

**New Zealand
Seismological Report 1999**

Seismological Observatory Bulletin E-182

D E Maunder (ed.)

Institute of Geological & Nuclear Sciences Science Report 2001/7

**Institute of Geological & Nuclear Sciences Limited
Lower Hutt, New Zealand
November 2001**

RECOMMENDED BIBLIOGRAPHIC REFERENCE

Maunder, D.E. (ed.) 2001. New Zealand Seismological Report 1999.
Seismological Observatory Bulletin E-182. *Institute of Geological & Nuclear
Sciences Science Report 2001/7*. 156p.

POSTAL SERVICE

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

The Chief Seismologist
Seismological Observatory
P O Box 30-368
Lower Hutt
NEW ZEALAND

or to FAX No. + 64-4-570-1440

CONTENTS

	Page
Introduction	1
Staff in 1999	2
New Zealand Seismicity in 1999	4
Instrumentation in 1999	5
Instrumental Changes in 1999	5
Index of Station Codes and Positions	6
Instrumentation and Lithology - National Network	9
- Broadband and local networks.....	13
Strong Motion Station Codes and Positions	17
Alpine Fault Network	17
EARSS Response Curve	18
Quanterra Response Curve	19
National Network map	20
Auckland and Taranaki Networks map	21
Volcanic and Hawkes Bay Networks map	22
Wellington Network map	23
Pacific Island Stations map.....	24
Timing Arrangements	25
Origin Information	26
Content.....	26
Determination of Origins	26
Magnitudes	27

	Page
Calculation of Amplitudes	28
Map of Stations used for Magnitude Determinations	30
Data from the National Network.....	31
Summary of Origin and Magnitude Determinations.....	32
Lists of Origins.....	98
$M_L \geq 5$	98
Wellington.....	99
Non-Instrumental Data	140
The Felt Reporting System.....	140
Map Showing Standard Reporting Localities	141
Index of Standard Reporting Localities	142
Earthquakes Felt in Standard Localities.....	143
Shocks Reported from Outside New Zealand.....	146
Publications by Observatory Staff	147
Observatory Services.....	151
Publications.....	151
Earthquake Catalogue	151
Earthquake Map Section	152
Index.....	152

INTRODUCTION

The form of this Report follows lines established in recent years. The main list of regional shocks contains only earthquakes of magnitude 3.5 or greater located within 10° of Wellington, and smaller earthquakes known to have been felt in New Zealand. Many other earthquakes have however been assigned serial numbers, so the serials of the shocks listed are often not consecutive.

Phase data are not published here, but are instead sent to the International Seismological Centre, and appear in their bulletins, which constitute the only medium now in use for routine reporting of arrival time observations made in New Zealand. The lists of origin coordinates and magnitudes include sufficient supplementary information for assessment of the quality of the data on which they are based.

There is also a list of origins of earthquakes in the Wellington area with magnitudes of 2.0 or more. This list gives less information on the quality of individual determinations, but the density of recording stations in the area and their easy accessibility for maintenance ensure that errors are small.

Seismologists urgently requiring unpublished New Zealand data may apply to the Observatory. Historical data are also available, but it is the Observatory's practice to make a charge for recovery of this material unless a two-way information exchange is involved. Definitive origins for local earthquakes are usually available within a few months of their occurrence.

Although the Report for 1993 has not yet been published, the data have been analysed and are available from the Observatory.

D E Maunder
Editor

STAFF IN 1999**Wellington**

- Chief Seismologist:** T H Webb, BSc (Hons), PhD (Cant)
- Scientists:** R A Benites, BSc (UNI Peru), PhD (MIT)
M P Chadwick, MSc, PhD (VUW)
W J Cousins, Bsc (Hons) (Cant), PhD (VUW)
P N Davenport, BSc, BE (Hons)(Civil), PhD, MIPENZ
G L Downes, BSc (Hons), MSc
K R Gledhill, MSc (Hons), PhD
G H McVerry, BE (Hons), ME (Hons) (Auck), PhD (Caltec)
A Pancha, MSc
M E Reyners, BSc (Hons), PhD
R Robinson, MSc, PhD (Stanford)
- Technical Officers:** D E Baguley, NZCE (Mech)
A F Cresswell, NZCS
B G Ferris, NZCS
J S Harris, NZCS
D E Maunder, BSc
R D Maunder
C W O'Reilly, NZCE
- Technicians:** G J Campbell, NZCE
S C Ede
M Kopeykin
F Langford, NZCE, BSc
- Technical Artist:** C Hume

