8*
	eS		09	08.3		-0.4	100					

AMPLITUDES: WTZ 6.0 8.0 GNZ 1.5 2.7 TUA 0.6
KRP 0.3 0.7

78/ 447

AUG 19 $10^h42^m12^s.5$ 36°.13S 178°.21E 285 km M = 4.2
± 1.7 0.08 0.15 18 S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	10	42	58.5		-0.5	99	2.10	208		4.6	4.0
GNZ	eP	10	43	03.1		0.3	100	2.51	183		4.1	4.0
KRP	eP	10	43	05.9		0.4	100	2.79	229		3.0*	
MNG	iP	10	43	29.5	D	-0.1	100	4.97	205		4.5	4.1
	eS		44	30		-0.0	100					

AMPLITUDES: WTZ 2.9 0.8 GNZ 0.9 1.1 KRP 0.5
MNG 2.2 1.0

78/ 448

AUG 19 $22^h45^m59^s.1$ 38°.79S 176°.65E 5 km M = 3.5
± 0.2 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
TUA	iPg	22	46	06.2	U	-0.8	100	0.39	93		3.4	3.9
	Sg			11.9		-0.4	100					
WNZ	eP*	22	46	09.0		0.2	100	0.46	290		3.1	3.4
TRZ	P*	22	46	14.4		0.3	100	0.77	170		3.5	
WTZ	P*	22	46	14.7		-0.7	100	0.85	18		3.2	3.5
	S*			28.3		1.2	99					
GSZ	iP*	22	46	17.4	U	0.1	100	0.96	239			
	iS*			30.4		-0.1	100					
GNZ	eP*	22	46	20.0		0.6	100	1.08	83		3.6	3.6
KRP	eP*	22	46	20.8		-1.1	99	1.23	314		3.5	3.5
MNG	eP*	22	46	36.3		0.6	100	2.03	206		3.8	3.2

AMPLITUDES: TUA 6.0 21 WNZ 0.4 1.2 TRZ 2.0
WTZ 2.5 4.0 GNZ 2.5 4.0 KRP 1.2 1.0
MNG 2.5 0.8

78/ 449

AUG 20 $15^h24^m57^s.0$ 38°.06S 176°.25E 159 km M = 3.6
± 1.5 0.05 0.07 14 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	iP	15	25	20.3	D	0.4	100	0.58	283		2.9*	
WTZ	eP	15	25	19		-0.9	100	0.58	83		3.1	3.3
TUA								1.03	137			3.6
GNZ	P	15	25	28.1		0.5	100	1.51	113		3.7	3.7
	S			51.0		-0.2	100					
TRZ	P	15	25	29.0		0.9	99	1.56	163		3.4	3.7
MNG	iP	15	25	39.8	U	-0.9	100	2.63	193		4.5	3.5
	eS		26	14		-0.1	100					

AMPLITUDES: KRP 1.1 WTZ 0.5 1.0 TUA 0.5
GNZ 1.1 2.0 TRZ 0.2 0.8 MNG 7.5 1.1

78/ 450

AUG 21 $00^h57^m52^s.6$ 37°.90S 176°.03E 288 km M = 4.7
± 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
KRP	iP	00	58	30.0	D	0.2	100	0.39	266		3.8*	3.1*
	S			59.2		0.3	100					
WTZ	P	00	58	29.5		-1.4	99	0.76	97		4.1	4.2
TUA	iP	00	58	33.9	D	0.5	100	1.27	136		4.6	5.1
GSZ	eP	00	58	34.9		0.5	100	1.42	194			
AUC	P	00	58	33.7		-0.8	100	1.44	316			
GNZ	iP	00	58	37.1	D	0.5	100	1.74	116		4.7	4.5
	S		59	09.4		-1.3	99					

TRZ	P	00	58	37.5		0.7	100	1.76	160		4.6	5.1	
TNZ	P	00	58	38.7		1.5	99	1.83	225		3.8*	3.7*	
ECZ	P	00	58	39		0.4	100	2.01	85				
MNG	iP	00	58	45.8	U	0.3	100	2.75	189		5.0	5.2	
CAZ	P	00	58	48.1		0.1	100	3.01	177				
	S		59	31.9		0.7	100						
WEL	S	00	59	40		-0.9	100	3.53	196				
COB	P	00	58	57.9		-1.8	98	4.09	218		4.3*	4.1*	
KAI								5.82	216	4.3*			
MSZ	P	00	59	57.5		-3.2		9.12	219			3.8*	

AMPLITUDES:									
KRP	4.5	1.0	WTZ	1.6	2.0	TUA	2.0	6.5	
AUC	6.0		GNZ	4.5	5.0	TRZ	1.3	9.5	
TNZ	0.8	0.8	MNG	16	32	COB	3.0	5.5	
KAI	1.5		MSZ	1.9					

78/ 451

AUG 21 $11^h33^m32^s.2$ $36°.97S$ $177°.63E$ 121 km M = 4.1

± 0.6 0.06 0.04 7 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	11	33	55.0		0.2	100	1.03	135			
WTZ	iP	11	33	55.4	D	-0.5	100	1.13	207		4.2	4.1
	S		34	14.4		0.3	100					
GNZ	P	11	34	02.2		-0.2	100	1.70	170		3.8	3.6
	S			25.0		-0.4	100					
TUA	eP	11	34	05.5		0.9	98	1.88	192		4.3	4.3
KRP	iP	11	34	04.8	D	-0.3	100	1.93	240		3.3*	
TRZ								2.66	194		4.3	4.2
GSZ	eP	11	34	16.5		-0.5	100	2.82	214			
TNZ	eP	11	34	25		0.3	100	3.39	228		3.3*	
MNG								4.01	204		4.5	3.9

AMPLITUDES:									
WTZ	6.0	6.0	GNZ	1.5	1.6	TUA	1.5	1.6	
KRP	1.7		TRZ	0.7	1.2	TNZ	0.2		
MNG	4.0	1.2							

78/ 452

AUG 23 $00^h43^m37^s.7$ $41°.36S$ $172°.29E$ 12 km M = 3.6

± 0.8 0.04 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
COB	iPg	00	43	46.6	D	-0.1	100	0.43	51		3.4	3.2
	Sg			52.6		-0.1	100					
KAI	S*	00	44	19.5		-0.1	100	1.34	209	3.9		
WEL	S*	00	44	36.5		1.1	99	1.86	89	3.5		
	Sg			39.7		-1.0	99					
MNG								2.53	74		4.0	4.0
TNZ								2.70	37		3.3	3.7

AMPLITUDES:									
COB	7.0	16	KAI	1.9		WEL	0.4		
MNG	3.0	3.5	TNZ	0.1	0.3				

FELT: Karamea (74)

78/ 453

AUG 23 $05^h00^m44^s.8$ $44°.29S$ $169°.30E$ 12 km M = 3.2

± 0.9 0.09 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
HHP	iP*	05	00	58.0	U	-0.9	100	0.76	93			
MSZ	P*	05	01	03.3		-0.8	100	1.06	248		3.1	3.4

	S*			18.8		0.5	100						
ROX	S-P*			15.0		-0.8	100	1.19	179		3.1	3.5	
OMZ	P*	05	01	11.0		1.2	100	1.39	125		3.2	2.7	

AMPLITUDES: MSZ 1.7 6.0 ROX 0.5 3.3 OMZ 0.5 0.3

78/ 454

AUG 24 $23^h26^m52^s.0$ 38°.99S 177°.97E 28 km M = 4.1

± 0.6 0.04 0.04 3 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	iP*	23	27	00.4	D	0.5	100	0.35	7			
TUA	iP*	23	27	04.3	U	-0.6	100	0.67	286		4.5	4.4
	S*			14.3		0.0	100					
TRZ								1.05	237		3.9	3.9
WTZ	iPn	23	27	13.0	U	-0.3	100	1.27	322		3.9	4.0
ECZ	ePn	23	27	14.6		-0.2	100	1.38	19			
WNZ								1.50	283		4.0	
GSZ	ePn	23	27	21.2		-0.4	100	1.87	261			
KRP	ePn	23	27	26		0.1	100	2.19	298		3.9	
MNG	S-Pn			29.3		0.5	100	2.51	229		3.5	4.2
TNZ	ePn	23	27	35.5		1.2	95	2.80	265		4.0	
WEL								3.36	226	4.3		
COB	Pn	23	27	57.6		-0.3	100	4.54	241		4.2	4.0
	Sn		28	47.5		-0.2	100					

AMPLITUDES: TUA 21 19 TRZ 3.0 4.0 WTZ 5.0 6.1
WNZ 0.3 KRP 1.0 MNG 0.9 6.1
TNZ 0.2 WEL 0.7 COB 0.5 1.1

78/ 455

AUG 25 $12^h29^m45^s.4$ 37°.89S 176°.50E 161 km M = 3.6

± 0.6 0.03 0.03 4 S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	12	30	07.1	D	-0.6	99	0.40	103		3.2	3.2
	S			24.5		-0.4	100					
KRP	P	12	30	09.3		-0.2	100	0.76	267		3.3*	
	S			29		0.7	99					
TUA	P	12	30	12		0.2	100	1.05	151		2.9	3.7
	eS			33		1.0						
GNZ	P	12	30	15.4		0.1	100	1.41	122		4.0	3.8
	S			38.5		0.3	100					
NGZ	P	12	30	16		0.2	100	1.47	208			
	S			38.5		-0.4	100					
TRZ	P	12	30	18		-0.0	100	1.68	171		3.2	3.7
	eS			45		2.0						
MNG	iP	12	30	29.5	U	-2.2		2.83	196		4.3	3.7
	S		31	04.5		-2.8						
WEL	S	12	31	22.5		-3.2		3.64	201	3.8		
COB	eP	12	30	47		-3.9		4.32	221		3.3*	3.1*
	e		31	05.3								
	S			37.5		-3.9						
MJZ	S	12	32	49.5		-10.2		7.61	215			2.6*

AMPLITUDES: WTZ 0.7 0.8 KRP 2.1 TUA 0.1 0.6
GNZ 2.2 2.5 TRZ 0.1 0.7 MNG 4.7 1.4
WEL 0.1 COB 0.3 0.6 MJZ 0.2

78/ 456

AUG 26 $01^h28^m32^s.3$ 37°.22S 177°.36E 113 km M = 4.0

± 1.1 0.09 0.06 11 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	01	28	51.7	D	-0.4	100	0.82	201		4.0	4.0
	S		29	07		-0.3	100					
ECZ	iP	01	28	55.8		1.2	100	1.05	117			
GNZ	iP	01	28	59.0	DS	-0.9	100	1.51	160		3.9	4.3
	e		29	09								
	S			19.5		-1.3	100					
TUA	P	01	29	00		-0.8	100	1.59	186		3.9	3.9
	S			25		2.5	96					
KRP	P	01	29	01.4	DE	0.4	100	1.61	244		3.2*	2.6*
	S			22.5		-0.3	100					
WNZ								1.73	215		3.9	
TRZ	(P)	01	29	14.4		3.6		2.37	190		4.1	3.9
	(S)			39.5		-0.1						
NGZ	P	01	29	11		-0.2	100	2.39	215			
TNZ	P	01	29	20.5		0.3	100	3.06	229		3.2*	
MNG	P	01	29	24		-4.8		3.70	203		4.2	3.9
	e			33								
	S		30	06		-5.7						
	e			23								
COB	P	01	29	45		-5.2		5.28	222		3.5*	3.0*
	S		30	45.5		-4.8						
CIZ	S	01	31	53		-7.7		8.16	147			

AMPLITUDES:								
WTZ	6.0	7.0	GNZ	2.5	9.0	TUA	0.9	0.8
KRP	1.6	0.4	WNZ	0.1		TRZ	0.6	0.8
TNZ	0.2		MNG	2.5	1.3	COB	0.4	0.4
CIZ		0.2						

78/ 457

AUG 26 $16^h36^m31^s.8$ 38°.03S 176°.16E 217 km M = 4.5

± 1.2 0.07 0.08 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	16	37	00.9	UNW	0.0	100	0.50	282		3.8*	3.0*
	S			22.5		-0.9	100					
WNZ	P	16	37	01.3		0.0	100	0.59	184		4.4	
WTZ	P	16	37	01.2		-0.3	100	0.66	86		3.9	4.3
	e			19.5								
	S			23.5		-1.1	100					
TUA	P	16	37	04.7	U	0.6	100	1.10	135		4.0	4.6
	e			23.5								
	S			28		-1.1	100					
NGZ	P	16	37	05.3		0.4	100	1.22	200			
	e			30								
	S			34		3.3	96					
GNZ	iP	16	37	08.3	DW	0.3	100	1.59	113		4.7	4.8
	S			35		-1.0	100					
TRZ	P	16	37	08.6	U	0.5	100	1.60	161		4.9	4.7
	e			36								
	S			38.5		2.3	99					
TNZ	P	16	37	10		0.1	100	1.81	230		3.3*	
ECZ	P	16	37	12.3	U	1.2	100	1.93	81		4.5	4.1
	e(S)			44		2.5						
MNG	iP	16	37	17.3	U	-1.3	100	2.64	191		4.9	4.8

	S			52		-2.9	98				
WEL	P	16	37	25.5		-2.2		3.42	198	4.5	
	S		38	07		-4.0					
COB	eP	16	37	32		-3.3		4.04	220		3.3* 3.8*
	S		38	20		-4.4					
KAI								5.78	217	3.7*	
MJZ								7.34	214		3.4*
OMZ								8.05	208		3.1*
CIZ	S	16	40	02		5.1		8.08	139		
MSZ								9.08	220		2.8* 3.1*

AMPLITUDES: KRP 5.5 1.1 WNZ 0.3 WTZ 2.0 4.9
TUA 0.8 3.3 GNZ 8.0 15 TRZ 4.0 5.5
TNZ 0.3 ECZ 1.6 0.6 MNG 18 15
WEL 0.8 COB 0.3 3.3 KAI 0.4
MJZ 1.1 OMZ 0.2 MSZ 0.1 0.4

78/ 458

AUG 26 $23^h46^m58^s.7$ 38°.11S 176°.26E 12 km M = 2.9
± 0.2 0.02 0.02 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	Pg	23	47	09.5		-0.3	100	0.54	194		2.7	
WTZ	P*	23	47	09.5		-0.3	100	0.58	78		2.5	2.3
	Pg			11		0.3	100					
	e(S*)			18		0.1						
KRP	P*	23	47	09		-1.1	98	0.60	287		3.0	2.5
	Pg			11.5		0.4	100					
	S*			18		-0.4	100					
	Sg			20		0.7	100					
GNZ	ePg	23	47	29		0.3	100	1.48	112		3.4	
	e			34								
TNZ	eP*	23	47	31.5		0.4	100	1.83	233		3.4	
MNG	eP*	23	47	47		3.1		2.58	193		3.2	
COB	eP*	23	48	08		-0.8		4.04	221			
	ePg			21		0.6						

AMPLITUDES: WNZ 0.1 WTZ 0.6 0.3 KRP 2.6 0.8
GNZ 0.7 TNZ 0.1 MNG 0.2

FELT: Rotorua (33)

78/ 459

AUG 27 $00^h23^m15^s.6$ 38°.10S 176°.25E 12 km M = 2.0
± R R R R S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	eP*	00	23	26.5		-0.3	100	0.59	287		2.3	
	Pg			27.8		0.1	100					
	e(Sg)			37		1.2						
WTZ	eP*	00	23	26		-0.9	100	0.59	79		1.7	
	e(Pg)			29		1.2	99					

AMPLITUDES: KRP 0.5 WTZ 0.1

FELT: Rotorua (33)

78/ 460

AUG 27 $00^h37^m09^s.2$ 38°.10S 176°.25E 12 km M = 2.6
± 0.4 0.04 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
WNZ	ePg?	00	37	20.5		0.1	100	0.54	192			

KRP	P*	00	37	19.4		-1.0	99	0.59	287		2.7	2.3
	Pg			22		0.7	100					
	S*			28		-0.5	100					
	Sg			30		0.6	100					
WTZ	eP*	00	37	20		-0.5	100	0.59	79		2.2	2.2
	Pg			22		0.6	100					
	e(Sg)			29		-0.5						
GNZ	ePg	00	37	41.5		2.0		1.49	112		3.1	
MNG	eP*	00	37	57.5		3.0		2.58	193		2.9	

AMPLITUDES: KRP 1.3 0.5 WTZ 0.3 0.2 GNZ 0.3
MNG 0.1

FELT: Rotorua (33)

78/ 461

AUG 27 $01^h23^m50^s.9$ 38°.08S 176°.27E 12 km M = 2.1
± 0.9 0.21 0.02 R S.E. of RES. 0.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P*	01	24	01.5		-0.4	99	0.58	81		1.7			
	(Pg)			03		0.3	100							
KRP	P*	01	24	02.3		-0.1	100	0.60	284		2.5			
	Pg			03.5		0.2	100							
	S*			10.5		-0.1	100							

AMPLITUDES: WTZ 0.1 KRP 0.8

FELT: Rotorua (33)

78/ 462

AUG 27 $14^h24^m30^s.2$ 36°.87S 177°.15E 211 km M = 3.5
± 2.2 0.12 0.21 28 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WTZ	P	14	25	02.5		0.5	100	1.13	186		3.0		3.1	
	e(S)			25		-1.7								
GNZ	P	14	25	09.5		0.6	100	1.91	159		3.8		2.7	
	S			38		-0.8	99							
TUA	(P)	14	25	12		2.8		1.93	180		3.3		3.3	
	e(S)			39		-0.3								
NGZ	P	14	25	16		-0.4	100	2.61	207					
TRZ	S	14	25	54.5		0.7	100	2.69	185				3.7	
GSZ	P	14	25	17		-0.4	100	2.70	207					
MNG	iP	14	25	29.0	U	-3.6		3.97	199		4.9		3.9	
	S		26	17		-3.8								
WEL	P	14	25	39		-3.9		4.79	202	3.8				
	S		26	33		-6.2								
COB	eP	14	25	50		-1.2		5.44	218				2.4*	
	eS		26	48		-6.1								
MJZ	S	14	28	03		-7.8		8.75	214					

AMPLITUDES: WTZ 0.2 0.3 GNZ 0.8 0.1 TUA 0.1 0.1
TRZ 0.3 MNG 9.0 1.1 WEL 0.1
COB 0.1

78/ 463

AUG 27 $16^h01^m38^s.1$ 39°.21S 174°.92E 11 km M = 2.8
± 0.5 0.02 0.03 4 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
TNZ	iPg	16	01	47.6	D	0.7	100	0.42	273		2.9		2.4	
	e(Sg)			57.5		4.8								

CNZ	iPg	16	01	47.4		-0.8	100	0.49	89			
	Sg			56.5		1.6	99					
GSZ	iPg	16	01	47.5		-1.3	99	0.52	97			
	Sg			56.5		0.5	100					
NGZ	Pg	16	01	48.1		-1.1	100	0.54	87			
	e(Sg)			56		-0.6						
KRP	P*	16	02	02.7	D	-0.2	100	1.38	21		2.9	2.8
	S*			21.5		0.3	100					
MNG	P*	16	02	04		-0.5	100	1.47	163		2.9	2.9
	S*			24.5		0.5	100					
TRZ	e(Sg)	16	02	30		0.8		1.51	104			3.0
WEL	S*	16	02	43.5		1.4		2.08	183	3.0		
COB	Pn	16	02	19		0.9		2.51	221		3.0	2.5
	S*			55		-0.3						

AMPLITUDES: TNZ 1.5 0.7 KRP 0.6 0.5 MNG 0.6 0.9
TRZ 0.1 WEL 0.1 COB 0.1 0.1

78/ 464

AUG 27 $18^h44^m18^s.4$ 38°.71S 174°.60E 33 km M = 3.3
± 0.2 0.01 0.02 R S.E. of RES. 0.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	iPn	18	44	28.3	U	-0.6	99	0.51	200		3.0	3.2
	S*			37		0.2	100					
CNZ	Pn	18	44	33.8		-0.3		0.89	124			
	Sn			47.5		1.8						
	S*			49		1.6						
NGZ	Pn	18	44	34.5		-0.1	100	0.92	121			
	e(Sn)			46		-0.6						
	e(S*)			50		1.5						
GSZ	iPn	18	44	35.2		0.1	100	0.95	127			
	S*			49		-0.5	99					
KRP	iPn	18	44	36.6	UN	-0.1	100	1.07	44		3.4	3.5
	Sn			50.5		0.3	100					
MNG	ePn	18	44	53		3.3		2.02	161		3.2	3.5
	P*			54.5		0.2	100					
	S*		45	21.5		0.4	100					
WEL	P*	18	45	08		4.3		2.58	177	3.2		
	S*			36		-1.5						
COB	e(Pn)	18	45	01.5		1.6		2.78	211		3.6	3.4
	eSn			34.5		3.3						
	S*			46		2.5						
MJZ	eP*	18	46	00		-4.0		6.13	209			
	Sn			55		3.4						

AMPLITUDES: TNZ 1.4 2.8 KRP 3.3 4.8 MNG 0.7 1.6
WEL 0.1 COB 0.3 0.6

FELT: Awakino (38) MM IV

78/ 465

AUG 28 $00^h08^m35^s.8$ 36°.78S 176°.82E 367 km M = 4.2
± 1.0 0.17 0.13 14 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	00	09	23.7	U	-0.8	99	1.21	174		4.3	
KRP	P	00	09	26.7		0.6	99	1.53	221		2.6*	
TUA	P	00	09	29.2	U	-0.1	100	2.04	173		4.5	4.3
	S		10	11		-0.2	100					
GNZ	P	00	09	30.1	U	0.4	100	2.10	153		4.2	4.1

	S			10	12		0.2	100					
NGZ	P	00	09	33.2			-0.1	100	2.58	201			
	eS			10	18		-0.4						
MNG	iP	00	09	44.4		D	-1.6		3.98	195		4.0	4.2
	S			10	37		-4.2						
WEL	S	00	10	53			-3.0		4.78	199			
COB	e	00	10	59.5					5.35	215			3.2*
	S			11	03		-4.2						

AMPLITUDES:									
WTZ	1.3		KRP	0.2		TUA	0.8	0.5	
GNZ	1.0	1.1	MNG	0.8	1.5	COB		0.6	

78/ 466

AUG 29 $06^h10^m41^s.3$ $31°.99S$ $177°.38W$ 33 km M = 4.6

± 3.6 0.26 0.51 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	06	12	28		-0.0	100	7.56	216		4.4	4.6
	e		13	44								
	Sn			50.5		1.5	99					
GNZ	e(P*)	06	13	01		8.5		7.63	208		4.5	4.9
	Sn			50		-0.7	100					
TUA	Sn	06	14	02.5		-0.4	100	8.14	212			4.7
KRP	eP*	06	13	06		2.1		8.30	222			
	eSn		14	13		6.3						
TRZ	Sn	06	14	22		0.9	100	8.90	210			5.0
NGZ	Sn	06	14	26		-1.6	99	9.17	217			
MNG	ePn	06	13	06.5		0.2		10.37	212		3.8	4.8
	Sn		14	50.5		-5.7						
WEL	Sn	06	15	10		-6.9		11.22	212	4.7		
CIZ	Sn	06	15	28		-6.9		11.97	177			
COB	Sn	06	15	30		-7.2		12.07	218			4.3
MJZ	Sn	06	16	47.5		-8.1		15.33	215			4.3*
MSZ								17.11	218		4.6	

AMPLITUDES:									
WTZ	0.5	0.7	GNZ	0.4	1.7	TUA		0.3	
TRZ		0.7	MNG	0.1	1.5	WEL	0.1		
CIZ	0.1	0.3	COB		0.3	MJZ		0.3	
MSZ	0.2								

78/ 467

AUG 29 $13^h31^m15^s.6$ $37°.98S$ $176°.64E$ 142 km M = 4.1

± 0.5 0.02 0.03 3 S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	13	31	35.3		0.1	100	0.28	91			
	S			50		-0.3	100					
WNZ	P	13	31	37.3		-0.6	100	0.77	213		3.9	
KRP	iP	13	31	38.6	DE	0.0	100	0.87	273			
	S			56		-0.3	100					
TUA	iP	13	31	39.0	U	0.0	100	0.92	154		4.1	3.9
	S			56.5		-0.4	100					
GNZ	P	13	31	43		0.6	100	1.28	122		3.6	4.1
	S		32	03		0.1	100					
NGZ	iP	13	31	43.5		-0.8	99	1.45	213			
TRZ	P	13	31	44.8	U	-0.9	99	1.58	175		4.5	4.0
	S		32	10		1.2	98					
AUC	iP	13	31	49.4	D	0.6	100	1.85	306			
GBZ	P	13	31	50.7		0.3	100	1.99	332			
TNZ	P	13	31	51.5	U	-0.8	99	2.14	235		3.1*	3.0*
	S		32	21		0.7	100					

MNG	iP	13	31	57.0	U	-3.6	2.79	198		4.8	4.1
	S		32	30		-4.8					
ONE	P	13	32	03		1.4	2.86	320			
CAZ	P	13	32	00		-2.7	2.94	186			
WEL	P	13	32	06.5		-4.9	3.61	203	3.9		
	S			47		-7.0					
COB	P	13	32	15.5		-5.4	4.34	223		3.7*	3.1*
	S		33	04.5		-6.6					
KAI							6.06	220	3.1*		
MJZ	P	13	32	59.5		-5.4	7.60	216		2.9*	2.8*
	S		34	17.5		-12.5					
CIZ	S	13	34	30.5		-6.0	7.88	141			
OMZ	P	13	33	07		-6.9	8.29	209		3.7*	2.8*
	eS		34	34		-12.3					
MSZ	S	13	34	57.5		-14.5	9.37	222			3.0*

AMPLITUDES:											
WTZ	6.5	4.4	WNZ	0.2		TUA		2.5	1.3
GNZ	1.3	6.0	TRZ	2.4	2.1	GBZ		1.8	
TNZ	0.2	0.2	MNG	14	4.0	WEL	0.2		
COB	0.7	0.7	KAI	0.1		MJZ		0.2	0.3
CIZ		0.2	OMZ	0.4	0.1	MSZ			0.3

78/ 468

AUG 30 $08^h09^m36^s.7$ 42°.97S 172°.86E 12 km M = 3.9

± 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
CHR	Pg	08	09	50		1.2	100	0.58	197			
	Sg			57		0.2	100					
KKY	Pg	08	09	53.9	U	0.4	100	0.83	48			
	Sg		10	06		1.3	99					
KAI	ePg	08	09	59.5		-0.7		1.16	292	4.0		
	Sg		10	17		1.1	100					
COB	P*	08	10	09.7		-0.3	100	1.88	357		4.3	3.6
	Pg			16.5		1.7						
	S*			35		0.1	100					
	e(Sg)			46		5.7						
MJZ	Pn	08	10	10		0.2	100	2.02	239		3.5*	3.7*
	Pg			18		0.4						
	Sn			33		-1.6	99					
	Sg			47		2.2						
WEL	ePn	08	10	14		1.7		2.20	41	4.0		
	ePg			24		2.7						
	Sn			37.5		-1.5	99					
HHP	Pn	08	10	13.5		0.2		2.28	233			
	Pg			28		5.3						
OMZ	iPn	08	10	15.8	D	-0.9	100	2.53	213		4.0	4.0
	ePg			31.5		3.7						
	e(Sg)		11	02.5		0.6						
MNG	Pn	08	10	23		-1.0		3.06	41		3.9	3.9
	P*			31		0.9						
	Pg			36.5		-2.1						
	Sn			57.5		-2.1						
ROX	eS*	08	11	28		2.5		3.57	224			3.4
TNZ	Pn	08	10	39		2.8		3.95	17		3.7	4.0
	Pg			54.5		-2.1						
	Sn		11	22.5		1.5						
MSZ	Pn	08	10	37		0.7		3.96	243		3.9	3.6
	Pg			59		2.2						
	eSg		11	47		-3.2						

TRZ	Sn	08	11	39		3.9		4.54	42		3.9
KRP	ePn	08	10	59		2.5		5.44	23	3.8	3.7
	Pg		11	24		-2.6					
	Sn			59		2.2					
GNZ	Sn	08	12	05		-1.3		5.83	44		4.1
WTZ	Sn	08	12	06		-1.7		5.89	34		4.5

AMPLITUDES:

KAI	2.8		COB	3.6	2.3	MJZ		1.5	3.8
WEL	0.8		OMZ	0.9	1.7	MNG		1.5	1.9
ROX		0.3	TNZ	0.1	0.3	MSZ		0.7	0.7
TRZ		0.2	KRP	0.3	0.3	GNZ			0.5
WTZ		0.3							

78/ 469

AUG 30 $14^h26^m24^s.2$ 39°.81S 174°.56E 101 km M = 3.7

± 0.9 0.03 0.05 9 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	P	14	26	41.6	D	0.3	100	0.64	347		3.5*	3.6*
	S			55.5		1.1	100					
NGZ	iP	14	26	45.1		-0.1	100	1.03	53			
	S		27	01		-0.2	100					
MNG	P	14	26	46.0	D	0.2	100	1.07	139		3.6	4.1
	S		27	01		-1.1	100					
WEL	P	14	26	51		0.3	100	1.48	174	3.7		
	S		27	09		-1.9	99					
CAZ	S	14	27	16		1.1	100	1.68	131			
WNZ								1.68	46			3.9
TRZ	P	14	26	57		2.8	96	1.76	82		3.6	3.7
	S		27	17		0.3	100					
COB	iP	14	26	55.5	U	-0.4	100	1.89	227		4.0*	3.7*
	S		27	20		0.6	100					
KRP	P	14	26	56.4	U	-1.3	100	2.03	22		3.2*	3.2*
	S		27	21		-1.6	99					
TUA	eS	14	27	26		-1.7		2.25	64			3.8
WTZ	eP	14	27	02		-3.9		2.63	47		3.3	3.6
	S			35		-2.1						
GNZ	P	14	27	07		-3.1		2.93	68		3.6	4.2
	S			42		-2.6						
KAI	S	14	27	58		-3.1		3.61	220	3.2*		
MJZ	eP	14	27	39		-1.7		5.17	215		2.4*	2.8*
	S		28	34		-5.6						
OMZ								5.91	206			2.7*
MSZ	S	14	29	14.5		-8.0		6.92	223			2.7*
CIZ	S	14	29	39		-5.3		7.81	125			

AMPLITUDES:

TNZ	1.3	2.3	MNG	5.3	19	WEL	0.8				
WNZ		0.1	TRZ	0.3	1.0	COB		3.1	5.4
KRP	1.2	1.4	TUA		0.4	WTZ		0.2	0.4
GNZ	0.4	2.3	KAI	0.2		MJZ		0.1	0.4
OMZ		0.1	MSZ		0.2	CIZ			0.3

78/ 470

AUG 30 $15^h23^m57^s.8$ 33°.07S 178°.74W 33 km M = 4.2

± 1.2 0.08 0.20 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	Pn	15	25	22.7	U	-0.8	99	6.02	214		4.6	4.3
	Sn		26	27.5		-0.9	99					
GNZ	Pn	15	25	25		-0.4	100	6.16	204		4.1	4.4
	Sn		26	32		0.3	100					

TUA	ePn	15	25	32.5		0.7		6.63	209			4.1
	Sn		26	43		-0.1	100					
KRP	Pn	15	25	34		0.8	99	6.73	222		4.5	
TRZ	Sn	15	27	01.5		-0.1	100	7.40	208			4.3
MNG	Pn	15	25	57		-5.1		8.85	210		3.9	4.3
	Sn		27	29		-7.3						
WEL	Sn	15	27	49		-7.9		9.70	210	4.4		
COB	eSn	15	28	09		-7.3		10.51	218			3.7
CIZ	(Sn)	15	28	36		7.7		11.01	172			

AMPLITUDES:							
WTZ	1.1	0.5	GNZ	0.3	0.9	TUA	0.1
KRP	0.2		TRZ	0.2		MNG	0.2 0.6
WEL	0.1		COB	0.1		CIZ	0.3

78/ 471

AUG 30 $22^h14^m04^s.5$ 38°.95S 175°.04E 230 km M = 4.4

± 1.2 0.05 0.07 9 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
NGZ	P	22	14	36.5		1.2	100	0.50	118			
TNZ	P	22	14	37		1.5	100	0.57	245		3.3*	2.6*
KRP	iP	22	14	38.9	D	0.7	100	1.10	21		3.3*	3.0*
	S		15	04.5		0.1	100					
TRZ	P	22	14	42.5		1.2	100	1.51	114		4.4	4.3
	S		15	12		2.3	99					
TUA	P	22	14	42.5		0.1	100	1.66	86		5.0	4.2
	S		15	11		-0.8	100					
MNG	iP	22	14	44.0	U	1.0	100	1.70	169		4.6	4.5
	S		15	12.5		-0.1	100					
WTZ	P	22	14	42.7		-1.2	100	1.81	58		3.6	4.2
	S		15	13		-1.3	100					
WEL	S	22	15	23		-0.5	100	2.34	185	4.3		
GNZ	iP	22	14	49.2	US	0.1	100	2.35	83		4.8	4.1
	S		15	22		-1.7	99					
COB	iP	22	14	53.2	U	-0.4	100	2.77	219		3.7*	3.6*
	S		15	30		-1.9	99					
KAI	S	22	16	05		-3.5		4.52	217	3.5*		
MJZ	eP	22	15	32.5		-1.6		6.09	213		2.5*	3.0*
	S		16	39		-5.0						
HHP	P	22	15	36.8		-1.5		6.43	212			
	S		16	48		-3.6						
ROX	S	22	17	16		-6.8		7.78	211			3.0*
MSZ	S	22	17	19		-4.4		7.81	221			2.9*

AMPLITUDES:							
TNZ	0.4	0.1	KRP	1.5	0.9	TRZ	1.2 2.2
TUA	6.0	0.9	MNG	12	14	WTZ	0.5 1.8
WEL	0.8		GNZ	5.7	2.0	COB	1.0 2.7
KAI	0.3		MJZ	0.1	0.6	ROX	0.2
MSZ		0.3					

78/ 472

AUG 31 $15^h44^m02^s.2$ 34°.69S 177°.98W 33 km M = 4.3

± 1.2 0.09 0.12 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	15	45	15		-0.2	100	5.09	218		4.0	4.7
	Sn		46	11		0.5	100					
WTZ	Pn	15	45	17		-0.1	100	5.23	230		4.0	4.7
	Sn		46	15		1.2	99					
TUA	Sn	15	46	24		-0.5	100	5.68	222			4.6
KRP	Pn	15	45	30		0.3	100	6.16	236		4.4	4.6

	Sn		46	35.5		-0.5	100					
TRZ	(Sn)	15	46	40		-1.8		6.39	219			4.8
	e			44.5								
NGZ	Sn	15	46	51		-1.0	99	6.82	227			
MNG	Pn	15	45	52		-1.2		7.87	219		3.5	4.3
	Sn		47	13.5		-3.8						
WEL	Sn	15	47	33		-4.9		8.73	219	4.3		
CIZ	e(Pn)	15	46	15		2.0		9.32	174			
	e		47	49								
	(Sn)			52.5		0.3						
COB	Sn	15	47	59		-3.0		9.73	226			4.0
MJZ	Sn	15	49	12		-5.8		12.89	220			3.7*

AMPLITUDES:									
	GNZ		0.3	2.6	WTZ	0.4	1.7	TUA	0.5
	KRP		0.2	0.2	TRZ		1.0	MNG	0.1 0.7
	WEL	0.1			CIZ	0.1	0.5	COB	0.2
	MJZ			0.1					

78/ 473

SEP 01 $03^h34^m58^s.3$ 32°.25S 179°.17E 33 km M = 5.0

± 3.2 0.17 0.37 R S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	eP	03	36	26.0		2.2	99	6.00	197		4.9	
KRP	eP	03	36	29		-0.3	100	6.40	207		5.4	
GNZ	S	03	37	40		0.6	100	6.45	188			5.3
MNG	eP	03	37	01		-2.0	99	8.87	199		4.8	5.0
	eS		38	36		-1.5	100					
COB	eS	03	39	11		0.9	100	10.23	209			4.9

AMPLITUDES:									
	WTZ		0.5		KRP	0.4		GNZ	0.8
	MNG		0.3	0.4	COB		0.2		

78/ 474

SEP 01 $21^h05^m12^s.4$ 37°.53S 176°.65E 211 km M = 4.0

± 0.9 0.05 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
WTZ	P	21	05	40.2		-0.8	100	0.53	150		3.8	3.7
	eS		06	02.5		-0.6	100					
KRP	eP	21	05	42.3		-0.9	100	0.97	245		2.5*	
	eS		06	08		0.8	100					
TUA	eS	21	06	12		0.1	100	1.34	163		3.9	
ECZ	P	21	05	49.0		1.6	99	1.51	97			
GNZ	P	21	05	47.6		-0.2	100	1.56	136		4.3	4.1
	S		06	14.3		-0.8	100					
NGZ	P	21	05	52.2		1.7	99	1.84	206			
CNZ	P	21	05	53.0		2.1		1.89	207			
GSZ	P	21	05	53.0		1.6		1.94	205			
TRZ	eP	21	05	53		0.6	100	2.03	176		3.8	4.1
	e(S)		06	26.2		3.0						
MNG	P	21	06	04.7		-1.0	100	3.22	196		4.6	4.0
	S			47.5		0.5	100					
CAZ	e(P)	21	06	12		4.3		3.39	185			
WEL	eS	21	07	05		0.5	100	4.03	201			
COB	eP	21	06	23		-0.8	100	4.68	219		3.4*	2.9*
	eS		07	18.5		-0.5	100					

AMPLITUDES:									
	WTZ		1.6	1.4	KRP	0.3		TUA	0.6
	GNZ		3.0	3.5	TRZ	0.3	1.2	MNG	6.0 2.2
	COB		0.3	0.4					

78/ 475

SEP 02 $09^h05^m39^s.3$ 37°.49S 176°.75E 12 km M = 3.1

± 3.4 0.09 0.24 R S.E. of RES. 2.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
WIZ	P*	09	05	47.0		0.6	100	0.35	97					
WTZ	P*	09	05	50.3		0.8	100	0.53	160			2.6		3.1
	iS*			54.8		-2.1	99							
ECZ	eP*	09	06	03		-2.0	99	1.44	99			3.4		
GNZ	P*	09	06	08.0		1.4	100	1.53	139			3.4		
	eS*			28.2		1.4	100							
MNG	e(P*)	09	06	45		8.5		3.28	197					

AMPLITUDES: WTZ 1.0 2.5 ECZ 0.2 GNZ 0.6

78/ 476

SEP 02 $10^h00^m33^s.8$ 36°.88S 179°.17E 153 km M = 4.2

± 1.1 0.07 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
ECZ	P	10	00	57.0		-1.5	100	0.95	211					
WIZ	P	10	01	05.2		-0.9	100	1.71	247					
	S			29.3		-1.5	100							
GNZ	P	10	01	09.0		-0.2	100	1.99	207			4.2		
	S			37.8		1.4	100							
WTZ	P	10	01	10.8		0.7	100	2.06	237			4.5		4.4
	S			37.2		-0.7	100							
TUA	P	10	01	17.0		1.3	100	2.50	219			4.2		4.2
	S			48.7		1.1	100							
KRP	P	10	01	24.4		1.4	100	3.08	249			2.9*		
	eS		02	00.7		0.2	100							
TRZ	P	10	01	25.5		0.3	100	3.25	214			4.1		
NGZ	P	10	01	31.2		1.1	100	3.64	230					
	S		02	15.0		1.6	99							
CNZ	P	10	01	33.0		2.2		3.68	230					
GSZ	P	10	01	33.0		1.9		3.71	229					
TNZ	e(P)	10	01	45		4.4		4.43	237			3.4*		
MNG	P	10	01	42.8		-1.6	99	4.72	217			4.0		3.9
	eS		02	37.8		-1.1	100							
WEL	eS	10	02	57.8		-1.6	99	5.58	217	4.2				
COB	eS	10	03	22.0		-0.5	100	6.54	228					3.2*

AMPLITUDES: GNZ 2.5 WTZ 4.4 3.5 TUA 0.7 0.7
KRP 0.4 TRZ 0.3 TNZ 0.2
MNG 0.8 0.8 WEL 0.2 COB 0.6

78/ 477

SEP 03 $03^h37^m25^s.6$ 46°.78S 165°.85E 12 km M = 4.3

± 0.8 0.04 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
OBZ	P*	03	37	54.0		0.6	100	1.56	95					
	S*		38	14.0		-0.0	100							
MNW	P*	03	37	53.2		-0.6	100	1.58	51					
	S*		38	13.0		-1.7	98							
MSZ	Pn	03	38	06.0		-0.0	100	2.56	35			4.6		4.4
	iP*			09.8		-0.6	100							
	S*			45.0		1.0	100							
	e			49.3										
ROX	Pn	03	38	09.9		1.3	99	2.74	63			4.5		4.5

	Sn			41.5		0.6	100					
OMZ	ePn	03	38	29.0		4.3		3.93	66		3.9	3.8
	eP*			38.0		4.2						
	eS*		39	23.0		-2.0						
	e			36.5								
HHP	Pn	03	38	25.0		-0.7	100	4.00	54			
	eP*			34.8		-0.2	100					
	i			43.3								
MJZ	ePn	03	38	29.8		0.2	100	4.29	51		3.9*	
	eP*			39.0		-0.9	100					
	eSn		39	21.3		3.3						
	e			24.0								
COB	Pn	03	39	14.0		-0.2	100	7.56	44		4.5	4.0
	eSn		40	38		1.4	99					

AMPLITUDES: MSZ 9.7 11 ROX 2.6 5.6 OMZ 0.3 0.5
MJZ 0.8 COB 0.3 0.4

78/ 478

SEP 03 $07^h 34^m 17^s.8$ 37°.46S 176°.77E 12 km M = 3.5
± 2.3 0.08 0.13 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	iPg	07	34	26.1		1.2	100	0.33	101			
WTZ	Pg	07	34	29.7		0.6	100	0.55	162		3.0	
	i			34.0								
	eSg			38.0		1.4	100					
TUA	ePg	07	34	44.8		-0.9	100	1.38	168		3.6	
GNZ	Pg	07	34	47.3		-1.6	99	1.54	140		3.8	
	Sg		35	09.0		-0.7	100					
MNG	e(P*)	07	35	20.8		5.4		3.31	197		3.5	

AMPLITUDES: WTZ 2.1 TUA 0.4 GNZ 1.4
MNG 0.3

78/ 479

SEP 03 $12^h 31^m 42^s.0$ 38°.05S 176°.75E 12 km M = 3.8
± 0.5 0.03 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
WTZ	iPg	12	31	45.4		-1.2	100	0.20	71			
WIZ	Pg	12	31	54.6		-0.2	100	0.63	34			
WNZ	ePg	12	31	59.0		1.2	100	0.77	221		3.4	3.4
	eSg		32	07.8		-0.4	100					
	e			16.6								
TUA	Pg	12	31	58.4		-0.3	100	0.82	158		4.2	
	eSg		32	10.3		0.4	100					
KRP	Pg	12	32	02.0		0.3	100	0.96	277		3.3	3.5
	Sg			16.2		1.4	100					
GNZ	Pg	12	32	05.8		0.2	100	1.16	121		4.1	3.8
	Sg			24.8		3.4	93					
NGZ	e	12	32	10.2				1.44	218			
	iPg			11.2		0.0	100					
	i			13.8								
ECZ	Pg	12	32	11.2		-0.5	100	1.47	76		3.9	
CNZ	Pg	12	32	12.5		0.4		1.48	219			
	e			20.5								
TRZ	ePn	12	32	06.3		-1.7	100	1.50	178		4.3	
	iPg			10.5		-1.9	99					
GSZ	Pg	12	32	13.2		0.2		1.53	216			
GBZ	ePg	12	32	23.5		-0.8		2.10	331			

MNG	Pn	12	32	28.0	3.0	2.74	201	3.7	
	e			30.2					
	iPg			35.8	-1.8				
	e(Sg)		33	20.8	6.2				

AMPLITUDES: WNZ 0.2 0.3 TUA 6.5 KRP 1.6 2.0
GNZ 7.5 5.5 ECZ 0.6 TRZ 2.8
MNG 1.0

FELT: Matahina (34) MM III

78/ 480

SEP 03 $17^h 50^m 12^s.2$ 40°.16S 174°.98E 12 km M = 3.5
± 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
MNG	iPg	17	50	25.8		1.3	100	0.59	140		3.3	3.4
	Sg			33.9		1.2	100					
GSZ	Pg	17	50	32.1		-0.4	100	1.00	28			
	Sg			45.1		-0.9	100					
CNZ	Pg	17	50	33.2		-0.4		1.05	25			
	Sg			47.0		-0.9						
TNZ	ePg	17	50	34.8		0.7	100	1.08	334		3.2	3.5
	Sg			51.8		3.2	97					
NGZ	Pg	17	50	33.8		-0.6	100	1.09	27			
	Sg			49		-0.1	100					
WEL	Pg	17	50	35.0		-0.3	100	1.13	188	3.5		
	Sg			50.8		0.1	100					
TRZ	ePg	17	50	42		-1.4	100	1.54	67		3.2	3.1
	e			44								
	eSg		51	07		2.7						
COB	P*	17	50	48.0		1.4	100	1.94	241		3.9	3.3
	iPg			50.0		-1.6	100					
	eSg		51	16.0		-1.8	99					
TUA	eP*	17	50	51		0.8		2.16	52		3.5	3.6
	eSg		51	28		3.1						
KRP	P*	17	50	53.8		1.6	100	2.28	11		4.3	4.0
	iPg			56.6		-1.6	100					
	S*		51	22.0		-0.1	100					
	eSg			27.3		-1.6	100					
KKY	P*	17	50	53.5		-1.8		2.46	203			
	e			59.6								
	ePg		51	01.8		-0.1						
WTZ	eP*	17	50	59.7		0.6		2.68	36		3.4	

AMPLITUDES: MNG 10 18 TNZ 0.4 1.4 WEL 1.0
TRZ 0.3 0.3 COB 1.2 1.1 TUA 0.2 0.3
KRP 1.7 0.8 WTZ 0.2

78/ 481

SEP 04 $09^h 22^m 49^s.4$ 38°.03S 178°.24E 33 km M = 3.4
± 0.5 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
ECZ	P*	09	22	59.0		0.3	100	0.41	36		3.4	3.1
	e		23	12.5								
GNZ	P*	09	23	00.8		-1.2	99	0.64	196		3.5	3.4
	S*			12.0		0.7	100					
WTZ	P*	09	23	07.0		-0.8	100	0.99	272		3.6	3.4
	S*			21.2		-0.2	100					
TUA	P*	09	23	09.5		-1.1	99	1.15	227		3.5	3.7

	eS*			26.5		0.3	100					
TRZ	ePn	09	23	17		-1.7		1.88	216		3.2	3.3
	e			29.3								
	eSn			44.0		3.4						
KRP	eP*	09	23	28.0		0.8	100	2.14	272		3.2	
NGZ	ePn	09	23	26.0		0.8	100	2.36	240			
	eP*			31.2		0.3	100					

AMPLITUDES: ECZ 3.0 1.8 GNZ 6.2 8.7 WTZ 4.5 2.6
TUA 0.8 1.3 TRZ 0.2 0.3 KRP 0.2

78/ 482

SEP 05 $14^h54^m36^s.1$ 38°.36S 177°.06E 12 km M = 3.6
± 0.5 0.02 0.04 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P*	14	54	45.5		1.8	100	0.38	351			
	S*			51.7		2.6	99					
TUA	P*	14	54	45.2		0.2	100	0.45	171		3.0	3.6
	S*			53.2		1.8	100					
GNZ	P*	14	54	49.5		-1.5	100	0.81	111		3.9	3.8
	S*		55	02.5		0.5	100					
WIZ	P*	14	54	50.0		-1.5	100	0.84	7			
	e		55	00.0								
	eS*			02.0		-0.8	100					
TRZ	eP*	14	54	56.0		-1.9		1.21	189			
	S*		55	16.7		2.8						
KRP	P*	14	54	57.8		-1.3	100	1.28	289		3.3	
	e		55	04.0								
ECZ	ePn	14	54	56.5		-3.5		1.35	61			
	e(P*)		55	07		6.7						
NGZ	P*	14	54	59.9		-1.2	100	1.39	234			
	S*		55	21.2		1.5	100					
CNZ	P*	14	55	01.2		-0.8	100	1.45	234			
	i			03.0								
GSZ	P*	14	55	01.4		-1.0	100	1.48	231			
TNZ	ePn	14	55	12		-0.3		2.25	248		4.0	
MNG	ePn	14	55	16.0		-0.6		2.56	208		3.3	3.4
	eP*			24		2.9						
	eSn			46.5		-0.6						
WEL	eSn	14	56	03		-4.5		3.42	210	3.9		
COB	ePn	14	55	41.8		1.4		4.31	229		4.2	3.6
	eSn		56	33		4.0						

AMPLITUDES: TUA 1.7 7.3 GNZ 10 14 KRP 0.7
TNZ 0.2 MNG 0.6 0.9 WEL 0.2
COB 0.5 0.4

78/ 483

SEP 05 $15^h56^m32^s.1$ 33°.93S 179°.21W 258 km M = 5.0
± 1.3 0.07 0.15 16 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	15	57	39.0		0.2	100	4.18	205		5.0	5.1
	S		58	32.0		1.2	100					
WIZ	P	15	57	43.0		-1.3	100	4.63	218			
	i			47.2								
	eS		58	39		-1.6	99					
WTZ	eP	15	57	48.0		-1.8	99	5.09	216		5.2	4.9
	i			50.4								
	e		58	44.5								

	eS			49.0		-1.4	100					
GNZ	P	15	57	51.8		0.6	100	5.21	205		5.1	4.9
	eS		58	55		1.9	99					
ONE	P	15	57	57.0		0.9	100	5.60	249			
TUA	P	15	57	56.7		-0.5	100	5.69	210		5.2	5.1
	e			58.0								
	S		59	04		0.4	100					
KRP	P	15	58	00.7		1.7	99	5.84	225		3.6*	
	e(S)		59	10.5		3.6						
NGZ	eP	15	58	11.3		1.5		6.70	217			
CRZ	eP	15	58	11		0.7	100	6.74	263		3.9*	
MNG	P	15	58	24.0		-1.0	100	7.91	211		4.4	4.8
	S		59	53.5		0.0	100					
WEL	S	16	00	13		0.2	100	8.77	211	4.8		
COB	eP	15	58	45		-1.3		9.59	219		3.5*	3.4*
	eS	16	00	34		2.3						
HHP	S	16	01	54.0		1.6		13.17	215			
MSZ	eP	15	59	53		4.2		14.63	219		3.4*	

AMPLITUDES:									
ECZ	1.4	1.7	WTZ	3.5	2.4	GNZ	3.0	3.6
TUA	1.5	1.2	KRP	1.1		CRZ	0.6	
MNG	0.8	2.2	WEL	0.3		COB	0.2	0.6
MSZ	0.3							

78/ 484

SEP 07 $01^h12^m01^s.5$ 38°.47S 175°.85E 188 km M = 4.3

± 0.9 0.04 0.07 8 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	P	01	12	26.8		0.1	100	0.25	129			
KRP	iP	01	12	28.3		0.5	100	0.59	336		4.1*	3.6*
	S			47.0		-1.0	100					
NGZ	P	01	12	29.7		1.2	100	0.74	194			
CNZ	P	01	12	30.5		1.9	100	0.76	198			
	iS			57.2		7.6						
GSZ	P	01	12	31.0		2.0	100	0.84	194			
WTZ	P	01	12	29.5		-0.8	100	1.02	62		3.5	4.0
	S			49.4		-3.1	99					
TUA	P	01	12	31.2		0.5	100	1.07	109		3.9	4.3
	S			51.8		-1.4	100					
TRZ	P	01	12	34.0		1.2	100	1.32	145		4.6	4.7
	e			56.0								
	S			59.2		2.3	99					
TNZ	P	01	12	35.1		2.1	100	1.35	238		3.9*	
WIZ	(S)	01	12	53.0		-5.4		1.41	49			
GNZ	P	01	12	37.0		0.6	100	1.71	97		4.0	4.2
	e			59.0								
	S		13	03.8		0.3	100					
AUC	P	01	12	38.2		0.6	100	1.82	332			
MNG	P	01	12	41.8		0.6	100	2.17	187		4.8	4.7
	S		13	10.1		-1.9	100					
ECZ	P	01	12	44.0		1.6	100	2.27	71		4.3	4.4
	S		13	09.7		-4.3	95					
GBZ	P	01	12	42.2		-0.2	100	2.27	352			
CAZ	P	01	12	46.0		1.5	100	2.45	173			
	eS		13	19		1.4	100					
WEL	P	01	12	51.0		0.7	100	2.93	196	4.4		
	eS		13	27.0		-0.9	100					
ONE	eP	01	12	50		-0.4	100	2.94	336			
KAI	eS	01	14	18		-2.9	99	5.28	218	3.6*		

CMZ	P	01	13	23.8		-1.1	100	5.66	204	3.8•	3.7•
	S		14	26.8		-3.0	99				

AMPLITUDES:									
WNZ	0.3	KRP	12	4.6	WTZ	0.8	3.0		
TUA	0.8	2.2	TRZ	2.8	8.2	TNZ	1.5		
GNZ	1.7	4.6	MNG	20	21	ECZ	1.0	1.2	
GBZ	4.5		WEL	0.9		KAI	0.3		
CMZ	0.8	1.6							

78/ 485

SEP 08 $15^h02^m25^s.4$ $37°.78S$ $176°.21E$ 302 km $M = 4.0$

± 0.9 0.05 0.07 6 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	eP	15	03	04		-0.5	100	0.55	255		2.5•	
	S			36.0		0.9	100					
WTZ	P	15	03	03.7		-1.0	100	0.65	108		3.6	3.7
	eS			34.2		-1.4	99					
TUA	P	15	03	08.8		1.2	99	1.26	144		3.8	4.1
	S			40		-0.5	100					
NGZ	eP	15	03	09.0		0.2	100	1.48	198			
	e(S)			47		4.3						
GSZ	eP	15	03	10.8		1.3	99	1.57	198			
GNZ	P	15	03	10.5		0.3	100	1.66	122		4.1	3.8
	S			45.0		0.0	100					
TRZ	eP	15	03	11		-0.3	100	1.84	165			4.2
	S			48.5		1.4	99					
ECZ	iP	15	03	12.0		0.5	100	1.85	88		4.1	
MNG	P	15	03	19.3		-1.3	99	2.89	191		4.0	4.1
	S		04	02.8		-0.8	100					
WEL	eS	15	04	18.0		0.0	100	3.67	197	4.3		

AMPLITUDES:									
KRP	0.2	WTZ	0.5	0.6	TUA	0.3	0.6		
GNZ	1.1	1.0	TRZ	1.0	ECZ	0.4			
MNG	1.6	2.2	WEL	0.4					

78/ 486

SEP 09 $17^h49^m37^s.2$ $38°.32S$ $176°.16E$ 160 km $M = 3.9$

± 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
KRP	P	17	50	00.1		-0.4	100	0.63	309		2.6•	2.6•
	S			17.7		-0.7	100					
WTZ	P	17	50	00.0		-1.1	100	0.74	63		3.9	
TUA	P	17	50	03.0		0.7	100	0.92	122		3.5	3.7
	e			17.2								
	eS			22.0		0.3	100					
NGZ	P	17	50	04.0		1.3	100	0.96	206			
CNZ	iP	17	50	04.6		1.6	99	1.00	208			
GSZ	P	17	50	05.0		1.5	99	1.05	205			
TRZ	eP	17	50	08		1.9		1.33	157		3.5	3.9
	e			23								
	eS			29.0		0.7						
	e			33.3								
GNZ	P	17	50	08.0		0.2	100	1.49	103		4.0	3.6
	S			30.5		-0.8	100					
TNZ	e(P)	17	50	13.7		4.5		1.64	238		3.2•	
ECZ	P	17	50	12.8		-0.3	100	1.99	72		4.1	
MNG	iP	17	50	17.2		-0.3	100	2.36	193		4.6	3.7
	S			49.0		0.6	100					
CAZ	P	17	50	21.0		0.7	100	2.58	179			

WEL	eP	17	50	26.5		-1.0	100	3.15	199	3.7		
	eS		51	04		-2.1	98					
COB	S-P			45		-0.4	100	3.82	223		3.3*	2.8*
CMZ	eS	17	52	05		-5.5		5.89	206			3.0*

AMPLITUDES:									
KRP	0.5	0.5	WTZ	3.3		TUA	0.5	0.8	
TRZ	0.3	1.7	GNZ	2.5	1.5	TNZ	0.3		
ECZ	0.8		MNG	12	1.9	WEL	0.2		
COB	0.3	0.4	CMZ		0.3				

78/ 487

SEP 09 $20^h 16^m 45^s.6$ 38°.48S 176°.69E 111 km M = 4.6
± 1.1 0.04 0.05 11 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	P	20	17	02.0		-0.6	100	0.49	252		4.5	
TUA	P	20	17	02.3		-0.3	100	0.49	133			
	e			23.5								
WTZ	P	20	17	02.2		-0.8	100	0.55	25			
WIZ	P	20	17	07.2		-0.1	100	1.03	23			
GNZ	P	20	17	08.1		0.4	100	1.05	99			
	S			23.6		-0.9	100					
KRP	P	20	17	08.2		0.4	100	1.06	301			
	S			23.0		-1.6	100					
TRZ	P	20	17	09.0		1.1	100	1.08	175		4.4	4.5
	i			11.0								
	S			26.4		1.6	100					
NGZ	P	20	17	09.3		1.2	100	1.10	230			
CNZ	P	20	17	10.0		1.3	100	1.15	231			
GSZ	P	20	17	10.7		1.7	100	1.18	227			
ECZ								1.66	62		4.9	
TNZ	P	20	17	20.3		2.0	99	1.94	248		4.4*	
MNG	P	20	17	22.7		-0.8	100	2.33	203		4.8	4.8
	i			27.7								
	eS			49.9		-2.0						
CAZ	P	20	17	25.8		0.7	100	2.45	188			
	S			54.0		-0.7	100					
GBZ								2.46	336			
WEL	P	20	17	33.2		-1.7	100	3.17	207	4.6		
	S		18	09.2		-2.9	97					
ONE	eP	20	17	39		2.6		3.28	325			
COB								4.01	228		4.0*	3.7*
KAI	eS	20	19	09		-5.0		5.71	223	3.9*		
CMZ	P	20	18	08.5		-4.1		5.96	210			
	S		19	12.8		-7.3						

AMPLITUDES:									
WNZ	1.7		TRZ	4.5	12	ECZ	7.5		
TNZ	4.7		MNG	20	25	GBZ	3.0		
WEL	1.6		COB	1.7	2.8	KAI	0.6		

FELT: Port Ohope (35)

78/ 488

SEP 11 $09^h 19^m 41^s.9$ 33°.33S 177°.91W 288 km M = 4.6
± 1.1 0.06 0.14 19 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	09	21	02		-0.1	100	5.23	213		4.5	
WIZ	eP	09	21	08.0		-1.0	100	5.80	222			
	e			20.5								
WTZ	P	09	21	13.0		-1.2	99	6.24	220		4.8	4.5

	eS		22	26		-0.8	100						
GNZ	eP	09	21	15		0.6	100	6.25	211		4.6	4.5	
	eS		22	28.5		1.4	99						
TUA	P	09	21	21.8		0.8	100	6.78	215		5.0		
KRP	eP	09	21	24		-0.2	100	7.04	227		3.1*		
TRZ	eP	09	21	30.5		0.2	100	7.52	213		4.8		
	e		22	59									
CRZ	eP	09	21	36		0.9	100	7.91	259		3.7*		
MNG	e(P)	09	21	58.5		9.9		9.00	214		4.1	4.6	
	eS		23	28		-0.0	100						
WEL	eS	09	23	47		-0.3	100	9.85	214	4.7			

AMPLITUDES: ECZ 0.3 WTZ 1.0 0.6 GNZ 0.8 0.9
TUA 0.7 KRP 0.3 TRZ 0.3
CRZ 0.3 MNG 0.3 1.3 WEL 0.2

78/ 489

SEP 11 $11^h52^m01^s.3$ 35°.73S 177°.99E 233 km M = 4.1
± 1.8 0.13 0.23 21 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	11	52	42.0		-0.8	100	2.02	167		4.2	
	i			43.8								
WTZ	eP	11	52	47.8		1.2	100	2.39	199		4.1	3.8
	eS		53	21.5		-0.1	100					
GNZ	iP	11	52	52.0		-0.2	100	2.91	179		4.5	4.1
	S		53	31.0		-0.6	100					
KRP	eP	11	52	51		-1.6	100	2.94	221		2.6*	
TUA	eP	11	52	55		0.2	100	3.15	192		3.9	
TRZ	eP	11	53	04.0		0.0	100	3.93	193		4.1	4.1
	eS			55.5		2.7	99					
GSZ	P	11	53	08.0		2.8	99	4.02	208			
MNG	P	11	53	19.8		-0.7	100	5.26	201		4.1	4.1
	S		54	20		-2.3	99					
WEL	eS	11	54	40		-1.0		6.10	204	4.3		

AMPLITUDES: ECZ 0.7 WTZ 1.0 0.6 GNZ 2.3 1.5
KRP 0.2 TUA 0.2 TRZ 0.2 0.4
MNG 0.8 1.0 WEL 0.2

78/ 490

SEP 11 $16^h46^m33^s.9$ 32°.91S 177°.71W 33 km M = 4.5
± 2.1 0.29 0.50 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	16	47	58		3.2		5.67	212		4.5	
WTZ	P	16	48	08		-0.3	100	6.66	219		4.2	4.5
	eS		49	21		1.1	100					
GNZ	eP	16	48	09		0.2	100	6.70	210		4.4	4.1
	S		49	22.8		2.1	99					
ONE	eP	16	48	20		4.9		7.15	244			
TUA	eP	16	48	16.7		0.8	100	7.22	214		4.7	4.6
	eS		49	34		0.7	100					
KRP	eP	16	48	26		6.9		7.45	226			
TRZ	e	16	48	16				7.97	212		4.5	4.5
	eP			25.5		-0.7	100					
	eS		49	50		-1.3	100					
MNG	eS	16	50	24		-2.6	99	9.44	213			4.2
WEL	eS	16	50	42		-5.2		10.30	214	4.7		

AMPLITUDES: ECZ 0.2 WTZ 0.4 0.7 GNZ 0.5 0.4

		TUA		0.3	0.3	TRZ		0.2	0.3	MNG		0.4	
		WEL	0.2										

78/ 491

SEP 11 $16^h49^m08^s.1$ 32°.92S 177°.81W 33 km M = 4.5

± 2.8 0.17 0.37 R S.E. of RES. 2.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	16	50	28		-0.4	100	5.62	211			
WTZ	P	16	50	40.0		-1.8	100	6.61	219		4.3	4.5
	eS		51	51		-1.7	100					
GNZ	eP	16	50	42		-0.3	100	6.64	209		4.3	4.2
	S		51	54.0		0.3	100					
ONE	eP	16	50	47		-1.2	100	7.07	244			
TUA	eP	16	50	48		-1.4	100	7.16	213		4.7	4.6
	eS		52	09		2.8	99					
KRP	eP	16	50	56		3.6	99	7.38	226		4.6	
TRZ	eS	16	52	21		-3.3	99	7.92	212			4.5
MNG	e	16	52	48				9.39	213			4.3
	eS			59		-0.5	100					
WEL	eS	16	53	14		-6.2		10.24	213	4.7		

AMPLITUDES:									
WTZ	0.5	0.6	GNZ	0.4	0.5	TUA	0.3	0.3	
KRP	0.2		TRZ		0.3	MNG		0.5	
WEL	0.2								

78/ 492

SEP 11 $17^h47^m41^s.0$ 32°.94S 177°.51W 33 km M = 5.2

± 1.6 0.08 0.18 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eP	17	49	04		1.2	100	5.73	213		5.5	
	e			06.4								
	e			24								
	e		50	19.5								
WIZ	eP	17	49	11.0		0.4	100	6.31	222			
WTZ	eP	17	49	16.2		-0.4	100	6.74	220		4.9	5.0
	i			18.3								
	eS		50	29		-0.0	100					
GNZ	eP	17	49	18.0		1.3	100	6.75	211		4.9	5.1
	S		50	31.0		1.8	100					
TUA	eP	17	49	24.0		0.0	100	7.28	215		5.3	5.5
	S		50	42		-0.0	100					
ONE	eP	17	49	25		0.9	100	7.29	245			
KRP	eP	17	49	27		-0.5	100	7.54	227		5.6	
	e			34								
	e			51								
TRZ	eP	17	49	33.5		-0.7	100	8.04	213		4.8	5.1
	e			50.8								
	S		51	02		2.0	99					
CRZ	eP	17	49	38.0		0.0	100	8.32	257		5.5	
TNZ	eP	17	49	48		-0.1	100	9.05	224		5.5	
MNG	eP	17	49	52		-2.3	99	9.50	214		4.5	5.0
	eS		51	31		-4.3	80					
WEL	eS	17	51	50		-6.0		10.36	214	5.0		

AMPLITUDES:									
ECZ	2.0		WTZ	2.0	2.2	GNZ	1.4	4.0	
TUA	1.3	2.2	KRP	1.8		TRZ	0.4	1.1	
CRZ	0.4		TNZ	0.3		MNG	0.7	2.8	
WEL	0.4								

78/ 493

SEP 11 $18^h01^m26^s.4$ 33°.16S 177°.30W 33 km M = 4.5
± 3.4 0.14 0.35 R S.E. of RES. 2.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
GNZ	eP	18	03	01.0		0.1	100	6.66	213			4.4		
	S		04	16		3.5	99							
WTZ	eP	18	02	59		-2.4	100	6.70	222			4.3		4.3
	eS		04	12		-1.3	100							
TUA	eP	18	03	08.0		-0.4	100	7.22	217			4.7		
ONE	eP	18	03	13		2.5	100	7.37	247					
KRP	eP	18	03	14		1.2	100	7.53	229			4.6		
CRZ	eP	18	03	24		-1.2	100	8.44	259			5.2		
MNG	eS	18	05	17		-1.9	100	9.43	216					4.2

AMPLITUDES: GNZ 0.5 WTZ 0.5 0.4 TUA 0.3
KRP 0.2 CRZ 0.2 MNG 0.4

78/ 494

SEP 11 $18^h34^m21^s.8$ 33°.34S 177°.26W 33 km M = 4.5
± 3.5 0.14 0.37 R S.E. of RES. 2.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	18	35	42		1.1	100	5.53	217			4.5		
GNZ	eP	18	35	55.8		1.2	100	6.53	215			4.2		4.4
	S		37	09.0		4.2	98							
WTZ	eP	18	35	52.5		-2.8	99	6.60	224			4.4		4.5
	eS		37	06		-0.2	100							
ONE	eP	18	36	04		-1.4	100	7.33	248					
KRP	eP	18	36	06		-1.0	100	7.44	230			4.6		
CRZ	eP	18	36	23		2.4	100	8.44	260			5.2		
MNG	eS	18	38	10.0		-1.4	100	9.31	217					4.4
WEL	eS	18	38	30		-2.0	100	10.16	216	4.8				

AMPLITUDES: ECZ 0.2 GNZ 0.3 0.7 WTZ 0.6 0.6
KRP 0.2 CRZ 0.2 MNG 0.6
WEL 0.2

78/ 495

SEP 11 $19^h42^m09^s.6$ 32°.20S 179°.04W 33 km M = 4.6
± 1.6 0.13 0.31 R S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
ECZ	eP	19	43	34.0		1.3	99	5.83	199			4.7		
WTZ	eP	19	43	44		0.4	100	6.63	208			4.5		4.6
	eS		44	56		1.2	100							
GNZ	eP	19	43	46		-0.8	100	6.87	200			4.4		4.6
	S		45	00		-0.5	100							
KRP	eP	19	43	51		-0.9	100	7.24	216			4.6		
TUA	eS	19	45	10		-0.7	100	7.29	204			4.8		4.8
WEL	eS	19	46	16		-8.1		10.34	207	4.7				

AMPLITUDES: ECZ 0.3 WTZ 0.7 0.8 GNZ 0.4 1.2
KRP 0.2 TUA 0.4 0.4 WEL 0.2

78/ 496

SEP 11 $19^h50^m55^s.8$ 41°.39S 172°.87E 152 km M = 4.2
± 0.7 0.04 0.08 10 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
COB	P	19	51	16.9		0.2	100	0.32	342					

KKY	P	19	51	24.7	2.0	99	1.20	149			
	e			34.8							
	e			37.0							
WEL	P	19	51	26.4	1.3	100	1.44	86	3.9		
	S			47	-0.5	100					
MNG	iP	19	51	33.2	0.4	100	2.12	69		4.1	4.2
	S		52	00.8	-0.4	100					
CMZ	P	19	51	35.7	2.0	99	2.20	184		4.1*	3.7*
	S		52	01.5	-1.3	100					
TNZ	eP	19	51	38.5	1.1	100	2.49	28		3.2*	3.5*
	S		52	10.0	0.8	100					
GSZ	P	19	51	44.4	0.9	100	2.97	45			
	S		52	19.8	-0.2	100					
CNZ	eP	19	51	44.8	0.9	100	3.01	44			
	S		52	20.3	-0.5	100					
MJZ	eP	19	51	46	0.3	100	3.14	214		2.7*	2.9*
	S		52	22.8	-1.1	100					
HHP	P	19	51	50.2	0.2	100	3.47	211			
	S		52	29.5	-2.1	99					
KRP	eS	19	52	42.0	-2.7	98	4.03	32			
TUA	e	19	52	37			4.18	53			4.4
	eS			45	-3.2						
GNZ	S	19	53	01.0	-2.2	99	4.82	57			4.3

AMPLITUDES: WEL 1.0 MNG 4.6 7.7 CMZ 4.5 3.7
TNZ 0.2 0.6 MJZ 0.3 0.9 TUA 0.4
GNZ 1.0

78/ 497

SEP 12 $05^h59^m28^s.9$ 45°.12S 167°.67E 81 km M = 4.2
± 1.0 0.04 0.08 8 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	iP	05	59	43.0		-0.0	100	0.49	22			
	S			54.0		0.4	100					
MNW	P	05	59	44.3		-0.3	100	0.67	183			
	S			55.0		-1.4	100					
ROX	P	05	59	53.1		2.0	99	1.22	108			
	S	06	00	09.0		1.0	100					
OBZ	P	05	59	58.3		-0.6	100	1.82	170		4.2*	4.3*
	S	06	00	21.7		0.5	100					
HHP	P	06	00	03.0		0.7	100	2.07	68			
	eS			29.3		2.2						
OMZ	P	06	00	06.5		0.9	100	2.30	90		4.2	4.1
	e			27.8								
	S			32.2		-0.7	100					
CMZ	eP	06	00	27.8		0.2	100	3.89	68		3.2*	3.5*
	eS		01	10.0		-2.4	98					

AMPLITUDES: OBZ 7.5 21 OMZ 2.5 3.0 CMZ 0.3 1.5

78/ 498

SEP 12 $22^h45^m01^s.0$ 37°.19S 177°.25E 181 km M = 4.0
± 1.0 0.05 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
WIZ	eP	22	45	24.2		-1.3	99	0.34	188			
WTZ	P	22	45	27.0		-0.7	100	0.82	194		4.1	3.7
	eS			47.8		-0.5	100					
ECZ								1.15	116		4.1	
KRP	eP	22	45	34.8		1.0	100	1.55	241		2.8*	

GNZ	P	22	45	33.7		-0.4	100	1.57	157		4.4	4.1
	e			57.0								
	S			59.8		0.2	100					
TUA	eP	22	45	36		1.6	99	1.62	183		3.6	4.0
	eS		46	00.8		0.5	100					
	e			05								
NGZ	eP	22	45	44.4		1.7	99	2.38	212			
	e		46	25.3								
CNZ	eP	22	45	44		0.8	100	2.41	213			
	e		46	22								
	e			30.0								
TNZ	eP	22	45	53		2.5		3.01	228			3.1*
MNG	P	22	45	58.0		-0.9	100	3.69	201		3.8	3.7
	S		46	43		-0.6	100					
WEL	eS	22	47	02.5		0.0	100	4.53	204	4.2		
COB	eP	22	46	18		-0.9	100	5.25	221		3.2*	2.9*
	eS		47	19		-0.3	100					

AMPLITUDES: WTZ 3.6 1.6 ECZ 1.2 KRP 0.5
GNZ 5.0 4.0 TUA 0.3 0.7 TNZ 0.2
MNG 0.8 0.9 WEL 0.3 COB 0.2 0.3

78/ 499

SEP 13 $06^h29^m23^s.3$ 31°.68S 178°.38W 33 km M = 4.6
± 7.2 0.25 0.76 R S.E. of RES. 4.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	06	31	09.0		1.7	100	7.36	210		4.5	4.5
	eS		32	25		-1.1	100					
GNZ	eS	06	32	35.0		4.2	100	7.56	202		4.4	4.6
CRZ	eP	06	31	16.7		0.7	100	8.00	248			
TRZ	eS	06	33	03		2.7	100	8.78	205			4.7
NGZ	eS	06	33	09.0		4.6	100	8.95	212			
MNG	eP	06	31	43.5		-2.7	100	10.21	207		4.2	4.7
	eS		33	29		-5.7	99					
WEL	eS	06	33	51		-4.2	100	11.07	208	4.8		

AMPLITUDES: WTZ 0.6 0.5 GNZ 0.4 0.9 TRZ 0.4
MNG 0.3 1.1 WEL 0.2

78/ 500

SEP 13 $16^h11^m13^s.1$ 46°.41S 166°.66E 33 km M = 3.8
± 0.9 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
MNW	P*	16	11	30.2		-0.1	100	0.92	47			
	S*			43.0		0.0	100					
OBZ	P*	16	11	33.9		0.1	100	1.13	117		3.8*	4.2*
	S*			49.0		0.0	100					
MSZ	P*	16	11	47.0		-0.7	100	1.95	27		3.8	
ROX	P*	16	11	49.4		-0.5	100	2.08	64		4.3	4.0
	S*		12	15.7		-1.6	98					
OMZ	eP*	16	12	10.5		0.4	100	3.27	67		3.6	3.4
	eS*			53		0.2	100					
	i		13	00.8								
HHP	P*	16	12	12.0		0.8	100	3.33	53			
	i			45.3								
	eS*			56		1.3	99					