STAFF IN 1999**Wairakei (Volcanic Networks)**

Scientists: C J Bryan, PhD (Hawaii) (until October)
B J Scott NZCS, NZ Dip Sci
S Sherburn, BSc (Hons)

Technician: D E Keen

Christchurch

Technical Officer: T J O'Neill, NZCE

Rarotonga

Observer in Charge: R Taia

Raoul Island

Observer: P Clerke

Scott Base

Observers: A Ogilvie

NEW ZEALAND SEISMICITY IN 1999

New Zealand experienced another relatively quiet year for earthquakes in 1999. While over 130 earthquakes were felt in various parts of the country during the year, only three were larger than magnitude 6.0, and all of these were deep so caused little damage.

The most significant event during the year occurred on October 25 (Event 99/7987) at a depth of 160 km under Taupo. It was of magnitude 6.9 and was felt widely in the North Island, from Tauranga to Wellington, and as far south as Christchurch. It did not cause much damage.

On May 18, a deep earthquake (Event 99/3921), 260 km deep and magnitude 6.5, occurred under the central North Island. This event caused shaking that was felt from Gisborne to Christchurch, but the shaking was not severe in any region because of the depth. Another magnitude 6.0 earthquake (Event 99/6166) occurred on August 18 and was located 112 km north-east of Whakatane at a depth of 156 km. It was felt in Opotiki, Whakatane and Gisborne, and was sufficiently strong to shake goods off shelves in Opotiki. The Bay of Plenty is one of the more seismically active regions of the country, so earthquakes like this are quite common. Other smaller deep earthquakes in that area occurred on March 28 (Event 99/2789), depth 150 km and magnitude 5.5 and one on April 20 (Event 99/3332), depth 210 km and magnitude 5.6. The latter was felt lightly near Opotiki.

Various smaller earthquakes were felt throughout the country. A 57 km deep, magnitude 5.5 earthquake (Event 99/76), located 33 km north-west of Wellington occurred on January 3. It was felt as far away as Christchurch and caused minor damage in the Wellington region. On August 26, a shallow magnitude 5.5 earthquake (Event 99/6413) occurred 134 km east-north-east of Whitianga. This event was felt in the Coromandel Peninsula and in Auckland.

An earthquake on August 18 (Event 99/6193), 226 km deep and magnitude 5.2, was located near Hawera and felt from Marton to Wellington. There was no damage because of its depth.

There were four earthquakes over magnitude 5 felt in the Nelson-Marlborough Sounds area. One, on April 1 (Event 99/2864) was located at a depth of 217 km just north of Takaka and was felt as far away as Wellington. Two were deep earthquakes north of French Pass in the Marlborough Sounds on May 19 (Event 99/3945), magnitude 5.2 and on August 5 (Event 99/5829), magnitude 5.3 and were felt from Taranaki to Nelson. Another deep earthquake (Event 99/9156) centred south of Nelson on December 19 was felt from Wellington to Westport. It was 100 km deep and had a magnitude of 5.1.

An earthquake (Event 99/4000) occurred on May 21, magnitude 4.9. It was felt throughout the district and caused minor damage near Omarama. The damage was quite localised because the earthquake was very shallow. This event was followed by two small events on May 21 and an earthquake of magnitude 4.2 (Event 99/4129) on May 24 that was also felt in the Omarama district.

On September 14 and 19 swarms of earthquakes occurred within a few kilometres of Rotorua. Although the largest event (Event 99/6977) was only magnitude 3.2, it caused minor damage in Rotorua. Events of this size can cause significant shaking because they are usually very shallow (in this case about 3 km deep).

A shallow earthquake occurred 200 km south-east of the Chatham Islands on October 16 (Event 99/7756). It had a magnitude of 5.2 and was felt on the main island. The location is poor because the nearest station to record the earthquake was 900 km distant and the azimuthal range of the data only 50 degrees. There is no seismometer on the Chatham Islands.

INSTRUMENTATION IN 1999

By the end of 1999, the New Zealand network consisted of 34 digital stations (23 three-component and 11 single component), one analogue station (excluding the stations from regional networks that record visually as well as digitally), seven regional networks and an IRIS system. We also received analogue records from stations outside New Zealand (RAO, SBA and VNDA).

A new kind of station was added to the National Seismograph Network in late 1998. It is intended that these stations will slowly replace the current EARSS based stations. The new stations record six components of ground motion (three components of weak motion and three components of strong motion) and telemeter data continuously to both Gracefield and Wairakei. The data are received on a Sun workstation at each centre and earthquake events are detected and added to the rest of the data for the appropriate events. The continuous record of ground motion is also archived at Gracefield. A pilot network of four sites (KNZ, TOZ, DSZ, MQZ) was installed late in 1998.

Each site consists of a vault and a small shed. The vault houses a Guralp CMG-40T broadband seismometer and a Kinometrics EpiSensor force-balance accelerometer. The Kinometrics EpiSensor can record strong ground shaking of up to 2g, and the Guralp CMG-40T has a bandwidth from 50 Hz to 30 or 60 seconds period. The data logger employed is a Quanterra Q4126 equipped with a GPS receiver for absolute timing, a hard disk for on-site recording, and an ethernet card so that data can be sent in real time using standard Internet protocols. The Quanterra Q4126 has a 24 bit digitiser and thus has a dynamic range of over 140 dB. The power supply for each site consists of

a bank of 12 volt batteries on continuous charge using mains power. If the mains power fails the batteries have enough capacity to operate the site for about three days.

Each site has a very small aperture terminal (VSAT) satellite transceiver system comprising an indoor unit (IDU) housed inside the shed with the Quanterra data logger, and a small dish antenna (1.8 m in diameter) with an attached outdoor unit. The IDU contains an ethernet card so the Quanterra data logger plugs directly into it and sends data via satellite to both Gracefield and Wairakei.

Until new 6-component stations replace the existing stations, the main recording system is still the EARSS (Equipment for the Automatic Recording of Seismic Signals). EARSS data loggers come in two main types: a three channel system used at the standard National Network stations, and a 16 channel system used to record the telemetry networks at Rotorua, Wairakei, and Gracefield. The volcano-seismic networks run in Auckland and Taranaki by the respective regional councils also use 16 channel EARSS recorders. The three-channel EARSS system employs automatic magnification adjustment ("gain-ranging") to extend the dynamic range of the 13-bit (12 bit plus sign) digitiser giving a dynamic range of 120 dB. In contrast the 16-channel version just uses the digitisation system without the gain-ranging and thus has a dynamic range of 76 dB. However, this is sufficient as the dynamic range of telemetry networks is restricted by the current telemetry technology to less than 50 dB. A frequency domain earthquake detector is used by both three and 16 channel EARSS systems to identify possible earthquake events which are then recorded on magnetic tape or computer hard disks.

INSTRUMENTAL CHANGES IN 1999

There were few changes to the networks in 1999.

The Mark-Products L4-3D seismometer and EARSS recorder at McQueen's Valley (MQZ) were removed in January.

A new 3-component station Far West T-bar (FWVZ) was installed near the Tongariro Volcano-Seismic network station at Chateau (CNZ). This site is equipped with a Guralp CMG-40T seismometer and a Kinometrics

EpiSensor accelerometer.

The instrument and recorder at Waipu Caves (WCZ) were destroyed by fire late in 1998 and have not been replaced. Omahuta (OUZ) recorded from late June until October only.

During the year, all stations were equipped with GPS clocks ensuring reliable timing especially at stations that had difficulty obtaining radio time signals.

INDEX OF STATION CODES AND POSITIONS

The number of seismograph stations has grown so much in recent years that it is not always possible to find short mnemonic codes that are unique in the world. Nearly all the codes used below are recognised and used by the United

States NEIS and by ISC, but some of those for stations in the telemetered networks may not be. The coordinates for the New Zealand stations are NZGD49 on the Hayford (International) spheroid.