AMPLITUDES: OBZ 4.0 19 MSZ 2.7 ROX 2.6 3.3
OMZ 0.2 0.3

78/ 501

SEP 14 $05^h39^m25^s.4$ $39°.61S$ $176°.69E$ 33 km M = 3.5

± 0.8 0.05 0.04 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	P*	05	39	31.0		-0.2	100	0.12	61			
	S*			39.2		3.8	96					
TUA	P*	05	39	41.8		-0.1	100	0.88	24		3.3	3.5
	eS*			55.3		1.2	100					
GSZ	P*	05	39	42.0		-0.6	100	0.92	291			
NGZ	P*	05	39	42.0		-0.9	100	0.94	297			
	S*			54.4		-1.4	100					
CNZ	P*	05	39	42.8		-0.8	100	0.97	294			
	eS*			56.8		-0.1	100					
WNZ	eP*	05	39	45.0		-0.3	100	1.08	335		3.8	3.9
	e			46.8								
	eS*		40	00.0		0.0	100					
MNG	Pn	05	39	46.0		-1.6	100	1.37	222		3.5	
	i			54.5								
GNZ	e	05	39	58.8				1.41	47		3.5	
	eS*		40	08		-1.9	100					
WTZ	Pn	05	39	51.0		-0.3	100	1.64	8		3.0	3.4
	i			56.4								
	eSn		40	12.0		1.2	100					
TNZ	ePn	05	39	55.7		1.6	100	1.84	283		3.6	3.9
	S*		40	26.0		3.5	97					
KRP	Pn	05	39	54.8		-0.2	100	1.91	331		3.7	
	iP*			57.0		-2.3	99					
	e		40	03.2								
	eS*			25.0		0.5						
WEL	eSn	05	40	24		-0.9		2.22	221	3.6		
COB	ePn	05	40	18.2		3.3		3.37	243		3.6	3.2
	eSn			56		3.7						

AMPLITUDES: TRZ 5.5 15 TUA 0.8 1.6 WNZ 0.4 0.7
MNG 3.0 GNZ 1.2 WTZ 0.4 0.9
TNZ 0.4 1.1 KRP 0.7 WEL 0.3
COB 0.2 0.3

78/ 502

SEP 14 $10^h15^m37^s.8$ $34°.81S$ $178°.81W$ 214 km M = 4.2

± 2.5 0.21 0.41 34 S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	P	10	16	48.4		0.3	100	4.60	213		4.4	4.0
	S		17	43.8		1.1	100					
WTZ	P	10	16	48.0		-0.7	100	4.64	226		4.4	
TUA	eP	10	16	55		0.0	100	5.15	218		4.4	
KRP	eP	10	16	59		-0.9	100	5.53	234		2.9*	
MNG	eP	10	17	25		1.5	100	7.36	216		3.7	3.8
	eS		18	45		-1.0	100					
WEL	eS	10	19	04		-2.0	99	8.22	216	4.5		
COB	eS	10	19	30		2.2	99	9.16	224			2.9*

AMPLITUDES: GNZ 0.8 0.6 WTZ 0.8 TUA 0.3
KRP 0.2 MNG 0.2 0.3 WEL 0.2
COB 0.2

78/ 503

SEP 14 $11^h01^m10^s.8$ 33°.67s 177°.64W 260 km M = 4.6

± 1.9 0.23 0.35 29 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	eP	11	02	41		0.3	100	6.07	214		4.7	4.5
	eS		03	53		2.0	99					
WTZ	eP	11	02	40.2		-1.2	100	6.13	224		4.7	4.5
	eS		03	51		-1.2	100					
TUA	eP	11	02	48		0.4	100	6.63	218		4.9	
KRP	eP	11	02	53		1.0	100	6.98	231		3.0*	
MNG	eP	11	03	15		-0.5	100	8.85	216		3.9	4.5
	e		04	46								
	eS			51		-2.3	99					
WEL	eS	11	05	13		0.1	100	9.70	216	4.8		
COB	eS	11	05	36		1.6	100	10.65	223			3.0*

AMPLITUDES: GNZ 0.9 0.9 WTZ 0.8 0.6 TUA 0.6
KRP 0.2 MNG 0.2 1.0 WEL 0.2
COB 0.2

78/ 504

SEP 14 $11^h08^m22^s.2$ 38°.53s 175°.81E 182 km M = 4.3

± 0.8 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	11	08	47.2		0.5	100	0.25	113			
KRP	iP	11	08	48.3		0.3	100	0.64	341			3.2*
	S		09	07.5		-0.4	100					
NGZ	P	11	08	49.8		1.7	99	0.67	193			
CNZ	P	11	08	49.4		1.1	100	0.69	197			
GSZ	P	11	08	50.2		1.5	100	0.76	193			
WTZ	P	11	08	49.9		-0.9	100	1.08	60		3.7	4.3
	i		09	09.0								
	S			11.2		-1.8	99					
TUA	P	11	08	51.2		0.3	100	1.09	105		3.9	4.6
	S		09	12.1		-1.0	100					
TRZ	P	11	08	54.2		1.6	99	1.29	143		3.8	4.0
	S		09	18.0		1.9	99					
TNZ	P	11	08	54.0		1.4	100	1.30	239		4.1*	
	eS		09	19.3		3.1						
WIZ	S?	11	09	14.9		-4.4		1.48	48			
GNZ	P	11	08	57.0		0.1	100	1.75	94		4.6	
	S		09	22.0		-1.8	99					
MNG	P	11	09	01.2		0.4	100	2.10	187		4.9	4.7
	i			25.0								
	S			29.2		-1.5	100					
ECZ	P	11	09	03.1		-0.2	100	2.32	70		4.4	4.5
	e			33.3								
	eS			36.0		1.0	100					
GBZ	P	11	09	02.8		-0.6	100	2.33	354			
WEL	P	11	09	09.7		-0.2	100	2.86	196	4.5		
	S			45.8		-0.8	100					
COB	eP	11	09	15.4		-2.1	99	3.48	222			
	eS			59		-1.1	100					
CMZ	P	11	09	42.5		-2.2		5.59	204		4.1*	3.6*
	S		10	44.8		-3.9						
HHP	P	11	10	02.0		-2.5		7.10	214			
	eS		11	17		-7.2						

AMPLITUDES:											
	WNZ	0.3		KRP		1.8	WTZ	1.1	5.0
	TUA	0.8	4.3	TRZ	0.5	2.0	TNZ	2.5	
	GNZ	6.2		MNG	28	20	ECZ	1.1	1.6
	GBZ	0.8		WEL	1.2		CMZ	1.6	1.3

78/ 505

SEP 14 $23^h06^m01^s.7$ 38°.10S 177°.36E 60 km M = 3.6

± 1.0 0.05 0.05 11 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	23	06	12.0		-0.5	100	0.31	292		3.0	3.5
	S			20.3		-0.1	100					
WIZ	P	23	06	14.0		-1.1	100	0.59	347			
	eS			24.0		-1.0	100					
TUA	eP	23	06	18.0		1.4	100	0.72	193		3.2	3.6
	eS			30.2		2.4	99					
	e			32.2								
GNZ	P	23	06	15.4		-1.6	100	0.76	136		3.7	3.8
	S			26		-2.4	99					
ECZ	P	23	06	21.0		0.4	100	1.03	67		3.8	3.9
	S			37.4		2.7	99					
KRP	P	23	06	26.0		-0.2	100	1.45	277		2.7*	2.8*
	S			46.0		1.3	100					
TRZ	eP	23	06	30.8		3.8		1.51	196			
	i			34.0								
	eS			49		2.8						
	e		07	04								
MNG	P	23	06	45.0		-1.7	100	2.91	209		3.5	
	e			53.2								

AMPLITUDES:											
	WTZ	4.7	16	TUA	1.0	2.3	GNZ	7.0	13
	ECZ	1.8	2.6	KRP	0.5	0.7	MNG	0.7	

78/ 506

SEP 15 $13^h05^m29^s.3$ 42°.07S 173°.05E 12 km M = 3.8

± 0.4 0.03 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
KKY	iP*	13	05	39.8	U	-0.8	100	0.59	126			
	eS*			49		0.3	100					
COB	Sg-P*			16		0.2	100	1.01	346			
KAI	ePg	13	05	55.5		-0.2	100	1.30	249	4.0		
	eSg		06	13		-0.2	100					
WEL	ePg	13	06	00		0.2	100	1.51	59	3.5		
	eSg			23		2.8	98					
CMZ	Pn	13	05	54.5		-1.4	100	1.55	191		4.1*	3.9*
	eP*			56		-0.8	100					
	eS*		06	15		-2.3	99					
MNG	ePn	13	06	06		-0.7	100	2.34	52		4.0	3.9
	eP*			09		-1.3	100					
	ePg			15		-1.6	100					
	eS*			41.5		0.5	100					
	eSg			48		-0.1	100					
MJZ	eP*	13	06	17		0.5	100	2.70	224		3.7*	3.6*
	eSn			46		2.5	99					
HHP	ePn	13	06	16		0.2	100	3.01	220			
	ePg			29		-1.0	100					
	eSn			50		-0.8	100					
OMZ	eP*	13	06	28		-0.1	100	3.37	207		3.6	3.5
	eS*		07	16		3.7	93					

ROX	ePg	13	07	00		2.8		4.35	217	4.0	3.6
	eSg			51		-4.8					
KRP	eP*	13	06	46		-2.3		4.56	26	3.9	3.8
	eS*		07	42		-5.7					

AMPLITUDES:

KAI	2.3		WEL	0.6		CMZ		3.5	5.7
MNG	3.0	3.0	MJZ	1.2	1.7	HHP		2.5	3.5
OMZ	0.2	0.3	ROX	0.3	0.3	KRP		0.5	0.5

78/ 507

SEP 15 $22^h35^m48^s.5$ 37°.94S 178°.88E 12 km M = 4.5

± 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
ECZ	iP*!	22	35	56.0		0.1	100	0.37	313			
WTZ	iPn	22	36	13.9	U	-0.6	100	1.49	268		4.6	
	e			21								
TUA	ePn	22	36	16		-0.0	100	1.61	237		4.3	
	e			26								
KRP	iPn	22	36	29.7	U	-0.4	100	2.65	269		4.3	4.3
	eSn		37	00		-1.5	100					
GSZ	Pn	22	36	34.4		0.7	100	2.91	242			
	e(Sn)		37	03		-4.7						
CAZ	eSn	22	37	25		0.5	100	3.60	214			
MNG	iPn	22	36	43.2	U	-2.1	99	3.75	224		4.2	4.5
	Sn		37	28.2		0.0	100					
ONE	ePn	22	36	53		1.3	100	4.22	299	4.8		
WEL	eSn	22	37	47		-1.7	99	4.61	222	4.5		
	eS*		38	11		2.6	98					
CRZ	Pn	22	37	18.7		1.1	100	6.12	303		5.1	
CIZ	ePn	22	37	29		0.4	100	6.93	152			
	eSn		38	44		-0.3	100					

AMPLITUDES:

WTZ	16		TUA	2.3		KRP		1.8	1.5
GSZ	1.5	3.5	CAZ	1.2		MNG		2.3	5.7
ONE	0.6		WEL	0.6		CRZ		0.6	
CIZ	0.5	1.7							

78/ 508

SEP 17 $14^h18^m44^s.4$ 40°.92S 175°.38E 12 km M = 3.7

± 0.5 0.03 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
MNG	iP*!	14	18	50.9		0.0	100	0.31	14		3.2	
	eS*			56		0.6	100					
WEL	eP*	14	18	55		-0.6	100	0.59	231	3.7		
	eS*		19	04		0.3	100					
CAZ	P*	14	18	55.5		-1.0	100	0.64	89			
	S*		19	06.5		1.2	100					
GSZ	Pn	14	19	12.1		-0.3	100	1.65	6			
	eSn			33		-0.4	100					
TRZ	ePn	14	19	13		-0.9	100	1.75	39		3.5	3.4
	eSn			36		0.0	100					
TNZ	ePn	14	19	17.5		1.7	100	1.90	336		3.5	4.1
	ePg			25		2.3	99					
	eS*			44		1.1	100					
COB	P*	14	19	19.1		-0.8	100	2.01	264		3.6	3.5
	Pg			26		0.9	100					
	Sn			41		-1.1	100					
KRP	ePn	14	19	33.5		2.7	99	3.00	2		4.4	4.2
	eP*			37		0.3	100					

	ePg			41			-3.9	91					
	eS*		20	14			-1.8	100					
AMPLITUDES:	MNG			30		WEL	5.3			CAZ		1.8	9.5
	GSZ			6.2	3.6	TRZ		0.4	0.5	TNZ		0.3	1.5
	COB			0.6	1.5	KRP		1.3	0.7				

78/ 509

SEP 17 $18^h31^m42^s.0$ $39°.48S$ $173°.61E$ 12 km M = 4.0

± 0.9 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
TNZ	Pn	18	31	55.5		-1.1	100	0.67	65		3.5	3.7
	eSn		32	07		-0.4	100					
GSZ	iPn	18	32	07.9	U	-0.7	100	1.55	83			
	ePg			15		1.6	100					
	eSn			27.5		-1.1	100					
MNG	iPn	18	32	11.0	U	-1.6	100	1.84	129		4.2	4.5
	i			11.7								
	eSn			34		-1.5	100					
WEL	ePn	18	32	15		-0.0	100	2.02	154	4.1		
	eSn			39		-0.8	100					
KRP	iPn	18	32	16.9	D	-0.1	100	2.17	45		3.7	3.9
	eSn			43		-0.4	100					
CAZ	ePn	18	32	24		2.9	98	2.47	126			
	eSg		33	06		0.9	100					
TRZ	eP*	18	32	26		0.3	100	2.49	93		3.8	3.9
	eSg		33	06		0.1	100					
TUA	eP*	18	32	31		-0.6	100	2.83	78		4.4	
GNZ	eP*	18	32	47		3.4	95	3.54	78		4.4	
	eS*		33	29		-0.8	100					

AMPLITUDES:	TNZ			2.5	5.0	GSZ		25	39	MNG		9.0	24
	WEL	1.3				KRP		1.5	3.0	CAZ		1.5	5.2
	TRZ			0.4	0.7	TUA		0.4		GNZ		0.6	

78/ 510

SEP 17 $21^h30^m56^s.3$ $36°.99S$ $177°.53E$ 195 km M = 4.1

± 1.7 0.07 0.11 11 S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	21	31	26.6		0.3	100	1.09	203		3.8	3.8
	eS			48		-1.5	100					
GNZ	iP	21	31	32.9	DE	1.2	100	1.70	167		4.1	4.4
	e			54								
	eS			59		-0.1	100					
GBZ	iP	21	31	30.3	U	-2.6	99	1.82	294			
KRP	iP	21	31	34.4	U	1.3	100	1.84	239		3.4*	
	eS		32	04		2.4	99					
TUA	e	21	31	59				1.84	189			4.1
	e(S)		32	05		3.4						
GSZ	P	21	31	45.3		2.1	99	2.75	213			
	eS		32	18		-1.5	100					
MNG	iP	21	31	56.9	U	-1.2	100	3.97	203		4.1	4.2
	eS		32	46		0.1	100					
WEL	eS	21	33	04		-0.9	100	4.81	206	4.4		
COB	eS	21	33	22		0.0	100	5.54	221			3.0*

AMPLITUDES:	WTZ			1.5	1.4	GNZ		2.2	6.0	GBZ		1.8	
	KRP			1.8		TUA			0.7	GSZ		0.7	0.9
	MNG			1.3	2.5	WEL	0.4			COB			0.4

78/ 511

SEP 18 $06^h02^m22^s.3$ $36°.26S$ $177°.35E$ 12 km M = 4.3

± 1.3 0.08 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
GBZ	Pn	06	02	47.8		-0.6	100	1.51	271			
	ePg			54		1.1	100					
	e			58.7								
	eSn		03	10		2.0	99					
ECZ	ePn	06	02	51		-0.3	100	1.72	147		4.2	4.2
	eS*		03	16		0.4	100					
WTZ	Pn	06	02	49.0		-2.6	99	1.75	189			4.3
	(P*)			50.1		-3.2						
	Pg			56.5		-1.1	100					
KRP	ePn	06	02	57		-0.9	100	2.20	221		4.3	4.5
	e		03	11								
	eSn			25		0.3	100					
GNZ	iPn	06	02	59.8	U	-1.3	100	2.44	168		4.7	4.4
	eP*		03	06		0.9	100					
	Sn			32.2		1.9	100					
ONE	ePg	06	03	14		1.7	100	2.47	280	4.3		
	eSg			43		-2.6	99					
TUA	eP*	06	03	06		-1.0	100	2.55	184		4.4	
MNG	ePn	06	03	32		1.5	100	4.60	198		4.3	4.0
	e		04	30								

AMPLITUDES: GBZ 6.5 8.5 ECZ 0.7 0.7 WTZ 2.1
KRP 1.0 1.0 GNZ 3.7 2.5 ONE 0.7
TUA 0.5 MNG 0.7 0.4

78/ 512

SEP 18 $11^h30^m39^s.2$ $34°.68S$ $179°.27E$ 317 km M = 4.5

± 1.3 0.12 0.21 13 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	eS	11	32	24.5		2.0	99	3.07	191			4.2
WTZ	eP	11	31	43		-1.4	100	3.78	209		4.7	4.3
	e			44.7								
	eS		32	34		-1.5	99					
GNZ	eP	11	31	48		0.3	100	4.09	194		4.8	4.5
	eS		32	40		-1.3	100					
KRP	eP	11	31	52.5		1.0	100	4.43	222		3.2*	
TRZ	eP	11	32	02		1.2	100	5.25	201		4.4	4.5
	e(S)		33	10		5.3						
MNG	iP	11	32	16.8	U	-0.6	100	6.65	206		5.0	4.1
	eS		33	34		-0.4	100					
WEL	eP	11	32	27		-0.6	100	7.50	207	4.6		
	eS		33	53		0.3	100					
COB	eP	11	32	36		-0.4	100	8.23	217			3.1*
	eS		34	10		1.3	100					

AMPLITUDES: ECZ 0.3 WTZ 1.6 0.8 GNZ 2.0 1.6
KRP 0.5 TRZ 0.2 0.6 MNG 4.0 0.6
WEL 0.2 COB 0.3

78/ 513

SEP 18 $16^h39^m08^s.1$ $38°.75S$ $178°.10E$ 33 km M = 3.5

± 0.9 0.06 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
GNZ	iP*!	16	39	14.5		0.6	100	0.13	331			
TUA	iPn	16	39	21.3	U	-0.5	100	0.75	266		3.6	3.8
	eSn			31		-0.9	100					
ECZ	Pn	16	39	27.8		0.9	100	1.12	19			3.4
	e			52								
WTZ	iPn	16	39	25.8	U	-1.7	100	1.16	311		3.5	3.8
	eSn			41		-1.0	100					
TRZ	Pn	16	39	29.8		0.8	100	1.28	231		3.7	3.4
	e			39								
	e		40	13								
NGZ	eP*	16	39	45		1.7	100	1.99	257			
KRP	ePn	16	39	40		-1.4	100	2.18	292		3.4	3.4
	eSn		40	09		2.6	99					
MNG	ePn	16	39	48		-1.1	100	2.74	227		3.2	3.1
	e		40	10								
	e			40								

AMPLITUDES:									
TUA	2.1	4.1	ECZ	0.5	WTZ	2.6	4.5		
TRZ	1.2	0.8	NGZ	1.7	KRP	0.3	0.3		
MNG	0.4	0.4							

78/ 514

SEP 22 $07^h26^m29^s.4$ 37°.70S 175°.95E 33 km M = 4.3

± 1.3 0.08 0.07 R S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	iP*!	07	26	39.1		0.7	100	0.40	235			
WTZ	eS*	07	26	57		-0.9	100	0.87	110			3.2
WNZ	eP*	07	26	47.5		0.6	100	0.94	173		3.9	4.1
	e(Sn)			55		-2.9						
	eS*		27	00		0.1	100					
GBZ	S*-Pn			25		1.6	100	1.53	346			
GSZ	iPn	07	26	54.0	D	-0.8	100	1.60	190			
TNZ	iPn	07	26	58.1	U	-1.2	100	1.93	219			
	Sn		27	21.7		-0.1	100					
TRZ	eP*	07	27	06.5		2.1	100	1.98	160		3.9	
MNG	Pn	07	27	15.4		2.3	100	2.94	187		5.1	4.9
	P*			18.8		-1.9	100					
	eSn			49		3.0	99					
WEL	eP*	07	27	30		-3.7	98	3.70	194	4.8		
	e(Sn)		28	11		6.7						
COB	ePn	07	27	30		-0.3	100	4.20	215		4.6	4.0
	e(Sn)		28	26		9.6						

AMPLITUDES:									
WTZ		0.8	WNZ	0.4	0.8	GBZ	1.4	1.3	
GSZ	38		TRZ	0.3		MNG	6.2	3.4	
WEL	0.3		COB	0.6	0.5				

78/ 515

SEP 22 $10^h42^m07^s.7$ 37°.80S 176°.39E 199 km M = 5.6

± 0.8 0.04 0.06 7 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	10	42	33.7	U	-1.1	100	0.51	112			
KRP	iP	10	42	36.2	SW	0.6	100	0.68	259			
WNZ	P	10	42	37.2		0.6	100	0.86	195		5.4	
	e			37.9								
TUA	iP	10	42	38.8	U	-0.0	100	1.17	150		5.6	5.7
	eS		43	01		-1.8	100					

GNZ	iP	10	42	41.9	USE	-0.0	100	1.54	124			
GSZ	iP	10	42	44.9	D	2.4	99	1.60	203			
TRZ	iP	10	42	45.8	D	1.6	100	1.78	169		5.7	
	eS		43	10		-2.5	99					
TNZ	P	10	42	51.0		3.5	98	2.10	228		4.7*	4.6*
	e(S)		43	25		6.7						
ONE	P	10	42	52		-1.0	100	2.59	321	4.3*		
MNG	iP	10	42	57.3	D	0.7	100	2.91	194		5.4	
	e?		43	25.5								
CAZ	iP	10	43	00.1	D	1.0	100	3.10	182			
	eS			38		-0.8	100					
WEL	iP	10	43	06.3	DNE	-0.1	100	3.71	199	6.0		
	e			51								
	eS			54		2.3	99					
COB	P	10	43	13.8		-0.6	100	4.34	220		4.8*	4.7*
	e			49								
	eS		44	08		2.1	100					
CRZ	P	10	43	15.1		-1.4	100	4.51	317		4.0*	
KAI	eP	10	43	39		2.4	99	6.07	217	4.9*		
	eS		44	45		-0.9	100					
CMZ	P	10	43	39.9		-1.6	100	6.45	205		4.9*	4.9*
	e		44	46								
	eS			53		-1.6	100					
CIZ	P	10	44	05.7		2.1	100	8.14	141			
	eS		45	34		-0.3	100					
MSZ	P	10	44	17.6		-2.0	100	9.38	220		4.6*	4.7*
	S		46	00.7		-2.2	99					

AMPLITUDES:									
WNZ	3.8	TUA	36	46	GSZ		60		
TRZ	25	TNZ	7.0	7.5	ONE	4.6			
MNG	46	CAZ	27	42	WEL	25			
COB	9.5	26	CRZ	1.2		KAI	5.5		
CMZ	9.0	21	CIZ	2.0	7.0	MSZ		6.7	16

FELT: From Tologa Bay (37) to Blenheim (77). Maximum intensity MM IV

78/ 516

SEP 22 $19^h36^m03^s.9$ $33°.39S$ $179°.79E$ 395 km M = 4.6
± 2.8 0.28 0.50 35 S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	eP	19	37	27		-0.6	100	5.12	206		4.8	4.4
	e			29								
	eS		38	34		0.8	100					
GNZ	P	19	37	31.2		0.3	100	5.44	195		4.5	4.5
	eS		38	37		-2.1	99					
TRZ	eS	19	39	05		2.7	99	6.61	200			4.6
MNG	eP	19	38	00.2		0.6	100	8.00	204		4.6	4.6
	eS		39	29		-1.9	100					
WEL	eS	19	39	50		1.5	100	8.84	205	4.6		
COB	eS	19	40	02		-0.9	100	9.52	214			3.1*

AMPLITUDES:									
WTZ	1.2	0.6	GNZ	0.7	1.0	TRZ		0.5	
MNG	1.1	1.5	WEL	0.2		COB		0.3	

78/ 517

SEP 22 $19^h42^m09^s.3$ $46°.61S$ $166°.19E$ 12 km M = 3.5
± 1.6 0.05 0.12 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNW	ePn	19	42	31		-1.5	100	1.30	51		3.9	3.6
	eSn			49.5		-0.2	100					
OBZ	ePn	19	42	33		-0.3	100	1.36	103		3.1*	3.5*
	ePg			38.5		1.7	99					
	eSn			50		-1.3	100					
	eS*			52		0.4	100					
MSZ	ePn	19	42	47		1.0	100	2.29	33		3.6	3.3
	eS*		43	20		0.4	100					
ROX	ePn	19	42	47		-1.4	100	2.46	64		3.5	3.2
	eP*			55		2.6	98					
	eSn		43	17		-0.7	100					

AMPLITUDES: MNW 4.5 4.5 OBZ 0.5 3.1 MSZ 1.0 0.9
ROX 0.3 0.4

78/ 518

SEP 24 $00^h05^m37^s.3$ 36°.19S 178°.27E 241 km M = 4.7
± 1.5 0.10 0.13 10 S.E. of RES. 1.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	00	06	15.8		0.7	100	1.52	172		4.0	4.3
	eS			44		-0.5	100					
WTZ	iP	00	06	19.8	U	-0.1	100	2.06	209		5.0	4.5
	e			34.0								
	eS			49.1		-3.8	96					
GNZ	iP!	00	06	24.2		0.4	100	2.46	185			
	e			53								
	eS		07	00		0.1	100					
KRP	iP	00	06	28.3	UNE	1.0	100	2.79	231		4.0*	
	eS		07	08		1.8	100					
TRZ	eP	00	06	36		0.2	100	3.55	198		4.7	4.7
	eS		07	25		3.6	97					
GSZ	P	00	06	38.8		0.6	100	3.74	214			
	e		07	17.5								
TNZ	eP	00	06	45		0.2	100	4.30	225		3.6*	
MNG	P	00	06	51.2		-1.4	100	4.93	206		5.4	4.8
	eS		07	50		-1.3	100					
CAZ	iP	00	06	53.2	D	0.1	100	4.98	198			
	eS		07	54		1.9	100					
WEL	eP	00	07	02		-1.1	100	5.78	207	4.4		
	eS		08	08		-2.1	99					

AMPLITUDES: ECZ 0.6 1.1 WTZ 8.6 3.6 KRP 4.6
TRZ 1.0 2.1 GSZ 5.5 1.4 TNZ 0.3
MNG 18 5.7 CAZ 2.5 2.0 WEL 0.3

78/ 519

SEP 24 $12^h33^m59^s.0$ 41°.17S 174°.67E 33 km M = 3.9
± 0.4 0.03 0.04 3 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WEL	P*	12	34	04.8		-0.1	100	0.13	147			
	eS*			09.5		0.2	100					
TCW	P*	12	34	05.9		-0.7	100	0.30	262			
KIW	P*	12	34	06.2		-1.2	100	0.36	31			
MOW	Pn	12	34	09.4		-0.1	100	0.50	120			
MNG	iPn	12	34	13.2		-0.6	100	0.83	48		3.9	4.1
	eSn			25		0.2	100					
CAZ	eP*	12	34	23		2.0	99	1.21	78			

KKY	eP*	12	34	26.5		1.4	100	1.45	210			
COB	iPn	12	34	22.4		-0.1	100	1.47	273		4.4	4.2
	eSn			42		1.8	100					
TNZ	eP*	12	34	36		1.7	100	2.00	354		3.7	3.7
	eS*			59		-1.6	100					
CNZ	Pn	12	34	32.7		1.7	100	2.08	19			
	eS*		35	01		-2.2	99					
TRZ	e(P*)	12	34	43		3.4		2.30	46		3.6	3.4
	e(S*)		35	18		8.1						
KAI	eSn	12	35	12		0.0	100	2.79	240	3.9		
CMZ	eSn	12	35	11		-2.3	99	2.84	211			3.4*
KRP	eP*	12	34	55		-1.7	100	3.31	12		4.1	4.4
	e(Sn)		35	29		4.5						
	eS*			42		2.1	99					
GNZ	eSn	12	35	31		-0.7	100	3.61	47			3.5

AMPLITUDES:										
	WEL	12		MNG		21	45	CAZ		2.0
	COB	6.8	14	TNZ		0.4	0.6	CNZ	3.5	6.0
	TRZ	0.3	0.3	KAI	0.4			CMZ		0.5
	KRP	0.5	0.8	GNZ		0.3				

Wellington net location: 12 33 58.11 41.110S 174.645E 35.5km magnitude 4.0 Felt MM IV at several places in the Wellington area (68)

78/ 520

SEP 25 $11^h50^m47^s.7$ 36°.86S 177°.38E 202 km M = 4.0

± 1.3 0.07 0.09 10 S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	11	51	18.2		-0.8	100	1.17	195		3.7	3.7
	eS			41		-2.2	99					
ECZ	eP	11	51	22		2.4	99	1.25	132		3.7	3.7
	eS			45		0.7	100					
GBZ	iP	11	51	21.9	U	-1.4	100	1.66	292			
KRP	iP	11	51	26.0	DNE	1.3	100	1.81	234		3.4*	
	eS			55		1.6	100					
GNZ	iP	11	51	24.6	U	-0.6	100	1.85	164		3.8	4.3
	e			45								
	eS			52		-2.1	99					
TUA	S-P			30		0.3	100	1.95	185		4.0	4.0
TRZ	P	11	51	34.8		0.1	100	2.73	189		4.1	4.2
	eS		52	13		2.0	99					
GSZ	P	11	51	36.2		0.7	100	2.80	210			
MNG	P	11	51	49.0		-1.7	100	4.04	201		4.6	3.8
	S		52	38.8		-0.6	100					

AMPLITUDES:										
	WTZ	1.0	1.1	ECZ		0.4	0.4	GBZ	1.7	
	KRP	1.6		GNZ		0.8	4.6	TUA	0.5	0.5
	TRZ	0.4	1.0	GSZ		1.2		MNG	4.2	0.8

78/ 521

SEP 25 $21^h25^m01^s.0$ 39°.69S 174°.23E 149 km M = 4.2

± 1.0 0.04 0.06 8 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	P	21	25	22.7		0.2	100	0.51	13		3.4*	3.6*
	S			39.1		0.2	100					
GSZ	P	21	25	28.2		1.2	100	1.13	69			
	eS			48		1.1	100					
MNG	iP	21	25	31.2	D	2.2	99	1.33	134		4.1	4.2

	e			46.5									
	eS			49.3		-1.2	100						
WEL	eS	21	25	55		-1.4	100	1.65	166	4.0			
COB	iP	21	25	34.4	D	0.3	100	1.81	219		4.0*	3.8*	
	e			52									
	eS			59		-0.5	100						
TRZ	eS	21	26	05		1.4	100	2.01	87			4.2	
KRP	P	21	25	37.0		0.1	100	2.04	30		2.8*	2.9*	
	eS		26	02.5		-1.8	99						
GNZ	P	21	25	50.0		-0.7	100	3.12	72		4.2	4.4	
	eS		26	27		-1.7	99						

AMPLITUDES: TNZ 0.8 1.6 GSZ 5.0 2.9 MNG 8.2 14
WEL 1.0 COB 2.8 7.0 TRZ 1.8
KRP 0.4 0.7 GNZ 1.3 3.0

78/ 522

SEP 26 $10^h36^m56^s.1$ 31°.45S 179°.73E 215 km M = 5.2
± 2.1 0.11 0.20 36 S.E. of RES. 2.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GBZ	e(P)	10	38	31.5		8.1		5.93	215			
ONE	e(P)	10	38	37		9.9		6.22	225	3.6*		
ECZ	e(P)	10	38	34		5.7		6.31	189		4.9	5.2
	eS		39	40		-0.1	100					
CRZ	e(P)	10	38	43		10.6		6.63	241		3.8*	
WTZ	P	10	38	35.5		-0.4	100	6.90	198		5.2	5.2
	e			40.9								
	e		39	04								
	e			40.7								
	eS			54		0.1	100					
GNZ	eP	10	38	40		-1.3	100	7.32	191		4.9	5.3
	e			45.0								
	eS		40	02		-1.4	100					
KRP	eP	10	38	45		3.6	99	7.33	207		3.4*	
	e			49								
TRZ	eP	10	38	57		1.3	100	8.43	196		4.9	5.3
	eS		40	31		1.8	100					
CNZ	e(P)	10	39	00		3.9		8.46	203			
	eS		40	29		-0.9	100					
TNZ	e(P)	10	39	07.7		6.2		8.87	208		3.9*	
MNG	eP	10	39	09		-4.1	97	9.78	199		5.4	5.2
	e			12.3								
	e		40	57								
	eS		41	02		1.7	100					
WEL	eP	10	39	22		-1.7	100	10.60	201	5.3		
	eS		41	19		-0.5	100					
CIZ	eP	10	39	54		2.2	100	12.83	168			
	eS		42	10		-0.5	100					

AMPLITUDES: GBZ 0.6 ONE 0.4 ECZ 0.6 1.1
CRZ 0.5 WTZ 2.1 2.5 GNZ 1.1 4.5
KRP 0.5 TRZ 0.3 1.8 CNZ 0.6 0.9
TNZ 0.3 MNG 4.8 4.5 WEL 0.7
CIZ 0.3 0.7

78/ 523

SEP 27 $14^h47^m05^s.2$ 38°.44S 175°.92E 155 km M = 3.9
± 1.0 0.04 0.05 7 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	P	14	47	27.7	D	-0.1	100	0.59	329		2.9*	2.5*
	eS			44		-1.1	100					
NGZ	P	14	47	30.9		1.9	99	0.78	198			
WTZ	iP	14	47	29.2	D	-1.0	100	0.95	62		3.7	3.3
	eS			51		1.4	100					
TUA	eP	14	47	30		-0.9	100	1.03	112		3.7	4.0
	e			44								
	eS			50		-0.6	100					
	e			52								
TRZ	P	14	47	35.3		1.8	99	1.32	148		3.8	3.9
	eS			57		1.6	99					
TNZ	eP	14	47	36.5		1.8	99	1.42	238		3.2*	
GNZ	P	14	47	37.7		0.4	100	1.66	98		4.1	3.7
	eS		48	00		-1.7	99					
ECZ	iP	14	47	42.9	U	-0.5	100	2.20	71		4.4	
MNG	iP	14	47	43.7	U	0.1	100	2.20	189		4.8	3.7
	eS		48	11.5		-1.3	100					
WEL	eP	14	47	53		-0.2	100	2.99	197	3.8		
	eS		48	30		-0.0	100					
COB	eS	14	48	43		-1.5	100	3.62	222			3.1*

AMPLITUDES:									
KRP	1.1	0.5	NGZ	3.6		WTZ	1.6	0.7
TUA	0.7	1.4	TRZ	0.6	1.8	TNZ	0.3	
GNZ	2.4	1.5	ECZ	1.4		MNG	22	2.2
WEL	0.2		COB	0.8				

78/ 524

SEP 28 $17^h19^m59^s.6$ 44°.96S 167°.56E 101 km M = 3.9

± 1.1 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
MSZ	iP	17	20	17.1	U	2.0	99	0.39	41		3.7	3.9
	eS			26		-0.9	100					
MNW	iP	17	20	18.3		-0.1	100	0.82	177			
	eS			31.5		-1.3	100					
ROX	iP	17	20	25.3	U	0.8	100	1.35	113		3.7	4.0
	eS			44		0.7	100					
MJZ	eP	17	20	36		-0.7	100	2.30	66		3.0*	3.6*
	eS		21	05		0.6	100					
OMZ	e(P)	17	20	42		4.1		2.38	94		3.5	3.7
	eS		21	06		-0.5	100					
KAI	eS	17	21	40		1.1	100	3.71	50	4.2		
CMZ	e	17	21	33.5				3.91	71			3.2*
	eS			43.5		-0.2	100					
COB	P	17	21	19.8		0.3	100	5.43	46		4.4	4.1
	eS		22	19		-2.2	98					

AMPLITUDES:									
MSZ	16	49	ROX	1.2	5.7	MJZ	0.9	5.6
OMZ	0.3	0.9	KAI	0.3		CMZ		0.7
COB	0.4	0.4						

78/ 525

SEP 28 $22^h54^m15^s.5$ 38°.10S 176°.55E 4 km M = 3.6

± 0.5 0.02 0.02 4 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPg	22	54	21.3	D	-1.6	99	0.37	71			3.4
	P*			22.7		-1.0	100					
KRP	P*	22	54	30.8		-0.6	100	0.82	282		3.3	3.2

	Pg			31.7		-0.4	100					
	eS*			43		0.1	100					
TUA	iP*	22	54	31.2	U	-0.7	100	0.85	146		3.7	3.7
	Pg			34.0		1.4	100					
	e			37.7								
	S*			42.8		-0.8	100					
	Sg			44.4		0.4	100					
GNZ	iP*?	22	54	38.7		-0.5	100	1.28	115		3.9	3.5
	Pg			39.9		-1.4	100					
	eS*			58		1.4	100					
NGZ	P*	22	54	38.7		-1.0	100	1.30	214			
	Pg			40.5		-1.3	100					
	eSg		55	00.5		1.1	100					
ECZ	ePg	22	54	50.5		2.0	99	1.63	76		3.7	
TNZ	eP*	22	54	52		0.2	100	2.02	237		3.9	4.0
	e(Sg)		55	29		5.6						
GBZ	eP*	22	54	54.5		1.7	99	2.07	335			
MNG	eP*	22	55	03.5		0.9	100	2.65	198		3.6	

AMPLITUDES:										
WTZ			12	KRP		2.2	1.6	TUA	1.7	2.0
GNZ	3.3	1.8	NGZ			3.7	1.5	ECZ	0.3	
TNZ	0.2	0.3	GBZ			0.5		MNG	0.7	

78/ 526

SEP 29 $08^h25^m27^s.9$ 37°.26S 177°.64E 33 km M = 3.6

± 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
ECZ	iPn	08	25	42.0	D	-0.9	100	0.84	121		4.1	3.9
	S*			57		1.4	99					
WTZ	iPn	08	25	42.6	U	-1.0	100	0.89	215		3.1	3.5
	Sn			55.5		0.2	100					
GNZ	Pn	08	25	48.9	D	-1.9	99	1.41	168		3.8	3.8
	i			59								
	Sn		26	08.5		0.6	100					
TUA	e(P*)	08	25	57		0.5		1.59	194		3.6	3.5
	e(S*)		26	21		3.3						
KRP	Pn	08	25	55.9	D	-0.1	100	1.80	248		3.6	
	Sn		26	18		0.9	100					
GBZ	Pn	08	25	59.7		0.6	100	2.02	300			
	S*		26	30.5		0.0	100					
TRZ	ePn	08	26	02.5		-1.4		2.38	195		3.1	3.5
	(Sn)			35		3.9						
NGZ	Pn	08	26	06		0.4		2.50	219			
	e(Sn)			39		5.1						
	S*			46		1.4						
TNZ	Pn	08	26	19		3.7		3.21	232		4.4	
MNG	e(Pn)	08	26	22.5		-0.2		3.75	206		3.4	3.7
	S*		27	19		-3.1						
COB	eSn	08	27	45		1.3		5.40	223			3.5
CIZ	ePn	08	27	17.5		-3.3		8.01	148			
	Sn		28	41		-5.4						

AMPLITUDES:										
ECZ	3.5	2.7	WTZ		1.7	3.7	GNZ	2.6	3.9	
TUA	0.5	0.5	KRP		0.5		GBZ	0.8	0.6	
TRZ	0.1	0.3	TNZ		0.2		MNG	0.3	0.8	
COB		0.2	CIZ		0.1	0.2				

78/ 527

OCT 02 $08^h03^m22^s.6$ 41°.26S 172°.62E 12 km M = 3.3

± 0.9 0.05 0.07 R S.E. of RES. 2.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	iPg	08	03	28.1	D	1.0	100	0.19	27			
	Sg			31.5		1.5	100					
KAI	e(S*)	08	04	10.5		-0.4		1.56	215	3.5		
	Sg			13		-2.1	100					
WEL	Sg	08	04	19.5		2.2	100	1.62	92	2.8		
MNG	P*	08	04	03.5		1.1	100	2.26	74		3.5	3.5
	Pg			06		-2.3	100					
	Sg			38		-0.8	100					
TNZ	Sg	08	04	46.5		0.6	100	2.47	34			3.1
NGZ	P*	08	04	14.5		-2.0	100	3.10	49			
	Pg			23.5		-1.6	100					
	S*			59.5		2.5						
	Sg		05	07.5		0.7						
MJZ	e(Pn)	08	04	14		2.8		3.16	210			
	Sn			51		3.2	99					
	Sg		05	05		-4.0						

AMPLITUDES: COB 10 28 KAI 0.5 WEL 0.1
MNG 1.1 1.3 TNZ 0.1

FELT: Arapito (74)

78/ 528

OCT 02 $11^h49^m02^s.2$ 39°.23S 175°.09E 156 km M = 4.8

± 0.6 0.02 0.04 4 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
NGZ	iP	11	49	24.5		0.6	100	0.41	84			
	S			40.5		-0.2	100					
TNZ	P	11	49	25		0.3	100	0.55	274		3.7*	3.9*
	S			43		1.1	100					
WNZ	P	11	49	28.0		0.5	100	0.99	53		4.9	4.6
KRP	iP	11	49	31.2	DSW	0.2	100	1.35	15		4.0*	3.6*
	S			52.5		-0.5	100					
TRZ	iP	11	49	32.6	D	1.3	100	1.38	104		4.7	4.9
	S			54.5		1.0	100					
MNG	iP	11	49	32.7	U	1.0	100	1.42	168		4.8	4.7
	S			52.5		-1.7	99					
TUA	iP	11	49	34.8	D	0.6	100	1.66	76		5.1	5.0
	S			59.5		0.7	100					
CAZ	iP	11	49	37.9	U	1.2	100	1.89	153			
	S		50	03		-0.2						
WTZ	iP	11	49	36.8	D	-0.5	100	1.94	51		4.7	4.6
	S		50	03		-1.3	100					
WEL	iP	11	49	39.0	USE	0.2	100	2.07	187	4.8		
	S		50	07		0.0	100					
GNZ	iP	11	49	42.6	D	0.2	100	2.36	77		5.1	4.8
	S		50	11		-2.2	97					
COB	iP	11	49	43.7	U	-1.5	99	2.59	223		4.3*	4.5*
	S		50	17		-1.2	100					
GBZ	P	11	49	51		0.2	100	3.02	6			
ECZ	iP	11	49	51.9		-0.1		3.12	62		4.9	4.7
	e(S)		50	34.5		4.4						
ONE	S	11	50	40		1.1		3.50	350	3.4*		
KAI	e	11	50	53				4.32	219	4.4*		

	(S)			55		-2.9					
CMZ	P	11	50	10.5	U	-2.4		4.72	202		
	S		51	02		-5.6					
MJZ	eP	11	50	26		-2.3		5.89	215	3.6*	4.3*
	S		51	29		-6.2					
OMZ								6.61	207	3.8*	3.9*
ROX								7.57	213	3.6*	4.0*
MSZ								7.63	222	3.5*	4.2*
CIZ								7.84	130		
MNW								8.57	218	3.7*	

AMPLITUDES:											
TNZ	1.4	3.1	WNZ	1.5	0.6	KRP	8.5	4.5			
TRZ	4.7	15	MNG	39	38	TUA	9.5	8.0			
WTZ	6.7	6.9	WEL	4.6		GNZ	16	13			
COB	4.4	27	GBZ	1.1	0.7	ECZ	2.5	1.4			
ONE	0.4		KAI	2.3		MJZ	1.3	13			
OMZ	0.6	1.5	ROX	0.3	2.2	MSZ	0.6	5.5			
CIZ	0.4	1.0	MNW	0.3							

78/ 529

OCT 02 $12^h54^m07^s.9$ 35°.84S 179°.98E 33 km M = 4.1

± 0.7 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	Pn	12	54	43.5		2.3		2.18	211		4.1	4.0
	e(Sn)		55	06		-0.2						
	eS*			17		1.9						
GNZ	Pn	12	54	55.5	U	0.3	100	3.20	209		4.1	3.9
	(P*)		55	06		2.2						
	Sn			31.5		0.6	100					
WTZ	Pn	12	54	55.2	U	-0.1	100	3.21	227		4.2	4.1
	Sn		55	31		-0.1	100					
	e			35								
TUA	Pn	12	55	02.5		0.2	100	3.73	216		3.9	4.1
	Sn			42.5		-0.9	99					
KRP	iPn	12	55	08.1	D	0.3	100	4.13	238		4.9	4.4
	e			49								
	Sn			53		-0.0	100					
TRZ	Pn	12	55	11.5		-1.0	98	4.47	213		3.7	4.0
	e(Sn)		56	04		2.6						
NGZ	Pn	12	55	17		-0.2	100	4.81	225			
	P*			25		-6.2						
	eSn		56	09		-0.6						
TNZ	ePn	12	55	30.5		3.0		5.57	231		4.6	4.7
MNG	Pn	12	55	30		-2.6		5.95	215		3.9	4.0
	P*			44.5		-5.9						
	eSn		56	35		-1.7						
	S*		57	05		-2.6						
WEL	eSn	12	56	51		-6.3		6.80	215			
COB	ePn	12	55	58		1.0		7.73	225			3.5
	eSn		57	18		-1.7						

AMPLITUDES:											
ECZ	0.5	0.5	GNZ	0.9	1.1	WTZ	1.5	1.0			
TUA	0.2	0.3	KRP	1.6	0.3	TRZ	0.1	0.3			
TNZ	0.1	0.1	MNG	0.4	0.6	COB		0.1			

78/ 530

OCT 06 $09^h54^m41^s.2$ 39°.49S 176°.86E 12 km M = 2.8

± 1.0 0.05 0.06 R S.E. of RES. 2.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	iPg	09	54	44.0	U	0.2	100	0.07	205			
	Sg			47		1.5	100					
	e			50								
TUA	ePg	09	54	55		-0.9		0.72	18			2.9
	(Sg)		55	05		-0.6	100					
	e			07.5								
NGZ	iPg	09	55	00.3		-1.5	100	1.02	287			
	Sg			17		1.4	100					
WNZ	e(Pg)	09	55	01		-1.3	100	1.04	325		3.2	3.0
	e(Sg)			20		3.5	99					
GNZ	e(Pg)	09	55	05		-1.3	100	1.24	47		2.7	2.7
	e			09								
	Sg			26		2.9	99					
	e			35								
WTZ	P*	09	55	06		-2.1	100	1.50	4		2.6	2.7
	(S*)			25.5		-2.5						
MNG	e(Pn)	09	55	07		-0.8		1.55	223		2.6	2.5
	e(Pg)			14		1.5						
	e(Sg)			39		5.6						
KRP	e(P*)	09	55	14.5		0.1		1.87	326			
	Pg			16.5		-2.6	100					

AMPLITUDES: TRZ 2.2 17 TUA 0.6 WNZ 0.1 0.1
GNZ 0.3 0.4 WTZ 0.2 0.2 MNG 0.3 0.3

FELT: Patoka (52) MM IV

78/ 531

OCT 07 $07^h\,55^m\,12^s.2$ $35°.95S$ $177°.96E$ 255 km $M = 4.4$
$\pm$ 1.4 0.09 0.14 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?	07	55	42		-11.6		1.80	165		3.7	4.0
	e			45								
	e			48.5								
	e(S)		56	27		1.3						
	e			36								
	e			47								
GBZ	iP	07	55	56.0	D	0.4	100	2.02	262			
WTZ	P	07	55	57.4		0.5	100	2.18	201		4.2	4.2
	S		56	30.5		-1.2	100					
GNZ	P	07	56	03.5		1.4	100	2.69	179		4.5	4.6
	S			42		1.1	100					
KRP	P	07	56	02.6	D	-0.3	100	2.77	224		3.3*	
	S			42		-0.3	100					
TUA	e(P)	07	56	04.5		-0.1	100	2.92	192		4.1	4.4
	S			44		-1.3	100					
ONE	e(P)	07	56	11.5		6.9		2.92	272			
TRZ	P	07	56	12		-1.3	100	3.71	194		4.3	4.5
	S		57	00		-0.8	100					
NGZ	P	07	56	12.5		-1.1	100	3.73	209			
	S		57	04		2.8	97					
TNZ	P	07	56	19		-1.4		4.31	220		3.1*	
CRZ	e(P)	07	56	19		-4.7		4.58	288			
MNG	P	07	56	24.8	D	-4.6		5.06	202		4.8	4.8
	S		57	23		-6.6						
WEL	S	07	57	39		-9.0		5.89	204	4.7		
COB	P	07	56	41		-7.2		6.57	217		3.3*	3.5*
	S		57	52.5		-10.8						

KAI						8.31	216	3.8*	
CMZ	S	07	58	38	-12.6	8.66	207		
MJZ	S	07	59	01	-17.3	9.88	213		
MSZ						11.60	218		3.1*

AMPLITUDES: ECZ 0.2 0.5 GBZ 1.7 WTZ 1.3 1.6
GNZ 2.4 4.2 KRP 1.0 TUA 0.3 0.7
TRZ 0.3 1.2 TNZ 0.1 MNG 4.7 5.0
WEL 0.5 COB 0.2 1.1 KAI 0.3
MSZ 0.3

78/ 532

OCT 07 $09^h44^m46^s.7$ 34°.22S 179°.88W 233 km M = 4.1
± 0.5 0.05 0.08 12 S.E. of RES. 0.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	09	45	57		0.2	100	4.54	213		4.6	3.9
	e(S)		46	51		-0.3	100					
GNZ	e(P)	09	45	59		-0.3	100	4.73	200		3.8	4.1
	S		46	56		0.3	100					
KRP	P	09	46	06		0.4	99	5.25	224		3.1*	
TRZ	P	09	46	14.5		-0.0	100	5.95	205		4.1	4.1
	e(S)		47	23		0.1	100					
NGZ	P	09	46	16.7		-0.2	100	6.14	215			
MNG	P	09	46	29		-3.7		7.38	209		4.6	3.8
	S		47	49		-6.7						

AMPLITUDES: WTZ 1.3 0.3 GNZ 0.2 0.6 KRP 0.4
TRZ 0.1 0.2 MNG 1.5 0.3

78/ 533

OCT 07 $22^h24^m23^s.6$ 40°.08S 178°.25E 33 km M = 3.9
± 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
TRZ	Pn	22	24	43.9	D	0.1	100	1.22	295		3.7	4.0
	e			54								
	Sn		25	01		2.1	99					
TUA	Pn	22	24	47		-1.0	100	1.53	326		3.9	4.1
	e(P*)			55		3.9						
	Sn		25	05		-1.3	100					
MNG	iPn	22	24	56.6	U	-0.4	100	2.19	255		3.8	4.3
	Sn		25	21.5		-0.5	100					
NGZ	iPn	22	24	58.8		1.3	100	2.22	293			
	e		25	14								
	Sn			25		2.0	99					
WTZ	Pn	22	24	58		-0.7	100	2.31	334		3.9	4.3
	e		25	12								
	e			21.5								
	(Sn)			23.5		-1.6						
ECZ	Pn	22	24	59		-0.8	100	2.39	6		3.7	3.9
	Sn		25	28		0.9	100					
WEL	Sn	22	25	38.5		-1.0	100	2.91	244	4.1		
KRP	Pn	22	25	08		-0.3	100	3.01	315		3.5	3.6
	e			27								
	e(Sn)			40		-2.1						
TNZ	eSn	22	25	47		2.5		3.12	285			3.3
	S*			57		-1.8						
COB	ePn	22	25	24		-2.1		4.32	255		4.0	4.0
	Sn		26	14		0.6						
CMZ	Sn	22	26	39		-1.9		5.46	228			

CIZ	Sn	22	26	42		1.0	100	5.47	137					
KAI								5.71	242	4.2				
MJZ	Sn	22	27	18		0.4		6.99	233					3.7*
HHP	Pn	22	26	05		-1.0		7.24	232					
	Sn		27	22		-1.7								
MSZ	Sn	22	28	02		-1.9		8.92	236					4.0

AMPLITUDES:													
TRZ	1.4	3.8	TUA	1.1	2.0	MNG	2.4	10					
WTZ	1.4	3.1	ECZ	0.2	0.4	WEL	0.6						
KRP	0.2	0.2	TNZ	0.1		COB	0.3	1.2					
CIZ	1.8		KAI	0.2		MJZ	0.3						
MSZ	0.3												

78/ 534

OCT 09 $00^h16^m15^s.7$ $40°.12S$ $174°.98E$ 12 km M = 3.7

± 0.3 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
MNG	iP*	00	16	27.7	U	0.1	100	0.63	143		3.8	3.7
	S*			36.5		0.3	100					
TNZ	iP*	00	16	35.0	U	0.4	100	1.04	333		3.3	3.7
	S*			50.5		1.9	99					
NGZ	iP*	00	16	34.3		-0.6	100	1.05	28			
	S*			49.5		0.5	100					
WEL	P*	00	16	36		-0.9	100	1.18	188	3.9		
	S*			51		-1.6	99					
	Sg			54		-1.5						
CAZ	Pg	00	16	40		-0.7	100	1.23	130			
	Sg		17	00		2.6	97					
TRZ	Pg	00	16	46		-0.6	100	1.53	69		3.5	3.6
	eS*		17	06		2.8						
	Sg			11		3.7						
COB	Pn	00	16	48		-0.0	100	1.96	240		4.0	3.6
	P*			49.2		-1.2	100					
	Sn		17	14		1.7	99					
KRP	Pn	00	16	51.3		-0.4	100	2.23	11		4.3	4.5
	P*			54.5		-0.5	100					
	S*		17	23		-1.4	100					
WTZ	Pn	00	16	58.5		1.2		2.65	37		3.7	3.7
	P*		17	02		-0.0						
	eSn			31		2.4						
GNZ	e(P*)	00	17	07.5		3.1		2.78	59		3.8	3.5
	Sn			35		3.1						
KAI								3.61	227	3.5		
MJZ	eP*	00	17	42		-2.3		5.12	220		3.6*	3.4*
	Sn		18	28		-0.2						

AMPLITUDES:													
MNG	27	32	TNZ	0.6	2.2	WEL	2.3						
TRZ	0.5	0.9	COB	1.4	1.9	KRP	1.9	2.1					
WTZ	0.4	0.3	GNZ	0.6	0.5	KAI	0.1						
MJZ	0.3	0.3											

FELT: Wanganui (57)

78/ 535

OCT 09 $15^h38^m27^s.9$ $43°.46S$ $171°.57E$ 12 km M = 3.3

± 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
CMZ	Pg	15	38	43.3	U	-0.7	100	0.79	100			
	Sg			55.5		0.8	100					

KAI	Pg	15	38	51.5		4.4		0.94	353	2.8	
	S*			57		-0.8	100				
	Sg		39	01		1.2	100				
MJZ	iP*	15	38	43.9	SW	-1.5	99	0.96	236		
	Pg			46		-1.4	99				
	Sg		39	00.5		0.1	100				
HHP	P*	15	38	49.3	U	-0.9	100	1.24	225		
	(Pg)			51		-2.0					
	S*		39	07.5		0.8	100				
OMZ	iP*	15	38	59.2	D	1.5	99	1.68	196	3.6	3.4
	Sg		39	24		-0.5	100				
COB	eP*	15	39	12		-0.1	100	2.53	20	3.0	2.8
	Pg			18		-0.9	100				
	Sn			39		1.1	100				
	S*			45		-0.2	100				
ROX	P*	15	39	14		0.9		2.58	218	3.5	3.4
	S*			52		5.0					
MSZ	ePn	15	39	11		-2.0		2.90	244	3.6	3.1
	P*			19.5		0.9	100				
	S*			58		1.4	99				
MNG	P*	15	39	39		0.5		4.07	47	3.3	

AMPLITUDES: KAI 0.3 OMZ 0.8 1.0 COB 0.1 0.2
ROX 0.3 0.5 MSZ 0.7 0.4 MNG 0.2

FELT: Lake Coleridge (100) MM IV

78/ 536

OCT 10 $10^h47^m20^s.2$ 37°.65S 176°.39E 12 km M = 4.2
± 0.5 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
WTZ	iPg	10	47	31.6		-0.5	100	0.58	125			
KRP	iPg	10	47	34.2	SNW	-0.9	100	0.73	248			
	Sg			45.2		0.2	100					
WNZ	P*	10	47	38.2		-0.3	100	1.01	193		4.2	
TUA	P*	10	47	43		-0.6	100	1.30	153		4.1	
	Pg			46		-0.6	100					
GBZ	Pg	10	47	52		-0.7	100	1.60	333			
	e			53.5								
	e			56.5								
	Sg		48	15.5		1.1	100					
	e			22								
NGZ	P*	10	47	48.5		-1.0	100	1.65	201			
	Pg			50		-3.6						
	e			58								
	e(S*)		48	13		1.7						
TRZ	P*	10	47	54		-0.3	100	1.93	170		3.9	3.7
	Pg			59.5		0.2						
	e		48	03								
	Sg			28.5		3.1	94					
	e			49.5								
TNZ	Pn	10	47	56		0.2		2.20	225		4.6	4.5
	P*		48	01		2.0	99					
	S*			26.5		-1.4	100					
	(Sg)			30		-4.5						
ONE	eP*	10	48	04		0.3		2.48	318	4.0		
	ePg			10.5		0.1	100					
	(S*)			42		5.7						
	(Sg)			45		1.1						

MNG	Pn	10	48	09.5		2.2		3.05	193	4.3	3.9
	P*			15		1.6					
	Pg			22		0.1					
	e(Sn)			44		1.2					
	e(Sg)		49	04		1.0					
COB	Pn	10	48	27		0.5		4.45	218	4.5	
	Pg			53.5		3.3					

AMPLITUDES: WNZ 0.7 TUA 1.5 GBZ 3.4 3.1
TRZ 0.4 0.3 TNZ 0.9 0.8 ONE 0.5
MNG 1.5 0.6 COB 0.4

FELT: Western Bay of Plenty, maximum intensity MM IV at Paengaroa and Te Puke (26)

78/ 537

OCT 10 $10^h56^m58^s.0$ 37°.45S 176°.41E 12 km M = 2.8
± ND ND ND R S.E. of RES. ND

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	Pg	10	57	12.3	U	-0.1	100	0.70	140		2.4	
KRP	Pg	10	57	15.1	U	0.0	100	0.84	235		2.8	3.2
	Sg			26.5		0.0	100					

AMPLITUDES: WTZ 0.3 KRP 0.7 1.4

FELT: Maketu (26) MM IV

78/ 538

OCT 10 $10^h59^m21^s.0$ 37°.69S 176°.42E 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
WTZ	iPg	10	59	32.9	U	0.8	100	0.54	123		3.6	3.6
	e			35.5								
	e(Sg)			40		0.5						
KRP	iPg	10	59	35.7	UW	-0.3	100	0.74	251		3.6	3.9
	Sg			47		0.9	100					
WNZ	P*	10	59	39.5		0.8	100	0.97	195		3.8	
	(Pg)			41		0.3						
TUA	ePg?	10	59	47.5		1.0		1.25	153		3.6	
NGZ	e(P*)	10	59	50		0.2		1.62	203			
	Pg			52		-1.8	99					
GBZ	Pg	10	59	53.5		-1.0	100	1.66	333			
	e			58								
	Sg	11	00	17		0.2	100					
	e			27.5								
TNZ	e(P*)	11	00	00.5		0.9		2.19	226		3.9	
	(Pg)			03		-2.3						
ONE	ePg	11	00	16		3.9		2.53	319	3.3		
	eS*			39		0.5						
	eSg			46.5		0.3	100					
MNG	eP*	11	00	13.5		-0.1		3.01	194		3.6	
	ePg			25		3.1						
COB	e(Pn)	11	00	32		5.0		4.44	219		3.9	

AMPLITUDES: WTZ 8.5 6.8 KRP 5.5 12 WNZ 0.3
TUA 0.5 GBZ 1.1 0.9 TNZ 0.2
ONE 0.1 MNG 0.3 COB 0.1

FELT: Maketu (26) MM IV

78/ 539

OCT 10 $14^h31^m58^s.6$ 37°.62S 176°.41E 12 km M = 3.4
± 1.4 0.09 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
WTZ	Pg	14	32	10.8		0.2	100	0.58	128			3.0		3.1
	(S*)			18		0.2	100							
	eSg			20		1.4								
KRP	iPg	14	32	13.6	UW	-0.4	100	0.76	246			3.5		4.0
	Sg			25		0.7	99							
NGZ	ePg	14	32	32		-0.6	100	1.68	202					
TNZ	e(P*)	14	32	38		0.1		2.23	225					

AMPLITUDES: WTZ 1.9 1.8 KRP 4.8 12

78/ 540

OCT 10 $16^h18^m19^s.3$ 37°.66S 176°.42E 12 km M = 2.7
± 2.0 0.15 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
WTZ	Pg	16	18	31.3		0.6	100	0.56	126			2.4		2.5
	e(Sg)			38		-0.3	100							
KRP	iPg	16	18	33.9	U	-0.6	100	0.75	249			2.8		3.2
	Sg			45		0.3	100							

AMPLITUDES: WTZ 0.5 0.5 KRP 1.0 2.2

78/ 541

OCT 11 $16^h09^m29^s.3$ 35°.32S 178°.81E 288 km M = 4.3
± 1.1 0.11 0.19 15 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	10	24		-1.0	100	3.03	208			5.1		4.0
	S		11	08		-0.3	100							
GNZ	P	16	10	28.6	U	0.1	100	3.37	191			4.6		4.2
	S		11	15		0.3	100							
KRP	P	16	10	32.5		0.5	100	3.70	224			3.2*		
TUA	P	16	10	33		0.7	100	3.73	200			4.2		4.1
	(S)		11	21		-0.5	100							
	e			24.5										
TRZ	P	16	10	41.5		0.3	100	4.51	200			4.2		4.1
	(S)		11	38		0.5	100							
	e			40										
NGZ	P	16	10	43.5		1.0	100	4.63	213					
MNG	P	16	10	56		-1.7	98	5.90	205			4.5		4.0
	eS		12	04.5		-2.6								
WEL	S	16	12	22		-3.6		6.75	207	4.1				

AMPLITUDES: WTZ 6.5 0.6 GNZ 1.9 1.2 KRP 0.6
TUA 0.3 0.2 TRZ 0.2 0.3 MNG 1.5 0.6
WEL 0.1

78/ 542

OCT 11 $19^h45^m27^s.2$ 38°.39S 175°.52E 229 km M = 4.1
± 1.0 0.06 0.06 7 S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
KRP	iP	19	45	58.0	D	0.3	100	0.47	1			3.3*		
NGZ	iP	19	45	59.5		0.5	100	0.79	175					
	S		46	23.5		-0.3	100							
WTZ	iP	19	46	00.9	D	-0.7	100	1.22	71			4.1		3.5

	S			28		-0.4	100					
TUA	P	19	46	02.9	D	0.4	100	1.34	109		4.3	4.2
	S			31.5		1.5	97					
TRZ	S	19	46	32		-0.7	100	1.54	139		3.6	4.0
GNZ	P	19	46	07.9	D	-0.2	100	1.98	98		4.8	4.1
	S			39.5		-0.1	100					
MNG	iP	19	46	09.0	U	-1.6		2.23	181		4.2	4.2
	S			41		-3.0						
ECZ	P	19	46	13		-0.2		2.48	75		4.2	
WEL	S	19	46	53		-5.0		2.95	191	3.9		

AMPLITUDES: KRP 1.6 WTZ 2.2 0.5 TUA 1.2 1.1
TRZ 0.2 1.3 GNZ 7.5 2.5 MNG 3.6 4.9
ECZ 0.5 WEL 0.2

78/ 543

OCT 12 $03^h50^m09^s.2$ 41°.65S 175°.03E 25 km M = 3.3
± 1.0 0.04 0.07 4 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WEL	P*	03	50	18.5		0.7	100	0.41	332	3.6		
	S*			23.5		-0.5	100					
MNG	Pn	03	50	28.8	U	0.5	100	1.09	19		2.9	3.1
	Sn			41.5		-1.0	99					
KKY	e	03	50	46.5				1.26	232			
	e(S*)			48		-0.7	100					
COB	Pn	03	50	39.3		1.0	99	1.82	287		3.4	3.4
	e			45								
	Sn		51	00		-0.1	100					
GSZ	Pn	03	50	48		1.6		2.41	10			
	Sn		51	17		2.7						

AMPLITUDES: WEL 10 MNG 1.1 2.2 COB 0.4 1.5

FELT: Wellington (68) MM IV

78/ 544

OCT 13 $04^h52^m34^s.6$ 37°.88S 178°.60E 33 km M = 3.7
± 1.0 0.05 0.10 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	04	52	41.3		0.3	100	0.19	347			
GNZ	P	04	52	50.3		0.0	100	0.89	211		3.8	
	i			51.1								
	i			56.3								
	S		53	04.0		2.1	99					
WIZ	P	04	52	56.0		1.8	99	1.17	287			
	i			58.6								
	i(S)		53	06.0		-2.8						
WTZ	P	04	52	54.8		-0.8	100	1.28	265		3.9	
TUA	e	04	53	08				1.47	230			3.7
	eS			17		1.1	100					
TRZ	i(S)	04	53	35.5		2.7		2.18	219			3.6
KRP	eP	04	53	11		-0.2	100	2.42	268		3.5	
	e			29								
	eS			38.2		-0.6	100					
CNZ	P	04	53	15.4		-0.1	100	2.74	240			
GSZ	eP	04	53	15.5		-0.1	100	2.74	238			
MNG	P	04	53	25.8		-2.2	99	3.65	221		3.6	3.7
	eS		54	07.2		-1.2	100					

AMPLITUDES: GNZ 7.0 WTZ 4.5 TUA 0.8

TRZ 0.5 KRP 0.3 MNG 0.6 0.8

78/ 545

OCT 13 $09^h45^m40^s.2$ 37°.81S 179°.14E 33 km M = 3.7

± 1.2 0.05 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
ECZ								0.48	285		3.8	3.7
	P	09	45	49.0		-1.3	100					
	eS		46	00.0		2.3	99					
GNZ								1.20	226		3.9	3.7
	P			00.8		0.5	100					
	i			13.0								
	S			17.0		1.7	99					
WIZ	eP	09	46	06.0		0.8	100	1.57	280			
	i			17.2								
WTZ								1.70	264		3.3	3.6
	P			07.8		0.7	100					
	e			10.7								
	i			16.0								
	eS			25		-2.2	99					
TUA								1.84	237		3.5	3.7
	e			19								
	eS			31.5		0.8	100					
TRZ								2.50	225		4.0	3.7
	P			18.0		-0.1	100					
	iS			49.0		2.4						
KRP								2.84	267		3.6	
	eP			22		-0.6	100					
	e			36								
	eS			53.2		-1.4	100					
NGZ	P	09	46	26.6		0.7	100	3.08	243			
	S		47	01.2		1.0	100					
CNZ	P	09	46	26.8		0.2	100	3.13	243			
MNG	P	09	46	36.8		-1.4	100	3.98	224		4.0	3.7
	e		47	13								
	S			20.7		-1.2	100					

AMPLITUDES: ECZ 5.2 5.6 GNZ 5.0 4.1 WTZ 0.7 1.4
TUA 0.3 0.6 TRZ 0.6 0.5 KRP 0.3
MNG 1.1 0.8

78/ 546

OCT 14 $06^h01^m47^s.3$ 44°.59S 168°.23E 12 km M = 3.8

± 0.3 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
MSZ	P*	06	01	52.2		-0.3	100	0.23	250			
	eS*			56.4		0.3	100					
RHP	P*	06	02	12.8		0.1	100	1.42	70			
	S*			31.5		0.0	100					
OMZ	ePn	06	02	19.7		0.0	100	1.97	105		3.7	3.8
	i			21.0								
	iP*			22.8		0.7	99					
	S*			47.5		-0.5	100					
OBZ	Pn	06	02	24.5		0.1	100	2.32	182		3.7*	3.5*
	P*			26.8		-1.2	96					
	iS*			59.0		0.5	100					
	i		03	02.0								
CMZ	e	06	02	51				3.33	74			

	eS*		03	29		0.1	100					
COB								4.82	45		4.1	3.5
MNG	ePn	06	03	24		0.2		6.67	56		3.9	

AMPLITUDES: OMZ 0.8 1.7 OBZ 0.7 1.0 COB 0.3 0.3
MNG 0.3

78/ 547

OCT 14 $07^h05^m49^s.4$ 38°.05S 176°.01E 190 km M = 3.7
± 1.0 0.05 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
KRP	P	07	06	14.9		-0.2	100	0.40	288		3.0*	
	eS			34.5		-0.4	100					
WTZ	P	07	06	16		-0.7	100	0.77	85		3.3	3.4
	S			38		0.2	100					
TUA	P	07	06	19.9		0.4	100	1.17	131		3.8	3.7
	eS			41.8		-0.9	100					
	e			46.8								
NGZ	eP	07	06	20.2		0.7	100	1.17	195			
CNZ	eP	07	06	20.8		1.0	100	1.21	198			
GSZ	eP	07	06	21.5		1.1	100	1.27	195			
TRZ	P	07	06	24.0		0.4	100	1.63	157		3.9	3.6
	S			52.8		2.7	94					
GNZ	P	07	06	24.4		0.1	100	1.69	111		3.8	3.6
	S			50.4		-0.7	100					
ECZ	eP	07	06	28		0.2	100	2.03	81		3.6	3.9
	eS			59.5		1.9						
	i		07	02.8								
MNG	P	07	06	32.9		-1.3	100	2.60	189		4.1	4.2
	e		07	05.0								
	iS			07.0		-1.8	99					
COB								3.95	219		3.1*	2.7*

AMPLITUDES: KRP 1.2 WTZ 0.6 0.8 TUA 0.6 0.5
TRZ 0.5 0.6 GNZ 1.0 1.1 ECZ 0.2 0.4
MNG 3.0 5.0 COB 0.2 0.3

78/ 548

OCT 15 $03^h58^m31^s.9$ 38°.56S 176°.13E 142 km M = 3.7
± 0.6 0.03 0.04 5 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
NGZ	P	03	58	54.4		0.5	100	0.74	213			
	eS		59	11.0		0.1	100					
KRP	P	03	58	54.2		0.0	100	0.78	324		3.3*	
CNZ	P	03	58	54.8		0.6	100	0.78	215			
GSZ	P	03	58	55.4		0.8	100	0.83	210			
TUA	eP	03	58	55.8		1.1	99	0.84	107		3.3	3.8
	S		59	12.2		0.0	100					
WTZ	P	03	58	54.8		-0.2	100	0.89	50		3.7	3.5
	S		59	11.8		-1.0	100					
TRZ	P	03	58	58.0		0.7	100	1.13	152		3.5	3.4
	S		59	17.8		1.1	99					
GNZ	eP	03	59	01.0		-0.1	100	1.49	94		3.4	3.6
	S			22.7		-0.6	100					
TNZ	eP	03	59	01		-0.2	100	1.50	245			
	eS			26		2.4						
ECZ	eP	03	59	08.0		-0.1	100	2.10	66		3.5	3.8
MNG	iP	03	59	07.7		-0.6	100	2.12	193		4.5	3.7
	S			34.0		-2.0	93					

WEL	eP	03	59	16		-2.7		2.92	201	3.8		
	eS			50		-4.2						
COB								3.64	225		3.2*	3.1*

AMPLITUDES: KRP 2.5 TUA 0.4 1.1 WTZ 2.2 1.5
TRZ 0.4 0.8 GNZ 0.6 1.6 ECZ 0.2 0.4
MNG 13 2.5 WEL 0.3 COB 0.3 0.7

78/ 549

OCT 17 $12^h30^m10^s.4$ 39°.32S 174°.98E 31 km M = 2.7
± 0.2 0.01 0.02 2 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CNZ	P*	12	30	19.9		-0.2	100	0.46	75			
	S*			27.0		-0.1	100					
GSZ	P*	12	30	20.2		-0.1	100	0.48	85			
	S*			27.0		-0.5	100					
TNZ	P*	12	30	20.0		-0.5	100	0.49	286		2.2	2.3
	S*			28.0		0.1	100					
NGZ	P*	12	30	20.9		-0.0	100	0.51	75			
	S*			28.5		-0.1	100					
MNG	ePn	12	30	32.8		0.2	100	1.35	164		2.7	
	eP*			34.2		-0.7	100					
	eS*			53.5		0.5	100					
KRP	eP*	12	30	38.5		1.8	75	1.46	18		3.0	3.4
	Sn			51.2		-0.6	100					

AMPLITUDES: TNZ 0.2 0.4 MNG 0.5 KRP 0.2 0.4

78/ 550

OCT 17 $12^h37^m54^s.2$ 42°.48S 173°.18E 74 km M = 4.1
± 0.4 0.03 0.05 11 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KKY	P	12	38	07.5		0.6	100	0.39	81			
	e			09.8								
CMZ	P	12	38	16.4		0.9	100	1.17	200		3.8*	4.1*
	S			31.3		-0.3	100					
KAI	P	12	38	19.0		1.7	99	1.31	268	4.1*		
	S			33.6		-1.2	100					
COB	S-P			17.4		-1.3	100	1.44	346		4.5*	4.0*
WEL	e	12	38	32.0				1.69	45	4.1		
	S			43.3		-0.1	100					
MJZ	P	12	38	34.4		1.0	100	2.48	232		3.0*	3.5*
	S		39	02.8		0.1	100					
MNG	eP	12	38	33.9		-0.3	100	2.55	44		3.7	4.2
	S		39	02.4		-1.7	99					
RHP	P	12	38	38.0		0.5	100	2.78	233			
	S		39	09.5		-0.5	100					
CAZ	S	12	39	10.5		0.6	100	2.78	56			
OMZ	P	12	38	41.8		0.3	100	3.06	212		3.5*	3.5*
	eS		39	14.0		-3.1	94					
TNZ	eP	12	38	49		2.5	98	3.42	16		3.5*	3.4*
	eS		39	26		-0.1	100					
	e			29								
CNZ	e(P)	12	38	54.5		3.5		3.74	29			
	eS		39	33.8		-0.3	100					
NGZ	eP	12	38	51		-0.6	100	3.78	30			
	S		39	34.0		-1.1	100					
TRZ	e	12	39	39				4.02	44			4.0
	eS			42		0.9						

MSZ	eP	12	39	00	-0.1	4.41	238		3.6*
	S			47.5	-3.1				
KRP	P	12	39	07.9	0.8	4.90	22	3.2*	3.3*
	eS		40	00.8	-2.2				
GNZ	eS	12	40	09.0	-4.5	5.33	45	4.4	
OBZ	eP	12	39	17	-1.1	5.71	217	3.3*	3.3*
	eS		40	19.5	-3.5				

AMPLITUDES:									
CMZ	4.5	20	KAI	3.8		COB	14	17	
WEL	1.8		MJZ	0.8	4.3	MNG	1.5	6.5	
CAZ		1.6	OMZ	0.7	1.3	TNZ	0.3	0.4	
TRZ		0.4	MSZ		2.5	KRP	0.5	0.8	
GNZ	0.7		OBZ	0.3	0.7				

78/ 551

OCT 17 $16^h36^m55^s.8$ 39°.00S 177°.36E 33 km M = 3.0

± 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
TUA	P*	16	37	02.2		-0.6	100	0.25	320					
	S*			09.1		1.1	100							
GNZ	P*	16	37	06.8		-1.5	99	0.63	56			3.0	3.3	
	S*			19.0		1.5	99							
TRZ	eP*	16	37	08.0		-1.3	100	0.69	217			2.5	3.0	
	eS*			20.8		1.6	99							
WNZ	eP*	16	37	18.0		2.8		1.04	290					
WTZ	eP*	16	37	14.8		-0.5	100	1.05	344			3.1	3.1	
	i			16.0										
	i			17.6										
	eS*			29.8		0.1	100							
	i			33.0										
NGZ	eP*	16	37	20		-0.6	100	1.37	262					
	i			23.8										
CNZ	eP*	16	37	21.5		0.0	100	1.42	261					
KRP	eP*	16	37	30		2.4		1.79	306			3.2		
	i			31.0										
	e			56.8										
MNG	ePn	16	37	31		2.0		2.17	221			2.9		
	e			44										

AMPLITUDES:									
TUA	3.5	5.1	GNZ	2.0	6.9	TRZ	0.3	1.1	
WTZ	1.1	1.1	KRP	0.3		MNG	0.3		

FELT: Wairoa (53) MM IV

78/ 552

OCT 18 $15^h47^m19^s.8$ 38°.59S 178°.11E 33 km M = 4.0

± 0.8 0.05 0.07 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W	P	W	S
GNZ	P*	15	47	25.3		-0.1	100	0.09	232					
TUA	P*	15	47	33.5		-1.3	100	0.78	254			4.1	4.5	
	S*			45.2		-0.6	100							
ECZ	eP*	15	47	38.0		0.3	100	0.96	21			3.7	4.3	
	e			58.3										
WTZ	P*	15	47	37.8		-1.7	99	1.07	304					
WIZ	Pn	15	47	40.2		-0.7	100	1.29	325					
TRZ	Pn	15	47	41.8		-0.5	100	1.39	226			3.9		
	eP*			47.0		2.1								
	i			51.0										
WNZ	eP*	15	47	48		0.0		1.57	268					

	e			56							
NGZ	ePn	15	47	53.5	2.3	99	2.03	252			
	eP*			57.0	1.1	100					
GSZ	ePn	15	47	54.5	2.7		2.09	250			
	iP*			58.0	1.3	100					
CNZ	ePn	15	47	54.2	2.3	99	2.09	252			
	eP*			57.5	0.7	100					
KRP	Pn	15	47	52.0	-0.4	100	2.13	287		3.8	
	P*			57.8	0.3	100					
	eSn		48	16.8	-0.2						
MNG	Pn	15	48	00.9	-1.6	100	2.87	224		3.9	3.9
	e			27.3							
	eSn			34.5	-0.2						
WEL	eSn	15	48	54	-1.2	100	3.73	223	4.1		
COB							4.83	237		4.1	4.0

AMPLITUDES: TUA 7.1 21 ECZ 1.1 5.3 TRZ 1.6
KRP 0.8 MNG 1.6 2.0 WEL 0.3
COB 0.3 0.8

FELT: Ormond (44) and Gisborne (45) MM IV This shock was followed by 13 aftershocks greater than magnitude 2 within the next two days.