CODE	NAME	LATITUDE				LONGITUDE				ALTITUDE
		d	m	s		d	m	s	metres	

STANDARD NETWORK

AXZ	Alexandra	45	16	02	S	169	19	52	E	260
BFZ	Birch Farm	40	40	54	S	176	14	46	E	318
BSZ	Bushy Park	39	47	55	S	174	55	52	E	150
BWZ	Berwen	44	31	54	S	169	52	59	E	500
DCZ	Deep Cove	45	28	04	S	167	09	15	E	20
DSZ	Denniston North	41	44	49	S	171	48	09	E	630
EWZ	Erewhon	43	30	42	S	170	51	09	E	650
FWVZ	Far West T-bar (from June)	39	15	23	S	175	33	07	E	2000
HBZ	Hicks Bay	37	35	57	S	178	18	05	E	0
KHZ	Kahutara	42	25	05	S	173	32	25	E	70
KNZ	Kokohu	39	01	17	S	177	40	25	E	
KUZ	Kuaotunu	36	44	50	S	175	43	12	E	40
LMZ	Lake Moeraki	43	42	59.5	S	169	16	10	E	-50
LTZ	Lake Taylor	42	46	58	S	172	16	08	E	640
MLZ	Mavora Lakes	45	20	52	S	168	10	22	E	640
MOZ	Mahoenui	38	30	21	S	174	48	11	E	160
MQZ	McQueen's Valley	43	42	28	S	172	39	08	E	60
MRZ	Mangatainoka River	40	39	45	S	175	34	45	E	320
MSZ	Milford Sound	44	40	31.5	S	167	55	39	E	90
NOZ	North Gisborne	38	37	05	S	178	02	12	E	60
NRZ	Ngariki	39	20	15	S	173	55	59	E	250
ODZ	Otahua Downs	45	02	43	S	170	38	40	E	270
OIZ	Oio	39	02	48	S	175	23	33	E	470
OUZ	Omahuta	35	13	17	S	173	35	46	E	40
PUZ	Puketiti	38	04	24	S	178	15	26	E	420
QRZ	Quartz Range	40	49	39	S	172	31	44	E	260
RAO	Raoul Island	29	15	06	S	177	55	06	W	110
RTY	Rotoiti	41	48	27	S	172	50	35	E	635
SIZ	Stewart Island	46	52	30	S	168	07	59	E	60
THZ	Top House	41	45	50	S	172	54	13	E	760
TOZ	Tahuroa Road	37	43	51	S	175	30	07	E	
TUZ	Tuapeka	45	57	22	S	169	37	56	E	110
URZ	Urewera	38	15	37	S	177	06	37	E	100
WEL	Wellington	41	17	10	S	174	46	06	E	122
WHZ	Wether Hill	45	53	41	S	167	56	51	E	320
WVZ	Waitaha Valley	43	04	35	S	170	44	10	E	75

BROADBAND IRIS STATIONS

RAR	Rarotonga	21	12	45	S	159	46	24	W	28
SBA	Scott Base	77	50	57	S	166	45	26	E	48
SNZO	South Karori	41	18	37	S	174	42	17	E	-10
VNDA	Vanda	77	30	50.2	S	161	50	44.2	E	-2

AUCKLAND VOLCANO-SEISMIC NETWORK

KAAZ	Kauri Point	36	49	27	S	174	42	13	E	65
MKAZ	Moumoukai	37	06	41.1	S	175	09	59.6	E	120
MTAZ	Motutapu	36	47	17.3	S	174	54	36.2	E	60
OTAZ	Otara	36	57	04	S	174	55	29	E	140
WTAZ	Waiatarua	36	56	03.1	S	174	34	26.0	E	340

BAY OF PLENTY VOLCANO-SEISMIC NETWORK

EDRZ	Edgecumbe	38	06	27.5	S	176	44	17	E	780
HARZ	Haroharo	38	05	28	S	176	30	07	E	740
LIRZ	Lichensteins Road	38	00	18	S	176	23	03	E	340
MARZ	Manawahe	37	59	12	S	176	40	28	E	480
PARZ	Papamoa	37	44	01	S	176	17	24	E	180
PATZ	Paeroa	38	22	53	S	176	15	30	E	940
TAZ	Tarawera	38	13	59	S	176	30	28	E	1037
UTU	Utuhina	38	10	39	S	176	11	32	E	410
WIZ	White Island	37	31	42	S	177	11	21	E	40

HAWKES BAY NETWORK

PAHZ	Panekirikiri	38	51	33	S	177	06	15	E	563
TTH	Taradale Trig	39	32	29	S	176	49	34	E	120
WAHZ	Wakarara	39	41	57	S	176	21	19	E	657

TARANAKI VOLCANO-SEISMIC NETWORK

DFE	Dawson Falls	39	19	39	S	174	06	13	E	880
NEZ	North Egmont	39	16	19	S	174	05	44	E	920
NRZ	Ngariki	39	20	15	S	173	55	59	E	250
NWEZ	Newall Rd	39	16	30	S	173	52	00	E	230
PKE	Pukeiti	39	11	44	S	173	59	14	E	485
RAEZ	Rainy Point	39	17	18	S	174	23	36	E	326

TAUPO VOLCANO-SEISMIC NETWORK

HATZ	Hinemaiaia	38	57	32	S	176	05	31	E	492
KATZ	Kakaramea	38	58	36	S	175	41	40	E	1280
RATZ	Rangitukia	38	52	07	S	175	46	16	E	649
WATZ	Waihaha	38	42	35	S	175	43	58.5	E	520
WHTZ	Whakaroa	38	40	04	S	175	57	27	E	780

TONGARIRO VOLCANO-SEISMIC NETWORK

CNZ	Chateau	39	12	00	S	175	32	51	E	1116
DRZ	Dome Shelter	39	16	35	S	175	33	49	E	2600
KAVZ	Karewarewa	39	05	55	S	175	38	45	E	1200
MGZ	Maungaku	39	00	07	S	175	32	20	E	806
NGZ	Ngaruhoe	39	10	37	S	175	36	04	E	806
TUVZ	Tukino	39	16	09	S	175	39	13	E	1410

WELLINGTON NETWORK

BBW	Blackbirch	41	42	45	S	173	52	42	E	250
BHW	Baring Head	41	24	33	S	174	52	17	E	10
BLW	Big Hill	41	22	07	S	175	28	29	E	340
CAW	Cannon Point	41	06	32	S	175	04	04	E	330
CCW	Cape Campbell	41	45	03	S	174	13	01	E	216
DIW	D'Urville Island	40	48	08	S	173	55	19	E	460
GFW	Glenfield	41	27	24	S	173	49	51	E	230
KIW	Kapiti Island	40	51	50	S	174	54	42	E	320
MOW	Moikau	41	25	18	S	175	15	07	E	430
MRW	Makara Radio	41	13	57	S	174	42	18	E	235
MTW	Mount Morrison	41	09	34	S	175	30	07	E	282
OTW	Orongorongo Valley	41	16	39	S	175	00	15	E	230
TCW	Tory Channel	41	12	48	S	174	16	33	E	150
WEL	Wellington	41	17	10	S	174	46	06	E	122

INSTRUMENTATION AND LITHOLOGY

STANDARD NETWORK AND CONTRIBUTING STATIONS

Stations are listed in alphabetical order of their abbreviations. Free period, T_0 , is given in seconds for moving coil seismometers. Long-period corner, T_c , is given in seconds for force-feedback seismometers. Damping, when not listed, may be assumed to be critical.

Magnifications listed are for the period of maximum response. Response curves for Mark Products L4-C seismometers with EARSS recorders and for Guralp seismometers with Quanterra recorders are shown at the end of this section.

Instrument	Component	T_0	T_c	Magnification
AXZ	ALEXANDRA Foundation: Schist. Mark Products L4-3D (with EARSS digital gain-ranging recorder). ZNE	1.0		
BFZ	BIRCH FARM Foundation: Greywacke. Mark Products L4-3D (with EARSS digital gain-ranging recorder). ZNE	1.0		
BSZ	BUSHY PARK Foundation: Quaternary marine sediments. Mark Products L4-C (with EARSS digital gain-ranging recorder). Z	1.0		
BWZ	BERWEN Foundation: Greywacke. Mark Products L4-C (with EARSS digital gain-ranging recorder). Z	1.0		
DCZ	DEEP COVE Foundation: Granite. Mark Products L4-3D (with EARSS digital gain-ranging recorder). ZNE	1.0		
DSZ	DENNISTON NORTH Foundation: Upper Precambrian greywacke. Guralp CMG-40T (with Quanterra Q4126 recorder) ZNE Kinometrics EpiSensor (with Quanterra Q4126 recorder) ZNE		30	
EWZ	EREWHON Foundation: Triassic Greywacke. Mark Products L4-C (with EARSS digital gain-ranging recorder). Z	1.0		
FWVZ	FAR WEST T-BAR (from June) Foundation: Andesite lava. Guralp CMG-40T (with Quanterra Q4126 recorder) ZNE		30	
HBZ	HICKS BAY Foundation: Consolidated conglomerate. Mark Products L4-C in borehole (with EARSS digital gain-ranging recorder). Z	1.0		67 500 at 0.10s