78/ 553

OCT 18 $15^h50^m18^s.7$ 38°.56S 178°.05E 33 km M = 4.1
± 0.5 0.03 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
GNZ	P*	15	50	24.0		-0.3	100	0.08	196			
TUA	P*	15	50	32.0		-1.1	100	0.75	251		4.3	4.5
	S*			43.3		-0.4	100					
ECZ	eP*	15	50	36.8		0.3	100	0.95	24		3.8	4.2
	e			43.8								
	eS*			49.5		-0.1	100					
WTZ	P*	15	50	36.1		-1.5	99	1.02	304			
WIZ	Pn	15	50	38.9		-0.3	100	1.24	326			
	eS*			57		-0.9						
TRZ	Pn	15	50	40.3		-0.8	100	1.38	224		4.2	3.9
	eP*			46.0		2.4	98					
	i			50.2								
	e		51	18.5								
WNZ	eP*	15	50	48		1.8		1.53	267			
	e			51								
NGZ	Pn	15	50	51.5		1.9	99	2.01	251			
	eP*			54.8		0.6	100					
	i			57.5								
GSZ	ePn	15	50	53		2.7		2.05	249			
	eP*			56		1.0	100					
	e			59.7								
CNZ	ePn	15	50	51.5		1.2	100	2.06	251			
	i			52.7								
	i			59.5								
KRP	Pn	15	50	50.2		-0.5	100	2.08	287		4.0	
	iP*			56.0		0.5	100					
	eSn		51	12.2		-2.5						
MNG	Pn	15	50	59.1		-2.2	99	2.86	223		3.9	3.9
	Sn		51	33.0		-0.3	100					
GBZ	iPn	15	51	05.0		0.3	100	3.11	318			
WEL	eSn	15	51	53		-0.9	100	3.72	222	4.0		

AMPLITUDES:	TUA	11	21	ECZ	1.3	4.7	TRZ	3.6	2.6
	KRP	1.5		MNG	1.7	2.5	WEL	0.3	

FELT: Gisborne (45) MM IV

78/ 554

OCT 18 $21^h15^m18^s.9$ 38°.49S 178°.08E 33 km M = 3.3

± 0.3 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
GNZ	P*	21	15	25.0		-0.0	100	0.16	196			
	S*			30.3		0.8	99					
TUA	P*	21	15	33.5		-0.6	100	0.79	246		3.0	3.5
	S*			44.9		-0.3	100					
ECZ	eP*	21	15	35.0		-0.4	100	0.87	25			
	e			38.7								
	eS*			48		0.4	100					
WTZ	P*	21	15	37.4		-0.0	100	1.00	300		3.4	3.1
	S*			52.0		0.9	99					
WIZ	eP*	21	15	40		-0.7	100	1.19	323			
CNZ	eP*	21	15	50		-6.0		2.11	249			

AMPLITUDES:	GNZ	15	17	TUA	0.5	2.0	WTZ	2.6	1.3
	WIZ	0.2							

78/ 555

OCT 19 $02^h35^m53^s.5$ 37°.67S 178°.04E 66 km M = 3.8

± 0.5 0.03 0.03 5 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	36	04.5		-1.1	99	0.40	94			
	eS			15.4		0.8	100					
WIZ	P	02	36	08.5		0.1	100	0.69	281			
	iS			20.0		0.4	100					
	i			23.7								
WTZ	P	02	36	10.2		-0.7	100	0.89	249			
	eS			23.0		-0.8	100					
GNZ	P	02	36	10.8		-1.1	99	0.97	181		3.9	4.3
	S			26.3		0.6	100					
TUA	e(P)	02	36	20.0		3.3		1.34	211			
KRP	P	02	36	25.8		0.1	100	2.00	262		3.1*	3.0*
	S			49.4		-0.1	100					
TRZ								2.12	206			3.6
NGZ	P	02	36	32.5		0.7	100	2.44	231			
CNZ	P	02	36	33.2		0.6	100	2.48	231			
GBZ	P	02	36	33.2		0.2	100	2.51	304			
GSZ	P	02	36	33.2		0.3	100	2.51	229			
MNG	eP	02	36	46.2		-1.5		3.55	213		3.3	3.6
	eS		37	24.5		-4.2						
WEL	eS	02	37	44		-6.2		4.42	214	4.0		

AMPLITUDES:	WIZ	2.3	4.9	GNZ	6.0	26	KRP	1.0	1.0
	TRZ		0.6	GBZ	0.4		MNG	0.3	0.8
	WEL	0.2							

78/ 556

OCT 19 $20^h51^m28^s.7$ 38°.53S 178°.09E 33 km M = 3.4

± 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	P*	20	51	35.6		1.0	100	0.13	207			
TUA	P*	20	51	43.2		-0.6	100	0.79	249		3.5	3.6

	S*			54.9		-0.0	100						
WTZ	P*	20	51	47.8		0.0	100	1.03	302		3.5	3.4	
	S*		52	02.4		0.6	100						
WIZ	eP*	20	51	50		-1.2	99	1.23	324				
CNZ	eP*	20	52	05		-0.8	100	2.10	251				
KRP	eP*	20	52	07		1.1	99	2.11	286		3.2		

AMPLITUDES: TUA 1.5 2.5 WTZ 3.3 2.2 KRP 0.2

78/ 557

OCT 19 $23^h01^m33^s.2$ 38°.70S 175°.93E 128 km M = 3.9

± 1.1 0.03 0.05 9 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S	
NGZ	P	23	01	53.4		0.9	100	0.54	207				
CNZ	P	23	01	52.8		0.1	100	0.58	211				
GSZ	P	23	01	53.8		0.7	100	0.63	205				
KRP	P	23	01	54.7		0.1	100	0.84	338		3.3*	2.7*	
	S		02	09.8		-1.2	100						
TUA	eP	23	01	56.5		0.8	100	0.96	97		3.5	3.6	
	eS		02	12.3		-0.6	100						
TRZ	S	23	02	17.0		1.7	99	1.10	141			3.9	
WTZ	eS	23	02	16.5		1.2	100	1.10	50				
TNZ	P	23	01	59.9		0.6	100	1.30	248		3.5*		
GNZ	P	23	02	02.8		-0.3	100	1.64	89		3.5	3.9	
	S			24.2		-1.7	99						
MNG	iP	23	02	05.9		-0.9	100	1.94	190		4.4	4.1	
	S			29.9		-2.3	98						
CAZ	P	23	02	10.3		0.1	100	2.21	174				
	S			38.5		0.4	100						
WEL	eS	23	02	46		-4.2		2.74	199	4.1			

AMPLITUDES: KRP 2.8 0.7 TUA 0.6 0.7 TRZ 2.8
TNZ 0.7 GNZ 0.7 3.1 MNG 11 7.5
CAZ 1.8 3.9 WEL 0.6

78/ 558

OCT 20 $23^h05^m28^s.0$ 45°.04S 170°.78E 12 km M = 3.4

± 0.2 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	
OMZ	iPg	23	05	31.1		0.1	100	0.10	108				
	iSg			33.2		0.3	100						
HHP	P*	23	05	42.5		0.1	100	0.77	336				
	Pn			43.6		-0.5	100						
	eS*			52.7		-0.2	100						
THP	iP*	23	05	42.6	D	-0.3	100	0.81	308				
TMP	P*	23	05	44.0		0.1	100	0.86	327				
	Pn			45.0		-0.3	100						
	S*			55.1		-0.5	100						
MJZ	P*	23	05	47.9		0.3	100	1.08	348		3.0*	2.8*	
	S*		06	02.8		0.8	98						
CMZ	eSg	23	06	34.1		-0.5	100	1.97	43			3.4*	
MSZ								2.07	279		3.6	3.1	

AMPLITUDES: MJZ 1.6 1.6 CMZ 1.0 MSZ 1.5 0.7

FELT: 'The Dasher' (136) MM IV

78/ 559

OCT 21 $06^h27^m09^s.7$ 38°.27S 176°.29E 144 km M = 3.9

± 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
WNZ	P	06	27	30.8		0.7	100	0.39	202		3.8	
WTZ	iP	06	27	30.0	U	-1.2	100	0.62	63		3.9	3.6
	S			46.8		-0.9	100					
KRP	iP	06	27	31.7	D	0.1	100	0.68	300		3.2*	
TUA	P	06	27	33.5		0.7	100	0.86	129		3.6	4.0
	eS			51.4		0.7	100					
CNZ	P	06	27	36.4		1.5	99	1.09	212			
TRZ	iP	06	27	38.8	D	1.4	99	1.34	162		4.0	3.9
	S		28	02.1		3.4						
GNZ	P	06	27	38.3		0.1	100	1.41	106		3.7	4.2
	S			59.7		-0.3	100					
ECZ	P	06	27	42.8		-0.5	100	1.87	73		4.1	3.8
MNG	iP	06	27	48.8	U	-1.4	99	2.43	195		4.6	4.2
	S		28	19.9		-1.1	100					
WEL								3.23	201	3.9		
COB	eS-P			45.4		-0.7	100	3.93	223		3.1*	3.5*

AMPLITUDES: WNZ 0.2 | WTZ 3.9 2.3 | KRP 2.2 | TUA 0.8 1.8 | TRZ 1.1 2.0 | GNZ 1.4 6.6 | ECZ 0.9 0.5 | MNG 11 5.6 | WEL 0.2 | COB 0.2 1.8

78/ 560

OCT 21 $09^h06^m39^s.0$ $43°.59$S $171°.57$E 12 km M = 3.2

± 0.5 0.06 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
CMZ	P*	09	06	53.9		0.5	100	0.77	90			
MJZ	iP*	09	06	55.0	U	-0.4	100	0.89	243		3.7*	3.0*
	iPn			57.0		0.3	100					
	Sn		07	11.3		1.5	99					
HHP	P*	09	06	59.7		-0.1	100	1.15	230			
	ePn		07	01.2		1.0	100					
RHP	P*	09	06	59.9		-0.6	100	1.19	244			
	ePn		07	01.1		0.3	100					
TMP	eP*	09	07	00.3		-1.6	98	1.28	235			
	ePn			01.5		-0.4	100					
OMZ	iPg	09	07	10.0		-0.5	100	1.56	197			3.3
COB	eS-P			30.5		-0.8	100	2.65	19		3.4	3.0

AMPLITUDES: MJZ 11 3.8 | OMZ 0.9 | COB 0.2 0.3

FELT: Peak Hill (99), Lake Coleridge (100) MM IV

78/ 561

OCT 21 $09^h27^m35^s.3$ $37°.99$S $176°.19$E 189 km M = 4.0

± 1.0 0.06 0.08 8 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	iP	09	28	01.4	D	-0.0	100	0.51	277		3.0*	
WTZ	P	09	28	01.1		-0.8	100	0.63	90		3.8	3.8
	S			21.7		-0.7	100					
TUA	eP	09	28	05.3		0.4	100	1.12	137		3.8	3.9
	S			29.1		1.3	99					
CNZ	P	09	28	08.1		1.6	99	1.30	202			
GNZ	P	09	28	09.4		0.3	100	1.58	115		4.0	4.2
	S			34.7		-0.5	100					
TRZ	iP	09	28	10.9	D	1.3	99	1.64	163		4.2	3.9
	eS			42.2		6.0						
ECZ	P	09	28	12.0		-0.2	100	1.89	82		3.9	3.5

MNG	iP	09	28	20.2	U	-0.9	100	2.68	192		4.3	4.2	
	S			55.3		-1.1	100						
WEL								3.47	198	4.0			
COB								4.09	220			3.2*	

AMPLITUDES: KRP 1.2 WTZ 2.1 2.3 TUA 0.7 0.8
GNZ 1.9 4.8 TRZ 0.9 1.0 ECZ 0.5 0.2
MNG 4.1 4.4 WEL 0.3 COB 0.8

78/ 562

OCT 21 $13^h28^m45^s.3$ 41°.52S 174°.48E 23 km M = 4.4
± 0.3 0.03 0.05 3 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WHW	iP*	13	28	51.6		-0.4	100	0.30	41			
BHW	iP*	13	28	52.2	D	-0.1	100	0.31	69			
WEL	iP*	13	28	52.1	U	-0.2	100	0.32	42	4.2		
	iS*			57.1		-0.3	100					
MRW	iP*	13	28	52.1		-0.4	100	0.33	30			
TCW	iP*	13	28	51.8	U	-0.9	100	0.34	333			
WDW	iP*	13	28	54.4	D	-0.2	100	0.46	57			
CAW	iP*	13	28	56.7	D	-0.2	100	0.60	47			
KIW	iP*	13	28	58.6	U	-0.5	100	0.74	26			
KKY	iPn	13	29	04.5	U	0.1	100	1.07	213			
	iP*			06.5		1.7	99					
MNG	iPn	13	29	05.1	D	-0.7	100	1.18	40		4.3	4.4
	i			12.5								
	iSn			20.6		-0.5	100					
COB	iS*-P*			18.2		-0.2	100	1.39	288		4.6	4.0
CNZ	ePn	13	29	25.9		2.6	96	2.46	20			
CMZ	ePn	13	29	21.8		-1.6	99	2.47	213			
KRP	P*	13	29	51.8		2.5	97	3.69	13		4.5	4.7
	S*		30	36.6		-0.7	100					
MJZ	Pn	13	29	44.0		1.7	99	3.85	229		4.0*	3.9*
	eSn		30	24.8		-0.5	100					
HHP	Pn	13	29	45.8		-0.3	100	4.14	226			
	Sn		30	31.1		-1.1	100					

AMPLITUDES: WEL 65 MNG 25 38 COB 13 11
KRP 1.1 1.4 MJZ 1.3 1.8

FELT: Wellington area (68) MM IV

78/ 563

OCT 25 $08^h20^m52^s.7$ 47°.41S 165°.07E 33 km M = 3.8
± 1.2 0.10 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
OBZ	P	08	21	26.3		0.9	99	2.14	78		3.9*	4.2*
	S			49.4		-0.6	100					
MSZ	eP	08	21	42.7		0.3	100	3.38	37		3.8	3.8
ROX	P	08	21	44.4		0.2	100	3.52	58		4.2	3.9
	S		22	23.7		0.5	100					
THP	eP	08	21	55.9		-0.6	100	4.42	51			
OMZ								4.68	62		3.6	3.3
HHP	eP	08	22	00.6		-1.2	99	4.81	52			
BSP	eP	08	22	04.6		0.2	100	5.00	47			
MJZ								5.10	50		3.6*	3.4*

AMPLITUDES: OBZ 1.3 5.3 MSZ 0.8 1.4 ROX 0.8 0.9
OMZ 0.1 0.1 MJZ 0.3 0.3

78/ 564

OCT 26 $05^h51^m54^s.2$ 37°.68S 178°.44E 63 km M = 3.9

± 2.4 0.11 0.21 29 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	iP	05	52	02.8	D	-1.1	100	0.08	103			
GNZ	e	05	52	13.3				1.03	199		4.2	3.6
	iP			14.5	U	1.3	100					
TUA	P	05	52	21.7		1.9	99	1.52	222		4.4	3.8
TRZ	P	05	52	31.0		0.8	100	2.27	214		4.0	3.7
KRP	P	05	52	30.6		-0.3	100	2.31	263		3.2*	
CNZ	P	05	52	37.3		0.5	100	2.74	235			
MNG	e	05	52	47.8				3.73	217		3.9	3.8
	iP			49.0	U	-1.9	99					
WEL	S	05	53	54.2		-1.3	100	4.60	217	3.9		
COB	eS-P		1	03.5		-0.2	100	5.59	231		3.2*	3.0*

AMPLITUDES: ECZ 10 GNZ 11 4.6 TUA 3.4 0.8
TRZ 0.6 0.7 KRP 1.0 MNG 1.1 1.3
WEL 0.1 COB 0.2 0.4

78/ 565

OCT 26 $20^h28^m36^s.4$ 38°.64S 176°.04E 213 km M = 4.0

± 0.7 0.05 0.05 4 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
NGZ	P	20	29	05.5		-0.1	100	0.64	211			
CNZ	P	20	29	05.7		-0.1	100	0.67	214			
GSZ	P	20	29	06.4		0.3	100	0.73	209			
	S			30.0		0.9	99					
TNZ	P	20	29	09.6		-1.0	99	1.40	247		3.3*	
GNZ	S	20	29	39.2		-0.2	100	1.56	91			3.6
MNG	iP	20	29	17.0	U	0.6	100	2.02	192		4.0	4.2
	S			46.2		-1.1	98					
KIW	P	20	29	20.4		0.1	100	2.38	201			
WDW	P	20	29	24.4		0.1	100	2.74	197			
MRW	P	20	29	24.8		0.1	100	2.79	201			
WHW	P	20	29	25.4		0.1	100	2.83	200			
MOW	P	20	29	25.9		0.6	100	2.84	192			
TCW	P	20	29	25.9		-0.1	100	2.91	207			

AMPLITUDES: TNZ 0.3 GNZ 1.0 MNG 3.2 6.8

78/ 566

OCT 27 $03^h18^m31^s.5$ 33°.12S 178°.82W 306 km M = 5.0

± 1.3 0.07 0.12 21 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	03	19	49.8		-0.3	100	5.05	204		4.9	4.9
	eS		20	53		1.0	100					
WIZ	eP	03	19	55		-0.2	100	5.47	215			
	e		20	02								
GBZ	eP	03	19	56.5		-0.6	100	5.62	235			
	e		20	08								
WTZ	P	03	19	59.0		-1.8	100	5.94	214		5.2	5.1
	e(S)		21	07		-3.7						
GNZ	P	03	20	01.9		-0.6	100	6.08	204		5.0	4.9
	eS		21	11		-3.0	98					
ONE	eP	03	20	05		0.8	100	6.23	243	3.9*		
TUA	eP	03	20	08.5		0.4	100	6.55	209		5.3	5.1

	e(S)			21	29		4.9					
KRP	eP	03	20	09.5		0.2	100	6.64	222		3.5*	3.3*
	eS			21	29		2.9	98				
CRZ	P	03	20	17.7		1.6	100	7.20	257		3.8*	
TRZ	eP	03	20	17		-0.6	100	7.33	207		5.0	4.9
	eS			21	42		1.2	100				
NGZ	eP	03	20	20		-0.2	100	7.54	215			
	eS			21	46		0.2	100				
MNG	eP	03	20	34		-1.1	100	8.77	210		4.5	4.6
	eS			22	11		-1.6	100				
WEL	eS	03	22	30		-1.6	100	9.62	210	4.9		
CIZ	eS	03	23	04		2.5	99	10.97	171			

AMPLITUDES:											
	ECZ	0.9	0.9	WIZ	1.5		GBZ	1.8			
	WTZ	3.0	2.5	GNZ	2.0	2.5	ONE	0.7			
	TUA	1.4	0.9	KRP	0.8	0.5	CRZ	0.4			
	TRZ	0.5	0.8	NGZ	1.1	1.0	MNG	0.8	1.3		
	WEL	0.3									

78/ 567

OCT 27 $11^h15^m58^s.5$ $38°.84S$ $177°.81E$ 33 km M = 4.5

± 0.5 0.02 0.04 R S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GNZ	iP*	11	16	06.9	N	1.3	100	0.26	40			
TUA	iPn	11	16	09.4	D	0.3	100	0.51	273		4.3	4.5
	eSn			15		-1.8	100					
TRZ	iPn	11	16	17.0	D	0.6	100	1.04	227		4.7	4.4
	eS*			34		1.8	100					
WTZ	iPn!	11	16	15.8		-0.9	100	1.07	323			4.5
	eSn			29		-1.2	100					
ECZ	iPn	11	16	19.0	D	-0.6	100	1.29	27		4.6	
WIZ	iPn	11	16	20.1	D	-1.0	100	1.39	339			
	e			34								
NGZ	iPn	11	16	26.8	U	0.9	100	1.75	258			
	e			38								
KRP	iPn	11	16	28.5	UW	-0.9	100	2.01	296		4.2	4.3
	eP*			36		1.9	100					
	e			50								
	eS*			59		-1.5	100					
MNG	iPn	11	16	35.8	D	-0.7	100	2.53	225		4.7	4.5
	eSn		17	04		-1.2	100					
TNZ	Pn	11	16	40.4		1.5	100	2.70	262		4.5	4.6
	eP*			49		3.3	98					
	eSn		17	11		1.8	100					
GBZ	Pn	11	16	44.7		-1.1	100	3.20	324			
	eP*			57		2.6	99					
	eSn		17	21		-0.5	100					
	e			24.5								
	eS*			36		-0.3	100					
WEL	ePn	11	16	46		-2.2	99	3.38	223	4.5		
	eP*			55		-2.3	99					
	eSn		17	25		-0.7	100					
ONE	ePn	11	16	59		0.8	100	4.11	317	4.5		
CIZ	ePn	11	17	35		2.4	99	6.63	142			
	eSn		18	42		-1.9	100					

AMPLITUDES:											
	TUA	24	45	TRZ	18	13	WTZ	28			
	ECZ	4.5		WIZ	10	11	NGZ	22	45		
	KRP	2.5	2.5	MNG	13	11	TNZ	0.6	0.9		

GBZ 0.8 0.9 WEL 1.1 ONE 0.3

FELT: Ormond (44), Gisborne (45) and Wairoa (53) MM IV.

78/ 568

OCT 27 $15^h47^m15^s.0$ 34°.49S 178°.95E 264 km M = 4.3

± 1.4 0.07 0.12 15 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	48	11		0.0	100	3.21	186		4.3	4.4
	eS			54.5		-0.1	100					
	e		49	23								
GBZ	P	15	48	11.9		-0.2	100	3.32	238			
WTZ	eP	15	48	17		-0.9	100	3.83	204		4.4	4.3
	eS		49	07		0.1	100					
ONE	eP	15	48	20		0.4	100	3.97	250	3.4*		
GNZ	P	15	48	22.0		-0.4	100	4.21	190		4.3	4.3
	eS		49	12		-2.9	99					
KRP	eP	15	48	27		2.3	99	4.40	218		3.0*	
TUA	eP	15	48	28		1.6	100	4.54	198			4.5
	eS		49	25		3.0	98					
CRZ	eP	15	48	33		-1.0	100	5.18	269		3.5*	
TRZ	e(S)	15	49	43		4.0		5.34	198			4.3
MNG	P	15	48	51.0		-1.8	100	6.71	203		4.1	4.1
	eS		50	08		-1.6	100					
WEL	eS	15	50	29		0.6	100	7.55	205	4.5		
CIZ	eS	15	51	26		0.5	100	10.08	161			

AMPLITUDES: ECZ 0.4 0.5 GBZ 0.9 WTZ 0.9 0.8
ONE 0.4 GNZ 0.7 1.3 KRP 0.3
TUA 0.4 CRZ 0.3 TRZ 0.4
MNG 0.5 0.6 WEL 0.2

78/ 569

OCT 27 $18^h48^m11^s.5$ 39°.08S 174°.88E 228 km M = 3.8

± 1.4 0.05 0.08 11 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	P	18	48	42.9		1.2	100	0.40	255		3.0*	
NGZ	P	18	48	43.2		0.9	100	0.58	100			
	e		49	20.5								
KRP	P	18	48	46.2		0.1	100	1.27	24		3.0*	
	eS		49	13.5		0.5	100					
TRZ	eP	18	48	50		1.3	100	1.57	108		3.9	3.6
	eS		49	20		2.7	98					
MNG	P	18	48	49.9		1.0	100	1.60	163		4.0	4.0
	S		49	17.1		-0.6	100					
WTZ	eP	18	48	51		-1.3	100	1.98	57			3.5
	eS		49	22		-1.8	99					
WEL	eS	18	49	26.5		-1.2	100	2.20	182	3.9		
GNZ	eP	18	48	58		0.6	100	2.49	81		3.5	4.0
	eS		49	31.0		-2.0	99					
COB	P	18	48	58.1		-0.3	100	2.59	219		3.4*	3.0*
	eS		49	34		-1.1	100					

AMPLITUDES: TNZ 0.2 NGZ 3.5 1.5 KRP 0.7
TRZ 0.4 0.5 MNG 3.3 5.0 WTZ 0.4
WEL 0.4 GNZ 0.3 1.3 COB 0.5 0.7

78/ 570

OCT 27 $20^h32^m18^s.6$ 37°.50S 177°.79E 102 km M = 4.8

± 0.7 0.03 0.06 9 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	iP	20	32	31.9	U	-2.8	99	0.48	266			
ECZ	iP!	20	32	36.2		0.4	100	0.63	108			
WTZ	iP!	20	32	36.9		-0.4	100	0.80	232			
GNZ	iP	20	32	43.2	DE	2.0	99	1.16	171			
TUA	eP	20	32	45.5		1.4	100	1.40	201		4.6	4.8
	eS		33	03.5		-0.1	100					
WNZ	P	20	32	48.0		-0.4	100	1.75	229		4.8	
TRZ	P	20	32	56.0		1.7	100	2.19	200		4.9	4.7
	e		33	03.8								
	e			10.0								
	eS			20		-0.7	100					
GBZ	iP!	20	32	54.0		-1.2	100	2.25	304			
NGZ	P	20	33	00.0		2.8	99	2.40	225			
	e			32								
TNZ	(P)	20	33	11.5		3.8		3.17	237		4.4*	
	e		34	04								
ONE	P	20	33	08.1		-0.8	100	3.25	301	3.9*		
	eS			47		0.2	100					
MNG	iP	20	33	13.3	U	-0.3	100	3.60	209		4.8	5.0
	e			15.0								
	eS			55		-0.2	100					
WEL	eP	20	33	24		-1.1	100	4.45	211	4.9		
	eS		34	15		-1.1	100					
	e			36								
CRZ	P	20	33	35.1		0.3	100	5.16	305		4.0*	3.4*
	eS		34	34		0.4	100					
CIZ	eP	20	34	12		1.7	100	7.75	148			
	e		35	30								
	eS			34		-3.0	98					

AMPLITUDES:									
TUA	5.0	9.5	WNZ	0.7	TRZ	4.0	6.0		
NGZ	36	35	TNZ	3.1	ONE	1.5			
MNG	9.5	20	WEL	1.5	CRZ	0.9	0.3		

FELT: Opotiki (35) MM IV and Whakatane (27)

78/ 571

OCT 27 $23^h42^m15^s.0$ 37°.19S 176°.88E 232 km M = 4.4

± 1.3 0.06 0.08 9 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	23	42	46.4		-0.8	100	0.80	174		4.3	4.1
	i			46.9								
	S		43	10.0		-2.1	99					
KRP	iP	23	42	50.9	D	0.6	100	1.30	235		2.7*	
	eS		43	18.5		0.9	100					
ECZ	eP	23	42	51		-0.2	100	1.42	111		4.1	4.2
	eS		43	21		1.8	100					
GBZ	iP	23	42	50.3	D	-1.4	100	1.48	310			
TUA	P	23	42	53.3		0.4	100	1.63	173		4.2	4.5
	eS		43	21		-1.3	100					
GNZ	iP	23	42	54.1	UN	0.4	100	1.71	148		4.5	4.8
	eS		43	22		-1.5	100					
NGZ	P	23	43	00.2		1.7	100	2.23	206			
	eS			34		1.8	100					

TRZ	e	23	43	30				2.36	181			4.8	
	eS			37		2.4	99						
MNG	iP	23	43	13.5	U	-0.2	100	3.60	197		4.8	4.6	
	i			14.0									
	e			50									
	eS			58		-1.3	100						
WEL	eS	23	44	15		-1.8	100	4.41	201	4.3			

AMPLITUDES:									
WTZ	4.0	2.5	KRP	0.4	ECZ	0.7	1.0		
GBZ	6.6		TUA	0.9	1.7	GNZ	4.2	14	
NGZ	1.5	1.7	TRZ	4.6	MNG	7.5	6.5		
WEL	0.4								

78/ 572

OCT 28 $09^h22^m05^s.2$ 45°.05S 167°.68E 109 km M = 4.2

± 0.9 0.06 0.08 7 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	S-P			13		0.5	100	0.41	25		4.0	4.0
MNW	iP	09	22	23.7	U	-0.3	100	0.73	183			
	eS			37		-1.2	100					
ROX	iP!	09	22	30.8		1.6	99	1.24	111			
HHP	iP	09	22	39.3	D	0.2	100	2.03	70			
	eS		23	05		0.7	100					
MJZ	iP	09	22	42.4	DSE	0.3	100	2.26	63		3.9*	4.0*
	eS		23	11		1.3	100					
OMZ	P	09	22	43.7		1.1	100	2.29	92		3.9	4.3
	eS		23	10		-0.5	100					
KAI	eP	09	23	01		-0.6	100	3.70	48	4.5		
	eS			44		-0.5	100					
CMZ	eP	09	23	04		0.3	100	3.85	69		3.6*	3.8*
	eS			46		-2.3	97					
COB	S-P		1	01		-0.8	100	5.43	45			

AMPLITUDES:									
MSZ	26	47	HHP	35	48	MJZ	6.6	17	
OMZ	0.8	2.8	KAI	0.5		CMZ	0.9	2.6	

78/ 573

OCT 29 $04^h18^m45^s.2$ 40°.15S 173°.58E 174 km M = 4.1

± 1.0 0.06 0.09 10 S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	S-P			20		-1.9	100	1.13	214		3.1*	3.3*
TNZ	eS	04	19	36		0.4	100	1.15	33			3.2*
WEL	(P)	04	19	19.7		3.2		1.45	142	3.9		
	eS			41		0.4	100					
MNG	iP	04	19	19.4		2.2	100	1.53	108		4.4	4.2
	e			36								
	eS			41.5		-0.4	100					
NGZ	eP	04	19	22.7		2.2	100	1.84	59			
	e			43								
	eS			48.5		0.8	100					
TRZ	eS	04	20	05		2.5	99	2.56	78			3.9
KRP	eS	04	20	04		-1.3	100	2.70	35			2.8*
KAI	eS	04	20	10		0.8	100	2.88	214	3.3*		
TUA	eS	04	20	13		-0.5	100	3.08	65			4.2
WTZ	eS	04	20	19		-2.4	99	3.43	52			3.8
CMZ	eP	04	19	42		1.6	100	3.50	191		3.3*	3.8*
	eS		20	21		-2.1	100					
GNZ	eP	04	19	44		0.2	100	3.76	68		3.9	4.1
	eS		20	26		-3.0	99					

MJZ	e(P)	04	19	58		5.0		4.48	210	3.1*	2.6*
	eS		20	45		-0.4	100				
HHP	P	04	19	59.0		1.6	100	4.81	209		
	eS		20	51		-2.2	100				

AMPLITUDES:

COB	0.5	2.6	TNZ		0.5	WEL	0.8		
MNG	13	9.5	NGZ	2.3	10	TRZ		0.7	
KRP		0.4	KAI	0.3		TUA		0.5	
WTZ		0.4	CMZ		0.4	3.0	GNZ	0.4	1.1
MJZ	0.5	0.3	HHP		5.5	0.8			

78/ 574

OCT 29 $18^h\,59^m\,27^s.7$ $45°.00$S $167°.71$E 81 km M = 3.7

± 0.6 0.02 0.04 6 S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	iP	18	59	41.0	U	0.2	100	0.36	24			
MNW	P	18	59	44.8		0.1	100	0.78	185	3.3		
	eS			57		-0.4	100					
ROX	eP	18	59	50.9		0.8	99	1.23	113		4.1	3.7
	i			51.4								
	eS	19	00	07.5		0.5	100					
OBZ	eP	18	59	59		-0.2	100	1.93	172		3.0*	3.3*
	eS	19	00	22		-0.5	100					
HHP	P	19	00	00.0		-0.2	100	2.00	71			
	e			14.8								
	eS			24		-0.1	100					
MJZ	eP	19	00	04		0.8	99	2.21	64		2.8*	3.1*
	eS			28		-1.5	93					
OMZ	iP	19	00	04.2	U	0.2	100	2.28	93		3.6	3.4
	eS			31		-0.0	100					
COB								5.37	45			3.6

AMPLITUDES:

MNW	1.8		ROX		4.5	4.0	OBZ	0.4	2.0
HHP	2.2	15	MJZ		0.6	2.0	OMZ	0.6	0.6
COB		0.3							

78/ 575

OCT 30 $05^h\,30^m\,00^s.7$ $38°.18$S $176°.51$E 151 km M = 4.2

± 0.9 0.04 0.05 6 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP!	05	30	21.3		-0.7	100	0.42	63		3.9	4.1
	eS			36		-2.3	99					
TUA	iP	05	30	24.9	U	0.8	100	0.80	142		4.4	4.2
	e			37.5								
	eS			42		-0.2	100					
KRP	iP	05	30	24.7	DE	0.5	100	0.81	288		3.6*	3.0*
	e			26.2								
	eS			42		-0.3	100					
WIZ	iP	05	30	23.5	U	-0.9	100	0.85	40			
NGZ	iP	05	30	28.9	U	1.1	100	1.22	215			
	eS			51		2.3	99					
GNZ	iP	05	30	28.3	U	-0.0	100	1.27	112		3.9	4.2
	e			45								
	eS			49		-0.4	100					
TRZ	iP	05	30	30.7	U	1.2	100	1.39	170		4.7	4.1
	eS			53		1.3	100					
ECZ	eP	05	30	33.5		0.9	100	1.68	74		3.6	3.9
	eS			58		0.9	100					
TNZ	P	05	30	37.2		1.5	100	1.95	238		3.4*	

GBZ								2.12	337				
MNG	iP	05	30	42.6	U	-0.6	100	2.56	198		4.7	4.2	
	e		31	08									
	eS			15		-0.7	100						
WEL	P	05	30	52.4		-1.4	100	3.38	203	4.3			
	eS		31	32		-2.5	98						

AMPLITUDES:											
WTZ	4.6	7.5	TUA	4.1	2.6	KRP	4.7	1.3
WIZ	4.7		NGZ	30	6.6	GNZ	2.2	7.0
TRZ	4.5	2.8	ECZ	0.3	0.6	TNZ	0.4	
GBZ	2.7		MNG	14	5.7	WEL	0.7	

78/ 576

OCT 31 $00^h43^m20^s.4$ $40°.46S$ $176°.81E$ 12 km $M = 4.3$

± 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
TRZ	P*	00	43	38.0		1.0	100	0.91	1		4.3	4.5
	eS*			51		1.8	100					
MNG	iP*!	00	43	40.8		1.7	100	1.03	261		4.4	
NGZ	ePn	00	43	48		0.6	100	1.57	324			
	eS*		44	11		1.8	100					
TUA	Pn	00	43	48.0		-0.7	100	1.67	9		4.3	4.4
	eSn		44	09		-0.9	100					
	e			36.5								
WEL	ePn	00	43	50		0.1	100	1.75	241	4.1		
	eSn		44	11		-0.9	100					
	eSg			20		0.4	100					
GNZ	ePn	00	43	53		-0.8	100	2.04	28		4.5	4.3
	e		44	09								
	e			37								
WTZ	Pn	00	43	59.2		-0.5	100	2.47	3		4.3	4.0
	ePg		44	12		1.5	100					
	eSn			28		-1.3	100					
	e			57.5								
KRP	ePn?	00	44	03.5		0.5	100	2.72	338		4.4	4.6
	eP*			09		1.0	100					
	eSg			51		-1.0	100					
WIZ	ePg	00	44	18		-1.9	99	2.94	6			
ECZ	eSn	00	44	41.6		-2.1	99	3.08	27			4.0
COB	(Sg-P*			54		) 2.6		3.16	257		4.4	4.1
CMZ	eP*	00	44	38		1.2	100	4.41	223		3.9*	4.1*
	eSn		45	14		-1.7	100					
	eSg			47		-1.9	99					
KAI	e	00	44	56.5				4.55	241	4.3		
	e		45	08								
	eSn			20		0.8	100					
	e			50								
CIZ	Pn	00	44	51.7		3.4	95	6.04	128			
	eSn		45	55		0.2	100					
HHP	ePn	00	44	50		0.1	100	6.16	229			
	e		45	01.8								
	eSn			56		-1.7	100					

AMPLITUDES:											
TRZ	9.7	23	MNG	45		NGZ	35	35
TUA	2.5	3.5	WEL	1.6		GNZ	6.8	6.0
WTZ	3.5	1.4	KRP	1.7	2.0	WIZ	0.4	
ECZ		0.3	COB	1.6	2.8	CMZ	0.3	1.0
KAI	0.4		CIZ	2.3		HHP	1.8	2.8

78/ 577

OCT 31 $02^h04^m23^s.1$ 41°.90S 173°.79E 12 km M = 3.9

± 0.3 0.04 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
KKY	iP*	02	04	32.7		-0.5	100	0.52	188			
WEL	P*	02	04	40.8		0.2	100	0.95	50	3.9		
	eS*			55		1.6	100					
COB	Sn-Pn			18		2.3	99	1.13	315		4.0	3.2
MNG	Pn	02	04	52.0		-1.2	100	1.81	45		3.8	3.9
	Pg			57.8		-1.8	99					
	Sg		05	24.8		0.8	100					
KAI	eSg	02	05	25		-1.5	100	1.88	250	3.8		
CMZ	ePn	02	04	53		-1.4	100	1.89	206		4.0*	
	ePg		05	01		-0.3	100					
NGZ	eP*	02	05	16		-0.3	100	3.05	28			
	eS*			58		1.9	99					
MJZ	Pn	02	05	12.9		0.4	100	3.21	228		3.6*	3.5*
	eP*			21		1.9	99					
	eSn			51		1.3	100					
	e(Sg)		06	16		4.6						
HHP	eP*	02	05	25		0.9	100	3.50	225			
	ePg			34		0.1	100					
	e(Sn)		06	01		4.3						
KRP	eP*	02	05	36		0.2	100	4.19	19		4.2	4.4
	e		06	24								
	eSg			42		-2.3	99					

AMPLITUDES:									
WEL	3.9	COB	4.0	2.5	MNG	3.6	5.5		
KAI	0.7	CMZ	2.0		NGZ	2.0	3.0		
MJZ	0.7	0.9	HHP	0.9	3.4	KRP	0.4	0.5	

78/ 578

OCT 31 $17^h24^m52^s.8$ 39°.55S 174°.48E 205 km M = 4.1

± 1.4 0.06 0.11 9 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
NGZ	P	17	25	23.2		0.4	100	0.95	68			
	e			43								
	eS			48		1.8	100					
MNG	iP!	17	25	27.0		1.4	100	1.32	145		4.4	4.3
	e			46								
	eS			51		0.0	100					
WEL	eS	17	25	56		-1.8	100	1.75	173	4.2		
KRP	eP	17	25	31		0.8	100	1.82	27		2.5*	2.6*
	e			40								
	S			57.8		-1.1	100					
TRZ	P	17	25	31		0.9	100	1.82	91		3.6	4.2
	e			56								
	eS		26	01		2.1	99					
COB	S-P			28		-2.5	99	2.03	220		3.6*	3.8*
TUA	e	17	25	59.5				2.20	71			4.2
	eS		26	05		-1.0	100					
WTZ	P	17	25	36.0		-1.4	100	2.51	52		3.6	3.9
	e(S)		26	05		-6.9						
GNZ	eP	17	25	42.7		0.7	100	2.91	73		4.2	4.5
	e		26	11								
	eS			18		-2.1	99					
ECZ	iP	17	25	50.8	U	-0.6	100	3.69	61		4.2	4.2

	S		26	36.3		-0.4	100							
AMPLITUDES:	NGZ			8.0	8.5	MNG		12	12	WEL	1.3			
	KRP			0.2	0.3	TRZ		0.2	2.0	COB			1.0	5.0
	TUA				0.7	WTZ		0.3	0.8	GNZ			1.2	3.7
	ECZ			0.3	0.3									

78/ 579

NOV 01 $21^h06^m32^s.1$ 38°.20S 176°.20E 192 km M = 3.7

± 1.5 0.07 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
KRP	iP	21	06	58.5	D	-0.2	100	0.59	298		3.1*	
	eS		07	19		-0.3	100					
WTZ	e(P)	21	07	03.5		4.5		0.67	71		3.0	3.4
	e			14								
	S			19.8		-0.1	100					
NGZ	eP	21	07	03		1.3	100	1.08	205			
	eS			26.5		1.9	99					
TRZ	iP	21	07	06.7	U	2.0	99	1.43	160		3.9	4.0
	e(S)			34		4.2						
GNZ	iP	21	07	06.0	D	0.7	100	1.50	108		4.0	3.9
	eS			31		0.1	100					
ECZ	eP	21	07	10.5		1.0	100	1.93	75		3.6	
	eS			36		-2.5	99					
MNG	P	21	07	15.8	U	0.2	100	2.47	193		4.2	3.7
	eS			47.5		-1.7	100					
COB	eS	21	08	19		-1.7	100	3.93	222			2.7*

AMPLITUDES:	KRP			1.2		WTZ		0.3	0.8	NGZ			1.6	1.0
	TRZ			0.6	1.6	GNZ		1.8	2.3	ECZ			0.2	
	MNG			3.8	1.5	COB			0.3					

78/ 580

NOV 02 $07^h17^m43^s.6$ 47°.95S 165°.00E 33 km M = 4.4

± 1.8 0.15 0.19 R S.E. of RES. 1.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	iPn	07	18	20.9	D	1.6	100	2.36	65		4.6*	4.7*
	e			21.9								
	eSn			45		-1.2	100					
MNW	Pn	07	18	26.0		0.4	100	2.82	41	4.4		
	eSn			54		-3.2	98					
MSZ	(Sn-Pn			37		)-5.4		3.85	33		4.7	4.4
ROX	iPn	07	18	39.7	U	-0.2	100	3.87	52		4.7	4.7
	eSn		19	23		0.5	100					
OMZ	ePn	07	18	54.5		-0.8	100	4.99	57		4.1	4.0
	eSn		19	50		0.4	100					
HHP	ePn	07	18	57		-0.9	100	5.19	48			
	e		19	07								
	e		20	08								
MJZ	ePn	07	19	02		-0.2	100	5.50	46		4.5*	4.3*
	eP*			16		-2.5	99					
	eSn		20	04		2.3	99					
COB	ePn	07	19	49		1.7	100	8.81	42		4.4	4.1
	eSn		21	23		1.8	100					

AMPLITUDES:	OBZ			5.6	13	MNW	1.7			MSZ			4.6	4.7
	ROX			2.0	5.0	OMZ		0.3	0.5	HHP			4.8	5.8
	MJZ			2.0	2.0	COB		0.2	0.3					

78/ 581

NOV 02 $20^h12^m30^s.9$ $47°.99S$ $165°.16E$ 33 km M = 3.9

± 2.1 0.16 0.26 R S.E. of RES. 1.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
OBZ	ePn	20	13	07.5		1.9	100	2.28	63		4.0*	4.2*
	eSn			31		-0.7	100					
MNW	Pn	20	13	12.8		0.3	100	2.78	38	3.7	4.3	4.0
	eSn			42		-1.7	100					
ROX	ePn	20	13	27.5		1.0	100	3.81	50		3.9	3.9
	eSn		14	06.5		-1.9	100					
MSZ	Sn-Pn			44.5		2.3	99	3.83	31		4.0	3.7
HHP	Pn	20	13	44.3		-0.3	100	5.14	46			
	eSn		14	43		2.6	99					
MJZ	eP*	20	14	04		-1.0	100	5.45	45		3.8*	

AMPLITUDES: OBZ 1.5 4.7 MNW 0.3 2.5 2.5 ROX 0.3 0.8
MSZ 0.9 0.8 HHP 0.4 0.6 MJZ 0.4

78/ 582

NOV 04 $20^h13^m30^s.8$ $38°.75S$ $175°.69E$ 155 km M = 3.6

± 1.9 0.08 0.11 16 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
NGZ	iP	20	13	54.0	U	1.5	100	0.43	188			
TUA	eS	20	14	19		1.1	100	1.14	93			3.7
TRZ	P	20	14	00.1		2.2	99	1.19	133		3.6	3.4
	e(S)			23		4.3						
WTZ	eS	20	14	19		-1.0	100	1.28	54			3.3
GNZ	iP	20	14	04.1	U	-0.4	100	1.83	87		3.6	3.6
	eS			29		-1.5	100					
MNG	iP	20	14	05.2		0.1	100	1.87	185		3.9	3.6
	S			31.0		-0.4	100					
WEL	eS	20	14	47		-0.6	100	2.63	195	3.9		
COB	eS	20	15	01		-0.8	100	3.26	223			3.0*

AMPLITUDES: NGZ 7.5 TUA 0.7 TRZ 0.4 0.6
WTZ 0.6 GNZ 0.8 1.2 MNG 3.6 2.2
WEL 0.4 COB 0.7

78/ 583

NOV 05 $10^h11^m27^s.1$ $44°.61S$ $168°.42E$ 12 km M = 4.1

± 0.8 0.03 0.07 R S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	S*-P*			08.0		2.8	98	0.36	260		3.6	3.4
ROX	iP*	10	11	48.3	U	1.7	100	1.08	144		4.1	4.1
	S*		12	02.2		1.2	100					
HHP	iPn	10	11	52.3	D	0.5	100	1.40	79			
	eSn		12	10		-0.3	100					
MJZ	iPn	10	11	54.3	DSW	-0.1	100	1.59	68		4.4*	4.0*
	eSn		12	15		0.2	100					
OMZ	iPn!	10	11	58.2		0.6	100	1.84	105			
	eSn		12	20		-0.5	100					
OBZ	ePn	10	12	02.5		-1.6	100	2.30	185		4.7*	4.6*
	eSn			30		-1.9	99					
KAI	ePn	10	12	16		2.3	99	3.01	47	4.4		
	eSn			48		-0.8	100					
CMZ	ePn	10	12	16		-0.4	100	3.21	73		4.1*	4.5*
	e(Sn)			49		-4.6						

COB	ePn	10	12	36.5		-0.8	100	4.74	44		4.6	4.5
	e		13	27								
	eSn			30.0		-0.4	100					

AMPLITUDES: MSZ 44 56 ROX 6.8 16 HHP 63 63
MJZ 17 11 OBZ 6.5 11 KAI 1.2
CMZ 0.8 5.0 COB 1.1 3.0

FELT: Earnslaw (121) MM IV and 'The Branches' (122)

78/ 584

NOV 05 $14^h31^m47^s.3$ 44°.94S 167°.56E 12 km M = 3.8

± 1.0 0.04 0.08 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	(S*-P*			12		) 6.7		0.37	43		3.5	3.2
ROX	P*	14	32	12.9		1.3	100	1.36	114		3.8	4.0
	S*			30.9		1.3	100					
OBZ	Pn	14	32	20.2		0.0	100	2.01	169		3.9*	3.9*
	eSn			43		-1.8	99					
HHP	Pn	14	32	21.7	D	0.5	100	2.08	74			
	eSn			46.5		-0.2	100					
MJZ	Pn	14	32	24.6		0.5	100	2.29	66		3.5*	3.8*
	eSn			52		0.3	100					
OMZ	iPn	14	32	26.0	U	0.6	100	2.38	94		4.1	3.7
	eSn			53		-1.0	100					
CMZ	eSn	14	33	28		-2.2	99	3.90	71			3.4*
COB	ePn	14	33	08		1.4	100	5.41	46		4.2	3.6
	eSn		34	05		-1.6	99					

AMPLITUDES: MSZ 34 32 ROX 2.0 8.5 OBZ 1.5 3.6
HHP 3.8 27 MJZ 1.0 4.0 OMZ 1.3 1.0
CMZ 0.3 COB 0.3 0.3

78/ 585

NOV 06 $06^h43^m45^s.2$ 35°.35S 179°.00E 12 km M = 4.4

± 1.6 0.08 0.17 R S.E. of RES. 2.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iPn	06	44	34.6	U	1.7	100	3.09	211		4.4	4.3
	eSn		45	11		2.2	100					
GNZ	iPn	06	44	36.9	D	0.0	100	3.38	193		4.3	4.2
	eSn		45	17		1.2	100					
	eSg			38.5		-0.6	100					
TUA	ePn	06	44	42		0.0	100	3.76	203		4.5	4.4
	eS*		45	40.5		1.0	100					
KRP	Pn	06	44	44.5		2.0	100	3.79	226		4.4	4.5
	eSn		45	27		1.3	100					
TRZ	ePn	06	44	51		-1.7	100	4.54	202		4.3	4.5
	eP*		45	03		-0.9	100					
	eSn			47		3.3	99					
	e(S*)		46	08		5.0						
NGZ	ePn	06	44	55		0.3	100	4.69	214			
	eP*		45	03		-3.3	99					
	e(Sn)			52.5		5.3						
	eS*		46	04		-3.3	99					
MNG	e	06	45	07.7				5.95	207		4.5	4.4
	Pn			10.2		-1.7	100					
	e			18								
	e			21.8								
	Sn		46	16		-1.6	100					

	e			37							
WEL	e(Sn)	06	46	33		-5.0		6.80	208	4.5	
	e			46							

AMPLITUDES: WTZ 2.5 2.0 GNZ 1.3 1.8 TUA 0.7 0.6
KRP 0.5 0.4 TRZ 0.4 0.9 NGZ 1.3 0.8
MNG 1.6 1.6 WEL 0.3

78/ 586

Nov 07 $18^h45^m42^s.6$ 32°.98s 179°.43w 432 km M = 4.8

± 2.1 0.24 0.61 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	18	47	07		0.3	100	4.99	199		4.8	4.7
	eS		48	14		1.2	100					
GNZ	iP	18	47	18.2	U	0.9	100	6.02	199		5.0	4.6
	eS		48	29		-2.9	97					
KRP	eP	18	47	21		-0.6	100	6.43	218		3.7*	
TRZ	eS	18	48	57.3		1.7	99	7.23	204			4.7
NGZ	eP	18	47	32.7		0.6	100	7.38	212			
MNG	P	18	47	45.2		-1.1	100	8.65	207		5.2	4.6
	i			46.0								
	eS		49	24		-0.1	100					
WEL	eS	18	49	42		0.5	100	9.50	208	4.9		

AMPLITUDES: ECZ 0.6 0.4 GNZ 1.8 1.1 KRP 1.1
TRZ 0.5 NGZ 2.2 MNG 3.6 1.1
WEL 0.3

78/ 587

Nov 08 $22^h04^m36^s.1$ 37°.19s 177°.12E 282 km M = 3.9

± 1.4 0.08 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	S	22	05	42.0		-1.4	99	0.80	187			3.5
KRP	eP	22	05	17		-0.5	100	1.46	239		2.7*	
	eS			51		1.2	99					
GNZ	eP	22	05	19		0.3	100	1.62	154		4.0	3.8
	eS			52		0.2	100					
NGZ	eP	22	05	25		0.6	100	2.32	210			
	e			49								
MNG	iP	22	05	37.9	D	-0.1	100	3.65	200		4.4	3.9
	e			47								
	eS		06	27		0.6	100					
COB	e	22	06	05				5.17	220		3.2*	
	eS			57		-0.8	100					

AMPLITUDES: WTZ 0.5 KRP 0.3 GNZ 1.0 1.0
NGZ 0.8 4.4 MNG 2.8 1.0 COB 0.2

78/ 588

Nov 09 $02^h17^m14^s.5$ 39°.03s 175°.32E 12 km M = 3.5

± 0.3 0.01 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
NGZ	eP*	02	17	21		0.6	100	0.27	124			
	eS*			24		-0.4	100					
TNZ	eS*	02	17	38		-0.7	100	0.75	258		2.8	
KRP	Pg	02	17	37.7	D	0.5	100	1.12	9		3.7	3.3
	eSg			53		0.7	100					
MNG	iPg	02	17	47.2	D	0.4	100	1.59	176		3.6	3.2
	eSg		18	08.5		0.2	100					

WTZ	eSn	02	18	02.7		-1.4	98	1.67	52		4.1	4.2
	e			39								
COB	e	02	18	24.9				2.86	223			3.2

AMPLITUDES: NGZ 37 TNZ 0.3 KRP 2.3 0.8
MNG 2.0 1.0 WTZ 1.4 1.2 COB 0.3

78/ 589

NOV 09 $03^h57^m18^s.9$ 38°.98S 175°.14E 205 km M = 3.9
± 1.1 0.04 0.06 8 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
NGZ	iP	03	57	48.0	U	1.5	100	0.42	119			
	eS		58	07		-0.8	100					
TNZ	P	03	57	48.8		1.5	100	0.63	250		3.0*	
KRP	iP	03	57	50.4	DSE	0.4	100	1.10	17			2.7*
	eS		58	14		-0.1	100					
TRZ	e	03	58	04.2				1.42	114		4.0	3.9
	eS			21		2.3	99					
TUA	S	03	58	22.1		1.0	100	1.57	84			3.9
MNG	iP	03	57	55.8	U	1.0	100	1.66	171		4.2	4.2
	eS		58	22		-0.5	100					
WTZ	eS	03	58	22.5		-1.6	100	1.75	56		3.7	
CAZ	eS	03	58	31		0.8	100	2.10	157			
GNZ	iP	03	58	01.0	D	-0.0	100	2.28	82		3.7	3.7
	eS			31		-2.6	98					
WEL	eS	03	58	33.5		-1.0	100	2.32	187	4.1		
GBZ	eP	03	58	07		0.4	100	2.77	6			
COB	iP	03	58	06.2	D	-0.8	100	2.81	220		3.8*	3.1*
	eS			43		-1.3	100					

AMPLITUDES: NGZ 8.2 2.7 TNZ 0.2 KRP 0.5
TRZ 0.7 1.2 TUA 0.5 MNG 6.5 8.0
WTZ 0.6 CAZ 0.7 GNZ 0.6 0.9
WEL 0.6 GBZ 0.2 COB 1.3 0.8

78/ 590

NOV 09 $10^h50^m46^s.1$ 38°.89S 175°.12E 214 km M = 4.2
± 1.0 0.04 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
NGZ	iP	10	51	16.5	U	1.5	100	0.49	127			
	eS			37		-0.2	100					
TNZ	iP	10	51	17.2	D	1.6	100	0.65	242		3.4*	
KRP	iP	10	51	18.2	UNW	0.6	100	1.02	19		3.5*	2.7*
	eS			42		-0.0	100					
TRZ	iP	10	51	22.0	U	0.9	100	1.48	117		4.0	4.0
	eS			50		1.8	99					
TUA	P	10	51	23.1		1.0	100	1.59	88		4.0	4.3
	eS			48.5		-1.5	100					
WTZ	P	10	51	21.5		-1.8	99	1.73	59		3.9	3.9
	e			48								
	eS			52		-0.2	100					
MNG	iP	10	51	24.9	U	1.4	100	1.75	171		4.7	4.3
	eS			52.0		-0.5	100					
CAZ	S	10	52	01.0		0.8	100	2.19	157			
GNZ	iP	10	51	29.0	DSE	-0.0	100	2.29	85		4.3	4.4
	eS		52	00.5		-1.6	99					
WEL	eS	10	52	04		-0.4	100	2.41	186	4.0		
COB	iP	10	51	34.6	U	-0.7	100	2.86	219		4.2*	3.3*
	eS		52	11.5		-2.0	99					

AMPLITUDES:									
	NGZ	20 7.0	TNZ	0.5	KRP	2.8 0.5
	TRZ	0.6 1.3	TUA	0.7 1.2	WTZ	1.0 1.2
	MNG	17 9.5	CAZ	4.0	GNZ	2.0 3.7
	WEL	0.5	COB	2.8 1.3		

78/ 591

NOV 09 $10^h59^m31^s.3$ 36°.61S 177°.33E 268 km M = 4.4
± 0.9 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
WTZ	iP	11	00	10.7	U	-0.1	100	1.39	191		4.0	4.2
	e			18.0								
	eS			41		-0.5	100					
ECZ	eP	11	00	12		0.8	100	1.45	138		3.9	4.2
	eS			42		-0.2	100					
GBZ	P	11	00	11.0		-0.9	100	1.55	284			
KRP	P	11	00	16.0		1.0	100	1.94	227		2.9*	
	eS			50		1.0	100					
GNZ	iP	11	00	16.9	D	0.5	100	2.11	165		4.3	4.5
	e			47								
	eS			51		-0.5	100					
TUA	iP	11	00	17.8	D	0.5	100	2.20	184		4.4	4.5
	eS			51		-2.0	99					
ONE	eP	11	00	21		0.4	100	2.55	288	3.2*		
NGZ	P	11	00	24.7		0.4	100	2.91	207			
	eS		01	06		0.5	100					
TRZ	P	11	00	24.9		-0.0	100	2.96	188		4.3	4.5
	eS		01	07		0.4	100					
TNZ	eP	11	00	32		1.7	99	3.47	221			3.2*
	e(S)		01	25		8.6						
MNG	iP	11	00	37.9	U	-1.5	100	4.26	199		4.8	4.7
	i			39.5								
	eS		01	31		-1.5	100					
CAZ	eS	11	01	38		3.1	95	4.37	191			
WEL	eS	11	01	51		1.0	100	5.08	202	4.6		
COB	eP	11	00	55		-2.2	99	5.73	217		3.5*	3.6*
	eS		02	03		-1.3	100					

AMPLITUDES:									
	WTZ	1.2 2.0	ECZ	0.4 0.8	GBZ	0.8	
	KRP	0.4	GNZ	1.9 5.1	TUA	0.8	1.0
	ONE	0.3	NGZ	1.0 1.6	TRZ	0.4	1.4
	TNZ	0.2	MNG	6.0 5.7	CAZ		1.5
	WEL	0.5	COB	0.3 1.6			

78/ 592

NOV 10 $12^h59^m53^s.9$ 46°.06S 165°.33E 12 km M = 3.9
± 0.7 0.03 0.06 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNW	Pn	13	00	21.5		-0.0	100	1.62	81	4.0	4.3	
	(P*)			24		1.2						
	Sn			43		0.7	100					
OBZ	Pn	13	00	28.3	D	0.2	100	2.11	115			
	(Pg)			39		2.5						
	Sn			53		-0.8	99					
ROX	Pn	13	00	39		0.6	100	2.85	80		4.3	4.0
	Sn		01	12.5		0.6	100					
HHP	Pn	13	00	53.5		0.2	100	3.95	66			
	ePg		01	13		-0.7						
	Sn			38		-0.1	100					

OMZ	Pn	13	00	54.5		-0.1	100	4.05	78	3.5	3.5
	e(Sn)		01	43		2.5					
MJZ	ePn	13	00	56		-0.6	100	4.19	62	4.1*	3.9*
	P*		01	05		-1.6					
	Pg			22		3.4					
	Sn			43		-1.0	99				
COB	Pn	13	01	41		1.6		7.33	50	4.0	3.7
	Sn		02	58		-1.3					

AMPLITUDES: MNW 1.8 7.5 ROX 1.5 1.8 OMZ 0.1 0.2
MJZ 1.3 1.6 COB 0.1 0.2

78/ 593

NOV 10 $18^h04^m02^s.7$ $39°.22S$ $175°.21E$ 12 km M = 3.5
± 0.3 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
NGZ	iPg	18	04	09.8		0.4	100	0.31	83			
	e(Sg)			15		1.2						
TNZ	Pg	18	04	16		0.1	100	0.65	273		2.9	3.1
	Sg			25.5		0.7	100					
	e			27								
TRZ	(Pg)	18	04	31		2.2		1.29	105		3.5	3.6
	e(Sg)			55		8.8						
	e		05	01								
KRP	Pn	18	04	26		-0.2	100	1.32	11		3.8	4.1
	Sn			43.5		-0.3	100					
MNG	Pn	18	04	27.0		-0.4	100	1.41	172		3.7	3.7
	Sn			45.5		-0.4	100					
	S*			47.5		0.9						
WEL	P*	18	04	39		-0.5	100	2.09	189	3.3		
	Sn		05	04		1.8	96					
COB	Pn	18	04	44.4	U	-0.1	100	2.66	225		3.6	3.3
	S*		05	23		-1.1	99					

AMPLITUDES: TNZ 0.5 1.0 TRZ 0.5 0.7 KRP 2.0 2.7
MNG 3.9 5.0 WEL 0.1 COB 0.3 0.5

FELT: Ohakune (49) MM IV

78/ 594

NOV 12 $03^h13^m03^s.6$ $37°.76S$ $176°.33E$ 181 km M = 3.6
± 0.7 0.03 0.04 5 S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	03	13	29.2	U	0.3	100	0.57	113		3.3	3.1
	e(S)			48.5		0.0	100					
KRP	P	03	13	29.4		0.0	100	0.65	255		2.7*	
TUA	S	03	13	56		-0.4	100	1.23	149			3.6
GNZ	P	03	13	36.5	D	-0.4	100	1.60	124		3.8	3.9
	S		14	03		0.4	100					
TRZ	e(S)	03	14	07		0.3	100	1.84	168			3.6
MNG	iP	03	13	46.8	U	-5.2		2.93	193		4.1	3.8
	S		14	21		-8.3						
WEL	S	03	14	37		-9.9		3.73	198	3.6		
COB	eP	03	14	05		-4.8		4.34	219			2.8*
	e			50								
	S			53.5		-7.4						

AMPLITUDES: WTZ 0.7 0.5 KRP 0.6 TUA 0.4
GNZ 1.1 2.2 TRZ 0.5 MNG 2.5 1.6
WEL 0.1 COB 0.3

78/ 595

Nov 12 $19^h19^m05^s.3$ 38°.92S 175°.44E 222 km M = 4.0

± 1.1 0.06 0.09 7 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
NGZ	iP	19	19	34.8		0.3	100	0.30	152			
	S			58		1.0	99					
CNZ	iP	19	19	34.7		0.2		0.30	163			
	e(S)			58		1.0						
TUA	S	19	20	07		0.2	100	1.34	86			3.9
WTZ	P	19	19	40.8	D	-0.7	100	1.54	53		3.5	3.6
	e(S)		20	08.5		-1.0	99					
MNG	iP	19	19	43.1		0.1	100	1.70	179		4.7	4.1
	S		20	11		-1.0	99					
GNZ	P	19	19	47.1	D	0.9	100	2.04	83		3.8	3.8
	S		20	18		0.3	100					
WEL	S	19	20	23		-1.7		2.42	192	4.0		
ECZ	P	19	19	54		0.5		2.74	64		4.2	
COB	P	19	19	53.5	D	-3.0		3.01	223		3.2*	3.1*
	S		20	31		-5.3						
CMZ	S	19	21	17.5		-4.8		5.12	203			
MJZ	e	19	21	40.5				6.29	215		2.5*	2.7*
	S			42.5		-6.7						

AMPLITUDES: TUA 0.6 WTZ 0.4 0.6 MNG 17 5.8
GNZ 0.7 1.2 WEL 0.4 ECZ 0.5
COB 0.3 0.8 MJZ 0.1 0.3

78/ 596

Nov 15 $03^h00^m22^s.5$ 38°.11S 176°.77E 12 km M = 4.4

± 0.5 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
WTZ	iPg	03	00	27.1		-0.3	100	0.22	53			
WIZ	iPg	03	00	36.1	U	-0.2	100	0.67	30			
	Sg			46		0.6	100					
WNZ	Pg	03	00	39		1.4	99	0.74	225		4.3	4.2
	e(Sg)		01	03		15.3						
TUA	iPg	03	00	36.2		-1.8	99	0.76	157		4.7	4.5
	Sg			50		1.7	99					
KRP	e(Sg)	03	00	58		1.8		0.99	280			
GNZ	iPg	03	00	44.8	UE	-0.4	100	1.12	119			
	Sg		01	00.5		0.1	100					
NGZ	Pg	03	00	51		0.0	100	1.40	220			
TRZ	Pg	03	00	50.5		-1.2	100	1.44	178		4.6	4.2
	(Sg)		01	17		5.8						
CNZ	Pg	03	00	50.5		-1.4		1.45	221			
ECZ	iPg	03	00	51.3	D	-0.9	100	1.47	74		5.0	4.4
	eSg		01	13		0.9	100					
	e			21								
GSZ	Pg	03	00	52.5		-0.2		1.48	218			
MNG	Pn	03	01	06.5		1.6		2.70	201		4.5	4.1
	(P*)			10		0.3						
	Pg			18.5		1.4						
	Sg			49.5		-3.9						
WEL	e(Pg)	03	01	33		-0.8		3.53	205	3.8		
	Sg		02	26		4.6						
COB	Pn	03	01	31		4.1		4.31	225		4.5	3.8
	S*		02	26		-7.4						

CIZ	Pn	03	02	15		1.7		7.71	141					
	Sn		03	38		0.8								
AMPLITUDES:	WNZ			1.9	1.9	TUA		25	20	TRZ		7.5	4.0	
	ECZ			8.5	2.8	MNG		6.5	3.0	WEL	0.1			
	COB			0.8	0.6	CIZ		0.3	0.5					

FELT: Te Teko (34) MM IV

78/ 597

NOV 15 $03^h04^m21^s.2$ 38°.10S 176°.76E 12 km M = 4.1

± 0.5 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
WTZ	iPg	03	04	25.7		-0.3	100	0.22	58			
WIZ	iPg	03	04	34.9	U	0.1	100	0.67	31			
	Sg			45		1.1	100					
WNZ	Pg	03	04	37.7		1.4	99	0.74	224			3.8
	e(Sg)		05	00		13.6						
TUA	iPg	03	04	36.1	U	-0.8	100	0.77	157		4.3	4.3
	Sg			48.5		1.1	100					
GNZ	iPg	03	04	43.3	UE	-0.9	100	1.13	119		4.5	4.2
	Sg		05	00.5		1.0	100					
NGZ	Pg	03	04	49.5		-0.2		1.40	219			
CNZ	Pg	03	04	50		-0.6	100	1.45	220			
TRZ	Pg	03	04	50		-0.6	100	1.45	178		4.2	3.9
	e(Sg)		05	15		4.7						
ECZ	Pg	03	04	49.5		-1.5	99	1.48	75		4.5	4.0
	i			50.5	D							
	e(Sg)		05	20		9.1						
GSZ	Pg	03	04	52		0.6		1.49	218			
TNZ	Pg	03	05	05		0.2		2.16	239		3.7	
MNG	P*	03	05	08.5		-0.0		2.71	201		4.2	3.8
	e			12								
	Pg			17		1.1						
	e(Sg)			52		-0.3						
	e		06	07								
COB	Pn	03	05	30		4.5		4.31	225		4.1	
	P*			40		4.1						
CIZ	e(Sn)	03	07	38		1.7		7.73	141			

AMPLITUDES:													
	WNZ			0.8	TUA		10	10	GNZ		18	16	
	TRZ		2.8	1.9	ECZ		2.9	1.1	TNZ		0.1		
	MNG		3.1	1.5	COB		0.3		CIZ			0.3	

FELT: Te Teko (34) MM IV

78/ 598

NOV 15 $17^h28^m55^s.6$ 37°.80S 176°.88E 12 km M = 3.6

± 0.5 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
WTZ	iPg	17	28	59.5		-0.7	100	0.20	156			
WIZ	iPg	17	29	02.7	D	-0.6	100	0.37	42			
	e(Sg)			09		0.5	100					
TUA	Pg	17	29	15.2		-1.3	99	1.03	168		3.7	3.4
	Sg			31		0.5	100					
WNZ	Pg	17	29	16.5		-0.1	100	1.03	216		3.7	
GNZ	Pg	17	29	21.5		0.9	100	1.23	134		3.8	3.3
	Sg			43.5		6.2						
NGZ	Pg	17	29	31		0.9	100	1.70	215			
	e			35.5								

TRZ	Pg	17	29	30		-1.1		1.75	182			3.6
MNG	(P*)	17	29	52.5		4.2		3.01	201	3.6		
	Pg			57		0.3						

AMPLITUDES: TUA 1.3 0.6 WNZ 0.2 GNZ 3.3 1.5
TRZ 0.6 MNG 0.6

78/ 599

NOV 15 $18^h05^m03^s.9$ 37°.73S 176°.76E 12 km M = 4.0
± 0.9 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
WTZ	iPg	18	05	09.5		-1.0	100	0.31	145			
WIZ	iPg	18	05	12.7		0.6	100	0.40	59			
	e			17								
	Sg			18		0.3	100					
WNZ	ePg	18	05	25		0.0	100	1.04	210	3.7		
	e			27								
TUA	Pg	18	05	25		-1.6	99	1.12	164	4.1	3.9	
	Sg			44		2.3	98					
GNZ	Pg	18	05	30		-1.2	100	1.35	133	4.4	4.1	
	i			31.5								
	Sg			55.5		6.0						
ECZ	ePg	18	05	33		0.4	100	1.41	89	4.2	4.0	
	e			38								
	(Sg)			54.5		2.8						
NGZ	Pg	18	05	39.5		1.0	100	1.71	212			
	e			47								
TRZ	P*	18	05	37		0.8		1.82	179	4.1		
	Pg			40		-0.8	100					
MNG	ePg	18	06	02		-3.6		3.05	199	3.8		

AMPLITUDES: WNZ 0.2 TUA 2.2 1.6 GNZ 10 7.0
ECZ 1.3 0.9 TRZ 1.1 MNG 0.8

FELT: Whakatane (27)