Instrument	Component	T ₀	T _c	Magnification
KHZ	KAHUTARA Foundation: Jurassic Greywacke. Mark Products L4-3D (with EARSS digital gain-ranging recorder).	ZNE	1.0	
KNZ	KOKOHU Foundation: Miocene Limestone. Guralp CMG-40T (with Quanterra Q4126 recorder)	ZNE		30
	Kinometrics FBA23 (with Quanterra Q4126 recorder)	ZNE		-
KUZ	KUAOTUNU Foundation: Greywacke. Mark Products L4-3D (with EARSS digital gain-ranging recorder).	ZNE	1.0	
LMZ	LAKE MOERAKI Foundation: Precambrian Greywacke. Mark Products L4-C (with EARSS digital gain-ranging recorder).	Z	1.0	
LTZ	LAKE TAYLOR Foundation: Triassic Greywacke. Mark Products L4-3D (with EARSS digital gain-ranging recorder).	ZNE	1.0	
MLZ	MAVORA LAKES Foundation: Greywacke. Mark Products L4-3D (with EARSS digital gain-ranging recorder).	ZNE	1.0	
MOZ	MAHOENUI Foundation: Jurassic Greywacke. Mark Products L4-3D (with EARSS digital gain-ranging recorder).	ZNE	1.0	
MQZ	McQUEEN'S VALLEY Foundation: Miocene Volcanics. Guralp CMG-40T (with Quanterra Q4126 recorder)	ZNE		30
	Kinometrics EpiSensor (with Quanterra Q4126 recorder)	ZNE		-
	Until February			
	Mark Products L4-3D (with EARSS digital gain-ranging recorder).	ZNE	1.0	
MRZ	MANGATAINOKA Foundation: Greywacke. Mark Products L4-3D (with EARSS digital gain-ranging recorder).	ZNE	1.0	
MSZ	MILFORD SOUND Foundation: Gneiss. Mark Products L4-C (with EARSS digital gain-ranging recorder).	Z	1.0	

Instrument	Component	T ₀	T _c	Magnification
NOZ	NORTH GISBORNE Foundation: Upper Miocene Siltstone. Mark Products L4-C (with EARSS digital gain-ranging recorder).	Z	1.0	
NRZ	NGARIKI Foundation: Andesite. Mark Products L4-C (with EARSS digital gain-ranging recorder).	Z	1.0	
ODZ	OTAHUA DOWNS Foundation: Greywacke. Mark Products L4-3D (with EARSS digital gain-ranging recorder).	ZNE	1.0	
OIZ	OIO Foundation: Tertiary sandstone. Mark Products L4-3D (with EARSS digital gain-ranging recorder).	ZNE	1.0	
OUZ	OMAHUTA Foundation: Greywacke. Mark Products L4-C (with EARSS digital gain-ranging recorder).	Z	1.0	
PUZ	PUKETITI Foundation: Cretaceous Greywacke. Mark Products L4-3D (with EARSS digital gain-ranging recorder).	ZNE	1.0	
QRZ	QUARTZ RANGE Foundation: Golden Bay Schist. Mark Products L4-3D (with EARSS digital gain-ranging recorder).	ZNE	1.0	
RAO	RAOUL ISLAND Foundation: Volcanic rock. Willmore II (with Kinometrics VR-1 pen-recorder).	Z	1.0	4 800 at 0.25s
RTY	ROTOITI Foundation: Glacial gravels. Mark Products L4-C (with Kinometrics VR-1 pen-recorder).	Z	1.0	Uncertain
SIZ	STEWART ISLAND Foundation: Granite. Mark Products L4-C (with EARSS digital gain-ranging recorder).	Z	1.0	
THZ	TOPHOUSE Foundation: Permian Greywacke. Willmore II (with EARSS digital gain-ranging recorder).	ZNE	1.0	

Instrument	Component	T ₀	T _c	Magnification
TOZ	TAHUROA ROAD Foundation: Jurassic Greywacke. Guralp CMG-40T (with Quanterra Q4126 recorder)	ZNE	30	
	Kinometrics EpiSensor (with Quanterra Q4126 recorder)	ZNE	-	
TUZ	TUAPEKA Foundation: Haast Schist. Mark Products L4-3D (with EARSS digital gain-ranging recorder).	ZNE	1.0	
URZ	UREWERA Foundation: Greywacke. Mark Products L4-3D (with EARSS digital gain-ranging recorder).	ZNE	1.0	
WCZ	WAIPU CAVES Foundation: Limestone. Mark Products L4-C (with EARSS digital gain-ranging recorder).	Z	1.0	
WEL	WELLINGTON (World-Wide Standard Station) Foundation: Greywacke. Kinometrics force-balance accelerometer (with EARSS digital gain-ranging recorder).	ZNE	1.0	
	The signal is transmitted to Gracefield by spread-spectrum radio and received on a Sun computer.			
WHZ	WETHER HILL Foundation: Greywacke. Mark Products L4-3D (with EARSS digital gain-ranging recorder).	ZNE	1.0	
WVZ	WAITAHA VALLEY Foundation: Granite. Mark Products L4-3D (with EARSS digital gain-ranging recorder).	ZNE	1.0	

BROADBAND IRIS STATIONS

These stations are operated by the United States Geological Survey, with recorded data archived at the IRIS data centre (www.iris.edu). Data at all stations are recorded on

Quanterra Q680 Dataloggers. More detailed information about the Global Seismic Network (GSN) can be found at www.cr.usgs.gov.

Code	Station	Instrument	Foundation
RAR	Rarotonga	Geotech 36000-I borehole seismometer Streckeisen STS-1 seismometer	Basalt
SBA	Scott Base	Geotech KS-54000 borehole seismometer Guralp CMG3-T seismometer Streckeisen STS-2 seismometer	Frozen basaltic debris resting on lava flows
SNZO	South Karori	GeoTech KS-36000-I BD seismometer (in 98m borehole) Guralp CMG-3ESP seismometer Kinometrics FBA-23 strong motion sensor	Jurassic-Permian Greywacke
VNDA	Vanda	Geotech KS-54000 borehole seismometer Geotech GS-21 short period vertical seismometer Geotech K53 6000I broadband 3-D seismometer recorded at Scott Base.	Granite Gneiss intruded by quartz porphyry dykes

AUCKLAND VOLCANO-SEISMIC NETWORK

This network has been installed in Auckland to monitor seismic activity associated with volcanic and tectonic processes in the Auckland volcanic region and is operated by Auckland Regional Council in conjunction with GNS

Wairakei. The instruments are single component L4-C seismometers telemetered to an EARSS digital recorder, and are also recorded on VR-1 visual recorders.

Code	Station	Component	Foundation
KA AZ	Kauri Point	Z	Miocene mudstone
MK AZ	Moumoukai	Z	Greywacke
MT AZ	Motuapu	Z	Jurassic mudstone
OT AZ	Otara	Z	Sandstone
WT AZ	Waiatarua	Z	Miocene volcanoclastics

BAY OF PLENTY VOLCANO-SEISMIC NETWORK

This network is operated by the Volcanology Programme in conjunction with the Seismological Observatory and monitors seismic activity associated with volcano, geothermal and tectonic processes in the northern portion of the Taupo Volcanic Zone.

Data from these stations are telemetered to a 16-channel EARSS at Rotorua and also Wairakei. Selected stations are also recorded on VR-1 pen-and-ink visual recorders. The seismometers are Mark Products L4-C (1 Hz) short-period vertical seismometers.

Code	Station	Component	Lithology
EDRZ	Edgecumbe	Z	Andesite
HARZ	Haroharo	Z	Rhyolite
LIRZ	Lichensteins Rd	Z	Rotoiti breccia
MARZ	Manawahe	Z	Andesite
PARZ	Papamoia	Z	Andesite
PATZ	Paeroa	Z	Ignimbrite
TAZ	Tarawera	Z	Ryolite lava
UTU	Utuhina	Z	Ignimbrite
WIZ	White Island	Z	Recent Andesite

HAWKES BAY NETWORK

The Hawkes Bay network was installed to monitor seismicity in an area which has not only some potential for hydroelectric power generation, but also a history of severe earthquakes. The network is recorded by a three-channel

EARSS digital gain-ranging recorder at Havelock North.

One of the stations is also recorded on a VR-1 pen-and-ink visual recorder.

Code	Station	Component	Foundation
PAHZ	Panekirikiri	Z	Pumice tuff
TTH	Taradale Trig	Z	Calcareous mudstone
WAHZ	Wakarara	Z	Greywacke

TARANAKI VOLCANO-SEISMIC NETWORK

This network is operated by the Taranaki Civil Defence and GNS Wairakei to monitor volcanic activity around Taranaki volcano. The stations are single component L4-C

seismometers telemetered to a 16-channel EARSS recorder at New Plymouth. NRZ (Ngariki) is also part of the New Zealand Seismic Network.