78/ 600

NOV 15 $18^h40^m07^s.6$ 37°.80S 176°.87E 12 km M = 3.7
± 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
WTZ	iPg	18	40	12.2	U	-0.2	100	0.21	154			
	e(Sg)			16		0.4						
WIZ	iPg	18	40	15.5	D	0.1	100	0.37	44			
	Sg			21		0.4	100					
WNZ	Pg	18	40	29.5		0.9	99	1.03	216	3.7		
TUA	Pg	18	40	28		-0.7	100	1.03	168	3.9	3.5	
	Sg			43.5		0.8	100					
GNZ	Pg	18	40	33		0.1	100	1.24	133	4.1	3.6	
	e			34.5								
	Sg			57		7.3						
ECZ	P*	18	40	30.5		-1.1	99	1.33	86	3.8	3.5	
	Pg			35		0.3	100					
	e			38								
	e(Sg)		41	06		13.3						
NGZ	ePg	18	40	41.5		-0.6	100	1.70	215			
TRZ	Pg	18	40	43		-0.2	100	1.75	181			
MNG	Pg	18	41	04.5		-4.2		3.02	200	3.7		

AMPLITUDES: WNZ 0.2 TUA 2.0 0.9 GNZ 6.5 2.9
ECZ 0.6 0.4 MNG 0.8

78/ 601

NOV 16 $00^h33^m48^s.7$ 44°.38S 168°.12E 0 km M = 4.0

± 0.9 0.05 0.06 7 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	iPg	00	33	55.6	U	0.3	100	0.32	207			
	(Sg)		34	01		1.3						
ROX	P*	00	34	14.7		-0.0	100	1.39	143		4.6	3.9
	S*			34		0.3	100					
MNW	P*	00	34	16		0.3	100	1.45	194	3.7	4.1	4.1
	S*			35.5		0.1	100					
HHP	P*	00	34	19.4	D	1.1	100	1.59	89			
	S*			40.5		0.6	100					
MJZ	P*	00	34	20.8		0.2	100	1.74	78		3.8*	3.9*
	Pg			24		0.3	100					
	S*			44		0.1	100					
	Sg			47		-0.0	100					
OMZ	P*	00	34	29.4		2.4	98	2.11	110		3.9	3.6
	eS*			57		1.8	99					
OBZ	ePn	00	34	31		0.7	100	2.53	180			
	Sn		35	05		3.6	73					
KAI	ePg	00	34	50.5		0.6		3.02	53	3.8		
	S*		35	26		3.2						
	(Sg)			42		11.3						
CMZ	e(Pn)	00	34	44.5		2.9		3.36	78			
	Sn		35	24		2.7						
	e(Sg)			42		0.2						
COB	Pn	00	35	00		-0.4		4.73	48		4.3	3.6
	Sn			55		0.7						
MNG	Pn	00	35	30.9		4.8		6.61	58		4.1	

AMPLITUDES: ROX 12 5.5 MNW 1.3 5.0 12 MJZ 3.5 8.0
OMZ 1.0 1.1 KAI 0.3 COB 0.5 0.4
MNG 0.5

78/ 602

NOV 16 $04^h16^m57^s.8$ 40°.22S 176°.52E 12 km M = 3.9

± 0.3 0.01 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
TRZ								0.70	19		3.7	4.0
CAZ	Pg	04	17	12.3	U	-0.3	100	0.72	198			
	Pg			18.8		6.2						
	Sg			23		0.6	100					
	Sg			32		9.6						
	e			34.5								
MNG	iP*	04	17	14.2	D	0.0	100	0.89	243		3.9	4.0
	S*			26.5		0.3	100					
GSZ	P*	04	17	19.5		0.3	100	1.19	322			
	S*			35.5		0.5	100					
NGZ	iP*	04	17	20.2		-0.1	100	1.25	326			
	S*			36		-0.9	100					
TUA	Pg	04	17	30		2.0	98	1.49	19		3.8	3.8
	S*			45.5		1.4	99					
WNZ	P*	04	17	27		0.4.	100	1.62	348		4.2	4.3
	S*			48.5		0.5	100					
WEL	ePg	04	17	33		0.6		1.71	231	3.6		
	Sn			46.5		-1.7	99					
TNZ	P*	04	17	31		-1.2	100	1.95	301		4.1	4.0

	Pg			36.5		-0.7					
	S*			58		0.1	100				
	Sg		18	03		-0.5					
GNZ	P*	04	17	32		-0.3	100	1.95	37	3.7	3.6
	Pg			39.5		2.1					
	Sn			54		-0.1	100				
WTZ	Pn	04	17	33.5		-0.7	100	2.26	9	3.6	3.9
	P*			40		2.4					
	Sn			59		-2.5	95				
KRP	Pn	04	17	36		-0.3	100	2.42	341	4.3	4.1
	P*			41.5		1.3					
	S*		18	14.5		2.6					
COB	P*	04	17	51		0.6	100	3.01	252	4.2	3.8
	S*		18	31		1.2	100				
	Sg			38		-1.3					
MJZ	ePn	04	18	23		-0.5		5.88	228	3.6*	3.6*
	Sn		19	24		-4.3					
	S*			50		-5.6					

AMPLITUDES:									
TRZ	4.0	11	MNG		17	28	TUA	0.9	1.0
WNZ	0.4	0.6	WEL	0.5			TNZ	1.0	1.3
GNZ	1.2	1.5	WTZ		0.9	1.6	KRP	1.5	0.7
COB	1.1	1.4	MJZ		0.2	0.4			

FELT: Waipawa (60) MM IV

78/ 603

NOV 17 $09^h00^m04^s.7$ 39°.29S 175°.24E 12 km M = 2.9

± 0.3 0.02 0.02 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
CNZ	iPg	09	00	10.6		0.4	100	0.25	69			
	Sg			15		1.1	100					
GSZ	iPg	09	00	10.8		0.3	100	0.27	87			
	Sg			15		0.6	100					
NGZ	iPg	09	00	11.3		0.1	100	0.31	70			
	Sg			16		0.4	100					
TNZ	P*	09	00	18		0.6	100	0.67	278		2.2	2.4
	S*			27		0.3	100					
	Sg			29		1.1	100					
MNG	P*	09	00	28.6	D	-0.1	100	1.34	172		3.2	3.0
	eS*			47		0.5						
	Sg			48.5		-1.5	99					
KRP	P*	09	00	28		-1.4	99	1.39	10		3.4	3.5
	S*			46		-1.8	99					
WEL	S*	09	01	08.5		1.4		2.02	190			
GNZ	Sg	09	01	25		4.1		2.26	74			3.0
COB	S*	09	01	25		-0.3		2.64	226			2.5

AMPLITUDES:									
TNZ	0.1	0.2	MNG		1.6	1.4	KRP	0.6	0.7
GNZ		0.1	COB			0.1			

78/ 604

NOV 17 $16^h16^m14^s.4$ 38°.38S 175°.96E 212 km M = 3.8

± 1.9 0.07 0.11 18 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	P	16	16	43.0		-0.2	100	0.57	323		2.7*	
NGZ	P	16	16	46.2		1.6	100	0.85	199			
WTZ	P	16	16	43.3		-1.6	100	0.90	64		3.9	3.6
TUA	P	16	16	45.5		-0.2	100	1.03	115		3.8	3.9

TRZ	P		16	16	49.5		1.4	100	1.35	151		3.5	3.9
	e			17	11.4								
	S				16.1		1.8	99					
GNZ	P		16	16	51.0		0.4	100	1.64	100		3.5	3.8
	e			17	08.1								
	S				17.1		-1.5	100					
MNG	iP		16	16	57.8	U	0.9	100	2.27	189		4.1	3.9
	e			17	19.5								
	S				29.1		-0.7	100					
WEL	eS		16	17	43.6		-1.8	99	3.05	197	3.5		
COB	eS		16	17	58.7		-0.1	100	3.68	222			2.5•

AMPLITUDES: KRP 0.5 WTZ 1.6 0.9 TUA 0.6 0.7
TRZ 0.2 1.2 GNZ 0.5 1.7 MNG 3.1 2.7
WEL 0.1 COB 0.2

78/ 605

NOV 17 $18^h25^m54^s.8$ 37°.34S 178°.76E 12 km M = 3.6
± 1.3 0.04 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
ECZ	ePg	18	26	04.0		1.0	100	0.39	205		3.2	3.5
	Sg			10.4		1.9	99					
WIZ	ePn	18	26	17.2		-0.3	100	1.26	261			
	P•			18.1		0.6	100					
GNZ	Pn	18	26	18.8		-1.0	100	1.43	204		3.7	3.8
	Sn			38.7		0.2	100					
WTZ	Pn	18	26	20.8		-0.6	100	1.55	245		4.0	3.9
	P•			21.5		-0.8	100					
	Pg			24.5		-1.6	99					
KRP	ePn	18	26	36.1		-0.0	100	2.62	256		3.4	
GBZ	Pn	18	26	40.3		0.9	100	2.86	292			
	P•			46.9		2.1	99					
NGZ	Pn	18	26	42.0		-0.4	100	3.09	232			
	Pg			55.2		-2.0	99					
	Sn		27	18.8		0.5	100					
CNZ	Pn	18	26	43.0		-0.1	100	3.14	233			
WEL								5.01	217	3.8		

AMPLITUDES: ECZ 1.9 5.0 GNZ 1.8 3.8 WTZ 4.1 3.1
KRP 0.2 WEL 0.1

78/ 606

NOV 17 $20^h43^m25^s.5$ 45°.08S 167°.59E 85 km M = 3.1
± 0.4 0.02 0.04 3 S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	P	20	43	40.2		0.4	100	0.48	30		3.0	2.9
	S			50.8		0.1	100					
MNW	P	20	43	42.2		0.3	100	0.70	178	2.9		3.1
	S			53.5		-0.7	99					
ROX	P	20	43	49.5		0.8	99	1.29	108		3.4	3.1
	S		44	06.7		0.5	100					
THP	iP	20	43	54.4	U	-0.0	100	1.72	73			
	S		44	15.5		-0.4	100					
DMP	iP	20	43	54.7	U	0.2	100	1.73	68			
HGP	P	20	43	56.6		0.1	100	1.89	59			
TMP	P	20	43	57.4		-0.2	100	1.96	68			
RHP	iP	20	43	58.4	U	-0.2	100	2.03	62			
HHP	P	20	43	59.0		-0.6	99	2.11	70			

AMPLITUDES: MSZ 3.7 5.8 MNW 0.8 4.2 ROX 0.8 0.9

78/ 607

NOV 18 $16^h34^m18^s.2$ 44°.53S 168°.09E 12 km M = 3.0
± 0.3 0.01 0.02 R S.E. of RES. 0.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	Pg	16	34	22.2		-0.4	100	0.19	222			
DMP	P*	16	34	40.8		0.1	100	1.25	85			
ROX	P*	16	34	41.3		-0.0	100	1.29	138		2.8	3.3
	S*			58.5		0.1	100					
MNW	P*	16	34	42.3		0.8	98	1.30	195	3.1		
	Sg		35	01.5		-0.4	100					
HGP	eP*	16	34	41.9		-0.2	100	1.33	72			
TMP	P*	16	34	44.8		0.3	100	1.47	82			
	Sn		35	02.3		-0.6	99					
RHP	P*	16	34	45.0		0.1	100	1.49	74			
HHP	eP*	16	34	47.3		0.1	100	1.63	84			
MJZ								1.79	73		2.8*	2.9*
OMZ								2.08	106		2.9	2.9

AMPLITUDES: ROX 0.2 1.8 MNW 0.4 MJZ 0.4 0.8
OMZ 0.1 0.2

78/ 608

NOV 18 $20^h56^m14^s.8$ 36°.93S 177°.21E 261 km M = 4.3
± 0.8 0.04 0.07 5 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	20	56	51.4		-0.2	100	1.07	189		4.3	4.3
	e		57	16.5								
ECZ								1.31	126		4.0	4.8
GBZ	P	20	56	53.1		-1.7	99	1.56	297			
KRP	P	20	56	56.5		0.9	100	1.66	233		3.0*	
	S		57	28.5		1.3	99					
GNZ	P	20	56	56.6		-0.4	100	1.84	160		3.7	3.4
	S		57	28.6		-1.1	100					
TUA	P	20	56	58.4		1.1	100	1.88	181		4.3	4.4
NGZ	eP	20	57	04.3		0.3	100	2.58	209			
	i			06.3								
	S			41.2		-1.0	100					
TRZ	P	20	57	05.8		1.2	100	2.64	186		4.2	4.6
	eS			44.4		1.1	100					
TNZ								3.18	224		3.3*	
MNG	P	20	57	18.6		-0.1	100	3.92	200		5.2	4.9
	S		58	08.2		-0.2	100					
WEL	S	20	58	24.6		-1.4	99	4.75	203	4.5		
COB	P	20	57	36.6		-0.1	100	5.43	219		3.8*	3.4*
MJZ	P	20	58	18.4		0.4	100	8.73	214		3.1*	3.0*
HHP	P	20	58	22.0		-0.1	100	9.05	213			

AMPLITUDES: WTZ 3.0 3.3 ECZ 0.5 3.7 KRP 0.6
GNZ 0.5 0.4 TUA 0.8 1.0 TRZ 0.4 2.2
TNZ 0.2 MNG 14 11 WEL 0.5
COB 0.7 1.1 MJZ 0.3 0.4

78/ 609

NOV 22 $03^h30^m24^s.8$ 39°.25S 175°.23E 12 km M = 3.5
± 0.3 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
CNZ	iPg	03	30	30.7		0.4	100	0.25	79			
	eSg			35		1.0	100					
GSZ	iPg	03	30	30.9		0.1	100	0.28	96			
	e(Sg)			35		0.1						
NGZ	iPg	03	30	31.4		0.1	100	0.31	78			
	Sg			36.5		0.8	100					
TNZ	P*	03	30	37.5		0.2	100	0.67	275		3.2	3.2
	eS*			46		-0.3						
	Sg			49		1.6	99					
TRZ								1.27	104			3.2
KRP	P*	03	30	48.2		-0.7	100	1.35	10		4.1	4.2
	S*		31	05.5		-1.3	99					
MNG	P*	03	30	48.6	U	-0.9	100	1.39	172		3.6	3.7
	S*		31	07		-0.9	100					
	i			09.5								
WEL	eP*	03	31	01		-0.2		2.07	190	3.2		
	S*			27		-1.4						
COB	Pn	03	31	06		-0.5		2.65	225		3.6	3.3
	S*			45		-1.0						
GBZ	eP*	03	31	19		1.2		3.03	4			

AMPLITUDES:								
TNZ	0.9	1.4	TRZ		0.3	KRP	3.3	3.5
MNG	3.8	5.2	WEL	0.1		COB	0.3	0.5
GBZ	0.1							

78/ 610

NOV 22 $16^h03^m24^s.2$ 37°.71S 176°.60E 166 km M = 4.0
± 0.5 0.02 0.03 3 S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	16	03	47.3	U	0.2	100	0.41	131		3.4	3.6
	S		04	05		0.3	100					
WIZ	P?	16	03	48		0.5		0.50	69			
	eS		04	04.5		-0.9	99					
KRP	iP	16	03	49.6	USW	0.0	100	0.86	256		3.7*	
	S		04	09.5		0.3	100					
WNZ	P	16	03	50		-0.6	100	1.00	203		3.8	
TUA	P	16	03	52.0	D	-0.1	100	1.18	158		3.8	4.0
	S		04	13.5		-0.1	100					
GNZ	P	16	03	55.5		0.6	100	1.46	130		3.8	4.3
	S		04	18.5		0.2	100					
ECZ	P	16	03	57.0	D	1.3	98	1.55	90		4.1	3.8
	eS		04	24.5		4.5						
	e			36								
CNZ	iP	16	03	56.5		-0.8	100	1.70	209			
	S		04	28		5.2						
GBZ	eP	16	03	57.5		-0.2	100	1.74	329			
TRZ	P	16	03	58		-0.9	99	1.84	175		3.9	4.0
	S		04	25.5		-0.1	100					
	e			28								
TNZ	P	16	04	03.5		-0.4	100	2.28	229			2.7*
	S			35.5		1.0	99					
MNG	iP	16	04	09.8	U	-3.4		3.03	196		4.6	4.2
	S			45.5		-5.3						
WEL	e(P)	16	04	19.5		-4.0		3.84	201	4.4		
	S		05	03		-6.3						
COB	P	16	04	27		-5.2		4.51	220		2.9*	3.5*
	S		05	18		-6.7						

CRZ	eP	16	04	33.5		0.6		4.56	315				
KAI	S	16	05	53.5		-12.3		6.25	218	3.4*			
MJZ	S	16	06	30		-13.0		7.80	215				3.1*

AMPLITUDES:											
WTZ		1.1	2.1	KRP		5.6		WNZ		0.1	
TUA		0.8	1.2	GNZ		1.3	6.5	ECZ		1.0	0.5
GBZ		0.2		TRZ		0.5	1.2	TNZ			0.1
MNG		8.0	4.2	WEL	0.6			COB		0.1	1.6
KAI	0.2			MJZ		0.6					

78/ 611

NOV 22 $22^h09^m40^s.1$ 37°.93S 176°.17E 213 km M = 3.9

± 1.5 0.10 0.08 11 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	iP	22	10	09.3	U	0.5	100	0.50	270		3.2*	
WTZ	P	22	10	08.3	U	-1.1	100	0.65	95		3.9	3.8
	S			31		-1.1	100					
TUA	P	22	10	12		-0.5	100	1.17	139		3.6	3.6
	S			37		-0.6	100					
NGZ	P	22	10	14		0.3	100	1.32	199			
	S			41		1.3	100					
CNZ	P	22	10	14		0.0		1.36	201			
	e(S)			42		1.8						
GNZ	iP	22	10	15.8	U	-0.5	100	1.62	117		4.2	4.2
	S			44		-0.3	100					
ECZ	S	22	10	51		2.2	98	1.90	84			4.1
MNG	P	22	10	26		-1.8		2.74	191			
	(S)		11	01		-3.8						
WEL	S	22	11	17.5		-3.7		3.53	197	3.8		
COB	S	22	11	30.5		-3.9		4.13	219		2.8*	3.0*

AMPLITUDES:											
KRP		1.5		WTZ		1.7	1.5	TUA		0.3	0.3
GNZ		2.6	4.2	ECZ			0.6	WEL	0.1		
COB		0.1	0.5								

78/ 612

NOV 23 $02^h07^m23^s.8$ 40°.33S 175°.77E 67 km M = 3.6

± 1.1 0.03 0.09 14 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	P	02	07	35		-0.7	100	0.36	218			
GSZ	P	02	07	43.3		-0.1	100	1.06	352			
	S			58		-0.1						
CNZ	P	02	07	44.2		-0.3	100	1.14	351			
	S		08	00		-0.0	100					
NGZ	iP	02	07	44.6		-0.0	100	1.15	354			
	S		08	00.5		0.3	100					
WEL	eP	02	07	45		-0.5	100	1.22	218	3.6		
	S		08	03.5		1.7	99					
TNZ	P	02	07	49.2	U	-1.0	100	1.57	316		3.8*	3.7*
	e		08	08.5								
	S			10		-0.0	100					
TUA	e(P)	02	07	52		-2.1		1.86	35		3.5	
	e		08	03								
KRP	P	02	08	04.5		2.6	96	2.41	356		2.8*	3.0*
	e			10								
	S			30		-0.2	100					
COB	P	02	08	00		-2.1	99	2.43	251		3.8*	3.3*
	e			03.5								
	e			10.5								

	S			31.5			0.8	100					
AMPLITUDES:	WEL	1.0			TNZ		1.4	1.6	TUA		0.3		
	KRP		0.4	0.7	COB		1.5	1.8					

78/ 613

NOV 23 $02^h14^m43^s.3$ 40°.07S 174°.98E 26 km M = 3.7

± 0.2 0.01 0.02 2 S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MNG	P*	02	14	57		0.9	99	0.67	145			
GSZ	P*	02	15	00.5		0.2	100	0.92	31			
	(S*)			14.5		1.6						
CNZ	P*	02	15	01.0		-0.2	100	0.97	27			
	S*			15		0.6	100					
TNZ	P*	02	15	01.4	D	-0.1	100	1.00	332		3.5	3.7
	S*			15.5		0.5	100					
NGZ	P*	02	15	01.5		-0.4	100	1.02	29			
	S*			15.5		-0.0	100					
WEL	P*	02	15	05		-0.4	100	1.22	187	3.5		
	S*			21.5		-0.4	100					
COB	Pn	02	15	14.6		-0.1	100	1.99	238		4.1	3.4
	Sn			39		0.8	99					
TUA	S*	02	15	48.5		0.4	100	2.11	54		3.4	3.6
KRP	Pn	02	15	16.5		-0.9	99	2.19	12		3.9	4.0
	(P*)			21		-0.8	99					
	Sn			43		0.0	100					

AMPLITUDES:	TNZ		1.1	2.5	WEL	0.9			COB		1.7	1.4	
	TUA		0.2	0.3	KRP		0.7	0.7					

78/ 614

NOV 24 $03^h52^m10^s.3$ 40°.78S 173°.92E 126 km M = 3.9

± 0.6 0.03 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
WEL	eP	03	52	32.8		1.4	99	0.82	129	3.8		
	S			47.2		-0.3	100					
MNG	iP	03	52	36.7		1.5	99	1.20	83			
	S			53.5		-0.5	100					
TNZ	P	03	52	41.3		1.2	100	1.63	13		4.4*	4.1*
	S		53	02.5		-0.1	100					
KKY	P	03	52	40		-0.3		1.65	186			
	S		53	00		-3.0						
GSZ	P	03	52	45.0		0.8	100	1.97	41			
	eS		53	10.2		0.6	100					
CNZ	P	03	52	45.1		0.4	100	2.02	39			
	e		53	13								
NGZ	P	03	52	45.7		0.4	100	2.06	40			
	eS		53	11.0		-0.5	100					
TRZ	eS	03	53	22		-0.7	100	2.54	62			3.9
KAI	S	03	53	23.4		0.1	100	2.56	226	3.6*		
CMZ	eP	03	52	57.5		0.2	100	2.97	198			
	S		53	32.0		-0.7	100					
KRP	P	03	52	59.0		-0.2	100	3.11	24		3.3*	3.3*
	S		53	35.0		-1.2	100					
WTZ	eS	03	53	48		-1.4	100	3.67	41			4.0
HHP	P	03	53	18.5		1.8	99	4.43	215			
	S		54	05.0		-2.7	95					

AMPLITUDES:	WEL	1.7			TNZ		4.7	3.5	TRZ			0.8	

KAI 0.7 KRP 1.1 1.0 WTZ 0.6

78/ 615

NOV 24 $10^h33^m09^s.4$ 39°.25S 174°.90E 12 km M = 3.6
± 0.8 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
CNZ	Pg	10	33	21.4		1.5	99	0.50	85			
	eSg			27.0		0.2	100					
GSZ	Pg	10	33	21.3		0.9	100	0.53	93			
NGZ	Pg	10	33	22.2		1.3	100	0.56	83			
	Sg			27.0		-1.5	99					
KRP	Pg	10	33	38.2		0.1	100	1.41	21		3.6	3.7
	Sg			55.8		-1.4	100					
MNG	Pg	10	33	39.0		0.4	100	1.44	162		4.1	3.7
	Sg			56.4		-1.6	99					
	i			59.2								
TRZ	ePg	10	33	40.5		0.3	100	1.52	102		3.4	3.6
	e			45.5								
	Sg		34	00.8		0.1	100					
WEL	ePg	10	33	51		0.4		2.03	183	3.5		
	eS*		34	15		2.9						

AMPLITUDES: KRP 2.7 4.0 MNG 10 5.8 TRZ 0.2 0.4
WEL 0.3

78/ 616

NOV 25 $09^h50^m13^s.3$ 33°.04S 178°.28W 248 km M = 4.5
± 1.7 0.10 0.23 35 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	eP	09	51	39		-0.7	100	5.81	218			
WTZ	P	09	51	44.0		-1.3	100	6.26	217		4.6	4.6
	eS		52	56		-1.3	100					
GNZ	P	09	51	47		0.6	100	6.35	207		4.6	4.4
	eS		52	59		-0.2	100					
TUA	eP	09	51	52		-0.7	100	6.85	211		4.7	
KRP	eP	09	51	57.5		2.7	99	7.02	224		3.1*	
TRZ	eP	09	52	02		-0.4	100	7.61	210		4.6	4.5
	eS		53	31		3.2	97					
CRZ	eP	09	52	03		-0.0	100	7.66	257		3.5*	
MNG	eP	09	52	21		0.1	100	9.07	212		3.9	4.3
	eS		54	01		-0.0	100					
WEL	eS	09	54	19		-1.6	100	9.93	212	4.7		

AMPLITUDES: WTZ 0.7 0.7 GNZ 0.7 0.8 TUA 0.3
KRP 0.3 TRZ 0.2 0.3 CRZ 0.2
MNG 0.2 0.6 WEL 0.2

78/ 617

NOV 26 $03^h07^m48^s.2$ 35°.32S 177°.16E 611 km M = 4.2
± 0.9 0.13 0.16 10 S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	eP	03	09	07		0.3	99	2.66	183		4.3	4.1
	S		10	09		-0.2	100					
GNZ	eP	03	09	10.5		-0.3	100	3.38	168		4.2	4.4
	eS		10	16.7		0.2	100					
TUA	e(S)	03	10	24		6.4		3.48	180			4.4
MNG								5.45	194		4.0	4.0
COB	eS	03	11	03		0.0	100	6.73	210			3.1*

AMPLITUDES: WTZ 0.4 0.3 GNZ 0.3 0.8 TUA 0.2
MNG 0.4 0.5 COB 0.3

78/ 618

NOV 26 $13^h44^m15^s.3$ 33°.88S 179°.29W 242 km M = 4.1
± 2.9 0.27 0.62 55 S.E. of RES. 2.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	eP	13	45	31		-1.6	100	5.09	215		4.2	
GNZ	eP	13	45	33		-1.3	100	5.24	204		4.1	4.0
	S		46	36		0.1	100					
TUA	eP	13	45	40		-0.2	100	5.71	209		4.3	4.3
	eS		46	48		1.6	100					
KRP	eP	13	45	42		0.2	100	5.83	225		2.9*	
MNG	eP	13	46	11		2.7	99	7.92	210		3.8	3.7
	e			15								
	eS		47	35		-1.8	100					

AMPLITUDES: WTZ 0.4 GNZ 0.3 0.4 TUA 0.2 0.2
KRP 0.2 MNG 0.2 0.2

78/ 619

NOV 26 $16^h51^m52^s.8$ 38°.63S 176°.08E 12 km
± R R R R S.E. of RES. ND

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	Pg	16	51	55.0		0.0	100	0.00	0			

AMPLITUDES: WNZ 5.8

FELT: Wairakei (41) Magnitude less than 3.

78/ 620

NOV 27 $10^h09^m26^s.8$ 37°.51S 176°.82E 182 km M = 4.4
± 1.1 0.05 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	10	09	51.1		-0.9	100	0.49	164		3.8	4.2
	eS		10	09.3		-2.0	99					
KRP	iP	10	09	57.4		1.8	100	1.10	247		3.9*	
	S		10	18.4		0.6	100					
WNZ	eP	10	09	57.5		0.6	100	1.25	206		4.2	
TUA	P	10	09	58.0		0.4	100	1.32	169		4.0	4.4
	i		10	00.2								
	S			21		-0.3	100					
ECZ								1.39	98		4.7	4.5
GNZ	P	10	09	59.7		0.7	100	1.48	140		4.2	4.7
	S		10	22.7		-1.1	100					
GBZ	P	10	09	59.7		-1.2	100	1.67	320			
NGZ	P	10	10	04.8		1.3	100	1.92	209			
CNZ	P	10	10	05.5		1.6	100	1.96	210			
TRZ	P	10	10	06.0		1.2	100	2.04	180		4.6	4.5
	i			10.8								
	eS			36		1.8	100					
TNZ	eP	10	10	13.0		2.4	99	2.55	228		3.7*	
MNG	P	10	10	19.0		-0.5	100	3.28	198		4.5	4.4
	i			26.7								
	S		11	00.3		0.2	100					
WEL	eP	10	10	29		-0.9	100	4.09	202	4.4		
	eS		11	18		-0.6	100					
COB	eP	10	10	36		-2.6	99	4.78	220		3.4*	3.5*
	S		11	32		-2.2	99					

	i			36							
KAI	eS	10	12	09		-5.8		6.51	218	3.6*	

AMPLITUDES: WTZ 2.2 6.0 KRP 7.5 WNZ 0.2
TUA 0.9 2.2 ECZ 4.8 2.7 GNZ 3.0 15
GBZ 0.8 TRZ 1.8 3.2 TNZ 0.6
MNG 5.0 5.7 WEL 0.5 COB 0.3 1.3
KAI 0.3

78/ 621

Nov 27 $17^h07^m10^s.4$ $41°.12S$ $174°.14E$ 56 km M = 4.0
± 0.4 0.03 0.03 7 S.E. of RES. 1.0

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TCW	iP	17	07	19.0		-0.5	100	0.13	130			
MRW	iP	17	07	21.5		-0.4	100	0.44	104			
WHW	iP	17	07	22.3		-0.1	100	0.49	111			
WEL	P	17	07	23.0		0.4	100	0.50	109	3.9		
	S			32.4		0.8	100					
BHW	P	17	07	23.9		0.0	100	0.62	118			
KIW	iP	17	07	23.9		-0.3	100	0.64	66			
WDW	iP	17	07	24.3		-0.1	100	0.67	103			
CAW	iP	17	07	24.9		0.0	100	0.70	89			
COB	P	17	07	29.4		-0.2	100	1.06	271			
	S			44.0		0.1	100					
MNG	P	17	07	30.0		-0.6	100	1.14	64		3.9	4.1
	S			46.0		0.2	100					
KKY	P	17	07	35.7		2.4	93	1.34	194			
	S			48.2		-2.4	93					
TNZ	eP	17	07	42.5		0.8	100	1.94	6			
CNZ	eP	17	07	45.0		-0.4	100	2.20	30			
NGZ	P	17	07	45.8		-0.2	100	2.25	31			
KAI	eS	17	08	19		0.6	100	2.47	235	3.5*		
TRZ	eP	17	07	52		1.2	100	2.58	53			
KRP	eP	17	08	00.4		-1.6	99	3.37	19		2.9*	
GNZ	eS	17	08	49.5		-4.5	0	3.89	52			

AMPLITUDES: WEL 10 MNG 12 25 KAI 0.6
KRP 0.4

78/ 622

Nov 28 $17^h21^m55^s.2$ $39°.68S$ $175°.43E$ 12 km M = 3.2
± 0.4 0.02 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
GSZ	Pg	17	22	04.8		0.8	100	0.42	17			
	iSg			09.5		-0.3	100					
CNZ	Pg	17	22	05.7		0.4	100	0.49	11			
NGZ	Pg	17	22	06.0		0.1	100	0.51	16			
	iSg			14.0		1.0	100					
MNG	Pg	17	22	13.8		-0.5	100	0.94	178		3.4	2.8
	Sg			26.2		-0.8	100					
TNZ	ePg	17	22	17		2.5	98	0.95	301		2.7	2.8
	eSg			26		-1.4	100					
WEL	eS*	17	22	48		0.7	100	1.68	197	3.1		
KRP	P*	17	22	26.0		-0.3	100	1.75	3		3.8	3.7
	eS*			47.5		-2.0	99					
	e			55								
COB	eP*	17	22	36.5		-2.5		2.49	235		3.3	2.8
	eS*		23	09		-2.6						

AMPLITUDES:	MNG	5.3	1.8	TNZ	0.2	0.3	WEL	0.2
	KRP	1.0	0.6	COB	0.2	0.2		

FELT: Parapara Okeore (57) MM IV

78/ 623

Nov 28 $19^h57^m28^s.3$ 38°.41S 175°.89E 166 km M = 4.1
± 1.3 0.05 0.06 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	19	57	51.0		-0.9	100	0.56	330		3.4*	2.7*
	S		58	09.7		-0.4	100					
NGZ	P	19	57	55.1		1.8	99	0.80	195			
CNZ	P	19	57	55.4		1.9		0.83	199			
GSZ	P	19	57	56.2		2.2	99	0.90	195			
WTZ	eP	19	57	52.5		-2.0	99	0.97	64		3.4	3.8
	S		58	14.5		-0.2	100					
TUA	P	19	57	56.0		0.7	100	1.06	112		4.1	
TRZ	P	19	57	59.5		1.5	100	1.35	148		4.5	3.8
	e(S)		58	24		3.3						
TNZ	P	19	58	00.1		1.6	100	1.41	236		4.3*	3.0*
	eS			23.7		2.0						
GNZ	P	19	58	01.2		-0.2	100	1.69	99		4.0	4.3
	S			26.2		-0.7	100					
MNG	P	19	58	07.5		0.1	100	2.22	188			
	e			33								
	S			37		-0.5	100					
ECZ								2.22	72		4.0	4.2
MNG								2.22	188		4.4	4.5
WEL	S	19	58	53.0		-1.3	100	3.00	196	4.4		
COB	eP	19	58	24.0		-0.8	100	3.62	221		3.6*	3.5*
	S		59	07		-1.3	100					
KAI	eS	19	59	44		-4.6		5.35	218	3.4*		

AMPLITUDES:	KRP	3.0	0.7	WTZ	0.7	2.0	TUA	1.7	
	TRZ	2.5	1.2	TNZ	3.5	0.3	GNZ	1.8	5.5
	ECZ	0.5	0.8	MNG	7.5	13	WEL	0.9	
	COB	0.6	2.1	KAI	0.2				

78/ 624

Nov 29 $08^h10^m38^s.5$ 38°.10S 176°.47E 145 km M = 3.4
± 1.3 0.06 0.05 8 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	10	57.9		-1.1	100	0.43	74		3.3	3.1
	eS		11	13.5		-1.3	100					
KRP	P	08	11	01.0		0.1	100	0.76	283		3.2*	
	S			18.7		0.6	100					
NGZ	eP	08	11	08.0		2.5	96	1.27	212			
GNZ	P	08	11	06.5		0.3	100	1.34	114		3.4	3.6
	S			28.0		0.6	100					
TRZ	e(S)	08	11	37		6.9		1.48	169			3.5
MNG	eP	08	11	21.5		-0.1	100	2.63	197		3.4	3.4
	S			55.0		0.6	100					
WEL	eS	08	12	12		-1.2	100	3.44	202	3.8		
COB	eP	08	11	41		-0.5	100	4.15	223		3.1*	2.8*
	eS		12	29		-0.9	100					

AMPLITUDES:	WTZ	1.1	0.8	KRP	1.8		GNZ	0.8	1.8
	TRZ		0.6	MNG	0.6	0.8	WEL	0.2	
	COB	0.2	0.3						

78/ 625

Nov 30 $21^h42^m03^s.5$ $34°.87$S $179°.95$W 33 km M = 4.3
± 3.5 0.17 0.49 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	21	42	59.7		-1.5	100	3.97	218		4.3	
GNZ	P	21	43	00.8		-2.2	99	4.10	203		4.4	4.0
	S			49.5		1.5	100					
TUA								4.56	210		4.6	
KRP	P	21	43	11.0		-0.8	100	4.75	229		4.9	
CNZ	eP	21	43	26.5		2.7	99	5.62	219			
TNZ	eP	21	43	33.0		0.6	100	6.25	225			
	e			38								
MNG	eP	21	43	41		1.4	100	6.79	211		4.0	4.1
	eS		44	51		-1.5	100					

AMPLITUDES: WTZ 1.3 GNZ 1.1 0.8 TUA 0.6
KRP 0.9 MNG 0.4 0.6

78/ 626

Nov 30 $21^h46^m38^s.7$ $41°.72$S $174°.12$E 8 km M = 4.2
± 0.5 0.03 0.03 4 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TCW	iPg	21	46	49.8		0.5	100	0.52	13			
WHW	iPg	21	46	51.8		0.3	100	0.63	48			
BHW	iPg	21	46	52.4		0.6		0.65	61			
WEL	Pg	21	46	52.3		0.3	100	0.65	49	4.4		
	Sg		47	01.3		0.5	100					
MRW	iPg	21	46	52.1		0.1	100	0.66	42			
KKY	iPg	21	46	57.1		2.8	97	0.76	204			
WDW	iPg	21	46	54.6		-0.3	100	0.80	56			
MOW	iPg	21	46	56.4		-0.6		0.90	71			
CAW	iPg	21	46	59.9		2.2		0.94	50			
KIW	iPg	21	46	58.1		-1.7	99	1.04	35			
COB	Pg	21	47	02.4		-1.0	100	1.22	301		4.1	3.6
	Sg			19.7		-0.1	100					
MNG	P*	21	47	04.2		-1.8	99	1.50	44		4.6	4.6
	S*			25.4		-0.7	100					
CMZ	eP*	21	47	15		-2.2	99	2.16	210			
	ePg			21		-1.4						
	e			35.2								
	eS*			46		0.3						
TNZ	eP*	21	47	23		-0.6	100	2.54	5		3.9	4.1
	ePg			30.5		0.5						
	eS*			58.5		1.5	100					
	eSg		48	05		0.7						
CNZ	Pn	21	47	23.5		1.3	100	2.74	24			
	eP*			28		0.9	100					
	ePg			32.5		-1.7						
	S*		48	05.4		2.2						
NGZ	Pn	21	47	23.7		1.0	100	2.78	25			
	eP*			27.3		-0.4	100					
	i			31.5								
	iPg			35.0		0.1						
	eS*		48	06		1.8						
TRZ	Pg	21	47	39.0		-0.1		2.99	44		4.2	
	e			43.2								
	e			50								

MJZ	e(Pn)	21	47	35.2		2.5		3.52	229				
	eP*			38.8		-1.5							
	e			41.8									
	iPg			47.8		-2.0							
HHP	e(Pn)	21	47	39		2.3		3.81	225				
	i(P*)			40.8		-4.4							
	e			47.7									
	iPg			54.2		-1.4							
	Sn		48	20		-0.3							
	eS*			30.5		-4.4							
GNZ	ePg	21	48	03.0		-2.4		4.29	45				
	eSn			30		-2.0							

AMPLITUDES: WEL 22 COB 4.6 5.5 MNG 33 37
TNZ 0.4 1.0 TRZ 0.7

FELT: Wellington (68) MM IV

78/ 627

DEC 03 $14^h46^m03^s.2$ 37°.30S 179°.33E 148 km M = 3.9
± 2.3 0.09 0.25 12 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ								0.74	238		3.9	4.1
GNZ	P	14	46	35.1		0.1	100	1.69	217		3.5	
	eS			59		-0.3	100					
	e		47	02								
WTZ	P	14	46	37.8		-0.5	100	1.98	249		4.3	
TUA	eP	14	46	43.0		0.9	99	2.29	228		3.9	
TRZ	eP	14	46	51.8		0.6	100	2.99	221		4.0	
KRP	eP	14	46	52.8		0.6	100	3.08	257		2.9*	
GBZ	eP	14	46	54.5		-0.3	100	3.28	288			
NGZ	eP	14	46	58.0		0.4	100	3.48	236			
TNZ	eP	14	47	11		2.3		4.33	243			
MNG	eP	14	47	09		-1.4	98	4.47	221		3.5	

AMPLITUDES: ECZ 1.6 2.6 GNZ 0.6 WTZ 2.8
TUA 0.4 TRZ 0.3 KRP 0.4
MNG 0.3

78/ 628

DEC 04 $05^h47^m32^s.8$ 36°.72S 179°.91E 33 km M = 4.1
± 1.3 0.04 0.13 R S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ								1.46	228		4.4	4.4
GNZ	P	05	48	10.0		0.4	100	2.44	217		4.1	3.9
	S			37.0		-0.3	100					
WTZ	P	05	48	12.5		-0.0	100	2.65	241		4.2	
TUA	eP	05	48	17.5		-0.1	100	3.02	226		3.9	
GBZ	eP	05	48	25.0		-0.6	100	3.61	277			
	e			29.7								
KRP	eP	05	48	27.4		0.7	99	3.69	250		4.0	
TRZ	eP	05	48	26.4		-0.9	99	3.73	220		4.1	
NGZ	P	05	48	33.8		0.2	100	4.19	233			
WEL	eS	05	49	58		-6.6		6.07	220	4.3		

AMPLITUDES: ECZ 2.5 2.8 GNZ 1.8 1.6 WTZ 2.6
TUA 0.3 GBZ 0.5 KRP 0.3
TRZ 0.4 WEL 0.2

78/ 629

DEC 05 $18^h16^m17^s.5$ $44°.93S$ $167°.25E$ 12 km $M = 3.6$

± 0.6 0.02 0.05 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	P*	18	16	28.2		0.4	100	0.54	61		2.8	3.1
	S*			35.3		0.0	100					
ROX	S*-P*			20.8		0.2	100	1.56	111		4.0	3.6
OBZ	P*	18	16	54.5		0.6	100	2.07	163		3.5*	3.6*
	S*		17	20.6		-0.4	100					
HHP	P*	18	16	58.2		0.5	100	2.29	76			
	i		17	02.2								
	eS*			28		0.3	100					
MJZ	P*	18	16	59.8		-1.3	97	2.48	69		3.4*	
	e		17	05.0								
	S*			33.5		-0.2	100					
	e			40								
KAI	e(S*)	18	18	23		8.3		3.85	53	3.9		
COB	e(Pn)	18	17	44		5.2		5.56	48		4.0	

AMPLITUDES: MSZ 3.5 11 ROX 2.5 2.3 OBZ 0.5 1.6
MJZ 0.8 KAI 0.2 COB 0.2

78/ 630

DEC 06 $07^h38^m41^s.7$ $40°.90S$ $172°.60E$ 12 km $M = 3.7$

± 0.7 0.05 0.07 R S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	iP*	07	38	44.8		-1.7	100	0.22	152			
WEL	eP*	07	39	11.5		-0.1	100	1.68	104	3.9		
	S*			34.6		0.7	100					
KAI	eP*	07	39	14		-0.5	100	1.85	208	4.0		
	S*			39.8		0.8	100					
TNZ	ePn	07	39	16.5		-0.6	100	2.19	39		3.6	3.8
	eP*			23		2.7						
	Sn			53		9.3						
CMZ	ePn	07	39	26		2.1		2.68	179			
	eP*			34		5.3						
CNZ	ePn	07	39	28.0		2.2	99	2.83	54			
	eP*			32.0		0.8	100					
	eS*		40	07.8		-0.4						
NGZ	ePn	07	39	27.0		0.5	100	2.88	54			
	eP*			29.5		-2.5	99					
	S*		40	08.0		-1.7						
MJZ	Pn	07	39	35.0		0.5		3.46	206		3.9*	
	eSn		40	17.5		3.1						
KRP								3.74	38		3.5	3.5

AMPLITUDES: WEL 1.2 KAI 1.3 TNZ 0.3 0.6
MJZ 1.3 KRP 0.3 0.4

FELT: Collingwood (72), Cobb River (75) MM IV

78/ 631

DEC 08 $01^h50^m37^s.0$ $47°.34S$ $166°.06E$ 33 km $M = 4.6$

± 0.8 0.05 0.07 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	01	51	00.7	D	0.1	100	1.47	73		4.9*	4.7*
	S*			23.1		0.0	100					
ROX	Pn	01	51	21.1		0.6	100	2.93	52			

MSZ	Pn	01	51	22.0		0.9	100	2.97	26	4.7	4.3
	i			23.0							
	eS*		52	07.5		-0.3	100				
OMZ	Pn	01	51	35.8		-0.2	100	4.07	58	4.4	
HHP	Pn	01	51	37.7	U	-0.9	100	4.26	46		
	P*			51.1		0.4	100				
MJZ	Pn	01	51	41.2		-1.6	98	4.56	44	4.5*	4.2*
	e			51.3							
	P*			57.0		1.0	99				
COB	ePn	01	52	28.1		-0.0	100	7.88	40	5.0	

AMPLITUDES: OBZ 26 37 MSZ 9.2 5.6 OMZ 0.8
HHP 15 18 MJZ 3.1 2.5 COB 0.9

78/ 632

DEC 08 $14^h46^m55^s.5$ 41°.35S 174°.10E 33 km M = 4.1

± 0.6 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
TCW	P*	14	47	03.0	U	1.1	100	0.19	44			
WEL	P*	14	47	06.1		-0.0	100	0.50	83	3.8		
	S*			15.0		1.2	100					
KIW	P*!	14	47	08.8		-1.7	99	0.78	52			
MOW	P*	14	47	10.8	D	-1.1	100	0.87	95			
COB	P*!	14	47	15.0		-0.1	100	1.06	284			
TNZ	Pn	14	47	29.8		1.1	100	2.17	6		4.1	4.0
	S*?		48	00.8		-1.6						
KAI								2.33	239	4.0		
CNZ	Pn	14	47	32.0		-0.1	100	2.42	28			
	(P*)			34.1		-3.9						
	Sn		48	00.2		0.6	100					
	eS*			09.0		-0.8	100					
NGZ	Pn	14	47	31.2		-1.4	99	2.46	29			
CMZ								2.48	205			3.7*
KRP	Pn	14	47	48.8		0.6	100	3.60	18		4.4	
MJZ	P*?	14	48	00.3		-0.5		3.76	224		3.8*	3.8*
HHP								4.06	222			
MSZ								5.62	232			4.1

AMPLITUDES: WEL 10 TNZ 0.9 1.0 KAI 0.8
CNZ 2.2 2.6 CMZ 1.4 KRP 1.0
MJZ 0.9 1.4 HHP 2.2 MSZ 1.0

FELT: Wellington (68)

78/ 633

DEC 09 $00^h08^m41^s.2$ 40°.91S 172°.71E 12 km M = 3.7

± 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
COB	Pg!	00	08	44.9		-0.5	100	0.18	175			
TCW	P*	00	09	01.7		-1.5	99	1.22	105			
WEL	P*	00	09	10.7		1.0	100	1.60	104			
	S*			31		0.2	100					
KIW	P*	00	09	09.8		-1.0	100	1.66	89			
KKY	S*	00	09	34		0.8	100	1.68	154			
KAI	eP*	00	09	17		2.4		1.89	211	3.8		
	eS*			39		-0.5	100					
	eSg			43.5		-1.4						
MNG								2.12	83		3.7	3.7
GSZ	ePn	00	09	25.2		1.0		2.74	54			

CNZ	Pn	00	09	26	1.5	99	2.76	53	
	eP*			31	1.4	100			
	ePg			39	1.8				
	S*		10	04.3	-1.5	100			
NGZ	Pn	00	09	25.8	0.6		2.82	53	
	iP*			32.0	1.5				
	eS*		10	06.8	-0.5				

AMPLITUDES: KAI 0.8 MNG 1.9 2.7

FELT: Bainham (72)

78/ 634

DEC 09 $14^h00^m56^s.9$ 37°.00S 176°.63E 295 km M = 4.2

± 1.1 0.09 0.12 11 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	14	01	36.4		-0.7	100	1.03	164		4.0	3.9
	S		02	08.0		-0.5	100					
ECZ	P	14	01	40.8		-0.2	100	1.67	115		3.9	3.9
	e		02	09.0								
	S			16.2		0.7	100					
TUA	P	14	01	42.2		-0.1	100	1.85	167		4.1	4.3
	eS		02	16.0		-1.8	99					
GNZ	P	14	01	42.6		-0.7	100	1.98	147		4.5	4.7
	S		02	20.0		0.5	100					
NGZ	P	14	01	48.0		1.7	99	2.32	200			
TRZ	eP	14	01	47.8		-0.6	100	2.56	177		3.9	4.1
	e		02	23.2								
	eS			30		1.5	99					
TNZ	eP	14	01	52.8		1.9	99	2.82	218		3.3*	
MNG								3.73	194		4.3	4.2
WEL	e	14	03	04.0				4.52	198	4.3		
	eS			06.0		0.1	100					
COB	P	14	02	14.6		-1.2	100	5.09	215		3.2*	2.9*
	S		03	17.0		-0.6	100					

AMPLITUDES: WTZ 1.0 1.0 ECZ 0.3 0.3 TUA 0.5 0.7
GNZ 2.5 7.2 NGZ 0.3 TRZ 0.2 0.7
TNZ 0.2 MNG 2.3 2.0 WEL 0.3
COB 0.2 0.3

78/ 635

DEC 09 $21^h15^m34^s.8$ 44°.50S 168°.01E 12 km M = 3.8

± 0.4 0.02 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
MSZ	Pg	21	15	39.0		-0.1	100	0.18	202			
ROX								1.34	137		3.9	3.8
HHP	P*	21	16	04.9		0.2	100	1.68	85			
	S*			27.0		0.1	100					
MJZ	P*	21	16	07.7		0.4	100	1.84	75		3.6*	3.5*
	S*			31.0		-0.6	100					
OBZ	P*	21	16	16.2		-0.8	99	2.40	178		3.7*	3.5*
	S*			49.0		0.5	100					
COB	Pn	21	16	47.0		0.2	100	4.87	47			

AMPLITUDES: ROX 2.5 4.8 HHP 21 23 MJZ 2.3 3.3
OBZ 0.7 0.9

78/ 636

DEC 10 $09^h58^m58^s.2$ 40°.65S 175°.86E 33 km M = 3.7
± 0.3 0.03 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
CAZ	iP*	09	59	06.2	U	-0.6	100	0.38	132			
	iS*			14.5		1.4	99					
KIW	Pn	09	59	11.5		-0.5	100	0.75	253			
MOW	Pn	09	59	12.5		-1.4	99	0.89	211			
WEL	Pn	09	59	15.0		-0.9	100	1.04	232			
	i			24.0								
	iSn			29.8		0.7	100					
	iS*			32.4		0.8	100					
	i			43.8								
TCW	Pn	09	59	18.8		-1.0	100	1.32	245			
TRZ	Pn	09	59	19.0		-0.8	100	1.32	34			3.8
	i			29.9								
	iS*			38.9		-1.1	100					
GSZ	iP	09	59	22.0		1.3	100	1.39	351			
CNZ	P	09	59	23.0		1.2	100	1.48	351			
COB	ePn	09	59	35.1		0.5	100	2.41	259		4.0	3.4
	eP*			39.2		-1.4						
	e			43.2								
	eS*	10	00	11.8		-0.4						
GNZ	Sn	10	00	07.6		0.7	100	2.61	40			3.8

AMPLITUDES: CAZ 47 44 TRZ 2.2 COB 1.0 0.8
GNZ 1.1

FELT: Palmerston North (62) MM V

78/ 637

DEC 10 $14^h58^m43^s.0$ 39°.86S 177°.37E 22 km M = 4.0
± 1.1 0.05 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
TRZ	iP*!	14	58	52.9		-0.4	100	0.52	306			
TUA	P*	14	59	01.7		-0.7	100	1.06	351		4.3	3.8
	i			07.3								
	eS*			15.8		-0.9	100					
GNZ	P*	14	59	06.0		-0.7	100	1.31	23		4.0	4.0
	i			12.2								
	iS*			26.5		2.3						
	i			39.0								
CAZ	iSn	14	59	22.3		-1.1		1.36	220			
GSZ	eP*	14	59	10.2		0.4	100	1.49	292			
CNZ	P*	14	59	10.9		0.1	100	1.56	294			
WNZ	e(P*)	14	59	15.4		4.3		1.57	321		4.2	
WTZ	Pn	14	59	14.0		0.5	100	1.90	351		3.5	
	P*			18.3		1.7	98					
	i			22.3								
KRP	ePn?	14	59	20.9		0.5		2.40	323			
	iP*?			26.1		0.9						
WEL	Pn	14	59	21.4		0.5	100	2.44	233	4.0		
	Sn			50.8		1.4	99					
COB	e	14	59	49				3.74	249			
	eSn	15	00	23.2		2.5						
	e(S*)			42		5.1						
CMZ	eSn	15	00	53.0		-1.2		5.14	222			
MJZ	Sn	15	01	28.9		-0.4	100	6.60	229			

HHP	Sn	15	01	35.7		-0.2	100	6.88	227				
MSZ	Sn	15	02	13.9		-1.2	99	8.50	232				

AMPLITUDES: TUA 5.7 2.2 GNZ 4.8 6.8 CAZ 5.1
WNZ 0.4 WTZ 1.0 WEL 0.7
HHP 3.3

78/ 638

DEC 11 $17^h13^m10^s.2$ $34°.14S$ $179°.52W$ 233 km M = 4.8
± 1.3 0.07 0.12 18 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	P	17	14	12.0		-0.3	100	3.88	203		4.9	4.9
	eS		15	00		-0.6	100					
WIZ	eP	17	14	16.3		-1.4		4.31	217			
GBZ	P	17	14	20.2		-0.9	100	4.59	242			
WTZ	eP	17	14	21.5		-1.8	99	4.77	215		5.1	4.8
	i			22.6								
	S		15	21		0.9	100					
GNZ	eP	17	14	23.1		-2.0	99	4.91	203		5.1	4.8
	i			25.7								
	S		15	23.9		0.6	100					
ONE	P	17	14	30.0		0.3	100	5.29	250	4.0*		
TUA	P	17	14	31.7		0.8	100	5.38	209		5.4	
KRP	P	17	14	34.8		2.3	99	5.51	225			
TRZ	P	17	14	40.5		-0.1	100	6.16	207		4.6	4.5
	eS		15	54		2.9						
CRZ	P	17	14	45.0		0.4	100	6.47	265			4.0*
MNG	S-P		1	29.8		4.6		7.60	210		4.6	4.6
WEL	S	17	16	42.2		-1.6	99	8.45	211			
CIZ	eS	17	17	21.8		0.8	100	10.07	168			

AMPLITUDES: ECZ 1.3 1.3 WIZ 3.5 GBZ 1.4
WTZ 3.9 2.0 GNZ 4.0 3.2 ONE 1.1
TUA 2.5 TRZ 0.3 0.5 CRZ 0.9
MNG 1.2 1.6 CIZ 0.3

78/ 639

DEC 12 $05^h09^m40^s.9$ $34°.82S$ $179°.72E$ 287 km M = 4.7
± 2.4 0.15 0.33 28 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	P	05	10	44.1		-1.0	100	3.85	214		4.5	4.6
	e		11	28.0								
	e(S)			31.8		-3.7						
GNZ	P	05	10	48.2		0.7	100	4.06	199		4.6	4.8
	S		11	39.3		-0.2	100					
TUA	e	05	11	44.0				4.48	207			4.9
	eS			47.8		-0.6	100					
KRP	P	05	10	54.0		0.4	100	4.59	226			
TRZ	S	05	12	06.2		1.4	99	5.26	205			4.7
WEL	S	05	12	53.5		-1.2	99	7.55	210			
COB	S	05	13	13		0.5	100	8.34	219			

AMPLITUDES: WTZ 1.1 1.6 GNZ 1.6 3.9 TUA 1.1
TRZ 1.0

78/ 640

DEC 13 $01^h21^m22^s.4$ $40°.21S$ $178°.45E$ 33 km M = 4.0
± 0.5 0.04 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
TRZ	P	01	21	45.8		0.5	100	1.41	297		4.2	3.9
	i			53.3								
GNZ	P	01	21	46.7		-1.1	100	1.59	348		3.3	4.3
	S		22	05.8		-0.9	100					
TUA	eP	01	21	48.5		-1.0	100	1.72	324		4.0	4.0
	i			50.7								
	i			57.1								
GSZ	P	01	21	59.6		0.9	100	2.39	292			
	S		22	28.0		2.0	99					
CNZ	P	01	22	00.1		0.6	100	2.46	293			
	i			18.2								
	eS			28.0		0.6	100					
WTZ								2.49	332			4.1
WEL	S	01	22	38		-2.5	98	3.00	248	3.9		
CIZ	eP	01	22	38.5		0.5	100	5.27	137			
	S		23	35.5		0.4	100					

AMPLITUDES:	TRZ	3.1	2.1	GNZ	0.7	10	TUA	1.0	1.2
	WTZ		2.0	WEL	0.3		CIZ	0.2	0.7

78/ 641

DEC 14 $03^h39^m45^s.9$ 39°.71S 175°.00E 130 km M = 3.8

± 1.1 0.05 0.05 10 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
GSZ	P	03	40	06.8		1.0	100	0.63	46			
CNZ	P	03	40	06.7		0.7	100	0.67	40			
TNZ	P	03	40	06.9		0.5	100	0.71	317		3.6*	3.6*
	S			22.0		-0.2	100					
TRZ	eP	03	40	15.5		2.2		1.41	84		3.5	3.8
	S			35.8		1.5	99					
CAZ								1.51	142			
WEL	P	03	40	16.2		0.9	100	1.58	186	4.1		
	S			36.6		-1.0	100					
KRP	S-P			23		-1.6	99	1.84	13		3.3*	3.1*
TUA	S	03	40	44.2		0.2	100	1.90	62			4.0
COB	P	03	40	22.9		-0.1	100	2.21	231		3.6*	
	S			50		-1.0	100					
GNZ	P	03	40	27.2		-0.6	100	2.58	67		3.7	
	S			57		-2.4	98					
CMZ	eS	03	41	35.5		-3.8		4.26	204			4.0*
HHP	P	03	41	10.0		-0.4		5.78	215			
	S		42	11		-5.0						

AMPLITUDES:	GSZ	1.7		CNZ	1.1		TNZ	1.2	1.7
	TRZ	0.3	1.5	CAZ		6.9	WEL	1.4	
	KRP	1.6	1.1	TUA		0.8	COB	1.1	
	GNZ	0.5		CMZ		4.2	HHP		3.7

78/ 642

DEC 14 $19^h55^m20^s.2$ 38°.51S 175°.79E 193 km M = 4.3

± 1.1 0.06 0.06 9 S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	iP	19	55	47.1		-0.1	100	0.62	341		3.6*	3.2*
	iS		56	07.0		-1.0	100					
CNZ	P	19	55	49.0		1.4	100	0.71	196			
GSZ	P	19	55	49.4		1.4	100	0.78	192			
TUA	P	19	55	50.5		0.4	100	1.10	106		4.0	4.5

TNZ	P	19	55	53.0	1.3	100	1.30	238		3.6*	
TRZ	P	19	55	53.6	1.7	99	1.31	143		4.3	
	S?		56	19.1	2.8						
GNZ	P	19	55	56.0	0.1	100	1.75	95		4.3	
	S		56	21.8	-1.8	99					
MNG	S-P			30	-0.5	100	2.12	186		4.4	4.3
ECZ	eP	19	56	01.5	-0.5	100	2.32	70			
CAZ							2.41	172			
WEL	P	19	56	08.2	-0.3	100	2.88	196	4.4		
	S			46.0	0.1	100					
COB	P	19	56	13.7	-2.3	99	3.49	222		3.6*	
	S			58.0	-1.1	100					
CMZ	eP	19	56	40.5	-2.5		5.61	204			3.7*
	S		57	43.5	-3.8						
MJZ	eP	19	56	56.0	-2.4		6.79	215		3.0*	3.5*
	S		58	09.0	-5.9						
HHP	P	19	57	00.2	-2.4		7.11	213			
	S		58	17.2	-5.3						
MSZ							8.53	221			3.4*

AMPLITUDES:									
KRP	3.8	1.7	CNZ	6.6		GSZ	3.2		
TUA	0.9	3.3	TNZ	0.7		TRZ	1.7		
GNZ	3.0		MNG	7.9	7.2	CAZ		2.1	
WEL	1.0		COB	0.7		CMZ		1.5	
MJZ	0.3	1.5	HHP	1.9	3.8	MSZ		0.8	

78/ 643

DEC 14 $20^h45^m55^s.0$ $45°.13$S $167°.76$E 126 km M = 4.0

± 0.6 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	P	20	46	13.9		0.3	100	0.47	14		4.0	
	S			28.0		0.1	100					
OBZ	P	20	46	26.2		-0.5	100	1.80	172		3.9*	4.4*
	S			50.8		0.1	100					
HHP	P	20	46	29.0		-0.2	100	2.01	67			
	i			41.5								
	i			49.2								
	S			55.1		0.0	100					
OMZ	P	20	46	33.2		1.0	98	2.23	90			
	eS		47	00		-0.2	100					
MJZ	P	20	46	31.7		-0.7	99	2.25	60		3.4*	4.2*
	S		47	00.0		-0.5	100					
CMZ	S	20	47	38.5		0.5	100	3.82	68			3.7*

AMPLITUDES:									
MSZ	19		OBZ	3.0	22	HHP	14		
MJZ	2.3	22	CMZ		2.2				

78/ 644

DEC 17 $00^h16^m14^s.5$ $36°.41$S $179°.85$W 160 km M = 5.0

± 1.0 0.06 0.08 18 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	iP	00	16	48.0		-0.4	100	1.82	225		4.4	
GNZ	iP	00	16	59.9		-0.5	100	2.80	217		5.0	5.0
	S		17	34.8		-0.7	100					
WTZ	iP	00	17	01.6		-1.0	100	2.98	237		5.1	
TUA	P	00	17	07.4		-0.4	100	3.37	224		5.1	5.3
	S			48.5		-0.1	100					
GBZ	iP	00	17	13.0	D	0.1	100	3.78	272			
KRP	iP	00	17	15.2		-0.4	100	3.99	246		4.0*	4.0*

	iS		18 01		-1.7	100						
TRZ	P	00	17 16.7		-0.4	100	4.09	219		5.0	5.2	
	S		18 08.5		3.2	98						
NGZ	P	00	17 23.0		0.2	100	4.54	231				
	eS		18 16		0.5	100						
CNZ	P	00	17 24.1		0.6	100	4.59	231				
	S		18 19		2.3	99						
CRZ	eP	00	17 48		0.3	100	6.42	286		3.8*		
WEL	eP	00	17 46		-1.9	100	6.43	219	5.3			
	S		18 58.5		-2.0	99						
CIZ	P	00	18 11.5		3.4	97	7.95	163				
	eS		19 35		-1.8	100						
CMZ	eP	00	18 24		-0.6		9.20	216				
	eS		20 01		-5.4							
MJZ	eiP	00	18 44		1.1		10.59	221		4.0*	3.9*	
	S		20 34.4		-4.8							
HHP	iP	00	18 46.1		-0.6		10.89	220				
	e		20 37.4									
	eS		41		-5.1							

AMPLITUDES:								
ECZ	1.9	GNZ	9.8	14	WTZ	8.8		
TUA	3.0	5.0	GBZ	3.1		KRP	3.8	3.9
TRZ	1.6	5.5	NGZ	6.3	11	CNZ	1.6	3.6
CRZ	0.5		WEL	2.1		CIZ	1.1	2.1
MJZ	1.9	2.4						

78/ 645

DEC 17 $02^h29^m18^s.3$ 39°.87S 177°.38E 12 km M = 3.6

± 0.7 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*	02	29	28.3		-0.3	100	0.53	306		3.9	
TUA	P*	02	29	37.5		-0.3	100	1.08	350		3.5	3.8
	e			43.0								
	e			48								
	S*			52.0		-0.2	100					
GNZ	P*	02	29	41.8		-0.2	100	1.32	22		3.7	3.7
	e			49.4								
	S*			59.7		0.1	100					
	e		30	15.7								
NGZ	P*	02	29	44.4		-1.2	100	1.53	296			
	i			45.9								
	S*		30	05		-0.8	100					
CNZ	P*	02	29	46.0		-0.2	100	1.57	295			
	S*		30	08.0		1.0	100					
WNZ	eP*	02	29	47.0		0.5	100	1.58	321			
WTZ	P*	02	29	53.4		1.4	99	1.91	351		3.4	
	i			57.3								
KRP	eP*	02	30	00		-0.7	100	2.42	323		3.5	
TNZ	eP*	02	30	03.0		2.2	95	2.42	285			
WEL	eSn	02	30	26		-0.3	100	2.44	234	3.5		

AMPLITUDES:								
TRZ	12	TUA	1.0	1.9	GNZ	2.2	4.0	
NGZ	10	CNZ	3.2	6.0	WTZ	0.7		
KRP	0.3	WEL	0.2					

78/ 646

DEC 17 $15^h29^m28^s.8$ 44°.14S 170°.05E 7 km M = 2.8

± 0.1 0.00 0.00 0 S.E. of RES. 0.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
RHP	iPg	15	29	30.2	U	-0.1	100	0.04	32			
HGP	iPg	15	29	32.3	D	0.2	100	0.15	284			
MMP	iPg	15	29	32.3	D	-0.1	100	0.16	91			
TMP	iPg	15	29	32.8	D	0.1	100	0.18	164			
	Sg			35.4		0.1	100					
BSP	iPg	15	29	34.5	U	0.1	100	0.27	8			
HHP	iPg	15	29	34.6	D	-0.1	100	0.28	132			
DMP	iPg	15	29	35.5	U	0.2	100	0.31	210			
MJP	iPg	15	29	35.5	U	-0.1	100	0.33	63			
MJZ	iPg	15	29	35.7	U	-0.0	100	0.33	63		2.6*	1.9*
	Sg			40.5		0.2	100					
THP	iPg	15	29	37.4	U	0.0	100	0.42	196			
OMZ	iP*	15	29	49.4		-0.1	100	1.12	147		2.9	2.5
ROX								1.43	201			3.0
MSZ	S*-P*			20.0		-1.6		1.62	250		2.6	3.2

AMPLITUDES: MJZ 5.7 2.3 OMZ 0.4 0.3 ROX 0.7
MSZ 0.2 1.5

78/ 647

DEC 17 $15^h37^m40^s.3$ $44°.15$S $170°.08$E 3 km M = 4.6
± 0.1 0.01 0.02 1 S.E. of RES. 0.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
RHP	iPg	15	37	41.5	U	0.1	100	0.04	3			
MMP	iPg	15	37	43.6	D	0.4	100	0.14	87			
TMP	iPg	15	37	44.1	D	0.4	100	0.17	170			
HGP	iPg	15	37	43.6	D	-0.3	100	0.18	286			
HHP	iPg	15	37	45.9	D	0.3	100	0.26	133			
BSP	iPg	15	37	45.8	U	-0.2	100	0.28	4			
MJP	iPg	15	37	46.8	U	0.1	100	0.31	60			
DMP	iPg	15	37	46.8	U	0.0	100	0.32	214			
MJZ	iPg	15	37	47.0	U	0.2	100	0.32	60			
THP	iPg	15	37	48.7	U	-0.1	100	0.42	199			
OMZ	iP*	15	38	00.7		-0.4	100	1.10	147			
ROX	S*-Pg			16.7		-0.2	100	1.43	202			
	S*-P*			20.1		0.7	99					
MSZ								1.64	251		4.9	4.7
KAI	ePn	15	38	14.2		1.4		1.89	31	4.7		
	iP*			15.7		1.1	95					
	S*			40.4		0.5	100					
CMZ	ePn	15	38	13.6		0.2	100	1.93	74			
	iPg			18.7		-0.7	99					
WEL	ePn	15	38	48.9		0.6		4.49	52	4.1		
	Sn		39	39.2		-0.2	100					
MNG								5.34	50		5.2	4.4
TNZ	ePn	15	39	10.1		2.4		5.91	34		4.7	4.5
	i			10.9								
KRP	ePn	15	39	31.2		2.3		7.47	35		4.9	4.3

AMPLITUDES: MSZ 41 48 KAI 6.4 WEL 0.2
MNG 9.3 2.2 TNZ 0.5 0.4 KRP 1.9 0.6

FELT: Twizel (116), Mahitahi (104) and Albury (117) MM IV

78/ 648

DEC 17 $19^h21^m56^s.6$ $38°.75$S $175°.76$E 150 km M = 4.0
± 0.9 0.05 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	iP	19	22	17.9		0.0	100	0.45	195			
	eS			34.0		-0.2	100					
CNZ	P	19	22	18.8		0.8	100	0.49	200			
	eS			35		0.5	100					
TUA	iP	19	22	22.9		0.6	100	1.09	94		4.2	3.5
	eS			41.5		-0.6	100					
TRZ	P	19	22	24.6		1.7	100	1.15	135		4.0	3.8
	eS			46.5		3.4	94					
TNZ	P	19	22	23.0		0.1	100	1.16	247		3.5*	3.5*
WTZ	P	19	22	22.3		-1.4	100	1.23	52		3.8	3.9
	S			43.2		-1.2	100					
GNZ	iP	19	22	29.2		-0.3	100	1.77	87		4.6	4.1
	S			53.3		-1.3	100					
MNG	S-P			24		-2.1	99	1.88	186			
GBZ	iP	19	22	39.7		0.9	100	2.54	355			
WEL	P	19	22	39		-1.2	100	2.65	196	4.0		
	eS		23	12		-1.4	100					
KAI	eS	19	24	03		-5.9		5.02	220	3.4*		
CMZ	eS	19	24	09		-8.4		5.38	205			3.0*

AMPLITUDES:									
NGZ	6.2	7.6	CNZ	2.0	2.2	TUA		2.0	0.5
TRZ	1.2	1.6	TNZ	0.7	1.0	WTZ		1.7	2.6
GNZ	7.0	4.0	GBZ	0.4		WEL	0.5		
KAI	0.2		CMZ	0.3					

78/ 649

DEC 18 $00^h 18^m 47^s.3$ 40°.37S 173°.55E 182 km M = 4.3

± 1.0 0.06 0.07 9 S.E. of RES. 1.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
COB	iP	00	19	16.7		1.8	100	0.94	221			
	eS			36		-0.3	100					
WEL	P	00	19	20.0		2.2	99	1.30	135	4.3		
	S			41.2		-0.1	100					
TNZ	iP	00	19	18.4		0.2	100	1.34	29		3.7*	
CNZ	P	00	19	24.2		0.1	100	1.93	53			
NGZ	P	00	19	24.9		0.3	100	1.99	54			
	iS			52.5		-1.0	100					
CAZ	P	00	19	28.0		2.0	99	2.11	106			
	e			53.0								
	S			56.8		0.9	100					
KAI	eS	00	20	06		-1.9	99	2.69	216	3.9*		
TUA	eP	00	19	40.2		1.3	100	3.19	62		4.2	4.3
	eS		20	18		-0.8	100					
CMZ	iP	00	19	40.9		0.7	100	3.28	192			
	S		20	18.8		-2.1	99					
GNZ	P	00	19	46.6		-0.9	100	3.87	65		4.5	4.4
	S		20	31.2		-2.7	99					
MJZ	P	00	19	55.4		2.6		4.28	211		3.0*	3.4*
	eS		20	41		-2.4						
HHP	P	00	19	57.3		0.3		4.62	210			
	S		20	47.8		-3.2						

AMPLITUDES:									
WEL	2.3		TNZ	0.9		CNZ		9.5	
NGZ	27		CAZ	1.1	7.0	KAI	1.2		
TUA	0.4	0.5	GNZ	1.6	1.8	MJZ		0.5	2.1

78/ 650

DEC 20 $00^h41^m19^s.4$ 39°.24S 176°.80E 12 km M = 3.4

± 0.3 0.02 0.02 R S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TRZ	Pg	00	41	25.1		-1.1	100	0.31	177			3.1
	Sg			31.8		1.1	100					
TUA	ePg	00	41	29.2		-0.7	100	0.50	33		2.9	3.3
	Sg			38.0		1.1	100					
NGZ	Pg	00	41	37.6		-0.6	100	0.93	273			
	Sg			53.0		2.3	97					
GSZ	Pg	00	41	37.8		-0.8	100	0.94	267			
GNZ	P*	00	41	39.8		0.1	100	1.13	59		3.8	3.4
	ePg			45.5		3.3						
	eSg			58		0.6	100					
WTZ	P*	00	41	41.0		-1.0	100	1.26	7		3.1	
KRP	Pn	00	41	46.8		-0.5	100	1.64	322		3.5	
MNG								1.72	216		3.6	3.4
TNZ	Pn	00	41	50.8		0.2	100	1.88	271		3.8	
	ePg			57.0		-0.5	100					

AMPLITUDES: TRZ 7.0 TUA 1.1 2.8 NGZ 38 25
GSZ 12 GNZ 4.0 2.5 WTZ 0.8
KRP 0.7 MNG 2.6 2.2 TNZ 0.3

78/ 651

DEC 20 $23^h56^m08^s.7$ 38°.33S 176°.10E 193 km M = 4.6

± 0.9 0.04 0.05 7 S.E. of RES. 1.5

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WNZ	P	23	56	34.7		0.2	100	0.31	180			
KRP	iP	23	56	35.7	D	0.2	100	0.60	312		4.1*	3.7*
	S			54.9		-1.3	100					
WTZ	eP	23	56	35.5		-1.0	100	0.77	64			
NGZ	P	23	56	38.5		1.1	100	0.94	204			
TUA	P	23	56	38.0	U	0.5	100	0.95	121		4.8	4.7
	eS			58		-1.8	99					
CNZ	P	23	56	38.8		1.2	100	0.97	206			
GSZ	P	23	56	39.3		1.2		1.03	203			
WIZ	eP	23	56	39		-0.2	100	1.17	47			
TRZ	eP	23	56	41.8		1.2	100	1.35	156			
	eS		57	05.3		0.1	100					
GNZ	iP	23	56	42.9	U	0.6	100	1.54	102		4.4	4.5
	eS		57	07.4		-1.0	100					
TNZ	P	23	56	44.0		1.0	100	1.60	237		3.7*	3.4*
	eS		57	12.3		2.9	98					
ECZ	eP	23	56	47.9		0.6	100	2.03	73			
GBZ	iP	23	56	48.5		-0.3	100	2.16	347			
CAZ	P	23	56	54.4		0.9	100	2.57	178			
	i		57	25.2								
	S			30.0		2.0	99					
WEL	P	23	56	59.7		-0.4	100	3.13	199	4.7		
	S		57	37.3		-2.5	99					
COB	P	23	57	06.3		-1.9	99	3.79	222		3.6*	4.0*
	S			52.2		-2.1	99					
MJZ	eP	23	57	50		-0.7		7.08	215		3.6*	3.5*
	S		59	04.9		-5.4						
HHP	eP	23	57	53.6		-1.3		7.40	214			

AMPLITUDES: WNZ 0.5 KRP 12 5.5 NGZ 28

TUA	7.0	5.0	CNZ	5.2		GSZ	17		
GNZ	4.3	9.0	TNZ	0.8	0.6	GBZ	2.8		
CAZ	1.7	18	WEL	1.5		COB	0.6	5.0	
MJZ	1.0	1.7							

78/ 652

DEC 21 $09^h 55^m 24^s.4$ 37°.79S 176°.32E 218 km M = 4.6

± 0.9 0.05 0.06 6 S.E. of RES. 1.4

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WTZ	iP	09	55	53.2	U	-0.7	100	0.57	110			
	eS		56	14.6		-2.0	99					
KRP	iP	09	55	54.6		0.4	100	0.63	258		3.6*	3.2*
	S		56	18.7		1.5	100					
WIZ	P	09	55	54		-0.7	100	0.74	69			
WNZ	eP	09	55	56		0.7	100	0.85	191		4.4	
TUA	P	09	55	58.5		1.0	100	1.21	147		4.7	4.5
	S		56	24		0.7	100					
CNZ	P	09	56	01.3		1.1	100	1.53	203			
GNZ	iP	09	56	01.2	D	0.5	100	1.59	123		4.5	4.5
	S			28.5		-0.3	100					
GSZ	P	09	56	01.2		0.5		1.59	201			
GBZ	P	09	55	59.6		-2.1	99	1.71	337			
ECZ	eP	09	56	02.3		0.0	100	1.77	88			
TRZ	eP	09	56	03.9		1.3	100	1.80	167		4.7	
	e(S)			37.5		5.3						
TNZ	P	09	56	07.9		2.7	98	2.06	227		3.9*	
MNG	S-P			37.8		-0.8	100	2.90	193			4.6
WEL	eP	09	56	23.0		-0.6	100	3.69	198	4.6		
	S		57	08.5		-1.0	100					
COB	eP	09	56	31		-0.2	100	4.31	219			
	eS		57	21		-1.9	99					
HHP	P	09	57	15.2		-2.4		7.94	213			

AMPLITUDES:									
KRP	3.7	1.5	WNZ	0.3		TUA	3.5	2.5	
CNZ	0.8		GNZ	5.0	8.0	GSZ	4.0		
GBZ	0.6		TRZ	2.5		TNZ	1.0		
MNG		10	WEL	1.0					

78/ 653

DEC 22 $00^h 24^m 34^s.4$ 39°.07S 174°.88E 209 km M = 4.3

± 0.9 0.04 0.05 7 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	e(P)	00	25	03		0.6	100	0.40	254		3.5*	3.0*
	i			03.6	U							
	e(S)			27		3.0						
CNZ	iP	00	25	04.2		1.4		0.53	104			
	S			24.5		-0.2						
NGZ	iP	00	25	04.2		1.1	100	0.58	101			
	eS			24.5		-0.5	100					
GSZ	P	00	25	04.5		1.4	99	0.58	111			
	e(S)			26		0.8						
KRP	P	00	25	07		-0.1	100	1.26	24		3.2*	2.7*
	S			32		-0.4	100					
TRZ	S	00	25	38.5		1.2	100	1.58	108			4.3
TUA	P	00	25	12.1	D	0.2	100	1.79	82		4.3	4.3
	e(S)			40		-0.7						
WTZ	iP	00	25	12.6	D	-1.1	100	1.98	57		4.3	3.9
	S			45		0.9	100					

CAZ	P	00	25	16.1	U	1.1	100	2.10	151			
	S			46		-0.2	100					
WEL	P	00	25	16.5		0.3	100	2.21	182	4.1		
	S			48		-0.3	100					
GNZ	iP	00	25	18.9	D	-0.2	100	2.49	81		4.7	4.3
	S			51		-2.6	94					
COB	P	00	25	20.0	D	-0.3	100	2.60	219		4.2*	3.8*
	S			54.5		-1.4	99					
KAI	S	00	26	31		-2.2		4.35	216	3.6*		
CMZ	eP	00	25	46		-1.3		4.81	200			
	S		26	40.5		-3.5						
MJZ	S	00	27	04		-5.3		5.92	213		2.8*	3.3*

AMPLITUDES:

TNZ	0.7	0.3	KRP	1.3	0.5	TRZ		2.5			
TUA	1.1	1.1	WTZ	2.5	0.9	WEL	0.6				
GNZ	5.0	3.2	COB	3.0	4.7	KAI	0.4				
MJZ	0.2	1.1									

78/ 654

DEC 23 $15^h24^m47^s.6$ 37°.21S 177°.65E 83 km M = 4.0
± 0.7 0.03 0.04 6 S.E. of RES. 0.9

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	P	15	25	02.5		0.7	100	0.49	229			
	S			12		-0.6	100					
ECZ	(P)	15	25	07		1.4	99	0.86	124			
WTZ	iP	15	25	06.6		0.2	100	0.94	214			
GNZ	iP	15	25	12.6	DNE	-0.4	100	1.47	169		4.2	4.0
	S			32		-0.3	100					
TUA	iP	15	25	14.9	D	-0.5	100	1.65	194		4.0	3.9
	(S)			41		4.7						
KRP	P	15	25	17.8		0.0	100	1.83	246		3.1*	
	S			40		-0.2	100					
GBZ	iP	15	25	20.2	D	0.0	100	2.01	299			
TRZ	P	15	25	24		-2.1	95	2.43	195		3.9	4.0
	S			55.5		0.6	100					
NGZ	P	15	25	27.2		-0.5	100	2.55	219			
	S			59		1.3	99					
TNZ	P	15	25	38		0.5	100	3.25	232		3.4*	3.3*
	(S)		26	22.5		7.3						
MNG								3.81	206		3.9	4.2
WEL	S	15	26	42.5		-7.5		4.64	208	3.7		
CIZ	P	15	26	42.5		-1.3		8.05	149			
	S		28	.09		-5.0						

AMPLITUDES:

GNZ	6.0	5.3	TUA	1.1	0.9	KRP		1.2			
GBZ	0.5		TRZ	0.4	1.0	TNZ		0.3	0.3		
MNG	1.0	2.5	WEL	0.1		CIZ		0.4	0.4		

78/ 655

DEC 24 $01^h25^m52^s.4$ 32°.67S 176°.84W 33 km M = 4.8
± 0.9 0.07 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
ECZ	(Sn)	01	28	35		5.6		6.28	216			
GBZ	e(Pn)	01	27	35.5		0.3	100	7.27	239			
GNZ	Pn	01	27	36		0.6	100	7.29	214		4.4	5.3
	Sn		28	54		0.5	100					
WTZ	Pn	01	27	35		-0.9	99	7.33	222		4.5	5.0
	Sn		28	54		-0.4	100					
TUA	Sn	01	29	07		0.2	100	7.85	217			5.1

KRP	Pn	01	27	47		-0.2	100	8.15	228		4.7	
	e(P*)		28	09		-3.4						
	Sn		29	15		0.8	100					
NGZ	Pn	01	27	58.0		0.1	100	8.94	221			
	Sn		29	32		-1.0	99					
MNG								10.05	216		4.6	5.1
WEL	Sn	01	30	14.5		-6.1		10.92	216	4.9		
CIZ	e(Pn)	01	28	38.5		8.6		11.29	179			
	Sn		30	30.5		1.1						
COB	e(Pn)	01	28	33		-4.6		11.85	222		4.7	4.6
	Sn		30	36.5		-6.6						
KAI								13.55	220	4.7		
MJZ	Pn	01	29	18.5		-2.9		15.06	218		5.0*	4.6*
	Sn		31	53		-7.2						

AMPLITUDES:										
GBZ	0.1		GNZ	0.4	5.2	WTZ		0.6	1.8
TUA		0.7	KRP	0.2		MNG		0.8	3.2
WEL	0.3		CIZ	0.3	2.2	COB		0.2	0.6
KAI	0.1		MJZ	0.8	0.6				

78/ 656

DEC 25 $05^h54^m30^s.3$ 44°.34S 167°.91E 12 km M = 3.8

± 0.8 0.03 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
MSZ	iPg	05	54	36.7	U	-0.6	100	0.33	179			
	Sg			42.8		0.8	100					
ROX	iPn	05	54	57.3	U	0.8	100	1.51	139		3.9	4.1
	Sn		55	16		-0.1	100					
MJZ	Pn	05	55	00		-1.4	99	1.87	80		3.6*	3.7*
	Pg			10		1.8						
	Sn			25		0.3	100					
	Sg			31		-2.5						
OMZ	P*	05	55	11		0.9	100	2.27	110		3.9	3.8
	(Pg)			14.5		-1.6						
	Sn			34		-0.1	100					
	S*			39.5		-0.3	100					
OBZ	ePn	05	55	11.5		0.6	100	2.57	177			
	(P*)			14		-1.3						
	S*			48		-1.0	99					
KAI	P*	05	55	24		-0.9		3.13	56	3.9		
	S*		56	01		-4.8						
COB	Pn	05	55	41		-0.6		4.81	49		3.6	3.5
	Sn		56	33		-2.5						
	e(Sg)		57	07		-5.6						

AMPLITUDES:										
ROX	2.2	7.5	MJZ	2.2	4.5	OMZ		0.8	1.5
KAI	0.3		COB	0.1	0.3				

78/ 657

DEC 26 $10^h53^m19^s.3$ 34°.22S 179°.54E 33 km M = 3.9

± 1.4 0.05 0.14 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	54	21		-0.4	100	4.29	208		4.2	3.9
	eSn		55	09		0.6	100					
GNZ	Pn	10	54	26		0.6	100	4.58	195		3.7	4.1
	Sn		55	14.5		-0.9	99					
KRP	Pn	10	54	30.5		0.5	100	4.92	220		4.3	
TUA								4.97	202			3.8
CRZ	ePn	10	54	40		-0.4	100	5.69	266			

TRZ	Sn	10	55	40		-3.5		5.76	201				3.8
MNG	Pn	10	55	23.5		22.9		7.16	206		3.9		3.8
	Sn		56	37		19.7							
COB	Sn	10	56	48.5		-6.5		8.73	216				3.6

AMPLITUDES:

WTZ		0.8	0.4	GNZ		0.2	0.8	KRP		0.2	
TUA			0.1	TRZ			0.1	MNG		0.3	0.3
COB			0.1								

78/ 658

DEC 27 $04^h14^m35^s.3$ 32°.80S 179°.07W 187 km M = 4.6

± 1.5 0.12 0.27 61 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	e(P)	04	15	54.5		1.0	99	5.26	201			
WTZ	P	04	16	03		-1.4	99	6.09	211		4.6	4.8
	S		17	14		0.3	100					
GNZ	P	04	16	07		0.0	100	6.30	201		4.5	4.6
	S		17	18		-0.4	100					
KRP	eP?	04	16	13.5		0.5	100	6.75	219			
	e			23								
TRZ	S	04	17	47.5		0.3	100	7.51	205			4.8
MNG	P	04	16	36.5		-5.3		8.95	208		4.1	4.7
	S		18	17.5		-3.3						
WEL	S	04	18	35		-5.6		9.80	208	4.7		
COB	S	04	18	53		-5.4		10.56	216			3.4*
CIZ	S	04	19	16.5		0.4		11.31	171			
MJZ	S	04	20	07		-7.4		13.85	213			3.1*

AMPLITUDES:

WTZ		0.8	1.3	GNZ		0.6	1.3	TRZ			0.7
MNG		0.3	1.6	WEL	0.2			COB			0.6
CIZ			0.3	MJZ			0.3				

78/ 659

DEC 27 $20^h21^m39^s.8$ 36°.84S 177°.72E 146 km M = 4.0

± 0.9 0.05 0.06 5 S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
WIZ	S	20	22	20.5		0.1	100	0.81	212			
ECZ	e(P)	20	22	07		1.9		1.08	143			
WTZ	P	20	22	06.5		-0.5	100	1.29	207		3.9	3.9
	S			27		-0.9	99					
GNZ	iP	20	22	13.0	U	0.1	100	1.82	173		4.1	4.2
	S			39		0.7	99					
TUA	e(S)	20	22	42		-0.2	100	2.02	193			3.9
KRP	P	20	22	16.4	D	0.7	99	2.05	237		3.5*	2.6*
	S			43.5		0.4	100					
TRZ	S	20	23	00		0.2	100	2.81	194		4.0	4.4
NGZ	P	20	22	25.5		-0.6	100	2.88	215			
GSZ	P	20	22	26.5		-0.8		2.96	214			
MNG	P	20	22	39.0	D	-3.9		4.17	204		4.2	4.1
	S		23	25.5		-6.0						
WEL	S	20	23	44.5		-7.0		5.00	206	3.8		
COB	P	20	22	59		-5.1		5.76	221		3.0*	2.9*
	S		24	02.5		-7.1						
MJZ	S	20	25	15.5		-12.7		9.04	216			2.7*

AMPLITUDES:

WTZ		2.0	2.7	GNZ		2.5	4.7	TUA			0.5
KRP		2.2	0.3	TRZ		0.3	1.9	MNG		1.6	1.8
WEL	0.1			COB		0.1	0.3	MJZ			0.2

78/ 660

DEC 28 $05^h33^m53^s.1$ 38°.05S 175°.69E 255 km M = 3.7

± 1.3 0.07 0.12 11 S.E. of RES. 1.2

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
KRP	iP	05	34	26.8	D	0.7	100	0.17	315			
WTZ	P	05	34	28		-0.9	100	1.03	87		3.3	3.1
	S			56		-0.8	100					
NGZ	P	05	34	30		0.4	100	1.13	183			
	e(S)		35	03		5.0						
TUA	(P)	05	34	31.5		0.3	100	1.38	124		3.7	3.9
	S		35	00.5		-0.2	100					
TRZ	eP	05	34	35		1.0	100	1.75	150		3.4	3.8
	S		35	08		2.3	97					
GNZ	iP	05	34	35.3	D	-0.3	100	1.93	109		4.3	3.9
	S		35	08		-0.6	100					
MNG	iP	05	34	41.1	U	-0.7	100	2.57	184		3.7	4.1
	S		35	18		-1.6	99					
WEL	S	05	35	32		-1.7		3.31	192	3.9		
COB	e(P)	05	34	53		-2.3		3.81	216		2.8*	2.8*
	S		35	42		-1.7						
MJZ	S	05	36	52		-4.9		7.14	212			2.6*

AMPLITUDES: KRP 1.0 WTZ 0.3 0.2 TUA 0.3 0.4
TRZ 0.1 0.6 GNZ 2.0 1.4 MNG 1.0 3.3
WEL 0.2 COB 0.1 0.3 MJZ 0.2

78/ 661

DEC 28 $21^h00^m48^s.9$ 44°.78S 167°.62E 87 km M = 4.1

± 0.6 0.02 0.05 4 S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MSZ	iP	21	01	02.3	U	0.2	100	0.24	62			
	S			11.5		-0.4	100					
ROX	P	21	01	14		0.4	100	1.39	120			
	e			21.5								
	e(S)			30		-2.1						
OBZ	P	21	01	23		-0.6	100	2.15	171			
	S			49.5		0.2	100					
MJZ	iP	21	01	24.6	DS	0.4	100	2.20	70		3.4*	3.6*
	S			51.5		1.2	98					
OMZ	iP	21	01	26.6	D	0.1	100	2.36	98		4.3	4.0
	S			53.5		-0.9	99					
CMZ	eS	21	02	28		-2.5		3.81	73			
COB	P	21	02	06.7		0.1	100	5.27	47		4.2	4.0
	S		03	06		-0.7	100					
MNG	e(P)	21	02	31		-1.4		7.14	57		2.8*	
	e			36.5								

AMPLITUDES: MJZ 2.2 6.7 OMZ 2.5 2.0 COB 0.4 0.6
MNG 0.2

78/ 662

DEC 28 $21^h03^m02^s.4$ 39°.83S 174°.64E 122 km M = 3.5

± 0.9 0.03 0.05 8 S.E. of RES. 1.1

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
TNZ	e(P)	21	03	22		0.2	100	0.67	343		2.5*	3.1*
	e			33								
	S			37.5		0.7	100					

NGZ	iP	21	03	25.3		0.7	100	0.99	50				
	S			40.5		-1.2	99						
MNG	iP	21	03	26.7	U	1.7	98	1.02	141		3.2	3.6	
	S			42.5		0.3	100						
WEL	S	21	03	49.5		-1.3	99	1.46	176	3.3			
COB	P	21	03	35.3		-0.1	100	1.93	229		3.6*	2.8*	
	S		04	00		-0.2	100						
KRP	P	21	03	36		-0.7	100	2.02	20		2.6*	2.6*	
	S		04	02		-0.5	100						
TUA								2.20	63			3.2	
WTZ	(P)	21	03	49		4.7		2.60	46		4.2		
	e			54.5									
GNZ	S	21	04	22		-0.6		2.88	67			3.7	

AMPLITUDES: TNZ 0.1 0.6 MNG 2.0 6.0 WEL 0.3
COB 1.1 0.7 KRP 0.3 0.3 TUA 0.1
WTZ 1.6 GNZ 0.8

78/ 663

DEC 29 $01^h57^m51^s.1$ $33°.28S$ $178°.62W$ 33 km M = 5.8
± 0.9 0.05 0.11 R S.E. of RES. 0.8

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	e(Pn)	01	59	05.5		2.9		4.98	207			
	i			09.8	D							
	e(Sn)			54		-2.6						
WIZ	Pn	01	59	10.0		0.9	100	5.45	218			
	i			13.5								
	e(Sn)	02	00	11		3.0						
WTZ	iPn	01	59	15.1	D	-0.1	100	5.90	216			
GNZ	iPn	01	59	17.1	D	0.4	100	6.01	206			
	Sn	02	00	20.5		-0.9	100					
ONE	iPn	01	59	20.2		-0.5	100	6.31	245			
TUA	Pn	01	59	24		0.7	100	6.50	211		6.4	6.3
	Sn	02	00	34		0.8	100					
KRP	iPn	01	59	26.1	DNE	0.7	100	6.65	224		6.4	
	Sn	02	00	37		0.2	100					
WNZ	Pn	01	59	29		0.9	100	6.85	217		5.8	
TRZ	Pn	01	59	33		-0.8	100	7.26	209		6.0	5.9
	Sn	02	00	52		0.4	100					
CRZ								7.33	259		5.8	5.5
NGZ	Pn	01	59	36		-1.2	99	7.51	217			
	e(Sn)	02	00	57.5		-0.1						
TNZ	ePn	01	59	45		-1.2		8.17	222		6.3	
MNG	Pn	01	59	48		-5.6		8.72	211			
	Sn	02	01	19		-7.5						
WEL	Pn	02	00	02		-3.3		9.58	211	5.9		
	Sn		01	41.5		-5.6						
COB	Pn	02	00	10.6		-6.1		10.41	219		5.7	5.6
	Sn		02	00		-7.2						
CIZ	Pn	02	00	30.5		8.6		10.79	172			
	Sn		02	28		11.7						
CMZ	Pn	02	00	36		-7.4		12.37	211			
	Sn		02	44		-10.1						
MJZ	Pn	02	00	54		-7.2		13.67	215		5.5*	5.5*
	Sn		03	12		-13.6						
OMZ								14.29	211		5.6	5.3
ROX								15.33	214		5.7	5.2
MSZ	Pn	02	01	14		-11.4		15.44	219		5.8	5.6
	e		02	09								

	Sn		03	55.5		-12.7								
AMPLITUDES:	TUA			21	16	KRP		15		WNZ		0.7		
	TRZ			8.0	7.8	CRZ		1.0	0.4	TNZ		2.0		
	WEL	3.3				COB		2.8	7.0	CIZ		7.0	6.3	
	MJZ			2.8	5.6	OMZ		1.2	1.2	ROX		1.3	1.1	
	MSZ			3.5	4.0									

78/ 664

DEC 29 $04^h42^m40^s.6$ 33°.35S 178°.82W 33 km M = 4.8

± 0.8 0.04 0.10 R S.E. of RES. 0.6

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	Pn	04	43	55.5		5.3		4.84	206			
	e(Sn)		44	45.5		2.6						
WTZ	Pn	04	44	02		-0.6	100	5.75	215		5.2	4.6
	Sn		45	05		0.3	100					
GNZ	ePn	04	44	05.5		1.2	98	5.88	205		5.0	4.9
	i			07								
	Sn		45	08		0.3	100					
ONE	(Pn)	04	44	08		0.2	100	6.13	245			
TUA	Pn	04	44	10.5		-0.3	100	6.35	210		5.2	4.8
	Sn		45	18.5		-0.7	100					
	e			21								
KRP	Pn	04	44	13		0.4	100	6.48	224		5.4	
TRZ	Pn	04	44	21		-0.3	100	7.12	208		4.8	4.7
	Sn		45	38		0.3	100					
NGZ	Pn	04	44	24		-0.6	100	7.36	216			
	e(Sn)		45	43		-0.4						
MNG	Pn	04	44	36.5		-4.6		8.57	210		4.8	4.5
	Sn		46	08		-4.5						
WEL	Sn	04	46	27		-6.1		9.43	211	4.3		
COB	e(Sn)	04	46	45		-7.8		10.25	219			4.2
CIZ	Pn	04	45	11		0.2		10.75	171			
	Sn		47	15.5		10.8						
MJZ	e(Pn)	04	45	42		-6.6		13.52	215		4.0*	4.1*
	Sn		47	58		-13.4						

AMPLITUDES:	WTZ			5.0	1.2	GNZ		2.2	2.8	TUA		1.3	0.6	
	KRP			1.4		TRZ		0.5	0.6	MNG		1.6	1.1	
	WEL	0.1				COB			0.3	CIZ		0.4	0.8	
	MJZ			0.1	0.2									

78/ 665

DEC 29 $16^h46^m25^s.1$ 33°.31S 178°.78W 33 km M = 4.8

± 1.2 0.06 0.16 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	16	47	41.5		6.1		4.89	206			
WTZ	Pn	16	47	47		-0.8	100	5.80	215		5.2	4.7
	Sn		48	51		0.5	100					
GNZ	ePn?	16	47	49		-0.5		5.92	205		4.8	4.8
	e			51								
	Sn		48	53		-0.4	100					
ONE	Pn	16	47	52		-0.9	100	6.17	245			
TUA	ePn	16	47	55		-1.0	99	6.41	210		4.9	4.8
	Sn		49	04.5		-0.4	100					
KRP	Pn	16	47	59		1.2	99	6.53	224		5.3	
TRZ	Pn	16	48	07		0.5	100	7.17	208		4.7	4.9
	Sn		49	23		-0.4	100					
NGZ	Pn	16	48	10.5		0.7	100	7.41	216			

	e(Sn)		49	26		-3.1						
TNZ	ePn	16	48	18		-0.7		8.06	221			
MNG	ePn	16	48	20		-6.3		8.62	211		5.0	4.6
	Sn		49	53.5		-4.8						
WEL	Sn	16	50	14		-4.8		9.48	211	4.5		
COB	e(Pn)	16	48	43.5		-5.7		10.30	219		4.7	4.3
	Sn		50	31		-7.6						
CIZ	Sn	16	50	58		8.0		10.77	171			
MJZ	Pn	16	49	26		-7.8		13.57	215		4.5*	4.1*
	Sn		51	46		-11.1						

AMPLITUDES:									
WTZ	5.0	1.5	GNZ	1.6	2.3	TUA		0.7	0.6
KRP	1.1		TRZ	0.4	0.8	MNG		2.4	1.3
WEL	0.1		COB	0.3	0.4	CIZ		0.7	0.3
MJZ	0.3	0.2							

78/ 666

DEC 30 $12^h36^m17^s.7$ $39°.01S$ $178°.09E$ 12 km M = 4.4

± 0.8 0.05 0.06 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	12	36	26.8	E	1.3	100	0.37	352			
TUA	iP*	12	36	31.5	U	-0.3	100	0.76	285		4.8	4.8
	S*			42		-0.1	100					
TRZ	P*	12	36	38.7	D	0.6	100	1.13	241		4.3	4.5
	ePg			43		2.5						
	Sg			58		2.2						
WTZ	iPn	12	36	40.4		-1.1	100	1.34	319			
ECZ	Pn	12	36	42.5		0.7	100	1.36	15			
WNZ	P*	12	36	47.5		1.4	100	1.60	283		4.4	4.2
	(Pg)			53		2.9						
	e(Sg)		37	16		4.3						
WIZ	Pn	12	36	44.5		-1.1	100	1.64	334			
	(P*)			47.5		0.6						
	e(Sn)		37	07.5		1.0						
NGZ	iPn	12	36	49.4		-0.2		1.93	264			
	iP*			50.5		-1.4						
GSZ	Pn	12	36	50.7		0.7	100	1.96	261			
	(P*)			53		0.6						
	ePg			58		0.5						
KRP	Pn	12	36	52		-2.3	98	2.28	298		4.5	3.9
	P*			59.5		1.7						
	Sg		37	36		1.5						
CAZ	e(Pn)	12	36	54		-1.6		2.38	217			
	Sn		37	20.5		-3.6						
MNG	Pn	12	36	57.0	U	-1.3	100	2.57	231			
TNZ	Pn	12	37	03.7	D	1.0	100	2.90	265		4.5	4.3
	e(P*)			10		1.8						
	eSn			37		0.4	100					
WEL	e(P*)	12	37	19		1.8		3.42	227	3.8		
	Sn			46.5		-2.6						
	e(Sg)		38	25		12.2						
COB	Pn	12	37	23.5		-2.6		4.61	242		4.6	4.1
	P*			39		1.5						
	Sn		38	16		-1.8						
	Sg			51		-1.9						
KAI	Sn	12	38	53		-2.4		6.17	233	4.4		
CIZ	Pn	12	37	53.5		3.4		6.37	143			
	Sn		39	03		2.9						
MJZ								7.59	227		4.1*	4.0*

MSZ						9.47	230			4.2	
AMPLITUDES:	TUA	32	37	TRZ	6.2	13	WNZ		0.7	0.7	
	KRP	4.0	0.9	TNZ	0.6	0.4	WEL	0.2			
	COB	1.0	1.3	KAI	0.3		CIZ		0.6	1.2	
	MJZ	0.4	0.6	MSZ		0.5					

FELT: Gisborne (45) MM IV

78/ 667

DEC 30 $20^h25^m45^s.1$ 42°.04S 172°.02E 12 km M = 3.7

± 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
KAI	iP*	20	25	58.3	X	0.7	100	0.67	223	3.9		
	S*		26	07		0.4	100					
	e(Sg)			10		2.3						
COB	P*	20	26	04.5	D	-0.5	100	1.10	29		4.0	3.9
	S*			19.5		-0.1	100					
CMZ	P*	20	26	14.5		0.8	100	1.61	164			
	Pg			18		0.3	100					
	S*			36		1.1	100					
WEL	P*?	20	26	25		1.3		2.20	71	3.4		
	Sg			57		-2.1	99					
MJZ								2.25	210		3.8*	3.4*
HHP	ePn	20	26	27.5		1.5		2.59	208			
	P*			30		-0.5	100					
	Pg			35.5		-2.0	99					
	S*		27	03		-1.4	100					
	(Sg)			16		3.5						
MNG	Pn	20	26	33		1.8	99	2.97	62		4.1	3.7
	e(Pg)			40.5		-4.7						
	e(Sg)		27	21.5		-3.7						
TNZ	Pg?	20	26	55		1.7		3.37	33		3.5	3.7
	Sg		27	37		-1.8	99					
NGZ	e(Pn)	20	26	47		2.4		3.96	45			
	P*			50		-3.8						
	e(S*)		27	47.5		2.1						
MSZ	Pn	20	26	45		0.0	100	3.99	227		3.6	3.7
	Sn		27	30		-0.2	100					
	e(S*)			43		-3.1						
	e(Sg)			57		-2.3						
KRP	Pn	20	26	59		1.2	100	4.92	34			
	Sn		27	55		2.2	99					

AMPLITUDES:	KAI	7.5			COB	5.0	13	WEL	0.2		
	MJZ	2.2	1.8	MNG	2.5	1.2	TNZ		0.1	0.2	
	MSZ	0.4	0.8								

78/ 668

DEC 31 $13^h58^m00^s.3$ 32°.66S 178°.08W 33 km M = 5.3

± 1.7 0.10 0.23 R S.E. of RES. 1.3

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
ECZ	(Pn)	13	59	26		3.9		5.73	208			
WIZ	Pn	13	59	29		0.3	100	6.22	217			
GBZ								6.40	235			
WTZ	Pn	13	59	33		-1.9	99	6.67	216		5.3	5.2
	Sn	14	00	45		-1.6	99					
GNZ	ePn	13	59	36.5		0.3	100	6.77	207		5.7	5.2
	Sn	14	00	49.5		0.7	100					

ONE	Pn	13	59	40.5		1.2	100	6.99	242			
TUA	ePn	13	59	40.5		-2.5		7.26	211		5.6	5.4
	Sn	14	01	01		0.2	100					
	e(S*)			38		-1.3						
KRP	Pn	13	59	46.0	U	1.0	100	7.41	223		5.6	5.5
CRZ								7.92	255		5.7	
TRZ	ePn	13	59	51.5		-1.9		8.03	210		5.1	5.0
	Sn	14	01	21		1.9	99					
NGZ	Pn	13	59	56		-0.9	100	8.28	216			
	Sn	14	01	24.5		-0.8	100					
TNZ	Pn	14	00	06		0.2		8.94	221		5.7	
MNG	e(Pn)	14	00	06		-7.3		9.49	211		4.9	5.1
	(P*)			38		-5.0						
	Sn		01	48		-6.1						
WEL	Sn	14	02	06		-8.7		10.34	212	5.1		
COB	Pn	14	00	30		-6.4		11.18	219		4.8	4.6
	Sn		02	27		-7.8						
CIZ	e(Pn)	14	00	46		7.3		11.35	174			
	e		02	38								
	(Sn)			42		3.1						
MJZ								14.44	215		5.0*	4.6*

AMPLITUDES: GBZ 5.0 WTZ 5.0 3.3 GNZ 8.5 5.0
TUA 2.7 1.9 KRP 2.0 1.0 CRZ 0.6
TRZ 0.8 0.9 TNZ 0.5 MNG 1.7 3.0
WEL 0.5 COB 0.3 0.6 MJZ 0.9 0.6

78/ 669

DEC 31 $17^h26^m49^s.9$ 43°.63S 169°.48E 12 km M = 4.1
± 0.5 0.03 0.02 R S.E. of RES. 0.7

STN	PHASE	H	M	S	DIR	RES	WT	DIST	AZ	W-A	W P	W S
MJZ	iP*	17	27	05.3	DSW	0.5	100	0.80	117		3.4*	3.5*
	S*			15		-0.6	100					
HHP	P*	17	27	07.9	D	0.8	100	0.94	138			
MSZ	P*	17	27	17.5		0.3	100	1.53	227		4.0	4.4
	Pg			20		-0.9	99					
	Sg			41.5		-0.1	100					
OMZ	P*	17	27	22		0.6	100	1.77	145		4.3	3.9
	S*			45		0.3	100					
ROX	S*-P*			23.5		-0.8	99	1.84	183		4.6	4.4
CMZ	ePg	17	27	36		-0.5	100	2.30	90			
	eSg		28	07		-0.5	100					
OBZ	Pn	17	27	43.5		1.5		3.41	196			
	P*			50.5		1.1						
	S*		28	33		-0.9						
COB	Pn	17	27	47		3.7		3.51	45		3.8	3.6
	Sg		28	48		-0.1						
MNG								5.39	58		3.7	

AMPLITUDES: MJZ 7.0 16 MSZ 5.8 25 OMZ 3.5 3.0
ROX 6.7 10 COB 0.3 0.7 MNG 0.3

78/ 670

DEC 31 $18^h10^m47^s.8$ 43°.65S 169°.46E 12 km M = 3.5
± 1.0 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
MJZ	iP*	18	11	02.9	D	0.2	100	0.80	115		3.1*	3.0*
	S*			12		-1.5	99					
HHP	iP*	18	11	05.1	D	0.2	100	0.94	137			

MSZ	(S*)	18	11	35.5		0.8		1.51	227			3.8
	(Sg)			38		-0.7	100					
OMZ	eP*	18	11	20		0.9	100	1.76	144		3.2	3.0
	eS*			44		1.7	99					
ROX	S*-P*			23		-1.1	100	1.83	183		3.8	3.8
CMZ	Pg	18	11	35		0.4	100	2.31	90			
	Sg		12	05		-0.7	100					
OBZ	P*	18	11	46		-0.9		3.39	196			
	e(S*)		12	25		-6.2						
COB	Pn	18	11	44.5		3.0		3.53	45		3.6	3.1
	e(Pg)			59		-0.1						
MNG								5.41	58		3.5	

AMPLITUDES:									
MJZ	3.2	4.6	MSZ		7.5	OMZ		0.3	0.4
ROX	1.0	2.8	COB	0.2	0.2	MNG		0.2	

78/ 671

DEC 31 $18^h10^m54^s.5$ 43°.66S 169°.48E 12 km M = 3.6

± 0.9 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
MJZ	iP*	18	11	09.1	U	0.0	100	0.78	115		3.2*	3.0*
	S*			18		-1.7	99					
HHP	P*	18	11	11		-0.3	100	0.92	137			
MSZ	e(Sg)	18	11	45		-0.6	100	1.51	228			3.9
OMZ	P*	18	11	26.5		1.0	100	1.75	144		3.3	3.2
	S*			50		1.5	99					
ROX	S*-P*			23		-1.0	100	1.82	184		3.7	3.8
CMZ	ePg	18	11	41		0.0	100	2.29	89			
	Sg		12	12		0.1	100					
OBZ	eP*	18	11	54		0.5		3.38	196			
	S*		12	32		-5.7						
COB	Pn	18	11	50.5		2.4		3.53	44		3.6	3.1
	Sg		12	51		-2.3						
MNG								5.40	58		3.7	

AMPLITUDES:									
MJZ	5.0	5.5	MSZ		9.5	OMZ		0.4	0.6
ROX	0.9	3.1	COB	0.2	0.2	MNG		0.3	

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	00	46	37.0	45.10 S	167.48 E	33 R	3.8	0.6	11	7
002	01	02	23	34.7	41.52 S	175.13 E	23 R	4.2F	1.0	10	14
003	01	11	25	39.8	42.71 S	171.73 E	12 R	4.0F	1.0	17	11
004	01	16	26	01.2	41.39 S	175.17 E	28 R	3.4	0.5	10	9
005	01	16	30	13.7	41.38 S	175.11 E	27	3.6F	0.2	7	11
006	02	13	07	16.6	38.19 S	179.74 E	33 R	3.7	0.9	12	8
007	02	17	13	56.1	40.63 S	175.69 E	12 R	3.5F	1.3	18	9
008	02	19	41	36.7	32.20 S	179.84 W	395	4.9	1.6	12	7
009	03	17	46	58.6	37.89 S	176.72 E	5 R	3.6	1.3	12	8
010	03	18	42	43.1	38.05 S	178.29 E	81	3.5	1.1	10	6
011	03	21	17	47.6	36.46 S	179.96 E	33 R	4.0	1.8	13	8
012	03	22	43	41.6	36.81 S	177.78 E	187	4.7	1.6	18	13
013	04	11	22	01.3	37.73 S	179.78 W	33 R	3.9	1.2	11	8
014	04	11	29	46.2	37.72 S	179.65 W	33 R	3.9	1.5	12	9
015	04	11	46	09.1	37.80 S	179.87 W	33 R	3.7	1.2	11	7
016	04	19	11	53.9	37.32 S	179.43 E	127	4.1	1.5	10	7
017	05	04	33	59.4	37.53 S	178.96 W	33 R	4.4	1.0	10	9
018	06	09	51	47.8	38.04 S	176.17 E	199	3.8	0.7	8	6
019	07	02	55	42.4	46.25 S	169.02 E	12 R	3.7	1.4	16	6
020	07	14	12	27.1	42.63 S	177.33 E	33 R	3.8	1.7	10	6
021	08	17	05	59.4	47.04 S	165.31 E	33 R	4.0	1.7	9	5
022	09	03	20	48.3	45.10 S	167.57 E	100	3.3	0.9	12	7
023	09	22	34	17.6	40.34 S	176.46 E	12 R	3.9	1.4	16	9
024	09	23	30	44.7	40.33 S	176.63 E	12 R	3.9F	1.4	19	9
025	09	23	52	27.7	40.38 S	176.77 E	12 R	4.0F	1.7	19	9
026	10	00	11	47.4	40.40 S	177.21 E	12 R	4.4F	1.5	21	9
027	10	01	17	59.6	40.35 S	176.67 E	12 R	4.0F	1.5	18	9
028	10	05	19	34.0	40.35 S	176.76 E	12 R	3.9F	1.6	18	9
029	10	06	29	48.0	31.60 S	179.81 W	479	4.9	2.1	10	7
030	10	07	24	18.4	40.41 S	177.07 E	12 R	4.0	1.0	20	9
031	11	08	32	38.7	43.33 S	170.90 E	12 R	3.6	1.3	21	8
032	14	08	16	51.1	38.54 S	175.84 E	152	3.6	1.3	10	6
033	16	03	07	23.6	37.83 S	176.42 E	93	3.4	1.5	7	5
034	16	20	01	18.4	34.02 S	179.56 W	360	4.9	1.5	13	9
035	16	20	23	37.6	41.80 S	172.20 E	12 R	2.7F	0.3	2	1
036	16	20	50	02.2	41.73 S	172.17 E	12 R	3.4F	1.3	10	5
037	18	09	54	31.1	42.65 S	172.74 E	33 R	5.7F	1.4	38	21
038	18	10	05	44.5	42.62 S	172.60 E	12 R	4.0	1.8	22	12
039	18	19	07	19.7	34.11 S	179.32 W	257	5.3	2.0	19	13
040	19	01	20	25.4	37.90 S	179.76 E	60	4.0	1.9	10	7
041	19	04	38	26.1	32.25 S	179.52 E	543	5.0	1.2	12	9
042	21	00	32	56.3	40.80 S	173.88 E	33 R	3.7	1.3	13	11
043	21	12	36	57.8	41.34 S	172.40 E	0	4.0	0.9	14	11
044	22	10	58	41.4	38.00 S	178.62 E	12 R	4.0	1.6	14	14
045	22	18	46	53.5	38.12 S	176.29 E	12 R	2.6F	1.6	4	3
046	25	12	23	54.8	37.40 S	177.40 E	133	4.4	1.0	14	13
047	25	17	01	32.1	36.77 S	178.22 E	33 R	4.9	1.2	13	17
048	29	03	27	46.7	40.87 S	174.04 E	12 R	3.9	1.1	11	12
049	30	19	35	40.8	44.24 S	168.83 E	12 R	5.0F	1.0	9	15
050	FEB 01	00	02	16.4	32.68 S	178.21 W	33 R	4.8	1.8	12	12

REF NUM		ORIGIN TIME h	m	s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
051	FEB 01	08	24	21.4	38.49 S	175.77 E	173	3.8	1.0	13	11
052	02	19	19	00.6	38.39 S	177.98 E	12 R	3.8	1.2	8	9
053	03	08	00	35.1	46.48 S	166.02 E	33 R	3.3	1.6	7	3
054	03	16	44	12.9	32.58 S	179.73 W	265	5.4	1.7	15	11
055	04	08	57	18.1	43.24 S	171.09 E	33 R	3.5	1.7	16	8
056	04	15	33	38.6	39.30 S	174.38 E	258	4.0	1.4	16	10
057	05	07	41	22.4	40.43 S	176.78 E	12 R	3.5 F	1.2	11	10
058	05	11	40	29.6	37.91 S	176.11 E	239	4.3	1.0	16	9
059	05	14	16	20.1	33.90 S	178.63 W	264	4.4	1.6	9	8
060	06	03	04	59.3	34.73 S	179.16 E	349	4.5	1.9	13	8
061	06	22	28	22.1	40.43 S	175.79 E	33 R	3.8 F	1.0	13	9
062	07	00	16	10.2	37.96 S	179.22 E	84	4.3	3.0	10	10
063	07	00	20	52.4	37.86 S	179.07 E	33 R	3.8	1.6	11	7
064	07	02	41	54.9	37.98 S	178.74 E	12 R	4.8	1.7	21	15
065	08	16	00	09.0	37.43 S	176.54 E	257	4.3	1.6	18	10
066	08	16	53	52.6	50.49 S	164.73 E	33 R	4.6	0.6	7	6
067	08	22	09	44.6	34.83 S	178.80 E	314	5.5	1.5	27	16
068	09	07	14	56.5	37.96 S	176.38 E	12 R	3.4	0.3	6	5
069	12	00	21	32.7	32.69 S	177.61 W	298	4.6	1.8	10	6
070	12	02	43	44.9	33.41 S	178.70 W	33 R	4.4	2.2	11	8
071	12	05	21	37.8	33.84 S	178.49 W	33 R	4.3	2.5	10	7
072	12	11	27	49.8	37.68 S	176.46 E	216	3.8	1.7	15	10
073	13	05	12	54.3	32.59 S	177.54 W	270	4.6	1.6	11	9
074	13	09	35	17.3	38.89 S	176.29 E	12 R	3.5	1.1	15	10
075	14	14	58	25.1	43.65 S	168.83 E	12 R	4.0	1.1	13	8
076	14	22	51	07.5	33.34 S	178.80 W	33 R	4.4	1.4	9	6
077	15	04	36	16.6	36.50 S	177.26 E	33 R	3.9	0.8	9	8
078	15	05	31	51.2	35.55 S	179.05 E	227	4.3	1.5	15	10
079	15	06	29	17.9	36.20 S	177.50 E	12 R	4.6	1.9	14	13
080	16	08	27	58.1	40.50 S	174.37 E	33 R	4.1 F	1.4	18	14
081	16	09	35	45.4	37.72 S	176.39 E	12 R	3.1 F	1.2	6	5
082	16	11	31	00.1	41.64 S	174.11 E	12 R	4.0	1.7	16	11
083	16	21	48	38.4	39.92 S	176.12 E	33 R	4.4 F	1.2	21	13
084	17	10	24	14.1	38.03 S	176.10 E	12 R	3.5 F	1.5	16	9
085	17	20	43	06.1	38.35 S	175.96 E	166	3.5	1.6	10	8
086	18	04	20	07.7	37.16 S	179.91 W	12 R	4.5	1.4	25	12
087	18	09	57	10.2	33.03 S	177.60 W	33 R	5.0	1.9	16	12
088	18	11	13	25.6	33.08 S	177.79 W	33 R	4.7	2.0	15	10
089	18	12	16	46.6	33.29 S	178.06 W	33 R	4.7	2.2	12	11
090	18	17	20	07.5	33.14 S	177.76 W	33 R	5.0	2.0	17	12
091	18	18	15	09.9	33.16 S	177.87 W	33 R	4.7	2.1	15	11
092	18	19	55	45.8	34.02 S	176.83 W	33 R	4.6	2.3	12	8
093	19	07	40	24.9	40.91 S	173.62 E	133	4.1	1.6	18	13
094	19	23	30	46.9	39.09 S	176.21 E	33 R	4.1	1.4	24	12
095	21	01	25	54.4	36.53 S	177.64 E	12 R	4.8	1.5	18	12
096	21	23	38	08.4	45.50 S	169.49 E	12 R	3.8	1.1	13	8
097	22	02	03	40.3	43.14 S	170.46 E	12 R	4.0 F	1.5	18	10
098	25	03	26	03.2	32.90 S	177.54 W	367	4.8	2.0	13	7
099	26	08	06	26.8	38.23 S	175.91 E	196	3.7	1.1	12	7
100	27	05	18	17.0	38.45 S	177.59 E	69	3.8	2.0	13	9

REF NUM	ORIGIN TIME				LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
101 FEB	28	00	34	43.1	41.77 S	171.85 E	12 R	3.8 F	1.4	21	10
102	28	03	05	20.8	37.48 S	177.14 E	170	3.8	1.2	13	8
103	28	14	17	22.3	32.04 S	179.46 W	346	4.7	2.2	12	8
104 MAR	01	04	47	18.3	37.93 S	179.22 E	12 R	4.3	1.6	18	12
105	01	22	47	02.8	44.24 S	167.70 E	12 R	3.7	1.4	14	7
106	02	16	58	42.8	48.99 S	166.01 E	33 R	4.0	2.3	7	5
107	02	21	55	22.0	39.74 S	175.21 E	12 R	3.5 F	1.3	15	8
108	04	08	27	42.0	40.67 S	175.85 E	12 R	3.4	1.2	14	11
109	05	08	27	01.8	41.38 S	175.04 E	12 R	3.3F	1.5	9	7
110	05	19	59	10.7	36.78 S	177.76 E	165	4.8	1.1	13	13
111	06	03	04	13.2	33.19 S	179.49 E	420	4.5	0.5	6	5
112	06	04	49	48.5	40.00 S	173.92 E	12 R	3.5	0.7	10	7
113	06	14	21	15.9	37.41 S	177.40 E	12 R	3.8	1.2	9	11
114	07	05	08	15.6	38.73 S	175.90 E	137	4.2	1.0	16	13
115	08	22	21	39.9	44.97 S	167.63 E	33 R	4.4	0.8	13	12
116	09	09	22	51.5	36.84 S	177.80 E	12 R	4.3	1.3	13	13
117	09	11	14	57.8	37.10 S	176.85 E	203	3.6	0.2	6	8
118	09	16	30	23.2	35.75 S	179.54 E	12 R	4.1	0.6	13	14
119	09	17	47	51.5	39.22 S	177.54 E	12 R	3.6 F	1.7	10	13
120	09	19	05	20.8	39.17 S	177.54 E	12 R	4.3F	1.4	16	15
121	11	23	10	29.6	40.25 S	175.29 E	12 R	3.6	1.0	13	13
122	11	23	51	14.3	40.27 S	175.25 E	12 R	3.6	1.5	15	8
123	12	16	13	10.6	30.71 S	177.03 W	33 R	5.5	2.0	13	13
124	13	16	47	43.8	33.80 S	179.72 E	33 R	4.3	2.0	7	9
125	14	22	34	14.8	38.33 S	176.23 E	12 R	2.9F	1.7	7	6
126	14	22	36	05.9	38.30 S	176.26 E	12 R	3.5 F	1.3	10	8
127	15	05	41	37.0	37.54 S	176.62 E	187	4.7	0.7	16	16
128	16	10	33	27.9	39.03 S	174.96 E	231	3.6	1.7	17	12
129	16	17	04	00.6	39.96 S	173.19 E	12 R	3.5	1.2	15	7
130	16	21	33	32.6	31.75 S	177.94 W	33 R	4.6	1.0	9	9
131	17	02	23	33.0	44.99 S	167.37 E	12 R	3.6	1.3	12	7
132	18	21	20	25.1	39.19 S	175.88 E	84	4.3	1.0	22	15
133	20	20	05	28.3	45.06 S	167.59 E	105	3.2	0.9	7	4
134	21	18	25	54.1	39.12 S	174.83 E	217	4.3	1.5	20	13
135	21	18	55	23.0	44.62 S	168.63 E	12 R	3.3F	0.9	10	6
136	22	10	54	43.6	31.92 S	179.58 E	240	4.6	2.3	7	6
137	22	23	31	37.8	42.56 S	172.57 E	12 R	3.9	1.4	15	12
138	23	11	21	59.3	42.58 S	172.63 E	12 R	4.3	1.4	17	17
139	23	16	29	47.3	32.04 S	177.94 W	253	4.4	1.8	10	8
140	23	19	10	46.5	36.97 S	177.73 E	12 R	4.2	1.6	14	10
141	24	03	24	32.3	39.36 S	175.83 E	87	3.7	1.0	18	11
142	24	03	59	31.0	36.66 S	177.57 E	12 R	4.2	0.6	11	10
143	24	11	43	03.6	36.82 S	177.85 E	12 R	4.2	1.5	15	11
144	24	12	55	45.0	36.76 S	178.04 E	33 R	4.7	1.5	15	13
145	24	15	40	28.5	32.95 S	179.56 W	437	5.4	1.6	17	10
146	25	12	35	23.3	36.69 S	177.19 E	307	4.1	1.3	15	9
147	25	14	45	21.2	42.73 S	172.00 E	0	3.6	0.7	14	9
148	25	17	12	23.4	42.75 S	171.97 E	3	3.8	1.1	16	9
149	26	09	27	41.2	36.91 S	177.57 E	217	4.9	1.5	24	17
150	27	16	05	16.0	45.15 S	170.60 E	12 R	3.8 F	1.5	11	8

REF NUM	ORIGIN TIME				LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
			h	m s							
151	MAR 28	06	41	40.5	37.59 S	176.45 E	278	4.2	1.4	16	10
152	29	04	00	59.0	45.39 S	167.56 E	76	3.3	0.5	11	6
153	29	08	06	54.3	41.36 S	174.73 E	29	2.9 F	0.9	15	10
154	29	08	55	59.0	40.66 S	175.03 E	12 R	3.7 F	1.2	22	19
155	29	09	59	35.1	33.17 S	178.68 W	279	5.2	1.7	16	13
156	30	11	35	10.6	36.69 S	177.95 E	233	4.4	1.1	14	9
157	31	00	56	02.6	32.73 S	179.02 E	311	4.7	1.8	10	7
158	31	13	05	59.4	38.38 S	178.38 E	12 R	4.2	1.4	18	11
159	APR 01	17	19	20.7	43.25 S	170.77 E	12 R	3.8 F	1.5	18	10
160	02	02	58	43.6	38.17 S	178.77 E	12 R	3.6	1.5	12	8
161	02	15	48	37.8	49.44 S	164.96 E	33 R	4.4	1.6	11	6
162	02	17	19	30.4	36.01 S	178.32 E	294	4.5	0.9	14	9
163	02	19	40	17.7	39.30 S	177.49 E	12 R	3.6	1.7	16	10
164	03	10	20	59.7	44.14 S	168.99 E	12 R	3.7	1.3	11	6
165	04	11	41	32.0	38.82 S	178.93 E	12 R	3.5	1.1	11	7
166	04	15	02	31.6	37.65 S	179.96 E	12 R	3.7	0.9	10	5
167	05	04	43	09.9	38.90 S	176.03 E	112	4.1	1.3	18	11
168	05	05	34	22.6	40.50 S	175.48 E	12 R	3.9 F	1.5	14	8
169	05	09	03	50.4	38.32 S	176.09 E	162	3.8	1.2	13	9
170	06	02	44	33.2	37.30 S	176.95 E	245	3.8	1.3	12	7
171	06	13	08	26.1	37.65 S	176.44 E	213	4.0	1.7	17	12
172	07	23	40	52.6	32.52 S	179.80 E	445	5.1	2.3	14	10
173	08	11	13	43.8	40.33 S	173.84 E	164	4.5	1.6	26	17
174	10	01	44	49.0	31.57 S	179.64 E	250	4.7	3.0	11	7
175	11	02	44	22.2	38.32 S	176.20 E	155	3.7	1.4	9	7
176	11	16	52	39.2	44.96 S	168.00 E	12 R	3.9	0.8	12	6
177	11	19	47	49.7	32.50 S	179.18 W	303	4.8	1.9	16	12
178	12	00	33	46.6	38.31 S	175.68 E	291	4.0	1.1	11	7
179	12	08	58	32.9	34.49 S	178.46 E	272	4.5	2.2	14	11
180	12	11	56	38.1	38.15 S	176.19 E	175	3.8	1.5	15	9
181	13	22	35	04.7	34.74 S	179.32 E	318	4.4	1.4	9	7
182	14	22	56	20.2	41.78 S	174.56 E	33 R	3.5	0.5	11	13
183	15	18	12	19.7	37.95 S	176.12 E	279	3.9	1.4	13	12
184	16	15	56	11.4	40.94 S	174.33 E	72	4.0	0.4	20	24
185	17	22	27	04.2	37.42 S	176.98 E	131	3.9	0.8	9	10
186	18	14	59	13.4	35.77 S	178.78 E	12 R	4.4	1.4	13	14
187	20	03	49	39.5	37.79 S	176.26 E	173	3.7	0.4	8	10
188	20	10	05	08.3	47.22 S	165.91 E	33 R	4.2	0.6	9	6
189	21	08	02	10.7	41.02 S	172.29 E	12 R	3.7 F	1.0	13	12
190	21	09	07	51.0	32.12 S	179.87 E	221	5.0	1.2	8	13
191	21	20	03	12.2	37.50 S	177.06 E	12 R	2.7	1.5	6	4
192	21	22	53	41.5	46.16 S	166.53 E	12 R	3.8	1.2	6	3
193	22	17	19	44.6	32.43 S	178.74 W	275	4.8	1.0	8	14
194	22	20	23	33.0	38.69 S	175.85 E	138	3.5	1.0	10	13
195	23	11	40	08.0	36.97 S	177.80 E	131	3.8	0.3	8	14
196	24	04	45	53.9	37.98 S	176.10 E	169	3.4	0.3	6	7
197	25	04	34	14.5	37.16 S	177.40 E	102	4.1	0.9	9	13
198	25	23	03	13.2	39.41 S	174.44 E	204	4.0	1.1	12	10
199	26	01	40	28.2	33.18 S	178.35 W	33 R	4.3	2.7	5	10
200	28	08	19	51.5	37.63 S	177.42 E	133	3.4	1.8	13	9

REF NUM		ORIGIN TIME				LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
201	APR	29	16	29	29.6	39.11 S	174.88 E	226	4.7	1.2	20	15
202		29	19	43	07.3	39.54 S	174.47 E	154	4.4	1.1	14	10
203		29	19	47	11.9	40.14 S	174.93 E	12 R	3.9	1.2	21	11
204		30	16	39	29.6	32.38 S	179.33 W	563	4.8	2.3	9	6
205	MAY	01	15	06	27.2	38.22 S	176.14 E	214	4.2	1.0	16	11
206		01	17	35	47.1	40.28 S	176.60 E	103	4.1 F	1.2	23	15
207		01	17	39	29.4	33.85 S	179.09 E	337	4.7	1.4	16	12
208		01	22	05	13.4	39.05 S	174.35 E	22	3.8	0.8	14	8
209		02	09	25	38.5	38.79 S	175.18 E	238	3.9	1.0	14	10
210		02	21	26	17.9	37.91 S	176.58 E	160	4.4	1.5	20	13
211		02	22	05	51.2	33.49 S	179.74 E	388	4.8	1.9	14	10
212		03	02	08	53.9	38.81 S	175.87 E	166	4.2	1.6	22	12
213		03	03	17	53.4	37.96 S	176.69 E	12 R	3.2 F	0.9	6	5
214		03	03	53	25.0	38.02 S	176.72 E	12 R	3.2 F	0.9	6	6
215		03	12	25	54.4	38.04 S	176.68 E	12 R	3.8 F	1.0	10	12
216		03	14	54	06.0	38.04 S	176.70 E	12 R	4.1 F	0.6	11	14
217		03	15	34	17.1	44.65 S	168.32 E	85	3.5	0.8	14	7
218		03	16	39	35.5	41.18 S	172.61 E	12 R	3.9 F	1.6	15	12
219		04	01	44	40.4	39.38 S	176.96 E	33 R	3.7 F	1.2	17	14
220		04	02	41	26.6	37.99 S	176.72 E	12 R	3.4 F	0.8	7	6
221		04	08	26	47.1	39.48 S	177.16 E	33 R	4.9 F	1.1	19	18
222		04	08	28	50.3	39.46 S	176.99 E	33 R	4.1	0.9	12	9
223		04	11	39	03.3	39.47 S	177.16 E	33 R	4.3 F	0.6	16	12
224		05	17	15	53.2	37.98 S	176.77 E	10	4.2 F	1.2	24	12
225		05	19	10	27.0	34.68 S	178.92 E	286	4.5	1.6	10	6
226		05	23	22	37.6	38.03 S	176.73 E	12 R	4.0 F	1.5	22	10
227		06	01	39	00.2	43.49 S	172.77 E	25	3.8 F	1.9	12	5
228		06	07	08	15.9	39.63 S	174.26 E	201	4.4	1.3	16	10
229		07	03	29	58.5	39.03 S	174.80 E	221	4.3	0.9	11	6
230		07	04	31	54.0	38.91 S	175.20 E	230	4.6	1.5	16	9
231		07	06	10	44.1	37.97 S	176.72 E	12 R	3.3 F	1.3	6	4
232		07	09	40	19.9	36.60 S	178.49 E	216	4.2	0.7	7	6
233		07	10	01	12.0	39.25 S	173.84 E	25	4.1 F	1.1	15	6
234		07	18	56	15.3	37.93 S	177.50 E	33 R	4.3	1.4	23	11
235		08	11	50	27.5	37.82 S	177.41 E	33 R	3.7	1.1	12	7
236		08	22	39	58.5	39.75 S	177.13 E	33 R	4.0 F	1.2	16	9
237		09	12	57	28.9	37.46 S	177.06 E	143	3.8	2.2	11	7
238		11	18	39	26.6	37.24 S	176.34 E	337	4.3	1.2	12	7
239		13	03	47	40.1	41.99 S	174.29 E	12 R	3.9	1.5	14	7
240		13	13	57	12.5	38.30 S	177.04 E	125	4.2	1.9	24	14
241		13	21	05	01.8	38.00 S	176.71 E	9	3.4 F	1.1	9	6
242		13	23	35	28.8	38.39 S	178.04 E	33 R	4.1	1.5	16	11
243		14	17	01	53.7	37.06 S	176.94 E	7	3.8	1.4	15	8
244		14	17	36	01.8	36.87 S	176.81 E	12 R	3.9	1.5	17	9
245		14	23	53	35.3	37.01 S	177.01 E	12 R	3.9	2.1	11	8
246		15	01	27	54.6	38.01 S	176.72 E	5	3.4 F	1.9	9	6
247		15	02	06	52.7	38.03 S	176.74 E	3	3.3	2.0	8	5
248		15	11	15	06.5	42.57 S	172.57 E	6	3.7 F	1.3	18	9
249		15	11	36	20.4	38.02 S	176.70 E	4	3.4	2.1	9	6
250		15	11	37	11.1	42.11 S	174.21 E	7	4.2	1.8	25	17

REF NUM	ORIGIN TIME				LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
			h	m s							
251	MAY 15	15	52	41.5	37.95 S	176.67 E	12 R	3.1 F	1.2	9	6
252	15	20	33	57.5	36.07 S	174.34 E	9	3.9 F	1.6	10	7
253	15	22	23	59.3	36.02 S	174.30 E	12 R	2.9 F	2.1	6	3
254	15	22	33	19.2	36.28 S	178.35 E	256	4.8	1.4	17	9
255	16	00	22	11.6	36.10 S	174.30 E	12 R	2.8 F	1.9	5	2
256	16	00	30	05.9	36.10 S	174.30 E	12 R	2.1 F	0.9	2	1
257	16	03	26	14.5	45.29 S	167.46 E	105	3.7	0.8	14	7
258	17	06	28	55.8	38.39 S	176.11 E	159	3.7	1.1	13	8
259	17	20	24	13.9	36.00 S	174.30 E	12 R	F	ND	1	1
260	18	11	12	20.9	45.43 S	167.29 E	91	4.5	1.3	13	8
261	18	12	59	52.0	37.92 S	176.03 E	213	3.7 F	1.5	11	8
262	18	19	55	16.3	35.30 S	179.94 E	238	4.3	1.8	12	10
263	18	23	21	23.8	38.01 S	176.73 E	12 R	4.1 F	1.5	16	12
264	18	23	24	05.5	38.04 S	176.66 E	12 R	3.2	1.7	7	5
265	18	23	26	14.4	38.04 S	176.62 E	12 R	3.3	1.7	7	5
266	18	23	46	32.5	37.98 S	176.78 E	12	3.4	1.8	8	5
267	19	07	58	02.2	35.81 S	179.40 E	200	3.9	1.2	7	5
268	19	08	46	10.9	45.18 S	167.62 E	101	3.7	0.8	14	7
269	19	23	58	03.3	44.85 S	168.16 E	12 R	3.4	1.3	14	8
270	20	00	25	22.6	45.18 S	167.12 E	24	3.8	0.8	15	8
271	20	11	49	53.3	35.84 S	174.70 E	12 R	3.3 F	1.5	7	3
272	21	18	17	36.1	35.51 S	178.53 E	320	4.3	0.9	10	6
273	22	04	19	46.8	43.16 S	171.93 E	12 R	3.4	1.4	12	5
274	22	19	39	57.9	38.02 S	176.71 E	12 R	3.6	1.2	10	6
275	22	19	50	10.6	38.03 S	176.71 E	12 R	3.6	1.4	11	6
276	22	20	46	24.3	38.04 S	176.67 E	5	3.9 F	1.1	14	9
277	22	20	52	06.6	38.02 S	176.71 E	12 R	3.6	1.3	10	6
278	22	22	47	46.4	38.12 S	176.63 E	12 R	3.5 F	1.5	12	7
279	23	00	24	49.8	45.36 S	167.28 E	80	3.7	1.1	14	8
280	23	00	25	08.4	38.04 S	176.71 E	12 R	3.4	1.4	11	7
281	23	05	24	32.8	37.94 S	176.68 E	12 R	4.0 F	1.8	19	10
282	23	07	03	15.5	44.34 S	168.60 E	12 R	4.1	1.4	15	9
283	24	06	11	46.5	53.57 S	158.49 E	33 R	5.8	1.6	10	11
284	24	14	19	19.3	41.56 S	175.17 E	12 R	4.0 F	0.9	14	9
285	24	19	31	33.8	39.08 S	175.33 E	0	4.1 F	1.1	17	10
286	25	03	56	15.4	40.37 S	173.58 E	199	3.8	1.3	13	9
287	26	03	25	57.9	40.12 S	175.05 E	12 R	3.7	0.9	12	10
288	26	05	21	17.3	39.04 S	175.37 E	152	4.2	1.3	20	16
289	26	09	26	10.1	45.10 S	167.66 E	120	3.9	0.6	11	8
290	26	11	00	12.0	37.81 S	176.35 E	194	4.5	1.1	16	16
291	27	00	34	42.1	35.02 S	179.60 E	12 R	4.1	1.1	7	10
292	27	00	38	17.8	37.15 S	176.81 E	257	4.8	0.6	12	14
293	28	00	42	40.9	35.44 S	178.65 E	240	4.9	0.9	16	14
294	28	21	37	51.4	37.92 S	179.85 E	12 R	4.8	0.9	15	16
295	31	02	58	23.1	38.72 S	175.30 E	236	3.8	1.3	11	8
296	31	17	08	41.2	35.01 S	178.85 E	225	4.1	1.3	8	9
297	31	19	28	27.8	49.44 S	164.71 E	12 R	4.5	0.8	8	8
298	JUN 01	13	45	49.4	40.25 S	173.61 E	195	3.8	1.1	10	11
299	01	17	08	38.0	38.98 S	178.53 E	33 R	3.8	0.7	9	10
300	01	19	21	09.7	32.95 S	176.74 W	12 R	5.2	1.6	14	17

REF NUM		ORIGIN TIME h	m	s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
301	JUN 02	09	32	21.1	32.59 S	179.20 W	33 R	5.0	1.4	11	14
302	02	21	41	21.3	49.94 S	164.71 E	12 R	4.2	0.6	6	6
303	03	19	03	41.0	38.76 S	176.13 E	99	4.0	0.9	17	14
304	05	13	43	19.3	44.52 S	167.49 E	12 R	4.2	0.2	10	9
305	06	02	47	57.2	35.52 S	178.82 E	283	4.4	0.8	7	8
306	06	03	08	43.9	39.24 S	177.30 E	33 R	4.2	0.9	10	14
307	06	04	38	25.0	39.94 S	175.30 E	12 R	3.8	1.9	15	10
308	06	05	44	10.4	44.09 S	168.30 E	12 R	3.9	0.6	10	8
309	06	19	12	40.3	38.48 S	176.03 E	177	4.1	0.9	13	12
310	07	04	37	10.1	30.49 S	177.28 W	33 R	5.3	1.6	8	12
311	07	04	56	40.5	39.19 S	177.12 E	12 R	3.7	1.7	13	14
312	08	08	27	11.7	38.36 S	175.92 E	171	3.9	1.0	17	14
313	08	23	34	10.6	33.36 S	179.12 W	12 R	5.2	1.2	14	20
314	09	07	53	00.6	45.22 S	166.96 E	12 R	3.4	0.8	10	7
315	09	19	59	25.4	36.27 S	176.90 E	33 R	4.1	1.8	6	5
316	09	21	00	23.8	36.24 S	177.14 E	33 R	4.1	1.0	8	5
317	09	23	49	23.6	36.39 S	177.32 E	33 R	4.2	1.9	8	6
318	10	01	13	29.1	37.38 S	176.74 E	332	4.5	1.0	19	12
319	10	02	15	49.1	36.19 S	178.79 E	292	4.1	1.0	14	9
320	11	19	37	16.1	38.92 S	175.25 E	112	3.6	1.5	14	10
321	12	11	35	35.4	42.32 S	172.97 E	12 R	4.9 F	1.3	15	18
322	12	23	37	17.7	42.18 S	173.04 E	12 R	3.5	0.8	10	8
323	13	21	55	03.3	33.93 S	179.07 W	33 R	4.6	1.5	7	6
324	14	01	35	00.1	44.22 S	168.53 E	12 R	4.2	1.6	12	7
325	15	12	26	13.6	44.55 S	167.82 E	12 R	3.8	1.4	10	8
326	15	18	16	27.9	37.85 S	176.27 E	218	4.8	1.3	18	13
327	17	19	16	26.4	38.62 S	176.68 E	46	3.9	1.0	21	14
328	17	22	19	22.9	38.07 S	175.69 E	326	5.4	1.0	18	15
329	20	05	57	44.5	34.74 S	178.49 E	33 R	4.4	3.2	6	5
330	20	23	10	39.6	37.48 S	178.91 E	33 R	3.7	1.1	6	4
331	21	15	22	18.3	42.27 S	172.93 E	12 R	4.7 F	1.1	14	16
332	22	13	47	23.1	38.08 S	176.98 E	60	3.0	1.3	8	5
333	22	17	54	37.8	45.00 S	166.58 E	33 R	4.5	1.2	7	6
334	22	18	32	17.9	36.22 S	179.52 E	176	4.3	1.1	16	12
335	22	21	00	23.0	45.95 S	166.00 E	33 R	4.2	1.7	7	6
336	23	00	12	14.4	36.64 S	177.88 E	247	4.8	0.9	19	14
337	23	07	39	15.2	35.37 S	179.30 W	194	4.4	1.2	12	10
338	24	02	22	36.4	38.65 S	175.64 E	176	4.1	1.6	13	10
339	24	20	38	41.9	39.55 S	173.57 E	12 R	3.7	0.6	18	8
340	27	22	33	32.4	37.74 S	177.46 E	33 R	4.0	2.1	9	12
341	29	01	52	15.8	43.74 S	172.68 E	12 R	4.4 F	1.5	30	19
342	29	13	24	59.1	40.13 S	174.97 E	12 R	3.6 F	0.7	13	10
343	29	13	28	00.3	37.24 S	177.23 E	202	4.5	1.4	18	13
344	29	17	24	00.6	41.34 S	174.91 E	30	3.1 F	0.5	13	10
345	29	19	25	44.5	48.82 S	164.83 E	12 R	4.4	1.7	11	7
346	29	22	27	27.3	38.04 S	176.09 E	194	5.0 F	1.1	22	23
347	30	07	35	30.0	33.56 S	179.70 W	356	5.2	2.5	15	13
348	JUL 01	04	16	38.3	34.84 S	166.75 E	33 R	4.7	1.6	17	12
349	01	09	47	55.0	39.93 S	174.00 E	126	3.8	1.6	14	9
350	01	19	36	43.1	33.53 S	179.12 W	279	4.2	1.4	9	5

REF NUM		ORIGIN TIME h	m	s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
351	JUL 02	08	55	13.0	35.16 S	178.72 E	341	4.6	1.6	10	6
352	02	12	24	14.5	37.18 S	177.35 E	187	3.7	1.3	11	8
353	03	02	30	21.9	38.24 S	175.97 E	133	3.8	1.7	9	7
354	03	11	51	02.8	36.44 S	177.55 E	257	3.9	1.3	9	7
355	04	01	44	16.3	38.74 S	176.35 E	12 R	3.0F	0.5	4	3
356	04	09	02	13.7	36.66 S	177.89 E	12 R	4.7	1.6	19	14
357	04	20	00	59.3	45.02 S	167.70 E	101	4.5	0.8	10	8
358	05	08	32	15.9	40.95 S	174.04 E	33 R	3.6	1.1	13	8
359	07	01	22	09.3	38.62 S	175.87 E	168	4.3 F	1.0	18	17
360	07	12	00	28.0	39.38 S	175.24 E	12 R	3.2 F	1.1	14	11
361	07	13	48	20.7	37.12 S	177.30 E	217	3.9	0.5	13	11
362	07	23	59	03.7	45.14 S	170.46 E	12 R	4.2 F	0.8	13	27
363	08	16	10	01.9	32.00 S	180.00 E	33 R	4.9	1.7	10	11
364	08	17	53	22.0	39.44 S	177.20 E	33 R	4.2 F	0.6	14	14
365	09	11	28	50.5	44.19 S	168.89 E	12 R	4.4 F	0.8	13	12
366	10	05	29	09.6	32.84 S	178.46 W	12 R	4.6	1.2	9	13
367	10	19	02	43.2	38.28 S	176.41 E	122	3.7	0.7	14	13
368	10	21	00	42.8	39.65 S	174.11 E	197	4.1	0.9	13	12
369	11	21	50	20.4	46.38 S	166.20 E	12 R	4.2	0.5	9	9
370	12	08	21	11.0	32.08 S	177.47 W	33 R	4.7	1.0	8	12
371	12	17	52	11.8	37.80 S	176.28 E	175	3.8	1.0	12	12
372	13	09	36	46.1	39.37 S	174.57 E	223	3.8	1.4	15	11
373	13	17	09	52.6	41.62 S	172.99 E	109	3.5 F	1.3	11	9
374	13	22	52	53.7	38.85 S	175.83 E	12 R	3.2 F	1.5	11	11
375	14	20	19	14.4	32.48 S	177.93 W	33 R	5.1	1.4	9	13
376	15	18	41	52.2	38.04 S	176.72 E	12 R	3.2 F	1.7	7	9
377	15	18	42	25.0	38.07 S	176.69 E	12 R	3.2	0.9	5	6
378	15	18	42	55.6	38.04 S	176.69 E	12 R	3.3	1.7	6	7
379	15	19	35	39.4	37.98 S	176.72 E	12 R	3.9 F	1.4	13	12
380	15	20	57	11.8	38.05 S	176.88 E	12 R	2.9 F	1.5	7	5
381	16	11	42	04.0	39.50 S	177.18 E	33 R	4.2	0.7	16	19
382	16	12	30	34.6	38.56 S	176.06 E	12 R	2.9 F	2.1	10	9
383	16	12	37	11.8	38.57 S	176.02 E	12 R	2.9 F	1.7	10	9
384	16	12	39	28.0	38.60 S	176.00 E	12 R	F	2.6	2	1
385	17	03	23	28.2	39.70 S	174.13 E	182	4.2	1.2	12	14
386	17	04	35	20.9	42.29 S	173.03 E	0	4.4	1.6	16	18
387	18	00	33	30.5	41.68 S	174.20 E	12 R	4.0 F	1.4	16	16
388	18	07	44	13.5	39.16 S	175.41 E	6	3.5 F	1.3	13	9
389	20	14	56	14.6	35.32 S	179.37 E	12 R	5.0	1.3	9	16
390	20	14	56	42.2	42.74 S	177.40 E	12 R	4.1	0.7	12	14
391	20	17	25	30.5	45.26 S	167.08 E	12 R	5.3 F	0.6	8	20
392	20	22	00	14.4	39.82 S	175.30 E	33 R	3.7	0.8	16	13
393	21	08	28	22.1	32.21 S	178.22 W	418	4.9	2.0	8	7
394	21	15	02	02.9	44.65 S	168.27 E	69	3.9	0.4	13	8
395	22	04	18	56.4	40.14 S	174.96 E	12 R	4.0 F	1.3	16	13
396	22	04	38	41.1	39.04 S	175.34 E	162	3.8	1.4	19	11
397	23	01	45	18.6	40.17 S	174.49 E	96	3.5	0.8	17	9
398	23	03	52	44.5	49.78 S	164.50 E	33 R	4.3	0.9	7	6
399	23	06	03	10.1	44.52 S	168.75 E	12 R	3.8 F	1.5	12	8
400	23	18	05	48.6	40.37 S	175.58 E	33 R	3.6 F	0.9	15	13

REF NUM		ORIGIN TIME				LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
			h	m	s							
401	JUL	24	20	42	06.1	37.67 S	177.53 E	33 R	3.4	2.0	11	8
402		25	01	39	55.4	46.31 S	166.35 E	33 R	3.6	0.3	6	4
403		25	11	37	41.7	37.66 S	179.34 E	33 R	3.7	1.0	9	6
404		26	21	18	42.7	38.29 S	177.35 E	33 R	3.1	1.1	12	7
405		26	21	45	28.6	38.51 S	175.83 E	178	4.2	1.5	22	14
406		27	01	04	36.4	36.06 S	178.15 E	287	4.4	1.1	17	12
407		27	12	15	13.7	37.34 S	177.64 E	68	3.7	1.1	13	11
408		27	21	16	32.2	44.31 S	167.83 E	12 R	3.4	1.3	9	5
409		28	11	37	51.2	38.38 S	177.08 E	12 R	3.4	1.8	12	7
410		28	15	01	32.4	39.10 S	174.84 E	213	4.4	1.3	11	8
411		29	10	47	16.7	44.48 S	168.14 E	12 R	3.2	0.5	8	5
412		31	03	23	26.9	40.28 S	173.59 E	202	4.1	1.7	9	7
413	AUG	02	07	43	37.7	39.12 S	177.75 E	33 R	3.5	1.6	12	7
414		02	12	57	49.3	38.11 S	176.02 E	222	4.0	0.9	10	8
415		03	04	25	09.3	39.09 S	174.75 E	12 R	3.4	1.0	12	7
416		03	14	13	54.3	40.08 S	174.79 E	33 R	3.5	1.9	12	7
417		04	01	41	53.0	40.54 S	175.88 E	33 R	3.8 F	1.4	14	8
418		04	10	57	31.2	37.45 S	176.99 E	200	4.8	1.3	20	12
419		04	11	49	41.6	39.11 S	175.19 E	142	3.7	1.4	16	9
420		04	11	59	19.2	44.80 S	167.46 E	33 R	3.7	1.4	11	6
421		04	15	33	51.2	41.64 S	171.85 E	12 R	4.3 F	1.4	19	10
422		04	17	30	58.8	38.64 S	175.67 E	170	4.4	1.3	26	14
423		05	03	53	54.4	38.64 S	175.68 E	156	3.7	1.3	17	10
424		05	20	18	57.5	38.77 S	177.29 E	33 R	3.5	1.6	15	10
425		07	13	13	00.9	49.33 S	164.34 E	33 R	5.0	2.2	11	7
426		07	14	04	44.9	34.13 S	178.11 W	282	4.8	1.6	18	12
427		07	18	04	49.4	43.62 S	174.53 E	12 R	4.1	1.6	21	12
428		08	22	09	50.4	38.92 S	175.54 E	173	4.3	1.6	25	13
429		09	03	39	37.9	38.21 S	176.36 E	164	4.2	1.2	19	11
430		09	07	22	24.7	32.29 S	178.41 W	301	4.8	2.4	19	13
431		11	02	04	22.6	31.74 S	179.82 E	491	5.4	2.3	20	12
432		12	19	14	13.3	37.16 S	177.16 E	224	4.8	1.3	20	12
433		12	19	40	26.7	37.44 S	176.65 E	245	4.1	1.5	13	8
434		13	00	21	19.2	38.26 S	176.12 E	200	3.9	1.8	16	9
435		14	09	55	45.8	39.74 S	175.59 E	68	3.6	1.0	14	8
436		14	16	19	15.5	40.14 S	173.86 E	153	4.6F	1.6	23	13
437		14	19	29	51.8	36.17 S	179.24 E	274	4.3	1.3	11	9
438		15	11	28	48.3	37.65 S	178.38 E	98	3.6	1.6	11	8
439		15	19	18	22.4	39.10 S	175.41 E	136	3.7	1.6	17	10
440		15	23	00	40.1	31.60 S	179.06 W	271	5.3	3.3	16	11
441		16	04	10	56.3	38.12 S	176.17 E	183	3.8	1.5	17	11
442		16	15	09	02.9	39.21 S	173.75 E	12 R	3.9	1.5	20	13
443		17	08	37	30.7	38.73 S	176.14 E	12 R	2.8 F	ND	3	2
444		17	19	36	00.8	37.86 S	178.30 E	12 R	3.8	1.5	16	10
445		19	05	39	39.1	45.02 S	167.75 E	64	3.3	0.2	7	4
446		19	10	08	22.4	37.77 S	177.55 E	51	3.3	0.6	7	4
447		19	10	42	12.5	36.13 S	178.21 E	285	4.2	0.7	5	4
448		19	22	45	59.1	38.79 S	176.65 E	5 R	3.5	0.8	11	8
449		20	15	24	57.0	38.06 S	176.25 E	159	3.6	1.0	7	5
450		21	00	57	52.6	37.90 S	176.03 E	288	4.7	1.0	16	14

REF NUM	ORIGIN TIME				LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
			h	m s							
451	AUG 21	11	33	32.2	36.97 S	177.63 E	121	4.1	0.6	9	7
452	23	00	43	37.7	41.36 S	172.29 E	12 R	3.6F	1.1	5	3
453	23	05	00	44.8	44.29 S	169.30 E	12 R	3.2	1.4	5	4
454	24	23	26	52.0	38.99 S	177.97 E	28	4.1	0.6	11	9
455	25	12	29	45.4	37.89 S	176.50 E	161	3.6	0.5	10	10
456	26	01	28	32.3	37.22 S	177.36 E	113	4.0	1.2	11	11
457	26	16	36	31.8	38.03 S	176.16 E	217	4.5	1.6	17	13
458	26	23	46	58.7	38.11 S	176.26 E	12 R	2.9F	0.7	9	7
459	27	00	23	15.6	38.10 S	176.25 E	12 R	2.0F	0.9	4	2
460	27	00	37	09.2	38.10 S	176.25 E	12 R	2.6F	0.8	7	5
461	27	01	23	50.9	38.08 S	176.27 E	12 R	2.1F	0.4	5	2
462	27	14	24	30.2	36.87 S	177.15 E	211	3.5	1.0	6	10
463	27	16	01	38.1	39.21 S	174.92 E	11	2.8	1.1	10	9
464	27	18	44	18.4	38.71 S	174.60 E	33 R	3.3F	0.4	9	9
465	28	00	08	35.8	36.78 S	176.82 E	367	4.2	0.6	7	8
466	29	06	10	41.3	31.99 S	177.38 W	33 R	4.6	1.5	6	11
467	29	13	31	15.6	37.98 S	176.64 E	142	4.1	0.7	16	19
468	30	08	09	36.7	42.97 S	172.86 E	12 R	3.9	1.1	11	16
469	30	14	26	24.2	39.81 S	174.56 E	101	3.7	1.3	15	15
470	30	15	23	57.8	33.07 S	178.74 W	33 R	4.2	0.7	7	9
471	30	22	14	04.5	38.95 S	175.04 E	230	4.4	1.4	17	15
472	31	15	44	02.2	34.69 S	177.98 W	33 R	4.3	0.8	8	11
473	SEP 01	03	34	58.3	32.25 S	179.17 E	33 R	5.0	2.0	6	5
474	01	21	05	12.4	37.53 S	176.65 E	211	4.0	1.0	15	13
475	02	09	05	39.3	37.49 S	176.75 E	12 R	3.1	2.1	6	5
476	02	10	00	33.8	36.88 S	179.17 E	153	4.2	1.3	18	14
477	03	03	37	25.6	46.78 S	165.85 E	12 R	4.3	0.9	15	8
478	03	07	34	17.8	37.46 S	176.77 E	12 R	3.5	1.6	6	5
479	03	12	31	42.0	38.05 S	176.75 E	12 R	3.8F	1.4	14	13
480	03	17	50	12.2	40.16 S	174.98 E	12 R	3.5	1.5	18	12
481	04	09	22	49.4	38.03 S	178.24 E	33 R	3.4	0.9	10	7
482	05	14	54	36.1	38.36 S	177.06 E	12 R	3.6	1.6	13	14
483	05	15	56	32.1	33.93 S	179.21 W	258	5.0	1.3	16	14
484	07	01	12	01.5	38.47 S	175.85 E	188	4.3	1.8	29	20
485	08	15	02	25.4	37.78 S	176.21 E	302	4.0	1.0	16	10
486	09	17	49	37.2	38.32 S	176.16 E	160	3.9	1.1	17	15
487	09	20	16	45.6	38.48 S	176.69 E	111	4.6F	1.4	19	17
488	11	09	19	41.9	33.33 S	177.91 W	288	4.6	1.0	12	10
489	11	11	52	01.3	35.73 S	177.99 E	233	4.1	1.8	12	9
490	11	16	46	33.9	32.91 S	177.71 W	33 R	4.5	1.6	9	9
491	11	16	49	08.1	32.92 S	177.81 W	33 R	4.5	2.3	11	9
492	11	17	47	41.0	32.94 S	177.51 W	33 R	5.2	1.5	16	12
493	11	18	01	26.4	33.16 S	177.30 W	33 R	4.5	2.3	9	7
494	11	18	34	21.8	33.34 S	177.26 W	33 R	4.5	2.5	10	8
495	11	19	42	09.6	32.20 S	179.04 W	33 R	4.6	1.2	7	6
496	11	19	50	55.8	41.39 S	172.87 E	152	4.2	1.4	20	13
497	12	05	59	28.9	45.12 S	167.67 E	81	4.2	1.3	13	7
498	12	22	45	01.0	37.19 S	177.25 E	181	4.0	1.0	15	11
499	13	06	29	23.3	31.68 S	178.38 W	33 R	4.6	4.2	9	7
500	13	16	11	13.1	46.41 S	166.66 E	33 R	3.8	0.9	11	6

REF NUM		ORIGIN TIME h	m	s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
501	SEP	14	05	39 25.4	39.61 S	176.69 E	33 R	3.5	1.7	19	13
502		14	10	15 37.8	34.81 S	178.81 W	214	4.2	1.7	9	7
503		14	11	01 10.8	33.67 S	177.64 W	260	4.6	1.6	10	7
504		14	11	08 22.2	38.53 S	175.81 E	182	4.3	1.3	24	18
505		14	23	06 01.7	38.10 S	177.36 E	60	3.6	1.8	13	8
506		15	13	05 29.3	42.07 S	173.05 E	12 R	3.8	1.5	22	11
507		15	22	35 48.5	37.94 S	178.88 E	12 R	4.5	1.3	15	11
508		17	14	18 44.4	40.92 S	175.38 E	12 R	3.7	1.5	20	8
509		17	18	31 42.0	39.48 S	173.61 E	12 R	4.0	1.5	18	9
510		17	21	30 56.3	36.99 S	177.53 E	195	4.1	1.7	13	9
511		18	06	02 22.3	36.26 S	177.35 E	12 R	4.3	1.6	16	8
512		18	11	30 39.2	34.68 S	179.27 E	317	4.5	1.3	13	8
513		18	16	39 08.1	38.75 S	178.10 E	33 R	3.5	1.6	11	8
514		22	07	26 29.4	37.70 S	175.95 E	33 R	4.3	2.0	14	10
515		22	10	42 07.7	37.80 S	176.39 E	199	5.6F	1.8	27	18
516		22	19	36 03.9	33.39 S	179.79 E	395	4.6	2.0	9	6
517		22	19	42 09.3	46.61 S	166.19 E	12 R	3.5	1.4	11	4
518		24	00	05 37.3	36.19 S	178.27 E	241	4.7	1.8	18	10
519		24	12	33 59.0	41.17 S	174.67 E	33	3.9F	1.5	20	15
520		25	11	50 47.7	36.86 S	177.38 E	202	4.0	1.7	15	9
521		25	21	25 01.0	39.69 S	174.23 E	149	4.2	1.4	14	8
522		26	10	36 56.1	31.45 S	179.73 E	215	5.2	2.1	15	13
523		27	14	47 05.2	38.44 S	175.92 E	155	3.9	1.4	18	11
524		28	17	19 59.6	44.96 S	167.56 E	101	3.9	1.3	13	8
525		28	22	54 15.5	38.10 S	176.55 E	4	3.6	1.3	19	9
526		29	08	25 27.9	37.26 S	177.64 E	33 R	3.6	1.1	10	12
527	OCT	02	08	03 22.6	41.26 S	172.62 E	12 R	3.3F	2.2	11	7
528		02	11	49 02.2	39.23 S	175.09 E	156	4.8	1.1	23	18
529		02	12	54 07.9	35.84 S	179.98 E	33 R	4.1	0.6	10	11
530		06	09	54 41.2	39.49 S	176.86 E	12 R	2.8F	2.3	11	8
531		07	07	55 12.2	35.95 S	177.96 E	255	4.4	1.4	13	16
532		07	09	44 46.7	34.22 S	179.88 W	233	4.1	0.4	8	6
533		07	22	24 23.6	40.08 S	178.25 E	33 R	3.9	1.2	14	15
534		09	00	16 15.7	40.12 S	174.98 E	12 R	3.7F	1.3	17	11
535		09	15	38 27.9	43.46 S	171.57 E	12 R	3.3F	1.1	17	9
536		10	10	47 20.2	37.65 S	176.39 E	12 R	4.2F	1.3	14	11
537		10	10	56 58.0	37.45 S	176.41 E	12 R	2.8F	ND	3	2
538		10	10	59 21.0	37.69 S	176.42 E	12 R	3.7F	1.1	8	10
539		10	14	31 58.6	37.62 S	176.41 E	12 R	3.4	0.8	5	4
540		10	16	18 19.3	37.66 S	176.42 E	12 R	2.7	1.0	4	2
541		11	16	09 29.3	35.32 S	178.81 E	288	4.3	0.9	11	8
542		11	19	45 27.2	38.39 S	175.52 E	229	4.1	0.8	10	9
543		12	03	50 09.2	41.65 S	175.03 E	25	3.3F	1.1	7	5
544		13	04	52 34.6	37.88 S	178.60 E	33 R	3.7	1.3	12	10
545		13	09	45 40.2	37.81 S	179.14 E	33 R	3.7	1.4	16	10
546		14	06	01 47.3	44.59 S	168.23 E	12 R	3.8	0.6	11	6
547		14	07	05 49.4	38.05 S	176.01 E	190	3.7	1.2	16	10
548		15	03	58 31.9	38.56 S	176.13 E	142	3.7	0.9	17	12
549		17	12	30 10.4	39.32 S	174.98 E	31	2.7	0.6	13	6
550		17	12	37 54.2	42.48 S	173.18 E	74	4.1	1.3	21	18

REF NUM		ORIGIN	TIME h	m	s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
551	OCT	17	16	36	55.8	39.00 S	177.36 E	33 R	3.0F	1.3	10	9
552		18	15	47	19.8	38.59 S	178.11 E	33 R	4.0F	1.4	16	13
553		18	15	50	18.7	38.56 S	178.05 E	33 R	4.1F	1.2	19	14
554		18	21	15	18.9	38.49 S	178.08 E	33 R	3.3	0.7	9	6
555		19	02	35	53.5	37.67 S	178.04 E	66	3.8	0.8	14	12
556		19	20	51	28.7	38.53 S	178.09 E	33 R	3.4	1.0	8	6
557		19	23	01	33.2	38.70 S	175.93 E	128	3.9	1.2	16	12
558		20	23	05	28.0	45.04 S	170.78 E	12 R	3.4F	0.5	12	6
559		21	06	27	09.7	38.27 S	176.29 E	144	3.9	1.1	14	10
560		21	09	06	39.0	43.59 S	171.57 E	12 R	3.2F	0.9	12	7
561		21	09	27	35.3	37.99 S	176.19 E	189	4.0	1.1	12	8
562		21	13	28	45.3	41.52 S	174.48 E	23	4.4F	1.2	22	16
563		25	08	20	52.7	47.41 S	165.07 E	33 R	3.8	0.8	8	6
564		26	05	51	54.2	37.68 S	178.44 E	63	3.9	1.6	9	9
565		26	20	28	36.4	38.64 S	176.04 E	213	4.0	0.6	14	12
566		27	03	18	31.5	33.12 S	178.82 W	306	5.0	1.6	20	14
567		27	11	15	58.5	38.84 S	177.81 E	33 R	4.5F	1.6	28	14
568		27	15	47	15.0	34.49 S	178.95 E	264	4.3	1.7	16	12
569		27	18	48	11.5	39.08 S	174.88 E	228	3.8	1.5	15	9
570		27	20	32	18.6	37.50 S	177.79 E	102	4.8F	1.6	21	15
571		27	23	42	15.0	37.19 S	176.88 E	232	4.4	1.6	17	10
572		28	09	22	05.2	45.05 S	167.68 E	109	4.2	1.1	15	9
573		29	04	18	45.2	40.15 S	173.58 E	174	4.1	1.9	19	14
574		29	18	59	27.7	45.00 S	167.71 E	81	3.7	0.7	13	7
575		30	05	30	00.7	38.18 S	176.51 E	151	4.2	1.4	20	11
576		31	00	43	20.4	40.46 S	176.81 E	12 R	4.3	1.4	27	15
577		31	02	04	23.1	41.90 S	173.79 E	12 R	3.9	1.4	19	10
578		31	17	24	52.8	39.55 S	174.48 E	205	4.1	1.6	16	10
579	NOV	01	21	06	32.1	38.20 S	176.20 E	192	3.7	1.6	13	8
580		02	07	17	43.6	47.95 S	165.00 E	33 R	4.4	1.7	14	8
581		02	20	12	30.9	47.99 S	165.16 E	33 R	3.9	1.9	10	6
582		04	20	13	30.8	38.75 S	175.69 E	155	3.6	1.5	10	8
583		05	10	11	27.1	44.61 S	168.42 E	12 R	4.1F	1.4	16	9
584		05	14	31	47.3	44.94 S	167.56 E	12 R	3.8	1.3	13	8
585		06	06	43	45.2	35.35 S	179.00 E	12 R	4.4	2.0	17	8
586		07	18	45	42.6	32.98 S	179.43 W	432	4.8	1.6	10	7
587		08	22	04	36.1	37.19 S	177.12 E	282	3.9	1.0	9	6
588		09	02	17	14.5	39.03 S	175.32 E	12 R	3.5	0.9	8	6
589		09	03	57	18.9	38.98 S	175.14 E	205	3.9	1.4	17	12
590		09	10	50	46.1	38.89 S	175.12 E	214	4.2	1.3	19	11
591		09	10	59	31.3	36.61 S	177.33 E	268	4.4	1.3	23	14
592		10	12	59	53.9	46.06 S	165.33 E	12 R	3.9	0.7	11	7
593		10	18	04	02.7	39.22 S	175.21 E	12 R	3.5F	0.8	11	7
594		12	03	13	03.6	37.76 S	176.33 E	181	3.6	0.5	7	8
595		12	19	19	05.3	38.92 S	175.44 E	222	4.0	0.9	9	11
596		15	03	00	22.5	38.11 S	176.77 E	12 R	4.4F	1.1	12	15
597		15	03	04	21.2	38.10 S	176.76 E	12 R	4.1F	1.1	11	14
598		15	17	28	55.6	37.80 S	176.88 E	12 R	3.6	1.0	8	8
599		15	18	05	03.9	37.73 S	176.76 E	12 R	4.0F	1.3	10	9
600		15	18	40	07.6	37.80 S	176.87 E	12 R	3.7	0.7	11	9

REF NUM		ORIGIN TIME h	m	s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
601	NOV 16	00	33	48.7	44.38 S	168.12 E	0	4.0	1.3	15	11
602	16	04	16	57.8	40.22 S	176.52 E	12 R	3.9F	1.0	22	13
603	17	09	00	04.7	39.29 S	175.24 E	12 R	2.9	1.1	13	9
604	17	16	16	14.4	38.38 S	175.96 E	212	3.8	1.5	12	9
605	17	18	25	54.8	37.34 S	178.76 E	12 R	3.6	1.2	16	8
606	17	20	43	25.5	45.08 S	167.59 E	85	3.1	0.5	13	9
607	18	16	34	18.2	44.53 S	168.09 E	12 R	3.0	0.4	11	8
608	18	20	56	14.8	36.93 S	177.21 E	261	4.3	1.0	17	12
609	22	03	30	24.8	39.25 S	175.23 E	12 R	3.5	1.0	11	9
610	22	16	03	24.2	37.71 S	176.60 E	166	4.0	0.7	17	17
611	22	22	09	40.1	37.93 S	176.17 E	213	3.9	1.3	10	10
612	23	02	07	23.8	40.33 S	175.77 E	67	3.6	1.3	14	9
613	23	02	14	43.3	40.07 S	174.98 E	26	3.7	0.6	16	9
614	24	03	52	10.3	40.78 S	173.92 E	126	3.9	1.2	20	13
615	24	10	33	09.4	39.25 S	174.90 E	12 R	3.6	1.2	11	7
616	25	09	50	13.3	33.04 S	178.28 W	248	4.5	1.6	13	9
617	26	03	07	48.2	35.32 S	177.16 E	611	4.2	0.5	5	4
618	26	13	44	15.3	33.88 S	179.29 W	242	4.1	2.1	8	5
619	26	16	51	52.8	38.63 S	176.08 E	12 R	F	ND	1	1
620	27	10	09	26.8	37.51 S	176.82 E	182	4.4	1.5	21	14
621	27	17	07	10.4	41.12 S	174.14 E	56	4.0	1.0	21	18
622	28	17	21	55.2	39.68 S	175.43 E	12 R	3.2F	1.3	12	8
623	28	19	57	28.3	38.41 S	175.89 E	166	4.1	1.4	16	13
624	29	08	10	38.5	38.10 S	176.47 E	145	3.4	1.2	12	8
625	30	21	42	03.5	34.87 S	179.95 W	33 R	4.3	2.1	8	6
626	30	21	46	38.7	41.72 S	174.12 E	8	4.2 F	1.3	19	20
627	DEC 03	14	46	03.2	37.30 S	179.33 E	148	3.9	0.9	9	9
628	04	05	47	32.8	36.72 S	179.91 E	33 R	4.1	0.6	8	8
629	05	18	16	17.5	44.93 S	167.25 E	12 R	3.6	0.7	9	7
630	06	07	38	41.7	40.90 S	172.60 E	12 R	3.7F	1.5	10	8
631	08	01	50	37.0	47.34 S	166.06 E	33 R	4.6	0.8	11	7
632	08	14	46	55.5	41.35 S	174.10 E	33 R	4.1 F	1.1	12	10
633	09	00	08	41.2	40.91 S	172.71 E	12 R	3.7F	1.3	10	9
634	09	14	00	56.9	37.00 S	176.63 E	295	4.2	1.2	15	9
635	09	21	15	34.8	44.50 S	168.01 E	12 R	3.8	0.5	8	5
636	10	09	58	58.2	40.65 S	175.86 E	33 R	3.7F	1.1	14	10
637	10	14	58	43.0	39.86 S	177.37 E	22	4.0	1.0	13	15
638	11	17	13	10.2	34.14 S	179.52 W	233	4.8	1.4	14	13
639	12	05	09	40.9	34.82 S	179.72 E	287	4.7	1.3	8	7
640	13	01	21	22.4	40.21 S	178.45 E	33 R	4.0	1.4	11	7
641	14	03	39	45.9	39.71 S	175.00 E	130	3.8	1.3	13	11
642	14	19	55	20.2	38.51 S	175.79 E	193	4.3	1.3	15	14
643	14	20	45	55.0	45.13 S	167.76 E	126	4.0	0.6	11	6
644	17	00	16	14.5	36.41 S	179.85 W	160	5.0	1.6	20	15
645	17	02	29	18.3	39.87 S	177.38 E	12 R	3.6	1.0	14	10
646	17	15	29	28.8	44.14 S	170.05 E	7	2.8	0.1	13	12
647	17	15	37	40.3	44.15 S	170.08 E	3	4.6F	0.5	18	17
648	17	19	21	56.6	38.75 S	175.76 E	150	4.0	1.5	17	12
649	18	00	18	47.3	40.37 S	173.55 E	182	4.3	1.6	17	12
650	20	00	41	19.4	39.24 S	176.80 E	12 R	3.4	1.1	13	8

REF NUM		ORIGIN TIME h	m	s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS	NUM STN
651	DEC 20	23	56	08.7	38.33 S	176.10 E	193	4.6	1.5	23	18
652	21	09	55	24.4	37.79 S	176.32 E	218	4.6	1.4	20	16
653	22	00	24	34.4	39.07 S	174.88 E	209	4.3	1.1	18	15
654	23	15	24	47.6	37.21 S	177.65 E	83	4.0	0.9	15	12
655	24	01	25	52.4	32.67 S	176.84 W	33 R	4.8	0.7	10	11
656	25	05	54	30.3	44.34 S	167.91 E	12 R	3.8	0.9	11	7
657	26	10	53	19.3	34.22 S	179.54 E	33 R	3.9	0.9	6	7
658	27	04	14	35.3	32.80 S	179.07 W	187	4.6	1.1	7	10
659	27	20	21	39.8	36.84 S	177.72 E	146	4.0	0.7	10	13
660	28	05	33	53.1	38.05 S	175.69 E	255	3.7	1.2	12	10
661	28	21	00	48.9	44.78 S	167.62 E	87	4.1	0.8	11	8
662	28	21	03	02.4	39.83 S	174.64 E	122	3.5	1.1	11	8
663	29	01	57	51.1	33.28 S	178.62 W	33 R	5.8	0.8	13	18
664	29	04	42	40.6	33.35 S	178.82 W	33 R	4.8	0.6	11	13
665	29	16	46	25.1	33.31 S	178.78 W	33 R	4.8	0.9	10	14
666	30	12	36	17.7	39.01 S	178.09 E	12 R	4.4 F	1.2	13	17
667	30	20	25	45.1	42.04 S	172.02 E	12 R	3.7	1.4	17	10
668	31	13	58	00.3	32.66 S	178.08 W	33 R	5.3	1.3	11	14
669	31	17	26	49.9	43.63 S	169.48 E	12 R	4.1	0.7	11	8
670	31	18	10	47.8	43.65 S	169.46 E	12 R	3.5	1.2	9	8
671	31	18	10	54.5	43.66 S	169.48 E	12 R	3.6	1.1	9	8

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 listed below have been determined by using a slightly modified version of the micro-earthquake programme HYPO 71 (Lee and Lahr, U.S. Geological Survey, 1972). The use of this programme is a temporary measure until computing operations can be transferred completely to the PDP 11/34 computer used for all other earthquake locations. Origins determined by the two programmes appear to be virtually indistinguishable.

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.

Several explosions which were detonated in the vicinity of the network have been analysed as earthquakes and included at the end of the list.

REF NUM		ORIGIN TIME				LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS
			h	m	s	deg	deg	km			
P 001	JAN	01	23	08	15.4	43.568 S	170.595 E	5.0	2.0	0.1	12
P 002		02	07	12	52.2	43.564 S	170.612 E	9.6	1.9	0.2	12
P 003		02	22	37	04.3	44.251 S	169.563 E	6.5	1.6	0.2	14
P 004		02	22	40	55.8	43.544 S	170.615 E	9.3	1.2	0.1	5
P 005		04	19	42	14.7	44.303 S	169.980 E	7.2	1.4	0.2	14
P 006		04	19	52	34.5	44.311 S	169.911 E	12.2	1.1	0.1	14
P 007		04	20	16	45.6	44.135 S	169.752 E	9.2	1.2	0.2	15
P 008		07	07	04	38.3	44.603 S	170.041 E	2.1	1.7	0.1	10
P 009		08	05	00	16.9	43.555 S	170.696 E	5.0	2.3	0.1	10
P 010		09	23	58	15.4	44.404 S	170.263 E	2.1	0.5	ND	4
P 011		16	20	45	18.6	44.366 S	169.500 E	5.0	2.0	0.2	10
P 012		17	03	37	08.5	44.196 S	169.561 E	5.0	2.3	0.2	9
P 013		17	12	54	27.6	44.534 S	170.077 E	2.5	1.2	0.2	11
P 014		18	08	00	24.6	43.750 S	169.611 E	2.0	1.7	0.1	11
P 015		18	14	23	30.3	43.703 S	170.106 E	5.0	1.5	0.3	8
P 016		19	02	42	23.5	44.181 S	169.546 E	5.0	0.9	0.2	6
P 017		21	04	27	23.8	44.371 S	169.458 E	5.0	1.7	0.2	9
P 018		21	21	28	28.9	44.390 S	169.500 E	10.9	1.3	0.2	9
P 019		22	19	50	16.2	44.437 S	169.964 E	5.0	1.1	0.1	10
P 020		23	10	19	06.2	44.214 S	169.985 E	9.4	0.8	0.1	14
P 021		25	12	20	18.1	44.390 S	169.497 E	10.0	1.5	0.3	7
P 022		26	22	08	30.7	43.574 S	170.045 E	1.4	1.7	0.2	9
P 023		27	12	41	29.2	44.213 S	169.738 E	2.4	0.7	0.1	8
P 024		27	16	56	09.2	44.476 S	169.687 E	8.9	1.7	0.2	17
P 025		28	16	20	05.2	44.460 S	169.737 E	5.0	***	ND	4
P 026		28	16	50	35.0	44.431 S	169.963 E	1.5	0.9	0.1	5
P 027		29	11	54	25.5	44.433 S	169.959 E	5.0	0.5	0.1	5
P 028		30	07	34	40.6	44.350 S	170.048 E	9.0	1.3	0.1	9
P 029		31	05	14	55.8	44.227 S	169.720 E	2.6	1.3	0.1	7
P 030	FEB	01	15	10	01.8	44.314 S	169.629 E	9.9	1.2	0.1	5
P 031		03	20	43	39.0	44.012 S	169.758 E	8.2	0.7	0.2	11
P 032		04	10	33	53.1	44.054 S	169.694 E	8.2	1.0	0.1	7
P 033		04	14	34	23.2	43.578 S	170.151 E	1.7	1.5	0.2	10
P 034		07	19	40	47.4	44.779 S	169.693 E	2.8	1.0	ND	4
P 035		10	13	54	24.0	44.438 S	169.921 E	6.9	1.1	0.1	10
P 036		13	02	28	56.1	43.503 S	170.611 E	5.6	1.7	0.2	10
P 037		21	15	22	50.0	44.429 S	169.865 E	10.3	1.5	0.1	9
P 038		23	15	48	29.0	44.225 S	169.713 E	2.0	0.8	0.1	5
P 039		24	07	34	08.9	43.890 S	169.762 E	2.0	1.1	0.2	7
P 040		25	01	02	42.7	44.454 S	169.449 E	3.7	1.5	0.1	13
P 041		25	03	12	43.1	44.046 S	169.708 E	7.4	1.0	0.2	10
P 042		26	23	11	11.8	43.956 S	170.443 E	7.5	0.7	ND	4
P 043		27	14	55	26.6	43.722 S	170.133 E	4.2	1.3	0.1	9
P 044		28	13	24	27.9	43.998 S	169.241 E	5.0	1.8	0.2	9
P 045	MAR	01	18	00	29.0	44.154 S	169.982 E	10.0	0.6	0.1	8
P 046		04	07	51	34.9	44.262 S	170.602 E	7.3	1.2	0.1	10
P 047		04	08	15	40.6	43.582 S	170.486 E	3.3	1.1	0.0	5
P 048		04	10	13	16.8	44.488 S	169.771 E	8.8	1.0	0.1	7
P 049		06	11	02	50.7	44.758 S	169.687 E	1.1	1.5	0.3	8
P 050		07	11	41	21.5	43.841 S	170.377 E	2.2	1.4	0.2	7

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
P 051 MAR	09 02 54 03.5	43.822 S	170.131 E	7.1	0.8	0.1	6
P 052	10 23 50 40.0	43.721 S	170.431 E	5.0	1.6	0.2	6
P 053	16 06 48 18.9	43.966 S	170.394 E	4.9	0.8	0.1	7
P 054	17 08 54 38.8	43.566 S	170.064 E	3.4	1.5	0.2	9
P 055	17 10 55 39.5	43.572 S	170.075 E	1.2	1.6	0.2	9
P 056	20 23 18 45.8	44.225 S	170.087 E	8.2	1.9	0.1	11
P 057	21 13 45 57.1	43.980 S	170.408 E	6.2	0.8	0.1	5
P 058	21 22 57 21.2	44.291 S	170.075 E	9.6	1.1	0.1	10
P 059	27 06 59 35.4	44.321 S	169.990 E	12.4	0.9	0.1	8
P 060	30 11 10 01.6	44.460 S	169.881 E	9.5	0.9	0.0	7
P 061	31 16 08 43.1	43.545 S	170.471 E	16.5	2.3	0.1	11
P 062 APR	03 10 39 10.8	44.295 S	169.916 E	4.4	0.9	0.1	7
P 063	04 06 06 23.4	44.500 S	169.890 E	9.4	0.9	ND	4
P 064	04 13 34 25.5	44.491 S	169.911 E	7.8	0.4	ND	4
P 065	04 13 38 45.8	44.500 S	169.890 E	9.4	0.8	ND	4
P 066	04 22 00 43.7	44.490 S	169.910 E	7.9	0.6	ND	4
P 067	05 01 01 46.7	44.492 S	169.907 E	7.8	0.6	ND	4
P 068	05 08 13 21.1	44.418 S	169.630 E	5.9	1.3	0.1	9
P 069	05 15 09 33.4	44.212 S	169.698 E	6.1	1.6	0.1	10
P 070	06 12 52 28.5	44.483 S	169.922 E	4.5	1.6	0.0	9
P 071	06 14 32 03.9	43.698 S	170.178 E	3.8	1.5	0.2	11
P 072	08 00 28 58.2	44.562 S	170.068 E	2.4	2.3	0.1	14
P 073	08 10 56 18.8	44.104 S	169.819 E	6.1	0.5	ND	4
P 074	10 14 55 27.7	44.190 S	170.549 E	15.6	1.3	0.0	5
P 075	11 16 50 10.7	44.417 S	169.829 E	12.7	0.6	ND	4
P 076	12 02 51 39.1	44.288 S	170.115 E	0.2	0.4	0.2	8
P 077	12 06 50 33.6	44.248 S	169.771 E	9.0	1.0	0.1	8
P 078	12 21 48 38.1	43.872 S	170.106 E	2.0	1.3	0.2	6
P 079	13 09 17 17.4	44.613 S	169.759 E	6.9	2.2	0.1	10
P 080	14 20 09 49.5	44.330 S	170.056 E	0.0	0.9	0.2	5
P 081	16 04 20 56.5	44.329 S	170.057 E	0.0	1.0	0.1	5
P 082	16 06 09 57.7	43.614 S	170.185 E	9.2	1.8	ND	4
P 083	18 08 39 49.3	43.606 S	169.930 E	1.6	1.7	0.1	9
P 084	24 13 22 47.2	44.445 S	169.960 E	8.7	0.8	0.1	9
P 085	24 15 08 05.1	44.534 S	169.973 E	11.0	0.6	0.1	6
P 086	25 00 57 40.0	43.869 S	169.639 E	1.9	1.1	0.1	5
P 087	25 01 57 36.4	44.487 S	169.998 E	9.1	1.4	0.2	13
P 088	25 04 14 47.3	43.909 S	169.535 E	10.1	1.1	0.4	7
P 089	25 13 10 24.3	44.594 S	170.022 E	3.2	0.8	0.1	6
P 090	27 16 24 32.4	44.529 S	170.094 E	1.8	0.9	0.2	7
P 091	30 04 26 10.4	44.081 S	170.698 E	2.7	1.4	0.2	13
P 092 MAY	02 17 07 04.8	44.398 S	170.257 E	6.9	1.8	0.1	8
P 093	04 08 08 04.6	44.245 S	169.985 E	14.3	0.6	0.1	7
P 094	04 23 07 00.6	43.728 S	170.455 E	3.0	1.7	0.1	6
P 095	05 22 26 04.9	44.558 S	170.041 E	2.3	1.2	0.1	11
P 096	07 00 05 59.8	43.511 S	170.257 E	0.5	1.4	0.1	5
P 097	07 08 14 23.1	43.855 S	170.144 E	2.2	1.1	0.2	6
P 098	12 09 41 33.7	43.689 S	170.226 E	0.2	1.5	ND	4
P 099	13 00 12 58.7	43.717 S	170.012 E	2.3	1.8	0.0	10
P 100	14 14 52 24.7	43.635 S	170.171 E	0.0	1.8	0.1	8

REF NUM		ORIGIN TIME				LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
P 101	MAY	14	16	38	44.8	43.840 S	170.410 E	5.0	0.9	ND	4
P 102		14	21	37	44.9	43.744 S	170.051 E	3.9	1.6	0.1	9
P 103		19	08	31	41.0	43.662 S	170.305 E	5.5	1.3	0.0	5
P 104		19	08	34	11.9	43.646 S	170.307 E	5.0	1.3	ND	4
P 105		19	13	10	18.1	43.804 S	169.893 E	0.0	1.5	0.2	7
P 106		20	06	51	04.3	43.544 S	170.504 E	0.0	1.9	0.2	7
P 107		22	21	03	06.6	44.054 S	169.818 E	7.2	1.3	0.1	10
P 108		22	22	12	34.2	44.533 S	169.869 E	11.0	1.4	0.1	8
P 109		23	23	42	36.0	44.558 S	169.776 E	5.9	1.4	0.1	5
P 110		26	19	04	08.5	44.337 S	170.023 E	12.1	0.4	0.1	7
P 111	JUN	04	10	18	08.5	44.418 S	169.711 E	17.4	1.3	0.2	10
P 112		04	21	43	35.1	43.616 S	170.387 E	2.5	1.3	ND	4
P 113		05	07	45	07.7	43.687 S	170.031 E	3.0	1.8	0.0	8
P 114		05	11	30	38.1	43.673 S	170.158 E	5.0	1.1	ND	4
P 115		06	01	25	25.6	43.357 S	170.576 E	11.2	1.9	0.1	5
P 116		07	09	22	51.5	43.503 S	170.699 E	8.7	2.0	0.2	9
P 117		09	01	22	47.7	44.720 S	169.562 E	3.1	1.6	0.0	7
P 118		10	22	30	03.0	44.236 S	170.142 E	9.3	0.4	0.1	9
P 119		11	03	26	07.6	43.697 S	170.723 E	3.4	1.5	0.2	9
P 120		12	02	15	47.7	43.649 S	170.248 E	6.9	1.9	0.1	6
P 121		12	07	25	30.3	43.650 S	170.246 E	5.4	1.4	ND	4
P 122		12	08	10	08.8	44.502 S	169.730 E	4.6	2.5	0.1	10
P 123		13	00	37	17.6	43.713 S	169.738 E	4.0	1.4	0.2	10
P 124		14	05	18	30.1	44.296 S	170.109 E	0.0	0.5	0.1	8
P 125		18	15	25	41.9	44.394 S	169.677 E	8.5	1.6	0.2	15
P 126		18	18	19	46.4	43.509 S	170.519 E	9.7	1.4	0.1	5
P 127		24	03	22	42.2	43.669 S	170.037 E	5.9	1.1	0.2	8
P 128		24	03	55	54.6	44.366 S	169.534 E	10.3	1.5	0.2	14
P 129		27	12	19	02.7	43.892 S	169.640 E	1.8	1.6	0.2	8
P 130		29	07	40	57.7	44.582 S	170.856 E	3.4	1.9	0.2	7
P 131		29	14	42	49.6	44.420 S	169.983 E	5.0	0.5	ND	3
P 132	JUL	01	07	03	24.1	44.369 S	169.513 E	10.6	1.1	0.1	10
P 133		01	18	01	30.2	43.692 S	170.063 E	2.2	1.5	0.2	13
P 134		01	23	19	06.3	44.349 S	170.234 E	6.7	1.2	0.1	14
P 135		02	15	45	43.6	43.718 S	170.229 E	5.0	1.3	0.2	6
P 136		04	09	31	14.2	43.888 S	170.657 E	8.1	1.4	0.2	10
P 137		04	23	37	42.2	44.476 S	169.528 E	5.0	2.1	0.1	12
P 138		05	08	38	19.2	44.501 S	170.727 E	3.3	1.8	0.0	7
P 139		05	17	50	17.6	44.652 S	169.919 E	8.5	1.8	0.1	9
P 140		06	08	54	26.6	43.742 S	169.477 E	1.2	1.6	0.1	6
P 141		06	14	48	00.3	44.589 S	170.038 E	0.5	1.0	0.1	7
P 142		07	22	58	35.0	43.705 S	169.738 E	1.2	1.5	0.1	9
P 143		09	11	28	49.8	44.119 S	168.882 E	5.0	3.9	0.3	10
P 144		10	02	03	19.1	44.356 S	169.551 E	8.9	1.6	0.4	11
P 145		11	03	35	59.6	43.918 S	169.594 E	4.1	1.6	0.1	5
P 146		11	18	42	47.6	43.718 S	170.461 E	0.3	2.0	4.6	7
P 147		12	17	12	13.2	44.354 S	169.531 E	11.5	1.1	0.2	6
P 148		12	23	33	15.3	43.805 S	170.461 E	8.5	1.3	0.2	9
P 149		13	00	36	28.9	43.975 S	170.354 E	7.2	0.8	ND	4
P 150		13	19	16	39.6	43.931 S	169.779 E	1.9	1.2	0.2	6

REF NUM		ORIGIN	TIME h	m	s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
P 151	JUL	14	09	35	35.8	44.005 S	169.517 E	2.2	1.1	0.2	8
P 152		16	14	34	31.7	43.664 S	169.810 E	1.1	1.5	0.1	5
P 153		18	08	03	14.4	44.067 S	169.620 E	5.0		0.1	5
P 154		21	12	52	41.8	43.919 S	169.312 E	0.5	1.7	0.1	9
P 155		22	22	20	00.7	44.411 S	169.658 E	7.6	0.6	0.0	5
P 156		25	12	02	31.8	44.229 S	169.407 E	3.7	2.1	0.2	11
P 157		27	13	52	25.8	44.611 S	170.031 E	8.2	0.8	0.1	6
P 158		27	20	01	11.0	44.082 S	170.251 E	6.9	1.0	0.1	7
P 159		28	20	21	07.7	44.368 S	169.547 E	8.5	1.2	0.2	11
P 160		29	06	04	34.2	44.482 S	170.003 E	8.1	0.9	0.1	10
P 161		30	01	34	20.8	44.345 S	169.639 E	6.0	1.0	0.2	9
P 162		30	12	52	20.7	44.256 S	170.112 E	5.0	0.3	0.1	6
P 163		30	18	18	42.0	44.169 S	169.735 E	5.0	1.7	0.2	15
P 164		30	23	07	39.5	44.350 S	169.690 E	6.8	1.2	0.0	5
P 165		30	23	15	19.3	44.432 S	169.631 E	19.5	0.9	0.1	5
P 166	AUG	01	08	23	20.0	43.997 S	170.062 E	9.3	0.7	0.1	5
P 167		01	09	11	28.4	43.997 S	170.058 E	9.3	2.0	0.1	10
P 168		01	09	28	05.7	44.002 S	170.086 E	7.9	1.1	0.1	9
P 169		01	10	14	45.5	44.005 S	170.080 E	13.3	0.9	ND	4
P 170		01	10	59	10.2	43.996 S	170.061 E	8.7	1.0	0.1	5
P 171		01	11	22	08.1	43.997 S	170.064 E	10.8	0.6	0.0	5
P 172		01	11	58	01.2	43.997 S	170.069 E	8.9	1.5	0.1	10
P 173		01	17	14	21.7	44.155 S	169.792 E	0.2	0.6	ND	4
P 174		01	23	39	35.4	43.995 S	170.057 E	8.9	0.7	0.0	5
P 175		02	08	48	25.6	43.795 S	169.749 E	4.2	1.0	ND	4
P 176		02	10	37	35.7	44.174 S	169.745 E	2.3	1.5	0.1	8
P 177		02	12	21	16.0	43.718 S	170.123 E	3.6	1.0	0.1	6
P 178		03	04	22	40.2	44.000 S	170.065 E	8.9	1.7	0.1	12
P 179		03	04	22	44.0	43.997 S	170.098 E	8.8	1.3	0.1	10
P 180		03	07	49	34.5	43.997 S	170.070 E	11.6	1.4	0.1	14
P 181		03	07	55	48.6	43.995 S	170.045 E	8.5	1.0	0.1	13
P 182		03	18	36	43.2	44.633 S	169.870 E	6.8	1.2	0.0	6
P 183		04	06	16	01.0	43.997 S	170.071 E	9.3	0.9	0.1	11
P 184		04	11	58	33.8	43.996 S	170.143 E	1.7	0.6	ND	4
P 185		04	12	13	50.0	43.999 S	170.054 E	10.0	1.2	0.1	11
P 186		04	14	16	25.2	43.998 S	170.081 E	8.8	0.9	0.1	10
P 187		04	14	31	33.3	44.003 S	170.067 E	8.7	1.0	0.1	10
P 188		04	18	21	30.7	44.002 S	170.086 E	8.7	0.8	0.1	10
P 189		05	10	34	34.6	44.001 S	170.059 E	8.5	1.5	0.1	16
P 190		05	22	33	25.3	44.000 S	169.343 E	2.9	1.1	ND	4
P 191		06	01	00	21.1	43.997 S	170.062 E	9.3	1.7	0.1	9
P 192		06	02	54	39.8	43.992 S	170.050 E	6.2	0.8	ND	4
P 193		06	14	29	55.2	44.002 S	170.071 E	13.8	0.6	ND	4
P 194		08	06	34	26.2	44.109 S	169.841 E	8.1	2.1	0.2	16
P 195		08	12	59	27.0	43.999 S	170.059 E	9.3	1.1	0.1	14
P 196		08	16	56	57.0	44.131 S	169.869 E	3.8	0.6	0.1	8
P 197		11	12	53	26.7	44.325 S	169.793 E	8.1	1.4	0.1	10
P 198		14	06	16	00.2	44.314 S	169.593 E	6.1	1.5	0.1	11
P 199		16	20	46	58.8	44.388 S	170.251 E	8.6	1.2	0.1	11
P 200		17	02	05	17.6	44.620 S	170.441 E	5.0	1.3	ND	4

REF NUM		ORIGIN TIME				LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS
			h	m	s	deg	deg	km			
P 201	AUG	17	21	58	06.1	44.179 S	169.731 E	2.3	1.4	0.1	10
P 202		18	05	08	24.8	43.635 S	169.614 E	1.7	1.8	0.2	9
P 203		18	18	22	18.4	44.535 S	169.488 E	2.8	1.9	0.2	12
P 204		21	03	55	58.5	44.301 S	170.110 E	1.9	0.6	0.1	9
P 205		22	12	26	15.4	44.150 S	169.639 E	5.0	1.0	0.2	7
P 206		23	05	00	47.7	44.296 S	169.576 E	5.0	2.4	0.1	7
P 207		28	13	30	04.6	44.600 S	170.036 E	6.2	0.7	0.0	5
P 208		28	20	52	53.1	44.166 S	170.022 E	8.3	1.3	0.0	6
P 209		29	07	58	30.1	44.243 S	169.981 E	12.5	1.5	0.1	9
P 210		29	21	40	05.5	44.241 S	169.993 E	15.1	0.9	0.1	8
P 211		31	05	31	02.5	44.520 S	170.067 E	5.0	0.9	0.1	7
P 212	SEP	04	12	29	50.8	44.540 S	170.093 E	1.9	0.9	0.1	5
P 213		04	16	33	24.8	44.403 S	170.069 E	1.4	0.6	0.2	5
P 214		04	21	42	07.0	44.535 S	170.091 E	2.0	0.9	0.1	6
P 215		05	02	11	04.1	44.228 S	169.958 E	9.2	1.3	0.1	17
P 216		06	03	53	08.0	44.529 S	170.087 E	5.0	1.2	0.1	5
P 217		06	09	42	21.4	44.517 S	170.012 E	5.0	0.6	ND	3
P 218		06	11	54	33.8	44.534 S	170.088 E	2.3	1.2	0.1	6
P 219		08	03	13	03.1	43.706 S	170.659 E	7.8	1.9	0.1	9
P 220		09	04	46	38.6	44.533 S	170.372 E	1.9	1.3	0.1	6
P 221		12	09	27	46.6	44.403 S	169.471 E	5.0	1.4	0.2	11
P 222		13	19	28	17.1	43.696 S	169.797 E	1.9	1.6	0.2	8
P 223		14	01	07	56.5	44.444 S	169.832 E	7.0	1.1	0.0	6
P 224		17	04	58	19.0	44.162 S	170.113 E	7.4	1.0	0.1	12
P 225		18	01	57	05.5	44.060 S	170.531 E	8.1	1.0	0.1	7
P 226		26	09	00	03.5	44.479 S	169.839 E	7.3	0.7	0.1	7
P 227		30	12	27	11.6	43.646 S	169.882 E	0.1	2.4	0.1	15
P 228		30	12	28	10.5	43.630 S	169.876 E	0.3	2.3	0.1	13
P 229	OCT	03	08	55	09.3	44.059 S	169.530 E	5.0	1.2	0.3	9
P 230		04	02	08	14.4	44.304 S	170.375 E	5.0	0.7	0.2	5
P 231		04	03	26	27.8	43.697 S	170.463 E	5.0	1.4	ND	3
P 232		05	10	59	22.9	43.714 S	170.020 E	3.5	1.3	0.0	6
P 233		05	14	54	08.7	43.718 S	170.105 E	2.0	1.5	0.1	5
P 234		11	11	50	42.7	43.750 S	170.468 E	7.9	1.5	0.1	6
P 235		12	01	40	03.3	44.439 S	170.443 E	33.2	2.0	0.2	10
P 236		13	02	38	11.6	44.391 S	170.269 E	7.3	1.9	0.1	8
P 237		15	14	33	46.1	44.160 S	169.564 E	5.0	1.2	0.1	5
P 238		18	15	03	47.9	44.326 S	169.816 E	7.9	1.1	0.0	6
P 239		19	06	34	08.5	43.944 S	170.515 E	2.3	1.9	0.1	10
P 240		26	05	09	21.2	44.177 S	169.934 E	8.1	1.2	0.2	11
P 241	NOV	05	10	18	56.6	43.984 S	169.647 E	5.0	0.9	0.2	6
P 242		05	12	39	33.1	44.782 S	169.905 E	5.0	1.1	0.2	7
P 243		05	18	02	37.9	44.344 S	170.796 E	5.0	1.5	0.1	10
P 244		07	05	26	09.2	44.002 S	170.340 E	6.4	1.6	0.1	13
P 245		08	06	21	39.5	43.699 S	170.503 E	3.5	1.4	0.1	5
P 246		10	08	28	27.0	43.996 S	170.341 E	7.0	1.5	0.1	11
P 247		12	04	23	21.4	44.055 S	170.305 E	5.1	1.3	0.1	6
P 248		14	01	48	48.4	44.310 S	169.516 E	5.8	2.5	0.1	6
P 249		16	12	32	40.3	44.024 S	170.398 E	8.1	1.1	ND	4
P 250		17	20	43	24.4	44.058 S	170.303 E	5.0	0.8	0.1	6

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
P 251 NOV	19 20 37 25.2	44.032 S	169.670 E	5.0	2.0	0.1	11
P 252	21 15 52 15.8	44.367 S	170.201 E	4.2	1.0	ND	4
P 253	23 21 05 21.5	44.055 S	169.382 E	6.4	1.5	0.2	7
P 254	24 03 00 20.1	44.444 S	169.952 E	9.9	0.7	0.1	7
P 255 DEC	03 09 39 04.6	44.957 S	170.223 E	0.8	2.1	0.5	13
P 256	03 15 48 28.9	43.490 S	170.319 E	0.7	1.5	ND	4
P 257	09 00 19 02.3	44.386 S	170.247 E	1.8	0.7	0.0	5
P 258	12 08 38 41.6	44.098 S	170.009 E	4.3	0.5	0.1	6
P 259	17 15 21 38.0	44.137 S	170.071 E	4.2	0.9	0.1	13
P 260	17 15 22 59.3	44.132 S	170.061 E	2.5	1.0	0.3	15
P 261	17 15 29 29.1	44.137 S	170.060 E	1.2	2.0	0.0	11
P 262	17 15 31 52.7	44.138 S	170.061 E	3.3	1.2	0.1	13
P 263	17 15 37 40.3	44.139 S	170.058 E	3.7	4.6	0.1	9
P 264	17 15 42 50.3	44.143 S	170.055 E	5.0	1.2	0.1	14
P 265	17 15 47 35.5	44.140 S	170.072 E	2.5	1.3	0.1	10
P 266	17 15 48 36.0	44.137 S	170.065 E	5.2	0.9	0.1	6
P 267	17 15 50 08.9	44.116 S	170.081 E	7.6	0.7	0.1	6
P 268	17 15 51 04.8	44.126 S	170.064 E	6.3	0.7	0.1	7
P 269	17 15 55 02.1	44.140 S	170.063 E	1.3	0.8	0.0	7
P 270	17 15 57 45.0	44.136 S	170.058 E	6.8	0.7	0.1	6
P 271	17 16 03 29.4	44.132 S	170.055 E	5.3	1.0	0.0	6
P 272	17 16 08 11.3	44.120 S	170.059 E	6.2	0.6	0.0	5
P 273	17 16 12 19.4	44.123 S	170.073 E	7.1	1.0	0.2	9
P 274	17 16 12 32.6	44.132 S	170.066 E	6.7	1.5	0.1	9
P 275	17 16 14 30.7	44.134 S	170.054 E	7.1	0.6	0.0	5
P 276	17 16 16 43.9	44.140 S	170.060 E	1.1	1.0	0.1	8
P 277	17 16 17 44.4	44.137 S	170.063 E	2.9	0.8	0.0	6
P 278	17 16 23 17.8	44.122 S	170.071 E	6.9	1.3	0.1	11
P 279	17 16 27 08.2	44.139 S	170.067 E	7.3	1.3	0.2	13
P 280	17 16 27 43.4	44.142 S	170.056 E	4.0	0.8	0.1	10
P 281	17 16 42 56.7	44.137 S	170.061 E	4.4	1.1	0.1	14
P 282	17 16 43 27.3	44.127 S	170.062 E	6.9	0.9	0.1	11
P 283	17 16 50 52.6	44.138 S	170.071 E	5.0	1.1	0.2	13
P 284	17 17 00 08.2	44.137 S	170.059 E	4.1	0.7	0.1	10
P 285	17 17 06 13.2	44.127 S	170.064 E	6.8	0.7	0.1	5
P 286	17 17 09 31.7	44.133 S	170.061 E	5.4	1.0	0.1	11
P 287	17 17 10 14.6	44.145 S	170.051 E	4.5	0.5	0.0	6
P 288	17 17 14 29.6	44.132 S	170.053 E	4.9	0.6	0.1	7
P 289	17 17 14 45.9	44.144 S	170.059 E	4.0	0.6	0.0	6
P 290	17 17 30 32.9	44.130 S	170.058 E	5.5	0.6	0.0	6
P 291	17 17 35 01.4	44.132 S	170.067 E	5.2	0.8	0.1	13
P 292	17 17 36 31.1	44.136 S	170.070 E	5.0	0.8	0.2	11
P 293	17 18 08 48.9	44.145 S	170.048 E	3.2	0.5	ND	4
P 294	17 18 24 28.8	44.122 S	170.055 E	7.0	1.1	0.1	6
P 295	17 19 12 28.4	44.136 S	170.053 E	4.7	1.6	0.1	9
P 296	17 19 26 28.4	44.133 S	170.063 E	4.4	0.8	0.0	6
P 297	17 19 55 00.1	44.138 S	170.061 E	4.0	1.0	0.0	6
P 298	17 20 41 17.9	44.141 S	170.055 E	2.3	0.9	0.0	8
P 299	17 20 59 33.0	44.141 S	170.058 E	2.0	1.0	0.0	6
P 300	17 23 38 11.3	44.147 S	170.059 E	1.3	0.4	0.0	5

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
P 301 DEC	18 00 10 23.5	44.146 S	170.058 E	0.8	0.3	0.0	6
P 302	18 00 10 28.4	44.097 S	170.064 E	7.2	0.9	ND	4
P 303	18 00 15 08.8	44.143 S	170.058 E	2.1	1.4	0.1	8
P 304	18 00 39 52.8	44.146 S	170.071 E	0.6	0.7	0.0	5
P 305	18 00 45 03.3	44.141 S	170.067 E	2.1	0.7	0.0	5
P 306	18 02 21 43.7	44.092 S	170.066 E	6.7	0.5	ND	4
P 307	18 02 27 18.6	44.145 S	170.054 E	0.8	0.4	0.0	5
P 308	18 02 28 18.8	44.138 S	170.055 E	3.6	1.2	0.1	7
P 309	18 02 28 54.9	44.102 S	170.061 E	5.0	0.5	ND	3
P 310	18 02 29 27.5	44.131 S	170.055 E	8.4	0.6	0.1	6
P 311	18 02 30 28.9	44.124 S	170.055 E	8.8	0.7	0.1	6
P 312	18 02 34 24.1	44.141 S	170.053 E	3.5	0.7	0.1	7
P 313	18 03 30 42.7	44.135 S	170.057 E	2.6	***	ND	4
P 314	18 04 11 58.5	44.139 S	170.058 E	8.1	0.3	ND	4
P 315	18 04 26 30.4	44.138 S	170.059 E	3.3	0.3	0.0	7
P 316	18 05 15 23.9	44.127 S	170.064 E	6.6	0.3	0.0	5
P 317	18 05 42 27.8	44.128 S	170.063 E	7.1	0.8	0.1	10
P 318	18 06 37 17.3	44.124 S	170.057 E	6.7	0.5	0.1	8
P 319	18 07 13 50.0	44.133 S	170.056 E	5.0	0.7	0.1	10
P 320	18 08 53 45.7	44.119 S	170.067 E	8.4	0.4	0.1	8
P 321	18 09 45 55.1	44.142 S	170.061 E	3.4	0.9	0.1	6
P 322	18 12 03 02.0	44.140 S	170.057 E	3.4	1.0	0.0	6
P 323	18 12 09 18.4	44.138 S	170.058 E	4.1	1.0	0.0	5
P 324	18 12 10 50.5	44.143 S	170.052 E	3.9	0.8	0.0	5
P 325	18 12 58 19.3	44.137 S	170.053 E	3.2	1.4	0.0	8
P 326	18 13 15 38.7	44.139 S	170.064 E	2.7	0.9	0.1	6
P 327	18 13 26 19.3	44.143 S	170.061 E	1.0	0.6	0.0	5
P 328	18 13 26 57.1	44.088 S	170.055 E	9.9	0.9	ND	4
P 329	18 13 32 39.5	44.126 S	170.065 E	1.1	0.7	0.1	5
P 330	18 16 38 01.1	44.146 S	170.053 E	0.9	0.6	0.0	5
P 331	18 16 56 11.6	44.143 S	170.057 E	3.2	0.4	0.0	5
P 332	18 21 13 17.6	44.136 S	170.057 E	3.6	1.0	0.0	5
P 333	18 23 13 25.6	44.135 S	170.057 E	4.9	0.7	0.0	6
P 334	18 23 27 47.6	44.137 S	170.054 E	4.8	1.1	0.1	8
P 335	19 02 38 55.3	44.134 S	170.061 E	3.0	0.9	0.0	6
P 336	19 05 55 51.5	44.145 S	170.057 E	2.2	0.6	ND	4
P 337	19 06 48 16.6	44.141 S	170.063 E	3.1	1.1	0.0	8
P 338	19 10 42 31.2	44.138 S	170.061 E	2.9	0.9	0.0	5
P 339	19 11 00 08.8	44.139 S	170.053 E	3.5	1.5	0.0	10
P 340	19 11 32 29.5	44.140 S	170.052 E	3.5	0.9	0.0	5
P 341	19 13 53 31.6	44.146 S	170.055 E	3.5	0.7	0.0	5
P 342	19 14 36 58.3	44.527 S	169.873 E	10.4	1.0	0.0	6
P 343	20 10 40 54.2	44.145 S	170.053 E	2.1	0.6	0.0	5
P 344	20 14 06 42.6	44.167 S	169.440 E	5.0	1.5	0.3	9
P 345	20 14 52 08.7	44.135 S	170.055 E	5.0	0.5	ND	4
P 346	20 21 26 25.1	44.146 S	170.049 E	0.9	0.3	0.0	5
P 347	20 21 30 36.1	44.140 S	170.053 E	4.6	1.2	0.1	9
P 348	20 21 43 10.9	44.146 S	170.051 E	0.7	0.6	0.0	5
P 349	20 21 48 20.6	44.146 S	170.051 E	0.8	0.6	0.0	5
P 350	20 23 26 52.9	44.127 S	170.059 E	6.4	0.3	0.1	6

REF NUM	ORIGIN TIME				LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS
		h	m	s	deg	deg	km			
P 351 DEC	21	03	35	21.9	44.131 S	170.055 E	5.2	0.6	0.1	9
P 352	21	05	44	17.7	44.138 S	170.053 E	5.7	0.6	0.1	10
P 353	21	05	53	29.4	44.133 S	170.058 E	7.5	1.4	0.1	13
P 354	21	06	07	03.8	44.135 S	170.054 E	4.5	0.8	0.1	8
P 355	21	06	13	50.2	44.128 S	170.056 E	6.7	0.4	0.1	8
P 356	21	06	53	11.6	44.135 S	170.054 E	5.2	0.6	0.1	9
P 357	21	08	49	07.9	44.137 S	170.050 E	4.6	0.3	0.1	6
P 358	21	11	25	56.8	44.140 S	170.054 E	3.0	1.8	0.1	12
P 359	21	11	34	09.4	44.130 S	170.060 E	6.5	0.7	0.1	8
P 360	21	12	05	58.9	44.137 S	170.056 E	4.5	1.1	0.1	10
P 361	21	12	51	28.0	44.134 S	170.066 E	4.8	0.6	0.0	8
P 362	21	12	55	46.7	44.133 S	170.058 E	5.4	0.6	0.0	9
P 363	21	13	42	31.9	44.137 S	170.055 E	4.4	1.4	0.1	8
P 364	22	06	05	15.9	44.121 S	170.048 E	9.1	0.7	0.1	5
P 365	22	17	26	47.5	44.126 S	170.059 E	7.3	0.8	0.1	8
P 366	22	19	31	47.1	44.138 S	170.055 E	3.9	1.6	0.1	10
P 367	23	14	43	21.6	44.144 S	170.048 E	3.9	0.7	0.1	7
P 368	23	14	44	32.3	44.142 S	170.053 E	4.8	0.6	0.0	5
P 369	23	17	48	11.4	44.126 S	170.061 E	7.6	0.6	0.1	6
P 370	23	21	50	16.0	44.138 S	170.050 E	7.0	1.8	0.1	10
P 371	23	22	19	39.8	44.123 S	170.036 E	8.7	0.6	0.1	5
P 372	23	22	20	12.3	44.138 S	170.057 E	3.9	1.4	0.1	9
P 373	24	03	49	41.1	44.124 S	170.065 E	7.1	0.7	0.1	6
P 374	24	03	56	15.8	44.142 S	170.059 E	1.9	1.1	0.0	10
P 375	24	14	25	59.4	44.132 S	170.063 E	4.8	1.1	0.1	10
P 376	24	15	15	25.5	44.129 S	170.064 E	8.3	0.4	0.1	6
P 377	24	15	44	56.4	44.131 S	170.057 E	7.6	0.7	0.1	8
P 378	24	15	45	41.4	44.133 S	170.055 E	6.5	0.5	0.1	9
P 379	24	18	49	42.8	44.145 S	170.046 E	6.6	0.5	0.1	7
P 380	25	02	57	26.2	43.568 S	170.329 E	0.9	1.7	0.0	7
P 381	25	03	04	18.5	44.128 S	170.055 E	7.3	1.0	0.1	6
P 382	26	01	26	31.7	44.141 S	170.050 E	3.4	1.0	0.1	7
P 383	26	19	51	07.1	44.148 S	170.044 E	2.4	0.3	0.0	6
P 384	26	20	55	11.7	44.133 S	170.053 E	6.0	0.7	0.0	7
P 385	27	09	40	51.4	44.140 S	170.057 E	2.4	1.0	0.0	6
P 386	28	04	54	17.2	44.145 S	170.061 E	4.4	1.3	0.1	10
P 387	28	10	45	04.5	44.005 S	170.189 E	7.5	1.1	0.1	10
P 388	28	12	18	07.9	43.718 S	170.058 E	4.0	1.9	0.1	15
P 389	28	13	57	25.5	44.145 S	170.057 E	4.4	1.1	0.0	8
P 390	30	01	32	15.8	44.134 S	170.064 E	5.0	0.7	0.1	5
P 391	31	15	44	06.4	43.763 S	169.634 E	5.0	1.9	0.2	14
P 392	31	17	26	52.8	43.757 S	169.618 E	1.5	2.8	0.1	9
P 393	31	18	07	37.6	43.804 S	169.456 E	2.9	1.5	0.2	8
P 394	31	18	08	18.2	43.754 S	169.566 E	1.5	2.5	0.1	10
P 395	31	18	08	36.0	43.768 S	169.581 E	3.3	2.4	0.2	13
P 396	31	18	09	09.6	43.762 S	169.552 E	3.4	2.0	0.3	9
P 397	31	18	09	29.1	43.763 S	169.575 E	6.8	1.8	0.1	5
P 398	31	18	10	08.8	43.774 S	169.555 E	2.1	2.2	0.2	7
P 399	31	18	10	50.2	43.782 S	169.590 E	0.3	2.8	0.2	11
P 400	31	18	12	26.2	43.759 S	169.556 E	0.4	1.9	0.0	6

REF NUM	ORIGIN TIME				LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS
		h	m	s	deg	deg	km			
P 401 DEC	31	18	15	47.6	43.776 S	169.503 E	1.4	1.1	ND	4
P 402	31	18	17	48.8	43.775 S	169.521 E	0.6	0.8	ND	4
P 403	31	18	19	28.5	43.769 S	169.515 E	1.3	1.2	ND	4
P 404	31	18	28	11.7	43.768 S	169.513 E	2.6	1.7	0.1	6

EXPLOSIONS

REF NUM	ORIGIN TIME				LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS
		h	m	s	deg	deg	km			
P 405 MAR	31	03	34	37.5	44.296 S	170.108 E	0.0	1.7	0.4	9

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				LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS
		h	m	s	deg	deg	km			
W 001 JAN	01	02	23	36.2	41.381 S	175.106 E	23.2	4.2	0.2	6
W 002	01	02	27	30.0	41.380 S	175.124 E	27.2	2.1	0.0	6
W 003	01	02	32	07.1	41.392 S	175.142 E	29.7	2.1	0.0	6
W 004	01	02	36	21.0	41.393 S	175.123 E	26.5	2.6	0.1	6
W 005	01	02	40	48.1	41.410 S	175.151 E	29.5	2.1	0.1	6
W 006	01	02	55	58.7	41.445 S	175.157 E	21.9	2.5	0.2	6
W 007	01	02	59	30.9	41.401 S	175.155 E	28.1	2.2	0.0	6
W 008	01	03	10	40.0	41.375 S	175.132 E	28.2	2.7	0.1	6
W 009	01	03	40	14.8	41.355 S	175.100 E	27.3	2.1	0.0	5
W 010	01	06	43	21.0	41.379 S	175.137 E	26.9	2.1	0.0	6
W 011	01	06	51	01.0	41.401 S	175.149 E	27.2	2.1	0.1	6
W 012	01	08	55	06.0	41.387 S	175.131 E	28.4	2.0	0.0	6
W 013	01	12	47	27.8	41.384 S	175.121 E	27.3	2.1	0.1	6
W 014	01	16	30	13.6	41.388 S	175.124 E	28.1	3.7	0.1	7
W 015	01	16	46	01.7	41.385 S	175.126 E	28.3	3.5	0.0	6
W 016	01	21	13	23.9	41.387 S	175.122 E	27.0	2.4	0.1	6
W 017	01	21	41	38.9	41.369 S	175.102 E	23.7	2.3	0.1	6
W 018	02	05	27	16.2	41.328 S	174.979 E	30.4	1.9	0.1	5
W 019	02	07	57	42.0	41.369 S	175.096 E	25.1	2.3	0.2	6
W 020	02	19	14	38.6	41.389 S	175.124 E	28.7	2.0	0.0	6
W 021	02	23	27	05.8	41.391 S	175.130 E	28.8	2.2	0.1	6
W 022	03	07	52	20.4	41.397 S	175.154 E	28.4	2.0	0.1	6
W 023	03	10	07	04.7	41.378 S	175.136 E	26.9	1.9	0.1	6
W 024	03	12	13	20.2	41.378 S	174.215 E	33.0	2.5	0.1	6
W 025	03	22	29	25.1	41.390 S	175.131 E	28.2	2.2	0.1	6
W 026	03	22	30	26.4	41.381 S	175.123 E	28.2	2.2	0.1	6
W 027	03	22	31	46.2	41.391 S	175.140 E	28.1	2.5	0.1	7
W 028	04	15	18	00.9	41.568 S	174.521 E	29.4	2.3	0.1	6
W 029	04	16	23	22.7	41.393 S	175.134 E	28.8	2.3	0.0	6
W 030	04	19	49	41.3	41.395 S	175.144 E	29.0	2.2	0.1	6
W 031	05	13	41	33.8	41.392 S	175.126 E	28.1	2.1	0.1	6
W 032	05	22	06	22.1	40.941 S	175.333 E	25.4	2.5	0.0	5
W 033	05	22	38	31.0	41.394 S	175.132 E	27.4	2.1	0.1	6
W 034	06	11	48	51.3	41.263 S	175.211 E	25.5	2.0	0.1	5
W 035	06	13	39	40.1	41.330 S	174.887 E	31.5	2.2	0.0	6
W 036	06	15	00	08.1	41.635 S	175.021 E	28.5	2.5	0.1	6
W 037	06	15	10	08.1	41.636 S	175.020 E	28.5	2.5	0.1	6
W 038	07	04	38	06.6	40.818 S	174.718 E	15.9	2.4	0.1	6
W 039	08	00	49	02.6	41.054 S	174.670 E	61.0	2.8	0.0	6
W 040	08	10	06	25.6	41.232 S	175.250 E	22.0	2.3	0.2	7
W 041	08	15	28	15.9	41.236 S	174.531 E	38.3	2.0	0.1	6
W 042	08	20	42	12.2	41.317 S	174.888 E	22.4	1.5	0.0	6
W 043	09	10	36	36.3	41.384 S	175.138 E	28.5	2.1	0.0	6
W 044	09	13	35	26.3	41.363 S	175.095 E	24.9	2.4	0.2	5
W 045	09	13	36	00.9	41.382 S	175.127 E	28.0	2.4	0.1	6
W 046	09	13	36	29.1	41.385 S	175.120 E	29.6	2.2	0.1	6
W 047	09	16	25	27.9	41.065 S	174.503 E	68.7	2.5	0.0	6
W 048	09	16	42	16.3	40.721 S	174.760 E	17.2	2.3	0.1	6
W 049	11	15	22	41.6	41.383 S	175.130 E	29.1	2.1	0.1	6
W 050	12	07	48	48.5	41.574 S	174.210 E	17.1	3.3	0.1	6

REF NUM		ORIGIN TIME				LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS
			h	m	s	deg	deg	km			
W 051	JAN	12	16	33	00.5	40.833 S	174.717 E	37.6	2.0	0.2	5
W 052		13	07	34	53.4	41.574 S	175.141 E	35.7	2.3	0.1	6
W 053		14	00	08	48.0	41.023 S	174.849 E	27.7	1.9	0.1	6
W 054		15	08	25	31.0	41.418 S	175.081 E	27.1	2.2	0.1	5
W 055		15	17	31	12.2	41.386 S	175.135 E	29.9	1.9	0.1	6
W 056		15	17	42	26.6	41.392 S	175.131 E	28.6	1.9	0.0	5
W 057		15	18	12	46.7	41.752 S	174.986 E	25.0	2.6	0.0	6
W 058		16	13	37	48.6	41.391 S	175.140 E	31.0	2.1	0.0	6
W 059		16	15	25	32.7	41.392 S	175.147 E	28.8	1.9	0.0	5
W 060		17	14	53	21.2	41.079 S	174.791 E	36.7	2.2	0.1	6
W 061		17	23	25	20.2	41.384 S	175.075 E	28.4	2.2	0.0	6
W 062		18	20	55	57.7	41.003 S	174.485 E	50.1	2.5	0.0	5
W 063		19	05	24	08.2	41.384 S	174.856 E	31.0	2.4	0.1	6
W 064		19	05	27	58.6	41.737 S	174.519 E	34.8	2.6	0.1	6
W 065		19	06	21	18.4	41.649 S	174.953 E	30.3	2.4	0.1	6
W 066		20	10	57	40.0	41.189 S	174.700 E	34.3	2.0	0.1	6
W 067		20	21	40	58.5	41.387 S	175.136 E	27.1	2.1	0.1	7
W 068		21	00	19	08.5	41.545 S	174.210 E	18.6	2.8	0.1	6
W 069		21	05	14	19.5	41.033 S	174.219 E	20.2	2.4	0.2	6
W 070		21	05	25	08.3	41.382 S	175.079 E	28.5	2.0	0.0	6
W 071		22	11	20	54.5	40.952 S	175.063 E	35.5	2.4	0.0	6
W 072		22	20	27	35.6	41.392 S	175.127 E	27.7	2.0	0.1	6
W 073		22	22	40	41.8	41.550 S	174.851 E	28.6	2.0	0.1	6
W 074		23	01	21	27.6	41.106 S	174.089 E	50.7	2.7	0.0	6
W 075		23	02	19	15.0	40.856 S	174.560 E	67.9	2.7	0.1	6
W 076		23	13	29	52.5	41.009 S	174.623 E	41.6	2.3	0.1	6
W 077		23	23	16	21.2	41.743 S	174.510 E	34.3	2.7	0.1	7
W 078		25	07	09	11.3	41.145 S	174.665 E	33.5	1.8	0.0	5
W 079		25	07	56	02.6	41.212 S	174.774 E	56.3	2.5	0.1	6
W 080		25	22	25	31.3	41.130 S	175.292 E	23.2	2.3	0.1	7
W 081		26	07	20	17.7	41.451 S	175.001 E	25.3	2.3	0.0	6
W 082		26	15	10	41.8	40.923 S	174.182 E	57.1	2.7	0.1	6
W 083		26	22	25	53.1	41.660 S	174.581 E	26.7	2.7	0.1	7
W 084		26	23	09	40.5	41.385 S	175.138 E	26.9	2.2	0.1	7
W 085		26	23	48	58.3	41.756 S	174.522 E	34.2	3.0	0.2	7
W 086		27	04	06	50.2	41.287 S	175.195 E	20.7	2.1	0.1	7
W 087		27	11	21	53.3	41.291 S	175.196 E	22.0	1.8	0.1	6
W 088		27	11	54	09.4	41.378 S	175.128 E	27.2	2.0	0.1	6
W 089		28	04	05	17.4	41.139 S	174.161 E	63.3	3.6	0.1	6
W 090		29	03	27	46.1	41.010 S	174.018 E	64.5	4.2	0.1	5
W 091		30	03	12	15.1	41.412 S	175.133 E	28.0	2.4	0.2	7
W 092		30	06	28	23.7	41.332 S	174.266 E	35.5	2.4	0.2	7
W 093		30	06	47	39.3	41.099 S	174.941 E	33.5	1.8	0.1	6
W 094		30	08	36	32.4	41.072 S	174.912 E	34.2	2.3	0.1	7
W 095		30	12	53	18.8	41.384 S	175.127 E	27.4	2.3	0.1	7
W 096		30	20	01	50.7	40.856 S	174.746 E	17.6	2.2	0.1	6
W 097		31	14	48	54.6	40.958 S	174.350 E	53.8	2.5	0.1	5
W 098		31	15	53	51.8	41.373 S	175.127 E	27.3	2.0	0.1	8
W 099	FEB	01	06	00	19.8	40.832 S	174.712 E	2.0	2.6	0.2	8
W 100		01	09	43	29.3	40.905 S	174.752 E	49.0	2.5	0.0	7

REF NUM	ORIGIN TIME				LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS
		h	m	s	deg	deg	km			
W 101 FEB	01	15	36	27.4	41.252 S	174.716 E	32.6	1.8	0.1	7
W 102	05	18	34	11.7	41.173 S	174.797 E	29.6	2.0	0.1	6
W 103	06	08	59	59.1	41.583 S	174.084 E	19.5	2.6	0.2	6
W 104	07	11	50	26.8	41.129 S	175.147 E	15.3	2.2	0.2	8
W 105	07	13	27	51.6	41.374 S	175.113 E	26.4	1.6	0.1	6
W 106	07	19	50	23.9	41.407 S	175.111 E	30.0	2.0	0.2	8
W 107	09	01	33	48.0	41.378 S	175.089 E	39.3	2.1	0.1	6
W 108	10	08	32	49.9	41.374 S	175.128 E	28.0	2.9	0.1	6
W 109	11	12	23	50.0	41.692 S	175.440 E	31.3	2.8	0.1	6
W 110	12	01	48	37.1	41.421 S	174.769 E	34.8	3.0	0.2	7
W 111	12	23	21	47.8	40.894 S	175.094 E	28.0	2.3	0.2	6
W 112	12	23	57	21.2	41.111 S	175.396 E	26.4	2.5	0.2	7
W 113	13	02	56	19.1	41.442 S	174.940 E	31.9	1.9	0.2	7
W 114	13	12	31	28.9	40.927 S	175.172 E	32.6	2.6	0.1	8
W 115	13	14	09	40.8	41.673 S	174.564 E	28.3	2.4	0.1	8
W 116	13	17	31	53.7	41.654 S	174.646 E	30.0	2.2	0.1	7
W 117	13	19	25	10.1	41.375 S	175.108 E	26.2	1.8	0.1	8
W 118	14	03	14	14.3	41.626 S	174.646 E	31.2	3.3	0.1	8
W 119	14	03	41	14.1	41.412 S	174.469 E	30.0	3.3	0.2	8
W 120	15	08	16	27.6	41.651 S	174.107 E	63.9	3.8	0.1	8
W 121	15	13	09	37.6	41.369 S	175.113 E	24.1	1.4	0.1	6
W 122	15	13	35	00.4	41.706 S	174.570 E	31.6	2.2	0.1	7
W 123	15	16	43	08.4	41.125 S	174.570 E	42.9	2.1	0.2	7
W 124	15	16	52	19.4	41.160 S	174.113 E	47.2	2.7	0.1	6
W 125	15	19	46	58.1	41.122 S	175.251 E	25.9	1.9	0.1	5
W 126	16	03	12	39.5	41.400 S	175.500 E	9.6	2.1	0.2	7
W 127	16	04	45	56.4	41.383 S	175.037 E	23.9	1.7	0.2	8
W 128	16	11	31	00.9	41.442 S	173.976 E	47.8	4.1	0.2	7
W 129	16	22	24	05.1	41.379 S	174.175 E	33.6	2.2	0.1	7
W 130	17	04	22	33.1	41.262 S	175.167 E	18.2	2.0	0.1	7
W 131	17	15	55	14.7	41.380 S	175.134 E	28.9	1.7	0.2	8
W 132	17	18	56	21.0	41.100 S	175.201 E	17.3	1.6	0.1	6
W 133	17	20	24	04.8	41.729 S	174.551 E	31.2	2.4	0.0	7
W 134	17	22	42	28.3	41.539 S	174.531 E	30.4	2.3	0.1	7
W 135	18	19	34	00.3	41.786 S	174.465 E	35.0	2.6	0.1	8
W 136	18	19	49	16.2	40.780 S	174.727 E	22.4	2.3	0.1	6
W 137	19	00	27	37.0	41.117 S	175.257 E	26.0	2.5	0.1	8
W 138	19	11	33	31.4	41.370 S	174.999 E	3.3	1.0	0.1	7
W 139	19	20	27	18.4	41.215 S	175.230 E	20.0	2.0	0.2	7
W 140	20	09	08	21.6	41.269 S	175.021 E	22.7	1.5	0.1	7
W 141	20	09	49	23.5	40.993 S	174.440 E	41.2	2.3	0.1	7
W 142	21	02	08	51.3	41.792 S	174.447 E	32.3	3.3	0.1	8
W 143	21	13	51	36.3	41.098 S	175.459 E	33.6	2.8	0.1	8
W 144	21	16	07	11.2	41.373 S	175.127 E	27.3	2.1	0.1	8
W 145	21	16	29	46.9	41.378 S	175.132 E	28.8	1.8	0.2	7
W 146	21	17	44	19.5	41.373 S	175.110 E	24.1	1.7	0.1	6
W 147	22	13	13	39.6	41.380 S	174.778 E	28.6	1.4	0.1	7
W 148	22	19	27	13.1	41.751 S	174.928 E	26.0	2.3	0.1	8
W 149	23	18	41	09.9	41.226 S	175.309 E	25.2	2.0	0.1	7
W 150	24	21	58	04.0	41.648 S	174.782 E	26.8	2.8	0.2	8

REF NUM	ORIGIN TIME				LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
		h	m	s						
W 151 FEB	24	22	06	29.3	41.682 S	174.801 E	22.5	2.2	0.0	7
W 152	26	13	31	26.1	41.111 S	174.012 E	55.9	2.7	0.1	7
W 153	26	16	22	25.0	41.062 S	174.261 E	69.6	2.9	0.1	8
W 154	27	00	58	59.6	41.072 S	175.079 E	30.2	2.3	0.2	7
W 155 MAR	01	08	25	21.6	41.305 S	174.548 E	65.0	2.3	0.1	5
W 156	01	08	38	43.1	41.373 S	175.102 E	24.5	1.4	0.1	6
W 157	01	09	00	31.8	41.636 S	174.627 E	29.1	2.1	0.1	5
W 158	02	07	10	16.5	41.427 S	174.847 E	16.3	1.4	0.2	7
W 159	02	19	32	22.8	41.116 S	174.383 E	61.5	2.7	0.1	7
W 160	02	21	50	51.4	41.388 S	175.121 E	28.1	1.9	0.1	8
W 161	02	23	28	01.1	41.099 S	174.758 E	65.1	2.8	0.2	8
W 162	03	01	30	13.5	40.810 S	174.641 E	55.8	2.8	0.1	7
W 163	03	18	01	54.2	41.443 S	174.344 E	58.5	2.8	0.2	6
W 164	03	20	25	37.1	41.657 S	174.596 E	29.1	2.2	0.1	7
W 165	04	04	41	06.5	40.949 S	175.191 E	33.3	2.5	0.2	7
W 166	05	08	27	03.1	41.218 S	174.886 E	19.1	2.7	0.3	8
W 167	05	22	09	23.0	41.589 S	174.668 E	27.6	2.0	0.1	6
W 168	06	23	10	22.6	41.770 S	174.486 E	32.5	2.6	0.1	8
W 169	07	10	06	45.8	41.156 S	175.070 E	2.6	1.6	0.2	6
W 170	07	12	34	26.1	41.380 S	175.130 E	30.1	1.8	0.2	8
W 171	08	14	33	27.9	41.365 S	175.133 E	27.2	1.7	0.1	5
W 172	08	14	58	38.3	41.394 S	175.135 E	27.1	1.6	0.2	5
W 173	08	16	49	04.6	40.833 S	174.230 E	56.5	3.1	0.1	6
W 174	09	11	03	03.3	41.547 S	174.368 E	14.4	2.0	0.1	6
W 175	10	12	15	37.3	41.376 S	175.088 E	29.2	1.6	0.2	6
W 176	10	13	46	57.7	41.084 S	175.039 E	29.9	1.9	0.2	6
W 177	12	17	04	27.6	41.385 S	175.123 E	27.8	1.9	0.1	8
W 178	13	00	20	47.2	41.220 S	175.335 E	27.7	2.2	0.1	7
W 179	13	15	08	45.2	41.141 S	174.587 E	62.2	2.3	0.1	7
W 180	15	11	17	42.1	40.864 S	174.737 E	12.5	2.3	0.0	7
W 181	15	16	34	45.7	41.040 S	175.566 E	8.1	2.6	0.0	6
W 182	15	22	29	22.3	40.943 S	175.171 E	31.9	2.3	0.1	7
W 183	16	02	29	11.4	41.378 S	174.021 E	73.6	2.9	0.2	6
W 184	16	17	42	08.3	41.370 S	175.110 E	25.7	1.8	0.1	7
W 185	16	18	51	15.8	41.200 S	174.633 E	36.8	1.7	0.0	7
W 186	16	22	47	48.0	41.389 S	174.646 E	19.5	1.6	0.2	7
W 187	17	23	12	15.6	41.383 S	175.133 E	30.8	2.1	0.2	7
W 188	18	11	04	35.9	41.030 S	174.507 E	39.9	2.0	0.2	6
W 189	18	11	12	45.4	41.003 S	174.483 E	48.1	2.1	0.2	6
W 190	18	11	47	26.8	41.183 S	174.758 E	33.0	1.9	0.0	7
W 191	18	13	14	13.1	40.801 S	174.398 E	51.2	2.9	0.2	8
W 192	21	13	23	35.9	41.189 S	175.039 E	26.0	1.3	0.2	6
W 193	21	21	43	19.6	41.117 S	175.466 E	16.8	1.9	0.0	5
W 194	22	09	46	58.4	41.377 S	175.139 E	30.2	2.0	0.2	8
W 195	22	09	51	44.6	41.433 S	175.131 E	18.6	1.6	0.1	7
W 196	22	09	58	00.6	41.407 S	175.100 E	20.5	1.9	0.1	8
W 197	22	13	20	23.4	41.365 S	175.106 E	23.0	1.3	0.0	6
W 198	22	22	48	30.1	41.378 S	175.130 E	27.3	3.0	0.2	7
W 199	22	22	52	03.3	41.396 S	175.094 E	29.8	2.0	0.3	7
W 200	22	22	58	06.7	41.377 S	175.123 E	27.4	2.4	0.1	8

REF NUM		ORIGIN TIME			LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS
			h	m s	deg	deg	km			
W 201	MAR	22	23	23 22.1	41.377 S	175.124 E	29.8	2.1	0.1	7
W 202		22	23	27 37.6	41.366 S	175.108 E	24.4	1.8	0.1	6
W 203		23	12	29 03.9	41.379 S	175.128 E	28.7	1.9	0.2	7
W 204		24	01	43 45.4	41.670 S	175.425 E	29.2	2.6	0.2	8
W 205		24	02	52 42.3	41.070 S	174.787 E	26.9	1.6	0.1	6
W 206		24	18	09 16.4	41.272 S	175.169 E	30.5	3.1	0.2	8
W 207		25	04	30 40.3	41.693 S	174.778 E	23.7	2.2	0.1	6
W 208		25	07	09 49.0	41.665 S	174.647 E	25.9	2.3	0.1	6
W 209		25	21	02 14.6	41.193 S	175.161 E	24.1	1.7	0.1	6
W 210		26	13	17 37.5	41.378 S	175.125 E	29.0	1.8	0.1	8
W 211		26	17	27 27.4	40.823 S	174.714 E	0.0 R	2.7	0.2	7
W 212		27	07	25 09.8	41.456 S	174.496 E	32.5	3.0	0.1	8
W 213		27	18	33 29.7	41.377 S	175.127 E	27.4	2.0	0.1	7
W 214		28	07	12 06.3	41.373 S	175.128 E	28.3	1.8	0.1	8
W 215		28	07	12 08.8	41.373 S	175.117 E	26.2	2.0	0.1	5
W 216		28	09	55 31.4	41.179 S	174.613 E	42.5	2.2	0.1	8
W 217		29	06	26 23.1	41.162 S	174.104 E	55.9	2.6	0.0	6
W 218		29	08	06 53.8	41.413 S	174.771 E	33.1	3.0	0.2	8
W 219		29	08	55 58.2	40.679 S	175.259 E	38.5	4.0	0.2	8
W 220		29	17	50 18.5	41.295 S	174.844 E	28.8	1.9	0.2	8
W 221		29	19	19 33.8	41.299 S	174.845 E	27.9	1.8	0.2	8
W 222		30	01	45 10.0	41.286 S	175.324 E	33.2	3.1	0.2	8
W 223		30	05	55 07.3	40.793 S	174.748 E	37.4	2.5	0.2	7
W 224		31	02	35 38.5	40.904 S	175.003 E	44.0	2.2	0.0	6
W 225		31	08	16 05.7	41.564 S	174.234 E	2.5	2.2	0.1	6
W 226		31	16	12 40.6	40.856 S	175.410 E	50.2	2.7	0.1	8
W 227		31	17	00 57.0	40.853 S	174.718 E	12.2	2.1	0.1	6
W 228		31	17	13 22.4	41.373 S	175.123 E	26.9	1.7	0.1	8
W 229	APR	01	00	33 44.6	40.793 S	175.443 E	32.9	2.8	0.2	7
W 230		01	01	20 59.9	41.013 S	174.969 E	55.7	2.4	0.1	7
W 231		01	01	34 26.3	41.311 S	174.801 E	24.0	1.7	0.1	7
W 232		01	03	27 19.6	41.182 S	174.794 E	31.8	1.7	0.1	5
W 233		02	04	33 23.7	41.366 S	175.070 E	41.0	2.0	0.1	7
W 234		02	08	55 21.5	41.181 S	174.787 E	31.5	2.0	0.1	8
W 235		02	19	28 02.0	41.370 S	175.110 E	24.2	2.1	0.1	8
W 236		02	21	11 21.7	41.165 S	174.813 E	32.5	1.6	0.0	7
W 237		02	22	46 18.1	41.012 S	174.387 E	75.2	2.7	0.1	6
W 238		03	03	14 20.8	40.899 S	174.093 E	52.1	3.0	0.2	8
W 239		04	01	40 44.7	41.241 S	174.619 E	24.2	2.0	0.0	5
W 240		04	10	11 36.9	40.737 S	174.750 E	11.9	2.7	0.2	8
W 241		04	21	49 41.4	41.748 S	174.467 E	32.7	2.6	0.2	8
W 242		04	23	28 34.7	41.365 S	175.111 E	24.5	1.6	0.1	6
W 243		05	16	31 42.0	41.372 S	174.212 E	11.3	2.0	0.1	7
W 244		05	19	20 52.4	41.357 S	174.959 E	30.0	1.5	0.1	5
W 245		06	00	01 48.3	41.372 S	175.119 E	25.4	1.9	0.1	8
W 246		06	01	16 27.5	41.374 S	175.124 E	27.8	2.2	0.1	8
W 247		06	05	03 11.0	41.076 S	175.209 E	24.8	2.2	0.1	7
W 248		07	04	55 30.3	41.112 S	174.681 E	37.8	2.1	0.1	7
W 249		07	17	59 58.5	41.486 S	174.559 E	30.6	1.7	0.3	5
W 250		08	06	53 42.1	41.280 S	174.986 E	30.0	2.3	0.1	8

REF NUM	ORIGIN TIME				LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS
		h	m	s	deg	deg	km			
W 251 APR	08	11	28	13.8	41.249 S	175.321 E	29.3	2.2	0.3	8
W 252	09	06	57	48.2	41.426 S	174.986 E	23.0	1.8	0.1	7
W 253	09	08	34	11.1	41.367 S	175.104 E	23.8	1.6	0.1	6
W 254	09	16	06	43.3	41.074 S	174.663 E	35.6	2.3	0.2	8
W 255	09	18	09	30.8	41.383 S	175.134 E	29.8	1.8	0.2	8
W 256	10	00	27	14.9	40.990 S	174.690 E	37.4	1.7	0.4	7
W 257	10	03	52	20.3	41.165 S	174.953 E	0.0 R	1.1	0.1	7
W 258	10	19	49	59.2	40.901 S	174.684 E	16.0	1.9	0.1	8
W 259	11	06	36	45.7	40.943 S	175.570 E	15.4	2.1	0.2	6
W 260	11	21	48	47.5	41.010 S	175.405 E	23.4	2.1	0.1	7
W 261	11	21	49	24.2	41.016 S	175.398 E	24.7	2.2	0.0	7
W 262	12	18	19	06.5	40.795 S	175.027 E	34.3	2.4	0.1	7
W 263	13	12	54	06.0	40.980 S	175.466 E	25.2	2.2	0.3	9
W 264	14	11	57	45.7	41.088 S	175.506 E	32.4	2.6	0.1	9
W 265	14	12	05	44.5	41.079 S	175.531 E	34.2	2.1	0.2	7
W 266	14	15	19	27.4	41.410 S	174.470 E	29.5	2.2	0.2	8
W 267	14	21	18	02.2	41.387 S	175.097 E	24.5	1.6	0.1	7
W 268	14	22	56	20.0	41.773 S	174.512 E	32.5	2.5	0.2	9
W 269	14	22	56	20.0	41.773 S	174.512 E	32.5	3.8	0.2	9
W 270	15	05	23	07.5	40.946 S	174.492 E	65.0	2.9	0.1	8
W 271	15	08	39	12.9	40.772 S	174.870 E	35.0	2.2	0.1	6
W 272	15	14	31	51.6	40.930 S	175.219 E	30.8	2.0	0.1	6
W 273	15	16	58	51.1	41.256 S	175.446 E	13.4	1.8	0.1	6
W 274	16	09	11	48.8	41.498 S	173.927 E	35.5	4.0	0.1	9
W 275	16	15	56	11.8	40.914 S	174.339 E	76.3	3.7	0.1	9
W 276	17	11	24	49.6	41.239 S	175.246 E	26.1	1.6	0.2	7
W 277	17	23	59	39.4	41.259 S	175.071 E	20.2	1.3	0.1	7
W 278	18	02	47	40.7	41.149 S	175.062 E	31.2	1.6	0.2	6
W 279	18	22	04	10.8	41.523 S	174.309 E	10.7	2.0	0.1	7
W 280	19	02	08	57.0	41.065 S	174.347 E	54.2	2.5	0.2	7
W 281	19	14	29	17.5	41.591 S	174.182 E	50.3	2.8	0.2	8
W 282	19	22	19	52.1	41.380 S	174.451 E	57.2	2.7	0.1	9
W 283	19	23	02	06.2	40.814 S	174.607 E	55.2	2.4	0.0	6
W 284	21	18	21	31.8	40.948 S	175.088 E	33.5	1.9	0.3	6
W 285	21	19	58	36.9	41.257 S	175.194 E	23.8	1.9	0.2	9
W 286	22	22	37	09.5	41.614 S	174.781 E	24.9	2.3	0.1	7
W 287	23	14	41	52.9	41.741 S	174.996 E	23.4	2.4	0.1	7
W 288	24	05	01	17.4	41.029 S	175.520 E	8.8	2.1	0.1	6
W 289	24	12	00	51.1	41.151 S	174.977 E	27.6	1.6	0.0	7
W 290	24	12	26	28.5	41.650 S	174.733 E	23.2	2.1	0.1	9
W 291	24	18	06	51.4	41.129 S	173.986 E	58.8	3.2	0.2	8
W 292	24	23	21	49.0	41.383 S	175.053 E	4.2	1.3	0.1	9
W 293	25	05	36	40.8	41.255 S	175.191 E	21.8	1.7	0.2	8
W 294	25	07	46	28.8	41.292 S	174.880 E	33.4	1.8	0.0	7
W 295	25	13	50	27.8	41.009 S	175.499 E	13.0	2.1	0.1	6
W 296	26	03	36	23.9	41.679 S	174.751 E	26.1	2.3	0.0	5
W 297	26	18	48	10.0	41.426 S	175.007 E	27.1	1.7	0.1	5
W 298	27	00	57	27.5	41.264 S	175.248 E	27.4	2.2	0.1	7
W 299	27	02	14	16.8	40.967 S	174.802 E	69.8	2.7	0.1	6
W 300	27	11	56	20.5	41.677 S	174.582 E	31.6	2.4	0.2	9

REF NUM	ORIGIN TIME				LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
		h	m	s						
W 301	APR 27	15	50	56.9	41.631 S	174.274 E	21.5	2.6	0.2	9
W 302	27	17	24	59.1	41.257 S	175.191 E	24.5	1.5	0.2	9
W 303	28	02	36	24.7	41.220 S	174.475 E	39.6	2.6	0.1	8
W 304	28	03	55	43.3	40.923 S	174.802 E	69.1	2.4	0.1	9
W 305	28	06	41	56.2	41.439 S	174.367 E	32.5	2.1	0.1	6
W 306	28	10	56	39.3	40.973 S	175.042 E	27.4	2.2	0.1	8
W 307	28	13	45	08.2	40.900 S	174.586 E	51.4	2.5	0.1	8
W 308	29	12	35	13.0	41.115 S	175.296 E	13.8	1.8	0.3	8
W 309	29	20	37	11.3	41.362 S	174.327 E	11.5	1.9	0.2	8
W 310	MAY 01	05	50	40.6	41.002 S	174.591 E	35.3	2.3	0.2	8
W 311	01	09	58	25.8	41.063 S	175.452 E	30.6	2.3	0.1	6
W 312	01	12	10	11.4	40.959 S	174.503 E	16.7	1.9	0.1	8
W 313	02	11	25	21.6	41.119 S	174.557 E	34.0	1.8	0.1	8
W 314	03	10	15	00.6	41.565 S	175.089 E	15.3	2.0	0.2	7
W 315	04	14	47	36.1	40.890 S	174.971 E	66.0	2.6	0.0	7
W 316	04	23	12	03.8	41.285 S	175.375 E	24.5	2.0	0.2	6
W 317	06	00	01	43.9	41.213 S	175.236 E	2.2	1.8	0.3	7
W 318	06	12	59	43.4	41.224 S	175.266 E	2.5	1.4	0.1	7
W 319	07	23	36	02.8	40.765 S	175.288 E	30.6	2.2	0.1	7
W 320	08	03	44	50.3	40.948 S	175.087 E	31.0	2.1	0.1	7
W 321	08	12	58	00.7	40.932 S	174.808 E	69.5	2.8	0.1	8
W 322	09	03	59	43.5	40.972 S	175.170 E	34.4	2.1	0.2	8
W 323	09	05	14	38.6	40.910 S	174.657 E	64.6	2.8	0.0	8
W 324	09	09	38	40.2	41.568 S	175.588 E	26.2	2.3	0.1	5
W 325	09	15	40	30.9	41.269 S	175.155 E	27.7	1.6	0.1	7
W 326	09	17	49	16.2	41.646 S	174.342 E	25.9	2.3	0.3	8
W 327	10	04	41	36.0	41.626 S	174.142 E	16.9	2.5	0.1	7
W 328	10	09	44	48.4	41.367 S	175.130 E	24.7	1.5	0.1	8
W 329	10	17	16	34.0	41.440 S	174.658 E	19.9	1.7	0.2	8
W 330	10	17	40	44.9	41.407 S	174.291 E	20.3	2.3	0.2	9
W 331	10	21	35	53.2	41.752 S	174.502 E	34.2	2.5	0.1	7
W 332	10	22	48	51.1	41.259 S	174.310 E	37.1	2.2	0.1	7
W 333	11	09	55	43.8	41.090 S	175.122 E	22.9	1.7	0.1	9
W 334	11	13	13	04.8	41.088 S	175.201 E	22.8	2.0	0.1	6
W 335	12	15	10	41.8	41.373 S	175.055 E	26.3	1.6	0.0	6
W 336	12	23	39	46.4	40.765 S	174.916 E	58.1	2.6	0.1	7
W 337	13	03	47	43.7	41.684 S	174.110 E	10.1	3.9	0.2	8
W 338	13	04	28	27.6	40.960 S	175.052 E	30.7	2.4	0.1	7
W 339	13	04	44	50.4	41.240 S	175.149 E	5.0 R	1.4	0.1	6
W 340	13	14	22	12.9	41.225 S	175.222 E	30.8	2.3	0.1	8
W 341	14	01	12	21.4	40.966 S	174.404 E	63.2	2.7	0.1	6
W 342	14	18	50	43.7	41.639 S	174.634 E	30.9	2.5	0.1	7
W 343	15	09	19	26.6	41.264 S	174.452 E	56.1	2.6	0.1	8
W 344	16	01	05	42.8	41.340 S	174.549 E	35.3	2.1	0.1	8
W 345	16	04	40	07.6	41.244 S	173.938 E	82.1	3.2	0.1	8
W 346	16	08	35	43.7	40.910 S	175.605 E	32.8	2.6	0.1	7
W 347	16	12	48	44.5	40.833 S	175.513 E	11.7	2.5	0.1	6
W 348	17	04	57	39.0	41.601 S	174.088 E	8.5	2.9	0.2	9
W 349	17	12	48	46.2	40.961 S	175.119 E	38.5	2.5	3.1	5
W 350	17	22	20	37.0	41.105 S	174.659 E	61.3	2.4	0.1	7

REF NUM	ORIGIN TIME				LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
		h	m	s						
W 351 MAY	19	06	00	41.1	41.240 S	175.054 E	11.9	1.5	0.2	8
W 352	19	11	01	53.6	41.110 S	174.466 E	44.6	2.3	0.1	8
W 353	19	16	44	59.1	41.461 S	175.055 E	18.9	1.7	0.2	8
W 354	20	16	31	49.8	41.119 S	175.408 E	30.9	3.0	0.1	8
W 355	20	16	44	56.4	41.090 S	175.653 E	26.2	2.5	0.1	6
W 356	21	05	15	53.5	41.060 S	174.561 E	43.7	2.0	0.1	7
W 357	21	14	21	09.1	41.216 S	175.210 E	26.8	2.8	0.1	8
W 358	21	18	13	06.3	41.361 S	175.082 E	3.7	1.1	0.2	5
W 359	21	20	53	03.6	41.636 S	174.453 E	19.9	2.3	0.1	7
W 360	22	10	05	24.8	40.883 S	174.726 E	62.7	3.0	0.1	9
W 361	23	02	33	58.5	41.898 S	175.226 E	31.1	2.7	0.2	9
W 362	23	15	11	48.7	41.323 S	175.045 E	32.8	1.9	0.3	7
W 363	24	01	51	05.9	41.266 S	175.215 E	19.3	1.9	0.1	8
W 364	24	01	54	07.7	41.052 S	175.582 E	23.2	2.2	0.2	6
W 365	24	08	04	00.6	41.374 S	175.126 E	28.1	1.8	0.1	7
W 366	24	14	19	22.1	41.375 S	175.099 E	24.8	4.2	0.1	9
W 367	24	14	23	28.5	41.390 S	175.111 E	28.8	1.7	0.1	8
W 368	24	15	46	59.1	41.413 S	174.291 E	32.9	2.0	0.1	7
W 369	24	15	59	51.4	41.386 S	175.124 E	27.4	2.1	0.1	9
W 370	24	16	06	14.1	41.392 S	175.116 E	27.0	2.1	0.1	9
W 371	25	04	10	38.9	40.942 S	174.869 E	47.2	2.4	0.1	8
W 372	25	12	18	58.6	41.055 S	174.432 E	37.7	2.4	0.3	9
W 373	25	22	14	54.7	41.376 S	175.118 E	27.6	2.1	0.1	8
W 374	26	07	35	52.9	41.006 S	174.900 E	32.5	2.3	0.1	8
W 375	26	20	09	15.3	41.386 S	175.124 E	28.7	2.0	0.1	9
W 376	27	09	19	55.3	41.001 S	175.641 E	32.6	2.7	0.1	9
W 377	28	06	41	53.0	41.369 S	175.117 E	27.0	1.7	0.1	6
W 378	28	07	31	40.2	40.817 S	175.048 E	35.6	2.3	0.1	7
W 379	28	14	06	06.7	41.398 S	175.024 E	29.1	1.6	0.1	7
W 380	28	16	32	44.4	41.094 S	175.517 E	33.2	2.6	0.1	9
W 381	30	14	59	08.3	40.973 S	175.691 E	31.7	2.6	0.2	9
W 382	31	09	13	17.2	41.066 S	174.886 E	59.2	2.7	0.1	8
W 383	31	11	35	10.9	41.377 S	175.125 E	29.9	1.8	0.1	7
W 384	31	15	23	00.9	41.096 S	175.569 E	32.8	2.4	0.1	6
W 385 JUN	01	16	47	37.4	40.782 S	175.038 E	35.1	2.3	0.1	6
W 386	01	22	13	49.8	41.083 S	175.506 E	33.2	2.4	0.2	6
W 387	01	22	49	26.1	41.102 S	174.117 E	62.0	2.5	0.2	6
W 388	02	07	55	18.3	41.689 S	174.583 E	30.3	2.2	0.0	7
W 389	03	08	34	40.7	41.444 S	175.001 E	27.0	2.0	0.1	8
W 390	03	08	41	38.2	41.277 S	174.420 E	19.0	2.4	0.1	7
W 391	03	22	16	22.9	41.364 S	174.852 E	31.4	1.4	0.1	6
W 392	03	22	40	43.6	41.199 S	175.684 E	30.8	2.5	0.2	7
W 393	03	22	50	58.6	41.267 S	175.321 E	28.9	1.9	0.1	7
W 394	04	00	28	13.9	41.609 S	175.051 E	27.0	2.3	0.1	8
W 395	04	06	07	11.7	41.269 S	174.447 E	14.3	1.4	0.1	6
W 396	04	06	37	00.7	41.249 S	174.428 E	37.6	2.2	0.0	8
W 397	04	07	44	51.9	41.257 S	174.706 E	35.1	1.7	0.1	7
W 398	04	08	15	51.6	41.087 S	174.683 E	34.8	1.7	0.1	6
W 399	05	08	17	29.5	41.202 S	174.656 E	33.8	1.6	0.1	7
W 400	05	09	12	51.6	41.071 S	174.867 E	34.1	1.9	0.1	8

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W 401 JUN	05 15 10 26.7	41.435 S	174.402 E	26.5	1.7	0.2	6
W 402	05 21 25 41.8	41.285 S	174.385 E	57.5	2.3	0.0	6
W 403	05 22 09 44.3	40.987 S	174.495 E	5.0 R	2.0	0.1	7
W 404	06 13 28 16.2	41.398 S	175.000 E	27.8	1.7	0.1	9
W 405	06 13 51 55.6	41.482 S	174.504 E	52.0	2.4	0.2	9
W 406	06 19 26 28.3	40.889 S	174.607 E	54.2	2.4	0.1	6
W 407	06 23 00 24.7	41.295 S	174.840 E	26.0	1.9	0.1	9
W 408	07 14 43 51.7	41.062 S	174.563 E	65.7	2.4	0.1	5
W 409	07 21 27 14.0	41.281 S	175.163 E	20.4	1.6	0.1	8
W 410	08 12 53 11.2	41.331 S	174.839 E	40.3	2.3	0.1	9
W 411	08 15 03 25.8	41.683 S	174.497 E	31.3	2.2	0.1	7
W 412	08 18 05 06.4	41.096 S	175.050 E	18.4	1.5	0.0	7
W 413	08 18 05 23.8	41.087 S	175.038 E	18.7	2.7	0.2	9
W 414	09 04 23 52.6	41.157 S	174.111 E	71.6	2.9	0.1	9
W 415	09 08 35 32.8	40.856 S	174.693 E	55.5	2.3	0.1	7
W 416	09 11 35 34.7	41.508 S	175.238 E	19.4	2.1	0.1	8
W 417	09 15 44 52.7	41.092 S	175.045 E	30.5	1.7	0.2	7
W 418	09 20 53 01.5	40.874 S	174.663 E	59.8	2.7	0.1	8
W 419	09 21 11 08.0	41.400 S	174.423 E	30.3	2.0	0.1	6
W 420	11 07 26 10.9	41.588 S	174.498 E	31.7	2.3	0.2	9
W 421	11 07 37 04.1	41.422 S	174.689 E	22.9	1.7	0.1	8
W 422	11 10 54 38.6	41.611 S	175.238 E	11.5	2.8	0.1	9
W 423	14 03 05 45.7	41.034 S	174.694 E	52.7	2.1	0.1	7
W 424	14 19 15 17.9	41.233 S	175.023 E	20.5	1.9	0.1	7
W 425	16 04 00 54.8	41.108 S	174.425 E	61.9	3.8	0.1	9
W 426	16 10 39 39.1	41.470 S	175.623 E	28.9	2.3	0.0	5
W 427	16 16 11 44.5	41.442 S	174.423 E	27.2	2.0	0.2	8
W 428	16 17 04 32.2	41.120 S	174.643 E	59.4	2.5	0.2	9
W 429	16 20 24 17.0	41.380 S	175.122 E	28.4	2.0	0.1	9
W 430	16 23 07 46.3	41.379 S	175.126 E	29.3	1.9	0.2	8
W 431	17 01 48 43.3	41.633 S	175.032 E	33.8	2.4	0.1	7
W 432	17 09 59 07.5	40.999 S	175.078 E	46.4	2.2	0.1	7
W 433	17 16 22 00.6	40.998 S	175.412 E	20.6	2.3	0.1	7
W 434	17 17 30 33.8	40.991 S	175.552 E	29.7	2.5	0.1	6
W 435	17 17 34 54.7	41.647 S	174.243 E	8.7	2.2	0.1	5
W 436	18 11 49 17.3	41.218 S	175.671 E	33.3	2.8	0.1	8
W 437	18 13 14 20.5	41.130 S	175.159 E	7.9	1.2	0.1	5
W 438	19 13 21 17.3	41.332 S	175.072 E	3.4	2.1	0.1	9
W 439	19 21 44 13.2	40.936 S	174.150 E	59.8	2.8	0.2	8
W 440	20 09 01 51.0	41.373 S	175.095 E	23.8	2.7	0.1	9
W 441	20 11 59 28.2	41.390 S	175.121 E	27.9	1.8	0.1	9
W 442	20 15 24 25.8	41.376 S	175.128 E	29.1	1.8	0.2	7
W 443	20 16 03 14.9	41.393 S	175.148 E	27.4	1.6	0.1	7
W 444	20 16 19 21.3	41.384 S	175.115 E	27.7	1.9	0.1	9
W 445	21 07 05 26.3	40.999 S	175.598 E	30.6	2.6	0.1	7
W 446	21 14 29 13.3	40.982 S	175.024 E	47.2	2.4	0.1	9
W 447	21 16 21 30.1	40.756 S	174.593 E	68.1	2.8	0.1	8
W 448	21 19 05 07.8	41.405 S	174.983 E	22.5	2.3	0.2	9
W 449	22 04 53 41.7	40.787 S	174.508 E	71.9	2.9	0.1	7
W 450	22 10 33 55.4	40.584 S	174.689 E	43.4	2.7	0.1	7

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W 451 JUN	23 12 44 36.8	41.064 S	174.654 E	31.4	1.8	0.1	7
W 452	23 22 56 09.5	41.213 S	174.458 E	35.6	2.5	0.0	9
W 453	25 12 45 19.4	41.164 S	174.779 E	35.6	1.7	0.1	6
W 454	26 04 46 04.7	41.380 S	175.118 E	27.4	1.7	0.1	8
W 455	26 13 11 15.3	41.176 S	174.599 E	40.2	2.0	0.0	8
W 456	26 16 55 44.4	41.375 S	175.134 E	28.4	1.7	0.2	7
W 457	26 18 59 59.1	40.983 S	174.500 E	5.3	1.7	0.1	7
W 458	27 07 02 26.6	41.014 S	174.435 E	5.4	1.8	0.1	6
W 459	27 07 06 24.9	41.227 S	175.043 E	21.3	1.6	0.1	8
W 460	27 08 54 39.2	41.169 S	174.473 E	39.9	2.1	0.2	7
W 461	28 05 03 11.4	41.243 S	175.231 E	12.5	1.5	0.1	8
W 462	28 06 18 51.3	40.848 S	174.191 E	64.1	2.9	0.2	6
W 463	29 09 39 59.9	41.253 S	174.826 E	52.9	2.4	0.1	9
W 464	29 15 10 39.1	40.714 S	174.760 E	44.0	2.6	0.2	10
W 465	29 17 24 00.8	41.336 S	174.914 E	29.1	3.5	0.2	9
W 466	30 10 37 04.8	41.599 S	174.625 E	26.2	2.3	0.1	5
W 467	30 18 20 47.8	41.013 S	174.867 E	53.0	2.4	0.1	8
W 468	30 23 01 14.5	41.376 S	174.646 E	18.4	1.5	0.1	6
W 469 JUL	01 04 50 58.0	41.261 S	174.954 E	21.5	1.7	0.1	9
W 470	01 12 20 41.2	41.086 S	174.670 E	35.4	2.3	0.2	9
W 471	01 20 32 34.2	40.785 S	174.363 E	77.5	2.6	0.1	7
W 472	02 15 14 20.6	41.382 S	175.124 E	28.8	1.8	0.1	8
W 473	02 15 41 37.7	41.425 S	174.442 E	12.8	2.5	0.2	10
W 474	03 05 19 13.8	40.857 S	174.716 E	16.5	1.9	0.1	7
W 475	03 06 53 28.1	40.875 S	174.612 E	47.7	2.2	0.0	6
W 476	03 15 37 22.4	40.866 S	174.708 E	15.2	1.9	0.1	8
W 477	04 11 58 20.1	41.267 S	174.674 E	35.3	2.5	0.1	9
W 478	04 21 09 41.6	41.569 S	173.903 E	9.4	2.7	0.2	8
W 479	05 01 14 40.4	41.243 S	175.205 E	27.7	1.9	0.1	8
W 480	05 01 19 16.8	41.155 S	174.110 E	62.3	2.9	0.0	6
W 481	05 07 57 26.6	40.861 S	174.708 E	16.3	2.0	0.1	6
W 482	05 14 03 32.9	41.109 S	174.570 E	61.2	2.4	0.0	5
W 483	06 05 23 55.2	41.110 S	175.375 E	27.5	2.6	0.2	8
W 484	06 09 55 27.6	41.186 S	175.116 E	31.9	2.6	0.2	9
W 485	06 12 15 02.6	41.191 S	175.088 E	28.4	2.5	0.2	9
W 486	06 15 41 22.2	40.740 S	175.161 E	34.0	2.8	0.2	9
W 487	07 08 04 51.3	41.190 S	175.085 E	27.0	1.6	0.1	9
W 488	08 03 30 06.9	41.305 S	175.064 E	9.4	1.3	0.1	7
W 489	08 14 17 18.3	41.231 S	175.195 E	28.1	2.8	0.2	9
W 490	08 16 05 56.1	40.900 S	174.465 E	67.9	2.5	0.1	7
W 491	09 04 07 32.2	40.890 S	175.218 E	34.0	2.3	0.2	7
W 492	09 09 03 33.3	40.895 S	174.727 E	59.0	2.6	0.2	7
W 493	09 09 29 30.0	41.611 S	174.645 E	31.3	2.3	0.1	9
W 494	09 19 40 39.3	41.426 S	174.832 E	16.5	1.6	0.2	8
W 495	10 02 10 16.3	40.893 S	174.968 E	47.0	2.3	0.1	9
W 496	10 05 47 14.0	41.154 S	175.092 E	27.5	1.7	0.1	8
W 497	10 18 13 22.0	41.382 S	174.943 E	12.0	2.4	0.2	9
W 498	11 15 33 01.0	40.983 S	174.894 E	35.0	3.0	0.1	9
W 499	11 16 02 37.8	41.372 S	175.128 E	27.4	1.7	0.1	7
W 500	11 17 01 58.2	41.003 S	174.885 E	29.6	2.1	0.1	7

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W 501 JUL	12 13 10 25.2	41.290 S	174.952 E	23.9	1.7	0.1	9
W 502	12 20 00 44.9	41.225 S	174.896 E	19.0	1.4	0.0	7
W 503	13 06 03 58.2	41.593 S	174.205 E	20.5	2.8	0.2	8
W 504	14 22 31 20.7	41.408 S	174.689 E	55.5	2.8	0.2	8
W 505	15 08 06 31.2	41.450 S	174.983 E	21.6	2.1	0.1	8
W 506	15 19 44 03.4	41.064 S	174.406 E	45.8	2.3	0.1	7
W 507	15 20 41 36.9	40.950 S	174.699 E	38.2	2.5	0.1	8
W 508	15 22 41 54.4	41.395 S	174.983 E	25.3	1.8	0.1	8
W 509	16 03 44 02.0	41.240 S	174.194 E	39.5	2.1	0.2	6
W 510	16 12 22 20.5	41.382 S	174.652 E	21.1	1.4	0.1	6
W 511	16 12 46 56.7	41.154 S	174.999 E	31.2	1.4	0.0	5
W 512	16 13 50 20.3	41.409 S	175.362 E	25.7	2.4	0.2	8
W 513	16 14 19 26.4	41.379 S	174.655 E	21.0	1.2	0.1	6
W 514	16 14 53 32.6	41.434 S	174.691 E	20.1	1.9	0.2	9
W 515	16 15 22 24.2	40.892 S	174.520 E	73.1	2.2	0.1	6
W 516	17 23 21 24.0	41.399 S	174.693 E	20.8	1.9	0.1	8
W 517	18 01 50 07.4	40.789 S	175.001 E	59.7	2.8	0.1	7
W 518	18 09 00 36.9	40.998 S	174.772 E	51.9	2.2	0.2	7
W 519	18 11 34 56.9	41.459 S	174.497 E	51.4	2.7	0.1	8
W 520	19 02 21 47.7	41.215 S	174.421 E	37.3	2.1	0.2	6
W 521	19 03 23 32.3	41.088 S	175.525 E	0.0 R	2.3	0.1	7
W 522	20 18 28 31.9	41.153 S	174.666 E	60.7	2.6	0.1	6
W 523	20 18 31 34.2	40.760 S	174.762 E	40.5	3.0	0.1	9
W 524	20 23 32 24.6	41.191 S	174.981 E	20.8	1.7	0.1	8
W 525	21 03 50 27.1	41.143 S	175.147 E	19.8	1.6	0.2	7
W 526	21 08 22 07.6	40.927 S	174.250 E	50.3	2.6	0.2	7
W 527	21 09 52 35.8	41.314 S	174.936 E	29.0	1.5	0.2	7
W 528	21 10 00 49.6	41.063 S	174.726 E	52.0	2.1	0.0	5
W 529	21 20 57 38.1	41.237 S	175.031 E	22.5	2.0	0.2	8
W 530	23 05 00 46.0	41.426 S	175.101 E	27.2	1.7	0.1	5
W 531	24 08 55 34.9	41.372 S	175.125 E	27.0	1.9	0.1	7
W 532	24 10 58 07.7	40.646 S	174.421 E	48.0	2.7	0.2	8
W 533	24 17 40 08.2	40.648 S	174.638 E	46.4	2.6	0.2	8
W 534	25 08 48 50.5	41.660 S	174.656 E	26.5	2.6	0.2	9
W 535	25 18 47 29.2	41.404 S	175.111 E	28.2	1.7	0.1	7
W 536	26 00 53 22.6	41.221 S	175.187 E	2.6	1.2	0.1	7
W 537	26 14 50 36.6	40.734 S	174.662 E	44.2	2.4	0.1	8
W 538	26 20 24 54.4	41.547 S	173.941 E	18.5	2.7	0.2	8
W 539	27 04 33 33.3	41.631 S	174.601 E	31.7	2.1	0.2	5
W 540	27 07 58 50.0	41.158 S	173.971 E	64.1	3.0	0.2	6
W 541	27 12 21 01.9	41.357 S	174.602 E	32.6	1.8	0.1	6
W 542	27 19 33 55.0	41.383 S	175.126 E	28.0	1.9	0.1	8
W 543	28 07 45 28.0	41.163 S	174.795 E	32.2	1.6	0.0	5
W 544	28 13 47 41.2	40.830 S	174.722 E	16.8	2.0	0.1	8
W 545	28 21 06 39.5	41.530 S	175.179 E	24.2	2.3	0.1	6
W 546	29 00 55 45.9	41.132 S	174.684 E	54.1	2.2	0.1	8
W 547	29 01 37 20.1	41.569 S	174.742 E	47.3	2.2	0.1	8
W 548	29 06 51 06.9	40.728 S	174.408 E	40.7	2.6	0.1	7
W 549	29 07 07 23.3	41.269 S	174.637 E	26.6	1.9	0.2	8
W 550	29 09 13 46.9	41.226 S	174.158 E	70.5	2.8	0.1	7

REF NUM		ORIGIN TIME				LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS
			h	m	s	deg	deg	km			
W 551	JUL	29	15	25	25.9	41.272 S	174.998 E	30.1	1.8	0.1	8
W 552		29	15	47	18.6	40.898 S	174.520 E	19.6	1.8	0.0	7
W 553		29	20	05	52.6	41.074 S	175.496 E	30.3	2.6	0.1	9
W 554		30	15	27	05.3	41.147 S	174.867 E	19.0	1.6	0.2	5
W 555		31	02	20	40.3	41.253 S	174.953 E	22.4	2.0	0.1	9
W 556		31	02	24	21.0	41.245 S	174.959 E	24.5	1.3	0.2	7
W 557		31	15	15	36.1	41.250 S	175.225 E	26.8	1.9	0.1	8
W 558		31	15	43	17.4	41.282 S	174.977 E	27.3	1.8	0.1	8
W 559		31	18	15	12.3	41.141 S	175.065 E	20.8	2.2	0.1	9
W 560		31	19	08	56.1	41.133 S	175.071 E	20.2	1.5	0.1	8
W 561	AUG	01	03	48	17.6	41.223 S	174.844 E	1.9	1.0	0.1	5
W 562		01	09	24	33.2	41.441 S	174.422 E	16.8	2.1	0.2	9
W 563		01	12	40	52.7	41.010 S	174.945 E	44.6	2.1	0.1	9
W 564		01	15	10	58.4	41.721 S	175.129 E	34.9	2.4	0.1	6
W 565		02	02	11	11.1	41.236 S	175.333 E	25.8	1.9	0.0	6
W 566		02	03	05	37.9	40.986 S	174.692 E	39.3	1.8	0.1	8
W 567		02	06	45	27.2	41.330 S	174.006 E	44.6	2.8	0.2	8
W 568		02	12	23	26.7	41.715 S	174.575 E	29.9	2.3	0.0	9
W 569		02	13	51	42.6	41.305 S	174.845 E	28.1	1.4	0.2	9
W 570		02	17	06	49.9	41.100 S	175.031 E	31.3	1.9	0.1	10
W 571		02	18	32	37.9	41.750 S	174.432 E	34.6	2.2	0.1	8
W 572		02	22	39	16.5	41.235 S	174.988 E	23.3	1.4	0.2	6
W 573		03	04	14	54.1	41.202 S	174.483 E	61.1	2.2	0.1	6
W 574		03	09	42	45.7	41.660 S	174.620 E	29.5	2.2	0.1	5
W 575		05	20	17	39.1	40.844 S	174.741 E	10.4	1.8	0.2	6
W 576		06	02	06	32.6	41.039 S	175.348 E	27.0	2.2	0.1	7
W 577		06	04	19	32.7	41.758 S	174.500 E	34.3	2.5	0.1	7
W 578		07	02	32	01.1	41.252 S	175.037 E	29.2	1.8	0.1	8
W 579		07	10	09	53.8	41.766 S	174.495 E	34.0	2.6	0.1	7
W 580		08	07	27	13.9	41.324 S	174.512 E	57.0	2.5	0.0	5
W 581		09	20	17	15.3	41.712 S	174.480 E	33.6	2.6	0.2	7
W 582		09	23	20	13.2	41.024 S	174.744 E	60.0	2.5	0.0	5
W 583		09	23	29	39.9	41.026 S	174.747 E	61.1	2.4	0.0	5
W 584		10	07	21	09.7	41.734 S	174.455 E	32.6	2.6	0.2	6
W 585		11	00	18	45.9	41.680 S	174.604 E	27.3	2.1	0.2	6
W 586		11	03	58	57.7	40.928 S	175.253 E	26.5	2.4	0.2	8
W 587		11	04	37	08.2	41.304 S	174.966 E	22.5	1.1	0.1	5
W 588		11	16	03	59.9	41.278 S	174.617 E	27.6	2.2	0.2	8
W 589		12	11	29	58.2	41.128 S	174.717 E	31.8	1.8	0.1	6
W 590		12	13	37	06.7	41.278 S	175.213 E	25.7	1.9	0.1	9
W 591		12	14	24	35.9	40.919 S	175.218 E	28.3	2.5	0.2	9
W 592		12	17	31	06.5	41.705 S	175.062 E	27.8	2.4	0.1	8
W 593		12	22	10	28.2	41.440 S	174.632 E	21.1	1.7	0.1	8
W 594		13	08	17	12.7	40.979 S	175.583 E	25.3	2.3	0.2	5
W 595		13	10	40	35.4	41.721 S	174.469 E	33.6	2.5	0.2	12
W 596		13	11	02	54.1	41.337 S	174.908 E	26.4	1.6	0.1	9
W 597		13	12	37	44.1	41.337 S	175.171 E	24.2	1.5	0.2	10
W 598		13	12	58	29.8	41.453 S	174.109 E	17.0	2.2	0.1	8
W 599		13	19	11	13.3	41.425 S	174.955 E	30.1	1.4	0.2	10
W 600		13	22	32	42.0	41.103 S	174.563 E	44.5	1.9	0.1	6

REF NUM	ORIGIN TIME				LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS
		h	m	s	deg	deg	km			
W 601 AUG	14	02	04	13.4	41.660 S	174.500 E	18.6	2.2	0.2	8
W 602	14	07	04	38.4	41.357 S	174.220 E	31.4	2.1	0.2	7
W 603	14	15	44	29.6	41.348 S	174.221 E	15.1	2.1	0.2	8
W 604	14	21	28	45.2	41.093 S	174.925 E	41.1	2.0	0.1	5
W 605	15	08	24	36.6	41.272 S	174.321 E	64.0	2.5	0.2	5
W 606	15	21	41	37.4	41.059 S	175.303 E	31.5	2.0	0.1	5
W 607	16	08	07	50.9	41.131 S	174.339 E	52.2	2.6	0.2	8
W 608	16	08	22	08.2	41.094 S	174.734 E	31.9	2.5	0.2	9
W 609	16	08	55	36.5	41.767 S	174.451 E	32.6	2.6	0.1	6
W 610	16	22	00	27.2	41.769 S	174.453 E	29.1	2.6	0.2	6
W 611	17	04	11	14.5	41.778 S	174.450 E	34.5	2.6	0.1	7
W 612	17	15	11	11.5	41.634 S	175.286 E	19.5	2.3	0.2	9
W 613	18	09	19	35.2	41.264 S	174.849 E	33.2	2.5	0.2	9
W 614	19	00	15	27.8	41.273 S	175.158 E	28.6	2.0	0.1	6
W 615	19	14	03	52.1	41.112 S	174.566 E	36.6	2.3	0.1	8
W 616	19	17	31	34.1	41.152 S	174.505 E	37.8	2.1	0.1	7
W 617	20	07	28	26.5	41.124 S	175.409 E	24.4	2.0	0.2	8
W 618	20	09	20	13.5	41.055 S	175.427 E	31.7	1.8	0.2	5
W 619	20	09	42	13.3	41.706 S	174.987 E	30.2	2.4	0.1	9
W 620	20	14	39	23.0	41.209 S	175.468 E	17.2	2.2	0.1	9
W 621	20	16	18	54.9	41.286 S	175.055 E	23.7	1.7	0.2	9
W 622	20	16	42	11.3	41.277 S	174.801 E	46.3	2.2	0.1	11
W 623	22	01	12	57.4	41.645 S	175.275 E	14.9	2.5	0.1	11
W 624	22	02	02	02.3	41.190 S	174.462 E	41.0	2.9	0.2	9
W 625	22	02	16	47.3	41.726 S	174.919 E	28.4	2.5	0.2	9
W 626	22	12	41	53.5	41.368 S	175.129 E	27.8	1.6	0.2	7
W 627	22	19	31	31.4	41.373 S	174.998 E	3.3	2.3	0.1	8
W 628	23	04	14	39.7	41.301 S	174.977 E	29.4	1.6	0.1	9
W 629	23	12	38	38.9	40.914 S	175.005 E	31.7	1.9	0.1	6
W 630	23	14	43	16.1	41.373 S	175.000 E	3.5	1.2	0.1	11
W 631	24	20	25	37.7	40.986 S	174.483 E	61.5	2.5	0.1	11
W 632	24	21	23	40.8	41.909 S	174.292 E	62.1	2.8	0.2	9
W 633	25	10	58	25.6	41.359 S	175.103 E	18.5	2.1	0.1	5
W 634	26	09	25	57.5	41.173 S	175.065 E	15.9	1.5	0.2	8
W 635	26	10	59	14.2	40.990 S	174.491 E	64.1	2.7	0.1	7
W 636	26	14	15	19.2	41.557 S	175.597 E	14.6	2.4	0.1	7
W 637	26	15	57	12.9	40.753 S	174.256 E	69.4	3.0	0.2	6
W 638	26	16	06	32.5	41.378 S	174.988 E	4.0	1.6	0.2	9
W 639	28	11	55	54.0	41.315 S	174.890 E	27.5	2.5	0.1	8
W 640	28	21	18	30.7	41.336 S	174.214 E	16.3	2.2	0.2	8
W 641	29	03	04	17.8	41.151 S	174.958 E	0.0	1.3	0.2	8
W 642	29	06	33	44.1	41.666 S	174.749 E	27.4	2.3	0.1	7
W 643	29	19	04	36.6	41.059 S	174.840 E	53.2	2.4	0.0	5
W 644	30	14	54	34.8	40.618 S	174.956 E	18.5	1.8	ND	4
W 645	30	17	43	31.1	40.626 S	174.969 E	17.7	2.4	0.2	7
W 646	30	19	56	09.8	41.132 S	174.378 E	54.1	2.2	0.1	6
W 647	30	22	09	29.4	41.237 S	175.332 E	30.4	2.3	0.2	8
W 648	31	20	14	28.7	41.316 S	174.902 E	29.9	1.9	0.1	8
W 649 SEP	01	04	20	40.5	40.846 S	174.969 E	49.9	2.2	0.2	6
W 650	01	05	11	28.7	41.247 S	174.598 E	20.8	1.5	0.1	9

REF NUM	ORIGIN TIME				LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
		h	m	s						
W 651 SEP	01	12	13	53.6	41.827 S	175.361 E	33.7	2.4	0.2	8
W 652	01	12	27	41.1	41.496 S	174.442 E	21.1	2.1	0.2	8
W 653	01	15	20	25.9	41.402 S	173.875 E	49.0	2.5	0.3	5
W 654	01	16	56	14.9	41.423 S	174.005 E	43.3	2.5	0.2	6
W 655	01	23	12	30.8	40.930 S	175.154 E	28.5	1.8	0.1	5
W 656	03	03	00	41.2	41.339 S	174.904 E	31.5	1.5	0.1	5
W 657	06	05	29	37.8	41.702 S	174.452 E	30.1	2.6	0.2	6
W 658	06	06	41	00.3	41.791 S	174.476 E	33.6	2.5	0.1	8
W 659	06	08	22	55.4	41.208 S	174.568 E	40.5	3.2	0.1	8
W 660	06	09	14	36.6	41.119 S	175.485 E	31.1	2.3	0.2	6
W 661	06	11	36	35.6	40.992 S	175.341 E	30.7	2.1	0.1	5
W 662	06	12	32	43.1	41.386 S	174.960 E	16.9	1.2	0.2	8
W 663	06	19	58	37.5	41.260 S	174.832 E	31.3	1.7	0.2	6
W 664	06	20	24	13.9	41.101 S	175.421 E	28.5	2.3	0.2	9
W 665	07	02	37	21.8	40.742 S	174.802 E	49.3	2.4	0.1	8
W 666	07	05	25	46.7	41.591 S	174.275 E	24.2	2.5	0.2	8
W 667	07	07	31	45.0	41.437 S	175.065 E	27.6	1.6	0.1	9
W 668	08	00	56	45.1	41.047 S	175.644 E	31.3	2.7	0.1	9
W 669	08	12	58	30.2	40.628 S	174.996 E	16.5	2.2	0.1	6
W 670	08	15	58	07.0	41.457 S	174.985 E	29.5	1.5	0.2	7
W 671	08	16	04	46.3	41.098 S	174.845 E	29.5	1.6	0.2	6
W 672	08	16	42	52.4	41.380 S	175.123 E	28.9	1.7	0.1	7
W 673	09	00	31	38.0	41.374 S	175.125 E	27.2	1.8	0.1	6
W 674	09	23	16	37.6	40.973 S	174.502 E	64.9	2.8	0.1	7
W 675	10	09	36	35.5	40.938 S	174.721 E	60.5	2.4	0.2	10
W 676	10	14	52	43.5	41.723 S	174.485 E	34.5	2.5	0.1	8
W 677	10	17	51	57.3	40.975 S	175.119 E	29.6	2.0	0.2	8
W 678	11	12	03	14.2	41.175 S	174.677 E	11.0	1.0	0.1	7
W 679	11	18	03	47.0	40.540 S	174.363 E	32.0	2.9	0.2	6
W 680	11	19	45	21.7	40.824 S	174.988 E	35.3	2.7	0.1	7
W 681	12	01	29	07.4	40.815 S	174.723 E	19.4	2.6	0.1	7
W 682	12	08	02	15.8	41.129 S	175.385 E	28.5	2.2	0.2	7
W 683	12	13	49	01.3	41.047 S	175.278 E	13.0	1.8	0.2	7
W 684	12	14	35	05.4	41.307 S	174.878 E	19.7	1.3	0.1	8
W 685	12	20	15	13.6	40.740 S	175.151 E	33.1	2.5	0.0	5
W 686	13	06	44	15.8	40.735 S	174.926 E	42.9	2.2	0.2	5
W 687	13	11	30	51.4	41.079 S	175.380 E	27.0	2.3	0.2	7
W 688	13	16	11	41.3	41.014 S	175.631 E	32.1	2.5	0.1	7
W 689	13	18	22	46.8	40.913 S	174.968 E	57.5	2.6	0.1	7
W 690	14	04	11	43.5	41.717 S	174.427 E	35.5	2.9	0.2	8
W 691	14	14	32	57.7	40.856 S	175.218 E	37.2	2.7	0.1	6
W 692	14	14	33	19.1	41.503 S	175.551 E	11.2	2.7	0.1	9
W 693	14	15	10	36.1	41.494 S	175.520 E	20.9	2.2	0.3	8
W 694	14	23	20	36.1	41.665 S	174.301 E	26.0	2.5	0.2	5
W 695	15	03	16	54.1	41.186 S	175.080 E	35.5	1.6	0.0	6
W 696	15	13	01	15.6	40.898 S	174.929 E	38.5	2.6	0.2	7
W 697	15	13	37	52.7	41.222 S	175.246 E	26.4	1.9	0.2	9
W 698	15	14	33	18.6	41.422 S	174.876 E	5.7	0.9	0.1	6
W 699	16	05	42	47.1	40.671 S	174.658 E	38.5	2.9	0.2	7
W 700	17	08	24	26.8	40.885 S	174.751 E	13.1	1.6	0.1	8

REF NUM	ORIGIN TIME				LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W 701 SEP	17	14	18	43.6	40.986 S	175.440 E	31.1	3.9	0.1	8
W 702	17	14	29	49.9	40.973 S	175.480 E	29.6	2.2	0.1	11
W 703	17	14	45	03.1	41.073 S	174.778 E	58.9	2.1	0.1	8
W 704	17	22	37	19.9	41.256 S	175.217 E	28.2	1.8	0.2	8
W 705	18	02	02	21.3	41.904 S	174.685 E	32.9	3.0	0.1	8
W 706	18	05	25	03.4	41.206 S	174.184 E	42.9	2.6	0.2	9
W 707	18	18	24	35.9	40.889 S	174.750 E	12.9	2.5	0.0	6
W 708	18	19	11	35.5	41.691 S	174.550 E	32.9	2.9	0.0	8
W 709	18	23	18	44.4	41.303 S	175.216 E	24.9	1.5	0.1	6
W 710	19	15	15	26.8	41.070 S	174.577 E	62.3	2.2	0.1	6
W 711	19	19	54	36.0	41.085 S	174.863 E	53.0	2.1	0.2	6
W 712	20	08	01	35.8	41.620 S	174.513 E	48.8	2.0	ND	4
W 713	20	13	36	58.7	41.354 S	175.153 E	23.3	1.5	0.1	5
W 714	20	14	53	04.9	40.702 S	174.372 E	62.5	2.8	0.2	6
W 715	20	17	13	19.7	41.263 S	175.271 E	27.7	1.6	0.2	7
W 716	20	19	06	00.6	41.375 S	175.129 E	27.5	1.4	0.1	7
W 717	20	19	12	59.1	41.177 S	174.411 E	37.1	1.8	0.1	8
W 718	20	19	58	42.9	41.007 S	175.134 E	32.1	1.8	0.1	6
W 719	20	21	27	35.3	41.254 S	174.566 E	34.8	2.2	0.1	11
W 720	21	01	38	49.5	40.755 S	174.446 E	40.6	2.2	0.1	6
W 721	21	04	01	15.2	41.289 S	175.215 E	21.5	1.6	0.1	6
W 722	21	05	51	51.7	40.735 S	174.779 E	25.8	2.6	0.0	7
W 723	21	13	31	17.2	41.098 S	175.057 E	30.3	1.6	0.1	7
W 724	22	07	18	04.4	41.210 S	174.613 E	35.2	1.8	0.1	7
W 725	22	12	01	58.8	41.019 S	174.483 E	58.6	2.3	0.1	10
W 726	22	14	38	59.1	40.803 S	175.181 E	62.2	2.5	0.1	5
W 727	23	10	43	05.3	40.798 S	174.798 E	19.0	1.8	0.2	7
W 728	23	14	57	11.5	41.799 S	174.444 E	34.9	2.4	0.1	6
W 729	24	08	14	52.8	41.269 S	175.155 E	26.3	1.9	0.1	6
W 730	24	10	27	32.0	41.117 S	174.640 E	36.8	2.2	0.1	8
W 731	24	12	33	58.1	41.110 S	174.645 E	35.5	4.0	0.1	8
W 732	24	13	01	41.7	41.107 S	174.625 E	35.2	2.0	0.1	9
W 733	25	00	13	12.4	41.115 S	174.635 E	32.8	3.2	0.2	7
W 734	25	04	46	57.1	40.838 S	174.854 E	45.8	2.5	0.1	6
W 735	25	06	29	13.9	40.890 S	175.205 E	56.1	2.6	0.1	5
W 736	25	08	57	48.0	41.076 S	174.035 E	57.8	3.0	0.2	8
W 737	25	13	58	51.8	40.870 S	174.446 E	76.8	3.0	0.1	9
W 738	26	00	02	35.9	40.973 S	175.631 E	33.5	2.7	0.2	12
W 739	26	02	40	37.8	41.153 S	175.177 E	10.6	1.3	0.0	5
W 740	26	07	12	31.2	41.373 S	174.831 E	29.4	1.9	0.2	9
W 741	26	08	59	10.1	40.752 S	174.804 E	18.7	2.2	0.1	5
W 742	26	11	50	46.6	40.693 S	174.752 E	28.8	2.0	0.0	6
W 743	26	12	29	26.3	41.459 S	174.429 E	17.7	1.7	0.2	5
W 744	26	12	46	15.6	40.914 S	175.445 E	29.3	3.1	0.1	8
W 745	26	15	39	17.6	41.761 S	174.462 E	29.8	2.7	0.1	8
W 746	26	19	11	05.5	41.029 S	175.045 E	49.0	2.0	ND	4
W 747	26	23	39	17.4	40.840 S	174.422 E	45.5	2.6	0.2	9
W 748	27	17	09	06.8	41.043 S	175.344 E	24.7	3.6	0.1	12
W 749	27	18	21	27.1	41.406 S	175.093 E	25.0	2.1	0.2	14
W 750	27	22	06	55.6	41.054 S	175.274 E	31.4	1.7	0.2	5

REF NUM		ORIGIN TIME h	m	s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W 751	SEP 27	22	39	40.8	41.794 S	174.879 E	20.2	2.2	0.1	8
W 752	28	23	03	38.9	41.416 S	174.236 E	64.0	2.5	0.2	9
W 753	29	10	01	10.4	41.250 S	174.977 E	25.6	1.6	0.2	11
W 754	29	10	02	45.8	41.286 S	175.021 E	27.5	1.5	0.1	5
W 755	29	10	52	14.7	41.775 S	174.496 E	35.4	2.8	0.1	8
W 756	29	15	18	43.9	41.006 S	175.194 E	30.1	2.0	0.2	6
W 757	30	01	19	07.5	41.107 S	174.684 E	59.1	2.2	0.1	11
W 758	30	04	00	19.0	41.470 S	175.347 E	17.1	2.2	0.2	11
W 759	30	04	15	41.2	41.427 S	175.332 E	12.4	1.9	0.2	5
W 760	30	05	12	19.7	41.407 S	175.103 E	23.8	1.8	0.2	10
W 761	30	06	25	26.3	41.533 S	173.876 E	32.9	2.6	0.2	9
W 762	30	09	01	41.1	41.384 S	175.115 E	29.3	2.1	0.2	13
W 763	30	09	27	31.6	41.379 S	175.126 E	27.8	1.5	0.1	8
W 764	30	12	35	56.6	41.343 S	174.985 E	26.8	2.2	0.1	10
W 765	30	18	19	25.7	41.871 S	174.851 E	10.1	2.5	0.1	8
W 766	30	18	52	05.1	41.820 S	174.869 E	31.8	2.5	0.1	9
W 767	OCT 01	00	10	23.4	41.020 S	174.491 E	68.1	2.7	0.0	7
W 768	02	06	17	46.8	41.418 S	175.102 E	26.1	1.5	0.1	8
W 769	02	12	04	52.2	41.268 S	175.220 E	25.5	1.7	0.2	7
W 770	02	12	29	07.9	41.533 S	174.254 E	10.5	2.1	0.1	8
W 771	02	16	24	25.0	41.271 S	174.569 E	34.9	1.9	0.1	11
W 772	02	16	31	59.3	40.953 S	175.540 E	28.6	2.4	0.2	8
W 773	04	06	27	15.0	41.405 S	175.097 E	25.2	1.9	0.2	9
W 774	04	06	33	09.0	41.400 S	175.103 E	25.2	1.5	0.2	6
W 775	04	13	11	25.5	40.966 S	174.486 E	5.0	2.3	0.2	5
W 776	04	16	52	57.8	40.916 S	174.885 E	32.0	1.7	0.1	5
W 777	04	17	26	45.4	41.041 S	175.497 E	27.7	2.5	0.1	8
W 778	04	21	22	32.4	40.910 S	175.618 E	20.0	2.6	0.1	7
W 779	05	15	07	51.4	41.361 S	175.006 E	29.2	1.6	0.0	5
W 780	05	15	49	15.9	41.413 S	175.097 E	25.9	2.1	0.1	8
W 781	06	12	33	32.2	41.060 S	175.602 E	31.8	2.8	0.1	10
W 782	06	13	20	06.5	41.096 S	175.463 E	20.1	1.8	0.1	6
W 783	06	14	53	58.2	41.040 S	175.327 E	9.0	3.0	0.1	9
W 784	06	18	34	47.3	41.384 S	175.119 E	27.3	2.3	0.1	10
W 785	06	20	01	45.8	40.998 S	174.618 E	35.6	1.8	0.1	8
W 786	06	20	50	39.9	41.114 S	174.628 E	34.2	1.7	0.1	10
W 787	06	23	07	37.2	41.373 S	175.114 E	28.4	1.7	0.2	7
W 788	07	00	37	50.3	41.053 S	174.827 E	52.7	1.9	0.2	5
W 789	07	01	13	58.7	41.710 S	174.509 E	29.9	2.7	0.1	10
W 790	07	12	33	14.0	41.680 S	174.225 E	20.0 R	2.3	0.1	8
W 791	07	13	58	23.0	41.066 S	174.199 E	72.5	2.2	0.1	5
W 792	07	17	12	51.8	41.166 S	174.490 E	56.8	2.5	0.1	9
W 793	07	18	37	30.5	41.331 S	174.885 E	30.4	1.6	0.1	6
W 794	07	20	08	56.1	41.270 S	174.402 E	32.5	1.9	0.1	7
W 795	08	01	45	26.2	40.938 S	174.993 E	28.8	1.7	0.2	8
W 796	08	03	02	28.6	41.367 S	175.129 E	26.7	1.4	0.1	7
W 797	08	06	39	29.5	40.940 S	174.513 E	34.8	2.0	0.0	6
W 798	08	07	15	06.7	41.343 S	175.011 E	24.5	1.6	0.0	6
W 799	08	08	41	27.5	41.421 S	174.456 E	9.8	2.2	0.1	9
W 800	08	13	58	50.7	41.587 S	174.907 E	27.6	2.2	0.1	11

REF NUM	ORIGIN TIME				LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS
		h	m	s	deg	deg	km			
W 801 OCT	08	14	16	06.0	41.579 S	174.909 E	27.8	2.0	0.1	8
W 802	08	19	59	34.0	40.789 S	174.788 E	38.5	2.5	0.2	8
W 803	08	21	55	51.9	41.293 S	174.357 E	32.5	2.4	0.2	6
W 804	08	22	19	44.6	41.177 S	175.184 E	27.9	1.8	0.2	7
W 805	09	07	22	56.4	40.930 S	175.770 E	29.4	2.7	0.1	7
W 806	09	12	35	56.2	40.902 S	175.045 E	31.0	1.4	ND	4
W 807	09	17	21	14.6	40.987 S	175.442 E	25.2	2.4	0.2	9
W 808	09	18	57	57.6	41.088 S	174.593 E	60.3	2.7	0.1	11
W 809	09	23	25	00.8	41.402 S	175.061 E	37.6	1.8	0.1	5
W 810	10	02	48	17.5	41.317 S	174.883 E	31.8	1.5	0.0	5
W 811	10	05	01	44.6	40.983 S	174.222 E	48.9	2.5	0.1	7
W 812	10	05	18	44.5	41.576 S	174.163 E	14.4	2.5	0.1	7
W 813	10	05	55	11.6	40.610 S	174.489 E	46.2	2.4	0.1	7
W 814	10	16	56	32.2	41.402 S	175.098 E	25.6	2.0	0.1	11
W 815	10	22	08	05.5	41.420 S	174.126 E	23.1	2.5	0.2	7
W 816	11	00	02	23.2	41.301 S	175.066 E	10.2	1.4	0.1	6
W 817	11	01	21	51.0	40.717 S	174.773 E	24.6	2.4	0.1	7
W 818	11	11	53	03.2	40.903 S	174.915 E	67.2	2.7	0.1	7
W 819	11	14	46	24.3	40.999 S	175.619 E	11.1	2.4	0.2	9
W 820	11	21	20	00.0	40.603 S	174.668 E	38.3	2.8	0.1	6
W 821	12	03	50	12.2	41.459 S	174.877 E	34.6	3.2	0.1	9
W 822	12	06	25	50.0	41.379 S	175.123 E	27.6	1.8	0.1	8
W 823	13	00	21	38.8	41.476 S	175.758 E	26.1	2.8	0.3	8
W 824	13	05	00	01.6	40.933 S	174.439 E	50.6	2.4	0.2	7
W 825	13	08	08	59.6	41.424 S	175.011 E	22.9	2.6	0.1	9
W 826	13	08	08	59.6	41.424 S	175.011 E	22.9	2.0	0.1	9
W 827	13	10	18	43.1	41.711 S	174.488 E	40.8	2.7	0.1	8
W 828	14	11	31	03.9	40.856 S	174.713 E	16.1	1.6	0.1	6
W 829	14	21	06	04.5	41.170 S	174.709 E	26.1	1.5	0.2	6
W 830	16	01	51	30.3	41.106 S	174.769 E	55.0	2.2	0.1	6
W 831	16	05	26	23.6	41.466 S	174.681 E	27.1	2.1	0.2	9
W 832	16	06	50	57.1	40.756 S	174.785 E	41.4	2.0	0.1	6
W 833	16	07	07	20.0	41.015 S	173.911 E	48.7	3.0	0.1	9
W 834	16	08	15	44.8	41.808 S	174.544 E	28.9	2.5	0.2	7
W 835	16	09	02	11.1	41.307 S	173.936 E	47.2	2.8	0.2	7
W 836	16	10	04	51.2	41.288 S	174.387 E	57.8	2.6	0.2	7
W 837	16	15	16	53.5	40.644 S	174.555 E	41.8	2.4	0.1	6
W 838	17	06	50	22.0	41.705 S	174.483 E	28.6	2.6	0.1	7
W 839	17	09	02	00.6	41.074 S	174.722 E	33.2	1.7	0.1	7
W 840	17	17	33	23.7	41.318 S	175.050 E	8.6	2.6	0.1	7
W 841	17	21	52	36.7	41.143 S	174.137 E	57.3	2.9	0.2	7
W 842	18	07	15	33.8	40.750 S	174.396 E	45.3	2.8	0.1	7
W 843	18	07	59	56.7	40.621 S	174.566 E	5.0 R	2.7	0.2	8
W 844	18	10	41	34.1	40.917 S	175.055 E	30.1	3.2	0.1	9
W 845	19	02	53	57.9	40.885 S	175.089 E	33.7	2.6	0.1	11
W 846	19	03	07	24.0	41.352 S	174.774 E	25.8	1.4	0.2	8
W 847	19	03	39	26.8	41.394 S	174.975 E	27.6	3.2	0.1	9
W 848	19	08	22	08.7	41.098 S	175.054 E	32.2	1.8	0.1	5
W 849	19	11	46	14.1	41.397 S	175.113 E	27.4	1.4	0.2	7
W 850	19	11	54	54.5	41.232 S	174.562 E	17.8	1.8	0.1	9

REF NUM		ORIGIN TIME h	m	s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W 851	OCT 19	13	35	57.3	41.376 S	175.139 E	26.1	1.5	0.1	7
W 852	20	02	29	58.5	40.838 S	174.394 E	61.6	2.8	0.0	5
W 853	20	03	06	22.5	41.443 S	175.011 E	26.5	1.9	0.1	10
W 854	20	03	51	12.6	41.185 S	175.024 E	28.0	2.2	0.1	9
W 855	20	12	44	42.7	41.390 S	174.966 E	24.5	2.2	0.1	10
W 856	20	15	46	31.0	41.304 S	175.056 E	12.8	1.7	0.2	9
W 857	20	16	44	46.6	40.969 S	174.841 E	9.0	2.7	0.2	9
W 858	21	12	42	58.9	41.647 S	174.748 E	26.6	2.3	0.2	8
W 859	21	13	18	48.7	41.286 S	175.036 E	27.1	1.5	ND	4
W 860	21	13	28	44.7	41.517 S	174.430 E	24.8	4.3	0.1	10
W 861	21	16	12	47.1	41.369 S	175.142 E	26.9	2.2	0.1	11
W 862	22	03	22	18.8	41.400 S	174.813 E	10.8	1.3	0.1	7
W 863	22	11	59	56.2	41.012 S	174.159 E	5.0 R	2.1	0.3	4
W 864	22	18	13	26.2	41.045 S	175.450 E	30.1	2.6	0.1	8
W 865	22	19	31	42.6	40.802 S	175.271 E	32.3	2.0	0.1	5
W 866	22	20	29	23.0	41.381 S	173.847 E	46.4	3.1	0.1	7
W 867	23	00	13	06.4	41.179 S	174.648 E	34.0	2.3	0.1	11
W 868	23	06	33	38.8	41.104 S	174.625 E	37.4	2.1	0.2	7
W 869	23	19	10	14.1	40.909 S	174.854 E	50.2	2.2	0.2	8
W 870	23	21	02	57.6	41.304 S	175.060 E	26.3	1.6	0.1	6
W 871	24	05	27	25.7	41.868 S	174.494 E	2.9	2.4	0.2	6
W 872	24	07	04	21.2	41.575 S	174.441 E	19.6	1.7	0.2	6
W 873	24	07	52	33.5	41.668 S	175.198 E	16.0	1.9	0.2	5
W 874	24	09	53	22.9	41.402 S	175.119 E	24.2	1.7	0.2	6
W 875	24	09	56	36.3	41.128 S	174.591 E	52.6	2.2	0.1	7
W 876	24	10	14	47.8	41.404 S	175.117 E	22.8	1.8	0.1	8
W 877	24	19	50	57.3	40.698 S	174.817 E	9.4	2.6	0.2	10
W 878	24	20	21	34.1	40.942 S	175.582 E	28.2	2.6	0.2	6
W 879	25	02	48	12.0	41.296 S	175.001 E	25.5	1.6	0.2	6
W 880	25	02	51	03.9	40.834 S	174.722 E	19.3	2.7	0.1	7
W 881	25	02	55	28.9	40.861 S	174.719 E	15.8	2.1	0.1	8
W 882	25	03	19	02.4	40.654 S	174.603 E	40.7	2.8	0.1	7
W 883	25	08	12	10.7	41.052 S	174.811 E	53.7	1.9	0.0	5
W 884	25	23	02	23.7	41.371 S	174.543 E	6.1	1.1	0.1	7
W 885	26	04	51	33.4	40.610 S	174.604 E	5.0 R	2.3	0.2	11
W 886	26	05	03	32.8	40.691 S	174.305 E	52.1	3.3	0.2	10
W 887	26	09	19	01.6	41.359 S	174.777 E	27.1	1.8	0.1	11
W 888	26	11	44	11.6	40.863 S	174.714 E	13.7	2.4	0.1	8
W 889	26	13	30	17.2	41.682 S	174.237 E	7.9	3.0	0.1	6
W 890	26	13	57	07.3	41.381 S	175.109 E	28.1	2.6	0.2	10
W 891	29	02	50	19.4	40.892 S	175.357 E	33.0	2.5	0.1	6
W 892	29	05	37	48.8	40.600 S	175.080 E	34.4	2.9	0.1	7
W 893	29	08	20	04.6	41.760 S	174.767 E	47.6	2.5	0.2	7
W 894	29	18	00	02.6	40.832 S	174.722 E	21.1	2.4	0.0	7
W 895	29	19	21	50.6	40.971 S	175.011 E	44.7	2.3	0.1	6
W 896	30	02	47	31.0	40.999 S	175.490 E	31.3	2.3	0.2	11
W 897	30	04	40	39.0	41.375 S	175.112 E	28.8	1.7	0.2	9
W 898	30	09	13	31.7	41.205 S	175.192 E	18.6	1.8	0.1	12
W 899	30	12	45	49.9	40.867 S	174.730 E	14.6	1.8	0.1	8
W 900	30	12	56	21.0	40.889 S	174.723 E	8.9	2.5	0.2	9

REF NUM		ORIGIN TIME			LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS
			h	m s	deg	deg	km			
W 901	OCT	30	20	07 10.7	41.426 S	174.491 E	12.6	1.5	0.1	7
W 902		31	08	13 46.5	41.243 S	175.223 E	27.9	1.4	0.1	6
W 903		31	11	58 15.5	41.028 S	174.764 E	58.9	1.9	0.0	5
W 904		31	15	00 11.7	41.217 S	174.988 E	23.7	2.0	0.2	10
W 905		31	15	47 15.9	41.766 S	174.486 E	32.9	2.8	0.2	11
W 906		31	23	43 16.7	41.600 S	174.498 E	21.8	2.4	0.1	7
W 907	NOV	01	00	09 25.1	40.868 S	174.702 E	14.5	2.2	0.2	8
W 908		01	05	27 44.1	40.638 S	174.857 E	29.3	2.0	0.1	5
W 909		01	07	04 49.9	41.774 S	174.490 E	29.2	2.4	0.0	6
W 910		01	13	49 00.8	41.609 S	174.679 E	27.4	2.1	0.1	11
W 911		01	14	10 09.1	41.109 S	174.195 E	54.2	2.3	0.2	6
W 912		01	14	18 45.2	41.612 S	174.682 E	28.3	2.0	0.1	9
W 913		01	18	55 43.8	40.315 S	175.140 E	21.7	2.6	0.1	5
W 914		01	20	26 26.2	41.041 S	174.447 E	41.8	2.2	0.1	8
W 915		02	02	14 58.3	41.767 S	174.875 E	27.7	2.5	0.0	11
W 916		02	11	30 28.2	40.916 S	175.163 E	33.6	2.0	0.0	5
W 917		02	13	50 17.0	41.199 S	175.057 E	36.2	1.5	0.2	8
W 918		02	18	36 30.1	41.073 S	174.184 E	46.2	2.8	0.1	7
W 919		03	04	42 04.0	41.372 S	174.324 E	35.7	2.3	0.1	9
W 920		03	09	06 58.0	41.378 S	174.623 E	20.0	1.6	0.2	9
W 921		03	09	25 44.9	40.700 S	175.330 E	35.2	2.4	0.1	5
W 922		03	10	46 46.6	41.292 S	175.183 E	23.1	1.6	0.1	7
W 923		03	20	21 17.4	41.264 S	173.904 E	66.3	2.8	0.1	5
W 924		04	00	50 20.9	41.763 S	174.446 E	32.3	2.4	0.1	5
W 925		04	08	20 20.6	41.584 S	173.913 E	16.7	3.0	0.1	9
W 926		04	12	58 05.0	41.571 S	174.563 E	46.7	2.5	0.1	7
W 927		04	15	38 13.8	41.731 S	174.464 E	41.1	2.4	0.2	7
W 928		04	16	13 17.3	40.622 S	174.306 E	52.4	2.5	0.2	8
W 929		04	17	01 28.1	40.879 S	174.971 E	54.9	1.8	0.1	5
W 930		04	17	09 10.6	41.167 S	175.027 E	23.5	1.3	0.2	9
W 931		05	00	47 20.3	40.950 S	175.116 E	33.1	2.0	0.1	7
W 932		05	08	23 20.5	41.427 S	174.150 E	26.1	2.8	0.1	9
W 933		05	10	00 33.6	40.824 S	174.503 E	41.1	2.7	0.1	10
W 934		05	11	58 02.9	41.066 S	174.967 E	29.9	1.4	0.0	8
W 935		05	12	01 46.6	41.595 S	175.076 E	25.7	1.9	0.1	9
W 936		05	13	15 41.2	41.215 S	173.767 E	50.7	2.7	0.1	8
W 937		06	02	58 56.0	40.810 S	174.508 E	43.4	2.3	0.2	7
W 938		06	04	27 26.1	41.371 S	175.069 E	36.1	2.1	0.2	10
W 939		06	05	35 57.0	41.294 S	175.320 E	29.4	1.5	0.2	5
W 940		06	14	01 10.3	40.976 S	175.352 E	32.7	2.0	0.2	6
W 941		06	15	09 46.4	41.280 S	173.857 E	47.1	2.6	0.4	6
W 942		06	17	23 41.9	41.428 S	174.145 E	26.9	2.5	0.1	6
W 943		06	17	27 35.8	41.396 S	174.171 E	25.9	2.9	0.1	12
W 944		06	18	01 00.5	41.436 S	174.136 E	26.7	2.4	0.1	9
W 945		06	22	12 42.3	40.985 S	175.333 E	27.1	2.0	0.2	5
W 946		06	22	50 08.7	40.939 S	175.059 E	35.5	2.0	0.1	5
W 947		07	04	30 42.9	41.422 S	174.145 E	23.5	2.6	0.1	9
W 948		07	20	08 04.8	40.951 S	174.510 E	65.2	2.4	0.1	8
W 949		07	21	22 22.4	41.362 S	174.990 E	29.1	2.0	0.1	13
W 950		08	00	48 47.1	40.998 S	175.641 E	28.7	2.6	0.1	11

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W 951 NOV	08 09 35 22.2	41.623 S	174.511 E	53.7	2.6	0.2	10
W 952	08 13 31 30.3	40.926 S	174.544 E	11.5	1.7	0.1	9
W 953	08 14 42 16.3	41.629 S	174.612 E	32.3	2.3	0.1	11
W 954	08 15 26 24.2	40.791 S	173.969 E	50.6	2.9	0.1	8
W 955	08 17 36 30.7	41.261 S	174.593 E	34.2	1.9	0.1	12
W 956	09 09 06 15.8	40.995 S	174.846 E	33.6	2.2	0.1	10
W 957	09 17 50 25.8	41.059 S	174.772 E	56.6	2.4	0.1	13
W 958	10 07 01 52.3	41.431 S	175.377 E	18.4	1.8	0.1	5
W 959	10 12 58 09.8	40.573 S	174.605 E	36.8	2.4	0.2	6
W 960	10 18 49 13.8	40.842 S	174.770 E	15.1	1.6	0.3	5
W 961	10 19 12 24.0	41.276 S	175.185 E	24.8	1.7	0.1	7
W 962	10 19 47 02.4	41.004 S	174.833 E	34.8	1.9	0.1	8
W 963	11 00 54 48.5	40.901 S	175.349 E	30.3	2.5	0.1	7
W 964	11 14 17 33.1	41.369 S	174.216 E	10.6	1.6	0.1	8
W 965	11 20 52 57.1	41.657 S	174.299 E	16.4	2.6	0.1	8
W 966	11 20 54 05.7	41.013 S	175.578 E	33.3	3.1	0.1	10
W 967	11 21 30 15.6	41.647 S	174.236 E	15.5	2.6	0.1	8
W 968	11 21 44 57.0	41.666 S	174.270 E	5.0 R	2.2	0.6	5
W 969	11 23 50 49.3	41.756 S	174.047 E	6.5	2.6	0.2	7
W 970	12 06 32 53.2	41.147 S	174.992 E	34.1	1.3	0.2	6
W 971	12 06 34 34.9	41.226 S	174.044 E	55.6	2.3	0.2	6
W 972	12 06 52 50.7	41.311 S	175.130 E	22.5	1.6	0.1	11
W 973	12 11 42 32.5	41.371 S	175.098 E	24.7	2.0	0.1	10
W 974	12 15 39 47.4	41.388 S	175.130 E	26.9	1.7	0.1	7
W 975	13 15 18 17.6	41.541 S	175.031 E	22.2	2.2	0.1	12
W 976	13 16 43 01.7	41.181 S	174.613 E	33.5	1.9	0.1	8
W 977	14 04 02 46.7	41.051 S	175.457 E	33.0	2.4	0.1	8
W 978	14 17 24 01.7	41.066 S	175.471 E	29.2	2.0	0.1	7
W 979	15 07 06 59.8	40.528 S	174.586 E	11.4	2.5	0.1	8
W 980	15 11 58 20.6	41.674 S	174.403 E	53.6	2.2	0.2	7
W 981	15 13 28 21.9	41.040 S	175.393 E	32.2	2.7	0.2	12
W 982	15 20 47 06.4	41.199 S	173.763 E	53.1	3.1	0.1	7
W 983	16 00 49 42.3	41.790 S	175.094 E	32.0	2.3	0.1	8
W 984	16 01 52 06.1	41.262 S	175.047 E	30.9		0.2	10
W 985	16 06 32 29.6	41.136 S	174.090 E	54.3	2.8	0.2	8
W 986	16 09 21 59.7	41.306 S	175.239 E	29.5	1.9	0.1	7
W 987	16 10 45 23.7	41.004 S	175.631 E	26.2	2.5	0.1	11
W 988	16 11 25 23.8	41.774 S	174.503 E	33.1	2.7	0.2	10
W 989	16 19 10 23.0	41.392 S	174.827 E	20.2	1.6	0.0	7
W 990	16 23 54 58.8	41.166 S	174.462 E	64.5	2.7	0.1	10
W 991	17 02 54 37.0	40.575 S	174.851 E	32.8	2.7	0.1	8
W 992	17 03 41 10.2	40.778 S	174.250 E	48.9	2.2	0.2	5
W 993	17 06 30 49.4	40.923 S	175.574 E	30.4	2.3	0.1	5
W 994	17 09 23 37.2	41.415 S	174.542 E	25.6	1.5	0.0	5
W 995	17 14 05 40.6	41.337 S	173.770 E	49.7	2.7	0.3	7
W 996	18 13 09 31.5	41.708 S	174.206 E	9.9	2.8	0.1	8
W 997	18 21 41 21.1	40.564 S	174.563 E	5.0 R	2.3	0.3	6
W 998	19 04 19 17.2	40.748 S	175.129 E	34.9	2.5	0.2	6
W 999	19 05 12 39.2	40.911 S	174.872 E	47.5	2.2	0.1	6
W1000	19 06 00 49.3	41.185 S	175.430 E	14.4	2.1	0.1	7

REF NUM	ORIGIN TIME				LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM OBS
		h	m	s	deg	deg	km			
W1001 NOV	19	15	05	24.1	40.870 S	174.719 E	15.1	1.7	0.1	9
W1002	19	15	12	55.8	41.209 S	174.905 E	21.1	2.3	0.1	8
W1003	19	18	01	56.2	40.816 S	175.305 E	29.6	2.4	0.1	5
W1004	19	21	08	26.8	41.048 S	174.754 E	32.5	1.8	0.2	8
W1005	20	05	12	06.7	41.402 S	174.476 E	30.9	1.6	0.1	5
W1006	20	06	24	04.7	41.026 S	175.594 E	10.3	2.0	0.2	5
W1007	20	13	27	19.6	41.033 S	175.526 E	31.1	2.3	0.2	8
W1008	20	18	00	12.6	41.418 S	174.918 E	15.7	2.4	0.1	9
W1009	21	09	39	37.4	41.384 S	174.898 E	28.2	1.6	0.1	12
W1010	21	10	14	55.2	40.513 S	174.593 E	39.5	2.8	0.2	10
W1011	21	11	20	05.7	40.962 S	174.700 E	40.9	1.9	0.0	6
W1012	21	12	35	30.8	41.002 S	175.473 E	31.2	3.4	0.1	8
W1013	21	16	09	30.6	40.940 S	174.769 E	51.1	2.0	0.1	8
W1014	21	16	47	55.0	41.087 S	174.169 E	56.8	2.9	0.2	8
W1015	22	08	23	14.1	41.694 S	174.156 E	52.1	2.7	0.2	6
W1016	22	08	29	30.8	41.658 S	174.344 E	15.6	2.6	0.2	7
W1017	22	12	38	49.1	40.982 S	175.332 E	32.9	2.5	0.1	8
W1018	22	14	08	25.8	41.361 S	174.780 E	26.8	2.1	0.1	9
W1019	22	19	37	04.7	41.593 S	174.398 E	10.4	2.2	0.2	9
W1020	22	20	17	12.4	40.976 S	175.128 E	26.8	3.3	0.2	9
W1021	22	20	36	17.0	40.972 S	175.134 E	28.5	2.7	0.1	9
W1022	22	20	36	50.1	40.938 S	175.259 E	35.2	3.0	0.1	5
W1023	22	20	53	56.1	40.967 S	175.132 E	28.4	3.1	0.1	8
W1024	22	22	04	27.9	40.668 S	175.140 E	50.9	2.5	ND	4
W1025	23	06	44	44.0	41.087 S	174.824 E	59.1	2.3	0.1	5
W1026	23	12	49	53.9	41.225 S	175.020 E	20.9	1.3	0.1	8
W1027	23	14	37	23.7	41.751 S	174.477 E	33.1	2.5	0.2	7
W1028	24	00	59	24.5	41.292 S	174.853 E	31.7	1.4	0.1	6
W1029	24	08	54	01.5	41.480 S	174.316 E	14.3	2.3	0.1	7
W1030	24	20	26	56.2	40.840 S	175.273 E	34.3	2.6	0.1	10
W1031	25	02	53	43.6	40.892 S	175.013 E	43.7	2.2	0.1	7
W1032	25	06	56	35.5	41.171 S	173.960 E	61.2	3.1	0.2	8
W1033	25	06	58	28.2	40.750 S	175.118 E	34.6	2.1	0.3	8
W1034	25	07	12	11.7	41.342 S	175.332 E	23.0	1.8	0.1	6
W1035	25	07	53	28.8	41.440 S	175.100 E	2.0	1.4	0.1	7
W1036	25	08	01	15.9	41.061 S	174.430 E	42.0	2.6	0.0	8
W1037	25	09	30	20.1	40.999 S	175.603 E	15.8	1.9	0.2	6
W1038	25	16	10	01.9	41.711 S	174.465 E	35.5	2.1	0.3	5
W1039	25	20	03	01.8	41.455 S	174.350 E	11.8	1.8	0.0	7
W1040	25	20	38	26.9	41.710 S	174.455 E	51.3	2.2	0.2	6
W1041	25	21	29	07.7	40.976 S	175.503 E	30.6	2.9	0.2	9
W1042	26	00	47	15.8	41.168 S	174.785 E	33.5	2.4	0.2	11
W1043	26	17	23	47.7	41.238 S	175.338 E	26.4	2.2	0.1	7
W1044	26	19	42	46.3	41.304 S	174.979 E	27.3	1.6	0.2	6
W1045	26	19	52	57.2	41.326 S	174.986 E	26.2	1.7	0.2	5
W1046	26	23	29	32.0	41.069 S	174.751 E	36.6	2.1	0.1	8
W1047	27	00	06	41.8	41.002 S	174.955 E	49.0	2.1	0.1	7
W1048	27	03	10	29.1	41.258 S	174.878 E	33.6	1.8	0.1	6
W1049	27	04	18	41.4	41.490 S	174.002 E	33.5	2.5	0.2	7
W1050	27	10	05	33.9	40.987 S	175.475 E	24.0	2.5	0.1	9

REF NUM	ORIGIN TIME				LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
		h	m	s						
W1051 NOV	27	17	07	09.3	41.100 S	173.992 E	60.3	4.0	0.1	9
W1052	27	19	25	53.8	41.454 S	174.352 E	10.8	1.8	0.1	5
W1053	27	22	41	05.3	41.439 S	174.821 E	6.6	1.2	0.1	5
W1054	28	03	37	08.7	40.650 S	174.529 E	48.2	2.9	0.1	9
W1055	28	05	00	08.0	41.227 S	175.470 E	12.7	2.2	0.2	8
W1056	28	11	53	36.5	40.792 S	174.892 E	29.8	1.9	0.1	5
W1057	28	12	34	58.2	41.116 S	174.871 E	32.4	1.3	0.1	7
W1058	28	13	03	56.6	41.358 S	173.939 E	51.9	2.7	0.1	5
W1059	28	14	01	38.8	41.400 S	175.133 E	27.0	2.0	0.1	10
W1060	28	15	28	41.8	41.648 S	174.259 E	19.1	2.6	0.1	10
W1061	28	16	16	59.4	40.532 S	175.293 E	34.5	2.6	0.1	5
W1062	28	17	56	46.3	40.863 S	175.147 E	35.5	2.1	0.1	5
W1063	28	19	39	41.6	41.641 S	174.268 E	16.4	2.6	0.1	8
W1064	29	05	30	19.6	41.414 S	173.972 E	44.7	2.5	0.2	5
W1065	29	12	38	04.8	41.266 S	174.017 E	50.8	3.0	0.1	7
W1066	29	13	24	03.7	41.636 S	174.464 E	37.9	2.3	0.2	7
W1067	29	13	26	57.0	40.937 S	174.404 E	50.0	2.7	0.1	8
W1068	29	13	47	33.5	41.672 S	174.789 E	25.4	2.4	0.0	8
W1069	29	21	40	47.8	41.247 S	174.413 E	11.2	2.1	0.2	8
W1070	29	23	19	18.4	41.186 S	175.007 E	30.5	1.7	0.1	6
W1071	30	11	07	30.8	41.469 S	174.327 E	12.8	2.3	0.1	11
W1072	30	14	39	29.1	41.371 S	175.142 E	27.6	1.3	0.1	7
W1073 DEC	01	00	04	13.2	41.628 S	174.644 E	28.6	2.1	0.0	6
W1074	01	00	14	37.7	41.371 S	173.678 E	61.6	3.0	0.1	5
W1075	01	05	32	38.2	40.926 S	175.543 E	30.8	2.5	0.2	8
W1076	01	11	09	30.6	41.507 S	174.465 E	52.4	2.8	0.1	9
W1077	01	13	28	06.0	41.043 S	174.684 E	57.2	2.2	0.1	5
W1078	01	14	03	45.7	40.988 S	175.661 E	25.7	2.6	0.0	5
W1079	01	14	52	19.2	40.658 S	174.966 E	41.4	2.5	0.1	7
W1080	01	21	14	33.3	41.726 S	174.179 E	7.1	2.4	0.1	5
W1081	02	06	05	56.8	41.272 S	174.644 E	28.9	3.1	0.0	8
W1082	02	16	31	24.2	40.820 S	174.581 E	64.4	2.3	0.1	7
W1083	02	16	47	10.7	41.468 S	174.369 E	20.6	2.1	0.1	11
W1084	02	19	36	33.3	41.277 S	174.646 E	28.5	1.4	0.1	6
W1085	02	19	58	32.5	41.277 S	174.641 E	28.0	1.7	0.0	7
W1086	02	23	58	38.8	41.166 S	174.543 E	35.7	1.9	0.1	6
W1087	02	23	59	10.8	41.450 S	174.358 E	2.5	1.6	0.1	7
W1088	03	03	44	44.0	41.445 S	174.106 E	35.5	2.5	0.0	5
W1089	03	06	47	46.9	40.806 S	175.173 E	38.0	2.4	0.2	6
W1090	03	08	21	33.4	40.773 S	174.773 E	20.9	1.8	0.1	5
W1091	03	08	44	32.7	40.661 S	174.363 E	57.2	3.0	0.2	7
W1092	03	12	52	16.1	40.898 S	174.610 E	55.6	2.4	0.1	8
W1093	03	13	00	49.9	40.614 S	174.558 E	5.0 R	2.3	0.2	7
W1094	03	17	16	17.9	41.339 S	175.036 E	38.8	2.2	0.1	7
W1095	04	03	57	39.9	41.266 S	174.473 E	59.1	2.1	0.1	7
W1096	04	04	57	24.7	40.672 S	174.888 E	15.4	2.0	0.0	5
W1097	04	09	42	06.0	40.960 S	174.796 E	40.0	2.3	0.1	10
W1098	04	15	47	16.8	41.044 S	174.526 E	44.7	2.1	0.1	7
W1099	04	19	37	26.5	40.967 S	175.608 E	32.1	2.6	0.2	7
W1100	04	23	24	09.2	40.598 S	174.571 E	5.0	2.3	0.3	8

REF NUM	ORIGIN TIME h m s	LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W1101 DEC	05 03 32 17.3	40.898 S	175.112 E	11.8	1.0	ND	4
W1102	05 11 41 18.6	41.272 S	174.436 E	16.1	1.3	ND	4
W1103	05 16 40 49.9	41.110 S	174.041 E	53.6	3.1	0.2	9
W1104	06 06 03 27.8	41.144 S	174.506 E	35.5	1.8	0.1	6
W1105	06 06 29 16.5	40.636 S	175.471 E	34.2	2.0	0.1	5
W1106	06 07 47 04.1	41.005 S	175.029 E	28.8	1.5	ND	4
W1107	06 10 46 11.1	41.420 S	174.562 E	57.5	2.5	0.1	8
W1108	06 14 07 18.3	41.804 S	174.448 E	32.4	2.5	0.2	7
W1109	06 14 51 37.9	40.865 S	174.718 E	15.0	1.5	0.1	10
W1110	07 01 10 23.3	41.616 S	174.656 E	30.7	2.0	0.1	9
W1111	07 13 46 15.1	41.511 S	173.959 E	33.8	3.0	0.2	9
W1112	07 17 24 18.5	40.956 S	175.045 E	34.8	1.9	0.1	6
W1113	07 22 51 09.6	40.650 S	174.361 E	51.4	3.0	0.3	7
W1114	08 05 34 23.1	41.524 S	174.365 E	29.0	2.8	0.2	9
W1115	08 08 10 12.0	41.302 S	174.193 E	41.2	2.9	0.1	8
W1116	08 11 45 13.2	40.990 S	174.621 E	40.8	1.5	0.1	6
W1117	08 11 55 28.6	41.390 S	175.011 E	26.3	1.7	0.1	9
W1118	08 14 46 54.2	41.243 S	174.058 E	56.7	4.1	0.2	9
W1119	08 17 03 19.3	40.523 S	175.126 E	33.4	2.3	0.2	5
W1120	09 02 24 52.2	40.728 S	174.736 E	21.1	2.7	0.2	10
W1121	09 11 53 42.2	41.626 S	174.518 E	22.6	2.2	0.1	6
W1122	09 18 15 04.4	41.038 S	174.081 E	20.0 R	2.0	0.4	7
W1123	09 23 42 42.2	41.475 S	174.856 E	29.3	1.9	0.1	11
W1124	11 17 00 25.5	40.601 S	175.144 E	34.9	2.1	0.1	5
W1125	11 22 06 13.0	41.284 S	175.458 E	34.3	1.8	0.1	6
W1126	11 23 29 37.3	41.687 S	174.551 E	31.7	2.4	0.1	9
W1127	12 03 54 43.9	41.372 S	175.141 E	2.9	1.1	0.2	8
W1128	12 10 21 12.1	41.110 S	175.388 E	27.9	2.2	0.2	8
W1129	12 10 32 26.1	41.379 S	174.446 E	22.9	1.4	0.2	8
W1130	12 13 30 30.2	40.822 S	174.727 E	18.6	1.5	0.1	8
W1131	12 16 03 37.1	41.313 S	175.156 E	29.3	1.8	0.3	6
W1132	12 21 34 35.9	41.404 S	175.414 E	11.7	2.1	0.2	7
W1133	13 03 49 25.1	40.818 S	175.146 E	65.6	2.3	0.1	7
W1134	13 06 39 55.8	41.393 S	175.422 E	11.2	2.2	0.1	8
W1135	13 06 51 32.0	41.684 S	174.432 E	50.6	2.7	0.2	9
W1136	13 07 37 41.1	41.268 S	174.657 E	32.3	1.8	0.1	10
W1137	13 14 06 44.6	41.662 S	174.565 E	30.9	2.2	0.0	6
W1138	13 15 28 52.2	41.129 S	175.350 E	34.6	1.5	0.2	5
W1139	13 20 20 13.9	41.167 S	174.929 E	51.0	2.3	0.1	8
W1140	14 10 00 09.5	40.982 S	174.918 E	32.2	2.0	0.0	6
W1141	14 12 14 44.7	41.361 S	174.877 E	30.7	1.6	0.1	6
W1142	14 18 30 17.8	40.727 S	175.106 E	36.2	2.2	0.1	6
W1143	14 22 45 38.9	40.869 S	174.615 E	39.8	2.5	0.1	10
W1144	15 04 18 38.5	41.357 S	175.647 E	11.0	2.6	0.1	10
W1145	15 05 46 02.6	41.267 S	175.340 E	24.0	1.9	0.1	9
W1146	15 13 21 10.3	41.115 S	174.667 E	38.0	1.6	0.1	8
W1147	15 13 46 02.6	41.650 S	174.303 E	40.4	2.2	0.3	5
W1148	15 15 21 50.4	41.740 S	174.467 E	40.5	2.0	0.3	6
W1149	15 20 48 12.6	41.191 S	174.168 E	56.9	2.0	0.1	5
W1150	15 21 20 16.0	41.701 S	174.575 E	31.5	3.1	0.1	10

REF NUM	ORIGIN TIME				LATITUDE deg	LONGITUDE deg	DEPTH km	MAG	S.E.	NUM OBS
W1151	DEC 15	23	02	14.4	41.775 S	174.570 E	24.9	2.0	ND	4
W1152	15	23	49	12.3	41.366 S	175.095 E	36.8	2.0	0.1	10
W1153	16	09	20	38.1	41.709 S	174.567 E	30.4	2.2	0.1	11
W1154	17	01	08	57.7	41.048 S	174.897 E	13.0	1.5	0.1	8
W1155	17	02	37	26.6	40.962 S	175.331 E	31.0	2.5	0.2	7
W1156	17	09	11	14.3	40.937 S	174.981 E	34.4	1.7	0.2	5
W1157	17	13	29	47.5	41.418 S	174.285 E	20.8	1.8	0.1	8
W1158	17	14	49	39.8	41.025 S	175.662 E	34.0	3.0	0.3	10
W1159	17	17	53	10.2	41.721 S	174.495 E	33.5	2.9	0.1	11
W1160	18	04	48	54.6	41.422 S	174.233 E	33.8	2.2	0.1	7
W1161	18	06	52	14.6	40.719 S	174.847 E	15.6	1.7	0.0	5
W1162	18	10	40	47.8	41.016 S	174.496 E	62.2	2.3	0.1	9
W1163	18	16	40	18.3	41.379 S	175.130 E	26.8	1.9	0.1	11
W1164	19	08	25	38.0	41.607 S	174.493 E	20.5	2.1	0.2	7
W1165	20	00	32	15.6	41.063 S	173.921 E	62.4	3.1	0.2	7
W1166	20	02	39	34.1	41.243 S	175.205 E	24.7	1.8	0.1	6
W1167	20	03	03	14.5	40.896 S	174.530 E	71.2	2.8	0.2	8
W1168	21	10	31	55.5	41.585 S	174.502 E	26.6	2.1	0.1	7
W1169	22	01	36	31.1	41.276 S	175.363 E	28.6	2.5	0.2	8
W1170	22	08	21	32.4	41.010 S	174.347 E	59.1	2.6	0.2	8
W1171	22	19	36	47.4	41.377 S	175.126 E	27.8	2.2	0.1	10
W1172	22	23	08	35.4	40.835 S	175.322 E	31.9	2.5	0.1	7
W1173	23	02	23	31.5	40.927 S	175.243 E	33.6	2.7	0.1	8
W1174	23	11	50	20.4	41.137 S	174.678 E	34.1	1.6	0.0	7
W1175	23	12	55	07.2	41.312 S	175.028 E	3.0 R	0.6	0.2	6
W1176	23	18	14	14.0	40.753 S	174.769 E	20.7	2.0	0.1	6
W1177	23	19	57	43.9	41.098 S	175.250 E	21.9	1.9	0.2	6
W1178	23	22	58	57.6	41.192 S	174.641 E	34.9	1.5	0.1	7
W1179	24	02	37	00.2	41.409 S	175.102 E	25.0	2.1	0.1	12
W1180	24	04	28	17.7	41.154 S	174.809 E	32.4	1.2	0.1	7
W1181	24	05	22	26.5	40.571 S	174.672 E	30.3	2.0	0.2	6
W1182	24	08	42	09.5	40.912 S	174.788 E	65.8	2.3	0.0	8
W1183	24	20	43	14.3	41.085 S	175.414 E	30.3	2.1	0.1	6
W1184	24	23	05	46.8	41.002 S	174.888 E	34.8	1.6	0.0	5
W1185	25	04	10	50.6	41.470 S	175.095 E	20.7	1.2	0.1	6
W1186	25	07	02	19.3	40.405 S	175.044 E	28.9	2.8	0.3	9
W1187	25	08	14	39.6	40.812 S	174.763 E	19.3	1.7	0.1	6
W1188	25	17	26	25.7	41.083 S	174.611 E	58.4	2.7	0.1	10
W1189	25	18	23	02.4	41.826 S	175.056 E	14.1	2.5	0.2	8
W1190	25	19	12	21.3	41.569 S	174.231 E	12.9	2.0	0.1	6
W1191	25	21	35	20.7	40.859 S	174.440 E	24.3	1.8	0.1	7
W1192	25	22	58	04.8	41.436 S	175.105 E	21.8	1.6	0.2	9
W1193	26	01	52	06.5	41.303 S	175.189 E	23.7	2.0	0.1	9
W1194	26	13	53	48.6	40.559 S	174.706 E	42.4	2.2	0.2	7
W1195	26	14	47	12.6	41.358 S	175.152 E	29.6	2.1	0.1	10
W1196	26	17	40	12.9	41.083 S	174.892 E	31.7	1.7	0.1	5
W1197	27	00	39	45.1	41.127 S	174.932 E	33.4	2.3	0.1	10
W1198	27	03	14	28.7	41.635 S	174.639 E	31.5	2.2	0.1	8
W1199	27	14	57	49.9	41.659 S	174.787 E	26.4	2.2	0.0	9
W1200	27	16	47	58.7	41.080 S	174.613 E	58.3	2.5	0.1	11

REF NUM	ORIGIN TIME				LATITUDE	LONGITUDE	DEPTH	MAG	S.E.	NUM
		h	m	s	deg	deg	km			OBS
W1201 DEC	27	17	33	50.4	41.011 S	175.669 E	30.4	2.7	0.1	8
W1202	27	17	50	30.7	41.411 S	173.844 E	49.5	2.9	0.3	7
W1203	27	18	45	29.3	41.439 S	174.375 E	32.6	3.0	0.1	9
W1204	27	19	23	30.1	40.969 S	175.150 E	25.9	2.1	0.1	7
W1205	27	23	44	57.0	41.002 S	175.634 E	30.4	2.9	0.2	11
W1206	28	01	54	13.7	41.210 S	175.270 E	23.7	1.5	0.2	5
W1207	28	08	19	49.9	41.457 S	174.213 E	19.9	2.2	0.1	6
W1208	28	08	49	06.2	41.113 S	175.511 E	31.9	2.5	0.1	6
W1209	28	17	41	34.1	40.959 S	174.485 E	6.3	1.6	0.2	8
W1210	28	17	43	35.8	41.137 S	175.141 E	30.2	1.7	0.2	7
W1211	28	19	45	07.6	41.204 S	174.037 E	48.9	2.5	0.2	9
W1212	29	08	28	39.0	41.012 S	174.940 E	43.7	1.9	0.1	6
W1213	29	23	40	33.0	41.434 S	174.626 E	21.9	2.1	0.1	11
W1214	30	07	45	59.0	41.848 S	174.541 E	27.5	3.0	0.1	10
W1215	30	10	08	00.6	41.111 S	174.968 E	59.2	2.7	0.1	9
W1216	30	15	01	42.2	41.137 S	174.441 E	40.8	2.1	0.2	7
W1217	30	20	42	08.1	41.264 S	174.351 E	57.7	2.5	0.2	6
W1218	31	03	21	43.2	40.781 S	174.572 E	43.6	2.7	0.1	7
W1219	31	11	01	34.5	41.034 S	174.768 E	26.8	2.0	0.1	5
W1220	31	11	52	11.5	41.037 S	174.773 E	27.7	1.6	0.0	5

NON-INSTRUMENTAL DATA

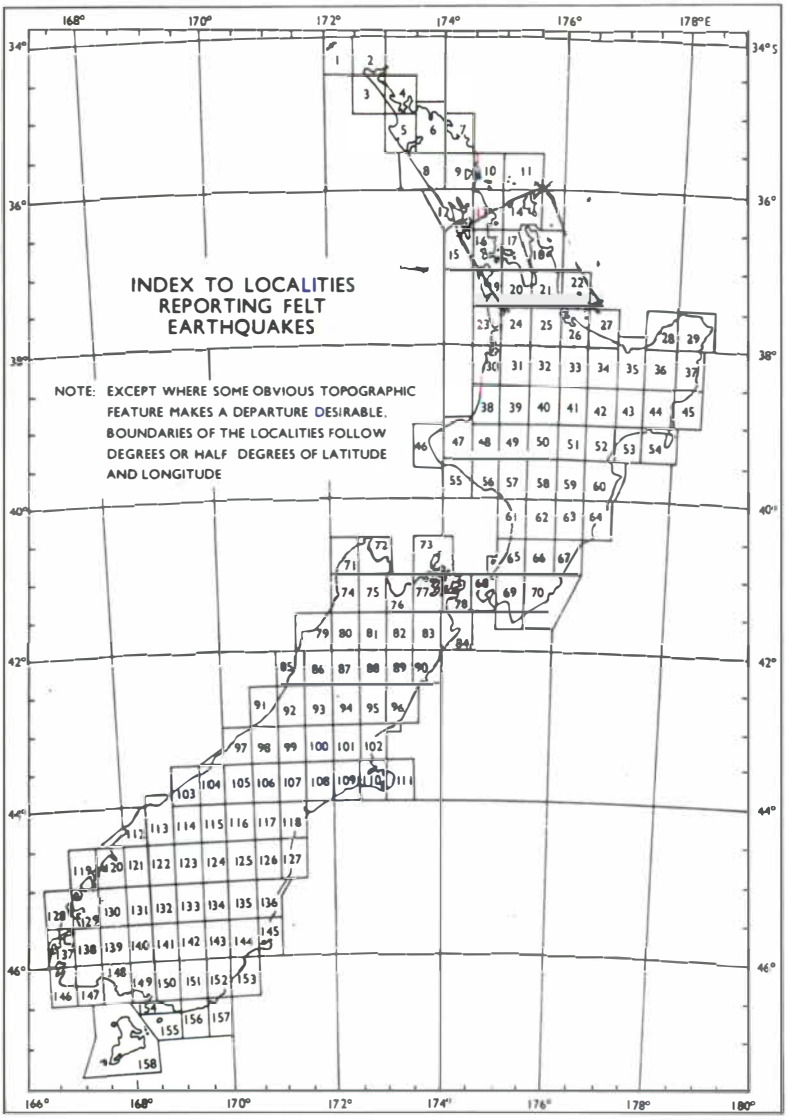
THE FELT REPORTING SYSTEM

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 numbered rectangles, with sides measuring half a degree of latitude or longitude, as shown on the map overleaf. Each rectangle is given a number and a name, usually that of the principal centre of population within it. These areas are termed 'localities' and the names are listed on the following page. In most areas 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.



Map of Standard Reporting Localities.

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
2 Te Reinga
3 Ninety Mile Beach
4 Doubtless Bay
5 Kaitaia
6 Kaikohe
7 Bay of Islands
8 Dargaville
9 Whangarei
10 Bream Head
11 Moko Hinau
12 Kaipara
13 Warkworth
14 Barrier Islands
15 Helensville
16 Auckland
17 Waiheke
18 Coromandel
19 Pukekohe
20 Mercer
21 Thames
22 Mayor Is.
23 Raglan
24 Hamilton
25 Matamata
26 Tauranga
27 Whakatane
28 Te Kaha
29 East Cape
30 Kawhia
31 Te Kuiti
32 Tokoroa
33 Rotorua
34 Murupara
35 Opotiki
36 Motu
37 Tolaga Bay
38 Mokau
39 Taumarunui
40 Tokaanu
41 Taupo
42 Te Whaiti
43 Tuai
44 Whakapunaki
45 Gisborne
46 Cape Egmont
47 New Plymouth
48 Whangamomona
49 Ohakune
50 Chateau
51 Kaweka
52 Napier
53 Wairoa
54 Mahia
55 Hawera
56 Waverley
57 Wanganui
58 Taihape
59 Ruahine
60 Hastings
61 Bulls
62 Palmerston North
63 Dannevirke
64 Porangahau
65 Otaki
66 Masterton
67 Castlepoint
68 Wellington
69 Featherston
70 Martinborough
71 Mount Stevens
72 Takaka
73 D'Urville Is.
74 Karamea
75 Motueka
76 Nelson
77 Blenheim
78 Picton
79 Westport
80 Murchison
81 Glenhope
82 Wairau
83 Awatere
84 Cape Campbell
85 Greymouth
86 Reefton
87 Maruia
88 Hanmer
89 Clarence
90 Kaikoura
91 Hokitika
92 Kumara
93 Arthur's Pass
94 Lake Sumner
95 Culverden
96 Cheviot
97 Franz Josef
98 Hari Hari
99 Whitcombe Pass
100 Lake Coleridge
101 Oxford
102 Rangiora
103 Haast
104 Bruce Bay
105 Mount Cook
106 Tekapo
107 Mount Somers
108 Ashburton
109 Rakaia
110 Christchurch
111 Akaroa
112 Big Bay
113 Jackson's Bay
114 Makarora
115 Lake Ohau
116 Pukaki
117 Fairlie
118 Timaru
119 George Sound
120 Milford
121 Glenorchy
122 Arrowtown
123 Wanaka
124 St Bathans
125 Kurow
126 Duntroon
127 Waimate
128 Secretary Is.
129 Doubtful Sound
130 Te Anau
131 Livingstone Mts
132 Kingston
133 Alexandra
134 Poolburn
135 Ranfurly
136 Oamaru
137 Resolution Is.
138 Pillans Pass
139 Monowai
140 Mossburn
141 Waikaia
142 Roxburgh
143 Lawrence
144 Outram
145 Dunedin
146 Puysegur Point
147 Poteretere
148 Tuatapere
149 Invercargill
150 Gore
151 Clinton
152 Balclutha
153 Waihola
154 Bluff
155 Ruapuke
156 Tahakopa
157 Owaka
158 Stewart Is.
159 Chatham Islands

PLACES REPORTING FELT EARTHQUAKES

78/2 *Jan 1 02h 23m*
MM 4 Eastbourne (68); Waiorongomai (69);
MM 3 York Bay (68);
'force 2' Kelburn (68);
? Lower Hutt, Wellington (68).

78/3 *Jan 1 11h 25m*
MM 4 Inchbonnie (92).

78/5 *Jan 1 16h 30m*
MM 4 Eastbourne, York Bay (68);
'force 4' Karori (68).

78/7 *Jan 2 17h 13m*
MM 3 Palmerston North (62).

78/24 *Jan 9 23h 30m*
MM 4 Porangahau (64).

78/25 *Jan 9 23h 52m*
'light' Porangahau (64).

78/26 *Jan 10 00h 11m*
MM 4 Porangahau (64);
MM 3 Kairakau Beach (60);
? Napier (52).

78/27 *Jan 10 01h 17m*
MM 4 Porangahau (64).

78/28 *Jan 10 05h 19m*
MM 4 Porangahau (64).

78/35 *Jan 16 20h 23m*
MM 4 Murchison (80).

78/36 *Jan 16 20h 50m*
MM 4 Murchison (80).

78/37 *Jan 18 09h 54m*
MM 4 Murchison (80); Greymouth (85); Reefton (86); Lewis Pass, Maruia (87); Culverden (95); Waiau (96); Motunau (98); Christchurch (110); Akaroa (111);
'force 3-4' Hokitika (91);
'force 2' Mount Pleasant (110);
? Blenheim (77); Westport (78); Reefton (86).

78/45 *Jan 22 18h 46m*
MM 4 Rotorua (33).

78/49 *Jan 30 19h 35m*
MM 5 Mahitahi (104);
MM 4 Mt Aspiring Station (113); Wanaka (123);
'medium' 'The Branches' (122);
'force 3' Wanaka (123).

78/57 *Feb 5 07h 41m*
MM 5 Porangahau (64).

78/61 *Feb 6 22h 28m*
'slight' Palmerston North (62).

78/80 *Feb 16 08h 27m*
MM 4 Wellington (68);
MM 3 Waikawa Beach (65);
? Karori, Paremata (68).

78/81 *Feb 16 09h 35m*
'force 2' Te Puke (26).

78/83 *Feb 16 21h 48m*
MM 4 Moawhango (58); Ongaonga (59);
MM 3 Palmerston North (62).

78/84 *Feb 17 10h 24m*
'force 4-5' Rotorua (33).

78/97 *Feb 22 02h 03m*
MM 4 Evans Creek (98).

78/101 *Feb 28 00h 34m*
MM 4 Granity (79).

78/107 *Mar 2 21h 55m*
MM 4 Wanganui (57).

78/109 *Mar 5 08h 27m*
MM 4 Eastbourne, Stokes Valley, Tawa, Wadestown (68);
? Lower Hutt (68); Upper Hutt (69).

78/119 *Mar 9 17h 47m*
MM 4 Wairoa (53).

78/120 *Mar 9 19h 05m*
MM 4 Wairoa (53).

78/125 *Mar 14 22h 34m*
? Waiotapu Forest (33).

78/126 *Mar 14 22h 36m*
? Waiotapu Forest (33).

78/135 *Mar 21 18h 55m*
MM 4 Mt Aspiring (113);
? 'The Branches' (122).

78/150 *Mar 27 16h 05m*
MM 4 'The Dasher' (136).

78/153 *Mar 29 08h 06m*
MM 4 Eastbourne (68).

78/154 *Mar 29 08h 55m*
MM 4 Waikawa Beach (65);
MM 3 Wellington (68).

78/159 *Apr 1 17h 19m*
MM 4 Evans Creek (98).

78/168 *Apr 5 05h 34m*
MM 4 Palmerston North (62).

78/189 *Apr 21 08h 02m*
MM 4 Karamea (74); Cobb River (75).

78/206 *May 1 17h 35m*
MM 4 Ongaonga (59); Mount Vernon, Waipawa (60); Aramoana (64);
'sharp jolt' Waipukurau (60).

78/213 *May 3 03h 17m*
MM 4 Te Teko (34).

78/214 *May 3 03h 53m*
MM 4 Te Teko (34).

78/215 *May 3 12h 25m*
MM 4 Matahina (34);
'tremors' Te Teko (34).

78/216 *May 3 14h 54m*
MM 4 Whakatane (27); Matahina (34);
'tremors' Te Teko (34);
? Pikowai (27).

78/218 *May 3 16h 39m*
MM 4 Cobb River (75).

78/219 *May 4 01h 44m*
MM 5 Napier (52);
MM 4 Napier (52).

78/220 *May 4 02h 41m*
MM 4 Te Teko (34).

78/221 *May 4 08h 26m*
MM 5 Patoka (52);
MM 4 Ohakune (49); Napier (52); Glenfarg, Wairoa (53); Waipawa (60);
MM 3 Maraetotara (60);
? Hastings (60).

78/223 *May 4 11h 39m*
MM 4 Napier, Patoka (52); Glenfarg (53);
? Hastings (60).

78/224 *May 5 17h 15m*
? Ohope (25); Pikowai (27); Te Teko (34).

78/226 *May 5 23h 22m*
? Pikowai (27).

78/227 *May 6 01h 39m*
'force 3' Mount Pleasant (110).

78/231 *May 7 06h 10m*
? Te Teko (34).

78/233 *May 7 10h 01m*
MM 4 Warea (46); New Plymouth (47).

78/236 *May 8 22h 39m*
? Napier (52).

78/241 *May 13 21h 05m*
MM 4 Matahina (34).

78/246 *May 15 01h 27m*
? Pikowai (27); Te Teko (34).

78/248 *May 15 11h 15m*
MM 4 'The Poplars' (94).

78/251 *May 15 15h 52m*
? Te Teko (34).

78/252 *May 15 20h 33m*
MM 7 Paparoa (12);
MM 6 Matakohe, Maungatauroto, Pahi (12);
MM 5 Maungatauroto (12);
MM 4 Ararua, Maungatauroto (12); Waipu (13);
MM 3 Ruawai (12);
? Ararua, Matakohe, Maungatauroto, Pahi (12).

78/253 *May 15 22h 23m*
MM 5 Maungatauroto (12);
? Bickerstaffe, Maungatauroto, Paparoa (12).

78/255 *May 16 00h 22m*
MM 5 Maungatauroto (12);
'very mild' Maungatauroto (12);
'slight' Waipu Cove (13);
? Bickerstaffe, Paparoa (12).

78/256 *May 16 00h 30m*
MM 4 Paparoa (12);
'very mild' Maungatauroto (12).

78/259 *May 17 20h 24m*
? Maungatauroto (12).

78/261 *May 18 12h 59m*
? Te Teko (34).

78/263 *May 18 23h 21m*
? Pikowai (27).

78/271 *May 20 11h 49m*
MM 5 Maungatauroto (12);
MM 4 Maungatauroto (12);
? Maungatauroto (12).

78/276 *May 22 20h 46m*
? Pikowai (27).

78/278 *May 22 22h 47m*
? Te Teko (34).

78/281 *May 23 05h 24m*
? Pikowai (27); Kawerau (34).

78/284 *May 24 14h 19m*
MM 4 Karori, Mount Victoria (68);
MM 3 Miramar (68);
? Wellington (68).

78/285 *May 24 19h 31m*
MM 4 Koiro Station, Ohakune (39);
MM 3 Omori (40).

78/321 *Jun 12 11h 35m*
MM 4 Maruia (87),
? Middlehurst (82).

78/331 *Jun 21 15h 22m*
? Middlehurst (82).

78/341 *Jun 29 01h 52m*
MM 5 Ashburton (108);
MM 4 Christchurch (110);
MM 3 Rangiora (102);
'force 4' Rangiora (102);
'force 3-4' Christchurch (110);
'force 3' Mt Pleasant (110);
Press reports that goods were thrown from shelves in Ashburton suggest that the intensity may have reached MM 6 on areas of poor ground.

78/342 *Jun 29 13h 24m*
MM 4 Wanganui (57).

78/344 *Jun 29 17h 24m*
MM 4 Eastbourne, Wainuiomata (68);
'force 3' Karori (68).

78/346 *Jun 29 22h 27m*
MM 3 Wellington (68).

78/355 *Jul 4 01h 44m*
? Taupo (41).

78/359 *Jul 7 01h 22m*
MM 3 Wellington (68).

78/360 *Jul 7 12h 00m*
MM 4 Ohakune (49).

78/362 *Jul 7 23h 59m*
MM 4 'The Dasher', Oamaru (136);
? Hampden, Herbert (136).

78/364 *Jul 8 17h 53m*
MM 4 Napier (52).

78/365 *Jul 9 11h 28m*
MM 4 Matukituki Valley (113).

78/373 *Jul 13 17h 09m*
MM 4 Murchison (80).

78/374 *Jul 13 22h 52m*
MM 3 Omori (40).

78/376 *Jul 15 18h 41m*
? Kawerau (34).

78/79 *Jul 15 19h 35m*
? Kawerau (34).

78/380 *Jul 15 20h 57m*
? Waingarara (36).

78/382 *Jul 16 12h 30m*
MM 4 Taupo (41).

78/383 *Jul 16 12h 37m*
MM 4 Taupo (41).

78/384 *Jul 16 12h 39m*
MM 4 Taupo (41).

78/387 *Jul 18 00h 33m*
MM 3 Lower Hutt, Wellington (68).

78/388 *Jul 18 07h 44m*
MM 4 Ohakune (49).

78/391 *Jul 20 17h 25m*
MM 4 Te Anau Downs (130);
MM 3 Mahitahi (104).

78/395 *Jul 22 04h 18m*
MM 4 Wanganui (57).

78/399 *Jul 23 06h 03m*
MM 4 Matukituki Valley (113).

78/400 *Jul 23 18h 05m*
MM 3 Palmerston North (62).

78/417 *Aug 4 01h 41m*
? Pahiatua (62);
'not felt' Woodville (62); Eketahuna, Masterton (66).

78/421 *Aug 4 15h 33m*
MM 4 Granity (79); Murchison (80).

78/436 *Aug 14 16h 19m*
MM 4 Eastbourne (68).

78/443 *Aug 17 08h 37m*
'slight' Wairakei (41).

78/452 *Aug 23 00h 43m*
MM 4 Karamea (74).

78/458 *Aug 26 23h 46m*
? Rotorua (33).

78/459 *Aug 27 00h 23m*
? Rotorua (33).

78/460 *Aug 27 00h 37m*
? Rotorua (33).

78/461 *Aug 27 01h 23m*
? Rotorua (33).

78/464 *Aug 27 18h 44m*
MM 4 Awakino (38).

78/479 *Sep 3 12h 31m*
MM 3 Matahina (34).

78/487 *Sep 9 20h 16m*
? Port Ohope (35).

78/515 *Sep 22 10h 42m*
MM 4 Tolaga Bay (37); Patoka (52); Eastbourne (68);
MM 3 Ormond (44); Table Flat (58); Waipawa (60); Waikawa Beach (65); Miramar, Tawa (68);
? Eastbourne, Karori (68); Port Hardy (73); Blenheim (77);
'force 4' Karori (68).

78/519 *Sep 24 12h 33m*
MM 4 Ngaio, Pauatahanui, Tawa (68);
'force 4' Karori (68).

78/527 *Oct 2 08h 03m*
? Arapito (74).

78/530 *Oct 6 09h 54m*
MM 4 Patoka (52).

78/534 *Oct 9 00h 16m*
? Wanganui (57);
'force 2' Wanganui (57).

78/535 *Oct 9 15h 8m*
MM 4 Lake Coleridge (100).

78/536 *Oct 10 10h 47m*
MM 4 Paengaroa, Te Puke (26);
? Maketu, Otumoetai, Tauranga (26).

78/537 *Oct 10 10h 56m*
MM 4 Maketu (26).

78/538 *Oct 10 10h 59m*
MM 4 Maketu (26);
? Te Puke (26).

78/543 *Oct 12 03h 50m*
MM 4 Tawa, Wellington (68).

78/551 *Oct 17 16h 36m*
MM 4 Wairoa (53).

78/552 *Oct 18 15h 47m*
MM 4 Ormond (44); Gisborne (45).

78/553 *Oct 18 15h 50m*
MM 4 Gisborne (45).

78/558 *Oct 20 23h 05m*
MM 4 'The Dasher' (136).

78/560 *Oct 21 09h 06m*
MM 4 Peak Hill (99); Lake Coleridge (100).

78/562 *Oct 21 13h 28m*
MM 4 Eastbourne, Hataitai, Karori, Wainuiomata (68);
MM 3 Karori (68);
? Island Bay, Karori, Lower Hutt, Mount Victoria, Strathmore (68).

78/567 *Oct 27 11h 15m*
MM 4 Ormond (44); Gisborne (45); Wairoa (53).

78/570 *Oct 27 20h 32m*
MM 4 Opotiki (35);
? Whakatane (27).

78/583 *Nov 5 10h 11m*
MM 4 Earnslaw (121);
? 'The Branches' (122).

78/593 *Nov 10 18h 04m*
MM 4 Ohakune (49).

78/596 *Nov 15 03h 00m*
MM 4 Te Teko (34).

78/597 *Nov 15 03h 04m*
MM 4 Te Teko (34).

78/599 *Nov 15 18h 05m*
? Whakatane (27).

78/602 *Nov 16 04h 16m*
MM 4 Waipawa (60).

78/619 *Nov 26 16h 51m*
'moderate' Wairakei (41).

78/622 *Nov 28 17h 21m*
MM 4 Parapara Okeore (57).

78/626 *Nov 30 21h 46m*
MM 4 Wellington (68);
MM 3 Wellington (68).

78/630 *Dec 6 07h 38m*
MM 4 Collingwood (72); Cobb River (75);
? Bainham (72).

78/632 *Dec 8 14h 46m*
? Wellington (68).

78/633 *Dec 9 00h 08m*
? Bainham (72).

78/636 *Dec 10 09h 58m*
MM 5 Palmerston North (62).

78/647 *Dec 17 15h 37m*
MM 4 Mahitahi (104); Twizel (116); Albury (117).

78/666 *Dec 30 12h 36m*
MM 4 Gisborne (45); Wairoa (53);
'force 2' Gisborne (45);
? Gisborne (45).

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'.

111	Akaroa	37 (4).			
122	Arrowtown	49(4*),	135 (?),	583 (?).	
108	Ashburton	341 (5).			
77	Blenheim	37 (?),	515 (?).		
104	Bruce Bay	49 (5),	391 (3),	647 (4).	
46	Cape Egmont	233 (4).			
96	Cheviot	37 (4).			
110	Christchurch	37 (4),	227(3*),	341 (4).	
95	Culverden	37 (4).			
73	D'Urville Island	515 (?).			
117	Fairlie	647 (4).			
69	Featherston	2 (4),	109 (?).		
45	Gisborne	552 (4),	553 (4),	567 (4),	666 (4).
121	Glenorchy	583 (4).			

85 Greymouth	37 (4).				
98 Hari Hari	37 (4),	97 (4),	159 (4).		
60 Hastings	26 (3),	206 (4),	221 (4),	223 (?),	515 (3),
	602 (4).				
91 Hokitika	37(3*).				
113 Jackson's Bay	49 (4),	135 (4),	365 (4),	399 (4).	
12 Kaipara	252 (7),	253 (5),	255 (5),	256 (4),	259 (?),
	271 (5).				
74 Karamea	189 (4),	452 (4),	527 (?).		
92 Kumara	3 (4).				
100 Lake Coleridge	535 (4),	560 (4).			
94 Lake Sumner	248 (4).				
87 Maruia	37 (4),	321 (4).			
66 Masterton	417 (?).				
25 Matamata	224 (?).				
38 Mokau	464 (4).				
36 Motu	380 (?).				
75 Motueka	189 (4),	218 (4),	630 (4).		
80 Murchison	35 (4),	36 (4),	37 (4),	373 (4),	421 (4).
34 Murupara	213 (4),	214 (4),	215 (4),	216 (4),	220 (4),
	224 (?),	231 (?),	241 (4),	246 (?),	251 (?),
	261 (?),	278 (?),	281 (?),	376 (?),	79 (?),
	479 (3),	596 (4),	597 (4).		
52 Napier	26 (?),	219 (5),	221 (5),	223 (4),	236 (?),
	364 (4),	515 (4),	530 (4).		
47 New Plymouth	233 (4).				
136 Oamaru	150 (4),	362 (4),	558 (4).		
49 Ohakune	221 (4),	360 (4),	388 (4),	593 (4).	
35 Opotiki	487 (?),	570 (4).			
65 Otaki	80 (3),	154 (4),	515 (3).		
62 Palmerston North	7 (3),	61(3*),	83 (3),	168 (4),	400 (3),
	417 (?),	636 (5).			
78 Picton	37 (?).				
64 Porangahau	24 (4),	25(3*),	26 (4),	27 (4),	28 (4),
	57 (5),	206 (4).			
116 Pukaki	647 (4).				
102 Rangiora	341 (3).				
86 Reefton	37 (4).				
33 Rotorua	45 (4),	84(4*),	125 (?),	126 (?),	458 (?),
	459 (?),	460 (?),	461 (?).		
59 Ruahine	83 (4),	206 (4).			
58 Taihape	83 (4),	515 (3).			
72 Takaka	630 (4),	633 (?).			
39 Taumarunui	285 (4).				
41 Taupo	355 (?),	382 (4),	383 (4),	384 (4),	443(3*),
	619(4*).				
26 Tauranga	81(2*),	536 (4),	537 (4),	538 (4).	
130 Te Anau	391 (4).				

40	Tokaanu	285 (3),	374 (3).			
37	Tolaga Bay	515 (4).				
82	Wairau	321 (?),	331 (?).			
53	Wairoa	119 (4),	120 (4),	221 (4),	223 (4),	551 (4),
		567 (4),	666 (4).			
123	Wanaka	49 (4).				
57	Wanganui	107 (4),	342 (4),	395 (4),	534 (?),	622 (4).
13	Warkworth	252 (4),	255(3*).			
68	Wellington	2 (4),	5 (4),	80 (4),	109 (4),	153 (4),
		154 (3),	284 (4),	344 (4),	346 (3),	359 (3),
		387 (3),	436 (4),	515 (4),	519 (4),	543 (4),
		562 (4),	626 (4),	632 (?).		
79	Westport	101 (4),	421 (4).			
44	Whakapunaki	515 (3),	552 (4),	567 (4).		
27	Whakatane	216 (4),	224 (?),	226 (?),	246 (?),	263 (?),
		276 (?),	281 (?),	570 (?),	599 (?).	
99	Whitcombe Pass	560 (4).				

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	*12*	*09h 37m*	Patoka (52)	MM 3
	12	*15h 45m*	Patoka (52)	MM 3
	15	*07h 53m*	Whitby (68)	MM 4
	15	*15h 10m*	Granity (79)	MM 4
Feb	*17*	*11h 31m*	Blenheim (77)	MM 4
	17	*13h 05m*	Rotorua (33)	'force 4-5'
	19	*21h 59m*	Table Flat (58)	MM 4
	20	*12h 55m*	Maruia (87)	MM 3
Mar	*18*	*22h 55m*	Hawkswood (96)	?
May	*2*	*14h 45m*	Ohope (35)	?
	5	*'during day'*	Te Teko (34)	'tremors'
	6	*'afternoon and night'*	Te Teko (34)	'tremors'
	7	*18h 45m*	Wairakei (41)	?
	16	*19h 50m*	Maungatauroto (12)	'light shock'
	19	*'evening'*	Te Teko (34)	?
	20	*19h 00m*	Maungatauroto (12)	?
	22	*'during day'*	Te Teko (34)	?
	22	*'during night'*	Te Teko (34)	'5 small'
	23	-	Kawerau (34)	'14 quakes'
	24	*14h 20m*	Ohakune (49)	MM 4

	25	*07h 42m*	Taumarunui (39)	'force 3'
	30	*22h 55m*	Milford Sound (120)	?
Jul	*12*	*19h 02m*	Te Kuiti (31)	MM 4
Aug	*12*			
or	*13*	*17h 18m*	Oratia (16)	MM 1
	19	*13h 30m*	Rotorua (33)	MM 4
Oct	*20*	*12h 27m*	Rotomanu (93)	'strong'
Nov	*15*	*01h 01m*	Whakatane (27)	MM 4
	17	*10h 33m*	Ohakune (49)	MM 4
Dec	*12*	*00h 35m*	Eastbourne (68)	MM 4
	12	*00h 38m*	Eastbourne (68)	MM 4
	31	*07h 38m*	Mahia Beach (54)	?
	31	*12h 30m*	Mahia Beach (54)	?

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:

Jan	*12*	*16h 58m*	Raoul Island	'force 4'
	14	*15h 20m*	Raoul Island	'force 4'
	14	*19h 47m*	Raoul Island	'force 2'
			(series continuing until 20h 10m)	
	15	*07h 05m*	Raoul Island	'force 4'
	29	*05h 01m*	Raoul Island	MM 4
	30	*06h 55m*	Raoul Island	MM 3
Mar	*12*	*16h 13m*	Raoul Island	'felt'
Apr	*6*	*18h 40m*	Raoul Island	MM 3
Aug	*7*	*09h 21m*	Raoul Island	MM 3
	7	*12h 00m*	Raoul Island	MM 3
	7	*21h 20m*	Raoul Island	MM 3
	15	*12h 37m*	Raoul Island	MM 4
	15	*12h 43m*	Raoul Island	MM 1
Sep	*1*	*07h 15m*	Raoul Island	MM 4
	6	*08h 22m*	Raoul Island	MM 3–4
	8	*22h 57m*	Raoul Island	MM 4
Nov	*8*	*21h 58m*	Raoul Island	'force 4'
	13	*07h 08m*	Raoul Island	MM 3
	19	*00h 01m*	Raoul Island	MM 4
	22	*11h 00m*	Raoul Island	MM 4
	23	*04h 53m*	Raoul Island	MM 3
	23	*16h 55m*	Raoul Island	MM 3
Dec	*1*	*11h*	Raoul Island	MM 3
	2	*07h 04m*	Raoul Island	MM 5

PUBLICATIONS BY STAFF MEMBERS

During 1978 the following papers by members of the Seismological Observatory staff were published:

S – 244 SMITH, E.G.C.: Comments on 'A Fast Epicenter Location Program'. (letter).

Bull. Seism. Soc. Am. 68 : 845 – 6.

Questions the claims of Lomnitz (*Bull. Seism. Soc. Am. 67*: 425 – 31.) that a new method of epicentre determination offers advantages of superior speed and accuracy.

S – 245 SMITH, W.D.: Spatial Distribution of Felt Intensities for New Zealand Earthquakes.

N.Z. J. Geol. Geophys. 21 : 293 – 311.

The isoseismals of shallow earthquakes in New Zealand exhibit three classes of intensity decay with distance, each characteristic of a particular geographical region. The calculation of the likely intensity at any place due to an earthquake whose location and magnitude are specified uses an empirical formula appropriate to the region in which the shock is located, and also the ellipticity of the isoseismals, a parameter which varies throughout the country. The formula for deep earthquakes incorporates the offset of the isoseismals from the epicentre and their ellipticity, both modelled as functions of focal depth. The calculation of intensity has a standard error of about one unit and is a useful tool for the estimation of earthquake risk.

S – 246 SMITH, W.D.: Earthquake Risk in New Zealand : Statistical Estimates.

N.Z. J. Geol. Geophys. 21 : 313 – 27.

From the historical record of New Zealand earthquakes, the mean return periods for Modified Mercalli intensities VI, VII, VIII and IX throughout the country are calculated. Results are presented in the form of contour maps and also a tabulated list for 19 cities and towns. The work attempts to document what has happened since 1840 but the results may be used for future planning, on the assumption that the historical record represents an average level of activity.

S – 247 EIBY, G.A.: The Milford Sound Earthquake of 1976, May 4.

Bull. N.Z. Natl. Soc. Earthq. Eng. 11 : 191 – 2

Epicentre, outline of felt effects and isoseismal map for Milford Sound earthquake of 1976, May 4.

S–248 ADAMS, R.D.: The New Zealand Seismograph Network.
Phys. Earth. Planet. Inter. 18 : 114–20.
The New Zealand Seismograph network is one of the oldest established in the world. From the installation of a Milne seismograph in 1900, it has now grown to consist of 36 permanent stations and two telemetered arrays. The network's stations provide for the recording of world earthquakes over an area that extends from the Pacific Islands to Antarctica, but its main emphasis is given to the study of local seismicity in New Zealand. Instrumentation varies from very low magnification instruments capable of recording the strongest earthquakes, to modern high-magnification networks, and a digitally recording Seismic Research Observatory. A set of portable recorders is also available for field studies. Present analysis procedures are being revised to take account of lateral variations in seismic velocity and attenuation.

——— ADAMS, R.D.: Earthquake Source and Propagation Parameters in New Zealand.
Tectonophysics 49 : 145–8.
Discussion of Gibowicz and Hatherton (1975) and Smith (1976).

——— EIBY, G.A.: History, Astronomy and New Zealand.
Southern Stars 27 : 118–24.
The value of historical studies to science, with special reference to the history of Astronomy in New Zealand.

——— EIBY, G.A.: The Wellington Time Ball.
Onslow Historian 8 : 8–11.

——— ROBINSON, R.: Seismicity Within a Zone of Plate Convergency - the Wellington Region, New Zealand.
Geophys. J. Royal Astr. Soc. 55 : 693–702.
A telemetered network of sensitive seismographs is being used to study the seismicity of the Wellington region, within the broad shear belt through New Zealand that marks the convergence of the Pacific and Indian plates. On average about 4 events/day are detected within 75 km of the network centre. Of the events located during the first two years of operation, the majority define a band of relatively intense activity, at depths from 20 to 40 km, dipping gently to the north-west and marking some surface near the top of the underthrust Pacific lithosphere. There is less intense and more diffuse activity both above and below this zone. The shallower activity does not correlate with major surface faults and reflects the widespread nature of shallow deformation throughout the shear belt. The mechanism of shallow events well above the band of high activity appears to be a mixture of strike-slip and thrust faulting, while that of at least part of the activity in the band is normal faulting. The rate of activity and *b*-value, as functions of time, show significant variations, some of which may be related to the occurrence of the largest shock of the period, M_L 6.1.

E–156 New Zealand Seismological Report, 1975.

E–157 New Zealand Seismological Report, 1970.

E–158 New Zealand Seismological Report, 1976.

E–159 New Zealand Seismological Report, 1977.

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 over 17,000 earthquake origins and associated information stored on magnetic tape. From this, lists of earthquakes within particular geographical areas of New Zealand or restricted 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. Its principal time-standards are three Hewlett-Packard double-oven quartz-crystal oscillators, having 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.

The Observatory does not make regular astronomical observations, though it is equipped with a Danjon impersonal prismatic astrolabe, and has participated in three International Longitude Campaigns and in the revision of the places of some southern stars. At present, the source of time is the caesium beam primary frequency standard at the Department's 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 elsewhere. At the Observatory clock errors are also determined by daily comparison with long- and short-wave signals transmitted by observatories co-operating with the Bureau International de l'Heure, appropriate allowances being made for propagation times.

The error of signals leaving the Observatory seldom exceeds 100 microseconds, 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.

The most widely used signals are the six-pip signals 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 marks 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.

Similar signals are also transmitted on 891 kHz by Radio Windy (Wellington), but those from other private stations are not under Observatory control. They are sometimes subject to large errors and should on no account be used 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 $22^h\ 54^m\ 55^s$	Call Sign, ZMO (- - - - -- - - -)
$22^h\ 55^m\ 00^s$ 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.

It should also be noted that the frame and line synchronisation pulses of the two national television networks are also linked with the Time Service and the caesium beam oscillators of the Department's Physics and Engineering Laboratory.

For most purposes the signals transmitted from the Observatory may be considered to define a close approximation to Universal Time (U.T.), which is itself an approximation to the mean solar time obtained by observing the transits of stars, and called UT0. Derived time scales known as UT1 and UT2 are corrected for motion of the Earth's rotational pole and for seasonal variations in the Earth's rotational speed respectively. These astronomical time-scales are compared with atomic time-scales based upon an energy-level transition of the caesium atom to derive the Coordinated Universal

Time (UTC) of the U.S. Naval Observatory and other Observatories cooperating with the Bureau International de l'Heure, and to which the New Zealand signals are most directly related. A more formal discussion of the various time-scales is to be found in the Time Service Reports, Series 11 of the U.S. Naval Observatory. To the accuracies required for seismology and for the great majority of civil purposes the above distinctions are of no consequence.

The Time Service is the oldest section of the Observatory, having been founded as the Colonial Observatory in 1869. The transit instrument and clocks were obtained from a still earlier observatory operated by the Wellington Provincial Government. The Colonial Observatory stood on the site now occupied by the Richard Seddon monument in the Bolton Street cemetery. Operations were transferred to the present building at Kelburn in 1907, where it was known for a time first as the Hector and then as the Dominion Observatory. Before the establishment of the Carter Observatory in 1942, the Observatory also undertook visual sunspot and auroral observations, double-star measurements, the timing of occultations, some planetary and cometary work, and positional measurements of Eros.

OBITUARY

Reginald Herbert Orr (1926 - 78)

During the year, the Observatory lost a most valued member of the staff with the death of the Senior Technical Officer, Mr. R. H. Orr, from cancer. Herb, as he was usually known, joined the Observatory in April 1960, having previously been engaged in field geophysics. With the exception of a three-year tour abroad, when he was engaged in seismic prospecting for oil in the U.S.A., Nigeria and the Middle East, he had worked with the Department of Scientific and Industrial Research for 35 years. His association with observatory work began in 1957 – 58, when he became a member of the first New Zealand Antarctic Expedition, and established the seismological station at Scott Base.

While he was in charge of the technical group of the Observatory he supervised the growth of the recording network to twice its original size, installing new equipment in Western Samoa, Raratonga, Wellington, at Scott Base and elsewhere, including World Network Stations, the Seismic Research Observatory at Wellington and the telemetered network at Lake Pukaki. He was also involved in micro-earthquake surveys, and in the operation of the New Zealand Time Service.

His final illness was met with the calm courtesy and integrity that marked his life and his relations with all his colleagues. He leaves a wife, Dorothy, a son and two daughters.

LIST OF MAPS

(In pocket inside back cover.)

1. Epicentres of Normal Focus Earthquakes in 1978.
2. Epicentres of Deep Focus Earthquakes in 1978.

ERRATUM

Stations Foulwind, Denniston and Waipara Point are no longer in operation and should not appear on the maps.

P. D. HASSELBERG, GOVERNMENT PRINTER, WELLINGTON, NEW ZEALAND—1979

37521F—350/10/79PT

NORMAL EARTHQUAKES
1978

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

Cape Reinga
Onerahi
Great Barrier
Auckland
East Cape
Karapiro
Whakatane
Wairakei
Tuai
Gisborne
Tarata
Taradale
Mangahao
Castlepoint
Cobb
Wellington
Foulwind
Denniston
Kaikoura W.
Kaimata
Cashmere
Mt. John
Milford Sound
Oamaru
Boxburgh
Monowai
Waipapa Pt.
Oban
Chatham Islands

SCALE
20 0 20 40 60 80 100 Statute miles
20 0 20 40 60 80 100 Kilometres

P.D. Hasselberg. Government Printer, Wellington, New Zealand.

DEEP FOCUS EARTHQUAKES

1978

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 epicentres, the magnitude of the largest is shown.

Magnitude
- > 6·0
- 5·0 – 5·9
- 4·0 – 4·9
- < 4·0

Cape Reinga
Onerahi
Great Barrier
Auckland
East Cape
Whakatane
Tuai
Gisborne
Tarata
Taradale
Mangahao
Castlepoint
Cobb
Wellington
Foulwind
Denniston
Kaikoura W.
Kaimata
Cashmere
Mt. John
Chatham Islands
Milford Sound
Oamaru
Roxburgh
Monowai
Waipapa Pt.
Oban

SCALE
20 0 20 40 60 80 100 Statute miles
20 0 20 40 60 80 100 Kilometres

P.D. Hasselberg. Government Printer, Wellington, New Zealand.

1978

NEW ZEALAND SEISMOLOGICAL REPORT

E-160