Code	Station	Component(s)	Foundation
DFE	Dawson Falls	Z	Volcanic ash
NEZ	North Egmont	Z	Volcanic ash
NRZ	Ngariki	Z	Andesite
NWEZ	Newall Rd	Z	Andesite
PKE	Pukeiti	Z	Andesite
RAEZ	Rainy Point	Z	Sandstone/Mudstone

TAUPO VOLCANO-SEISMIC NETWORK

This network is operated by the Volcanology Programme in conjunction with the Seismological Observatory and monitors seismic activity associated with volcanic and tectonic processes in the central part of the Taupo Volcanic Zone. Data from the stations are telemetered to a 16-channel EARSS at Wairakei. One station is usually also

recorded on a VR-1 pen-and-ink visual recorder. The seismometers are all Mark Products L4-C (1 Hz) vertical-component instruments. The equipment for the network was funded by a grant from the New Zealand Lottery Grants Board's Science Research Committee.

Code	Station	Component(s)	Foundation
HATZ	Hinemaiaia	Z	Ignimbrite
KATZ	Kakaramea	Z	Ignimbrite
RATZ	Rangitukia	Z	Ignimbrite
WATZ	Waihaha	Z	Ignimbrite
WHTZ	Whakaroa	Z	Pumice alluvium

TONGARIRO VOLCANO-SEISMIC NETWORK

This network is operated jointly by the Volcanology programme and the Seismological Observatory to monitor seismic activity associated with volcanic and tectonic processes about Tongariro Volcanic Centre. The instruments at all sites are Mark Products L4-C

short-period vertical seismometers and their signals are telemetered and recorded on a 16-channel EARSS at the Chateau Observatory. The signals from selected stations are also recorded on VR-1 pen-and-ink recorders.

Code	Station	Component(s)	Foundation
CNZ	Chateau	Z	Andesitic ash
DRZ	Dome Shelter	Z	Andesite ash
KAVZ	Karewarewa	Z	Lava
MGZ	Maungaku	Z	Andesite
NGZ	Ngaruhoe	Z	Andesite lava
TUVZ	Tukino	Z	Tephra

WELLINGTON NETWORK

The stations of the Wellington network are linked by radio or land-line to the Cotton Building at Victoria University of Wellington in Kelburn. The data is continuously recorded and transmitted to Gracefield via a spread-spectrum radio link. The data are received at Gracefield on a Sun workstation where event detection takes place. The instrument at WEL is a Kinometrics force balance

accelerometer and the seismometer at MRW is a Mark Products L4-3D. The seismometers for the rest of the network are Mark Products L4-C instruments with a period of 1.0 second. The lithological foundation at most stations is Jurassic-Permian Greywacke. The exceptions are BBW (schist), CCW (Miocene sandstone) and DIW (Granodiorite).

Code	Station	Component(s)
BBW	Blackbirch	Z
BHW	Baring Head	Z
BLW	Big Hill	Z
CAW	Cannon Point	Z
CCW	Cape Campbell	Z
DIW	D'Urville Island	Z
GFW	Glenfield	Z
KIW	Kapiti Island	Z
MOW	Moikau	Z
MRW	Makara Radio	ZNE
MTW	Mount Morrison	Z
OTW	Orongorongo Valley	Z
TCW	Tory Channel	Z
WEL	Wellington	ZNE

STRONG-MOTION STATION CODES AND POSITIONS

These strong motion instruments were installed to record ground acceleration, especially accelerations that might be strong enough to cause damage to buildings and contents. The data are used to help develop building codes and to facilitate design of special structures. The instruments at

these sites are three-component "Etna" Kinematics. The data from these stations are now analysed with data from the weak-motion instruments.

These station codes are not internationally recognised.

CODE	NAME	LATITUDE				LONGITUDE			
		d	m	s		d	m	s	
ARPS	Arnold River Power Station	42	31	32	S	171	24	27	E
CACS	Canterbury Aero Club	43	29	07	S	172	31	46	E
CBGS	Botanic Gardens Christchurch	43	31	52	S	172	37	11	E
CCPS	Christchurch Police	43	32	04	S	172	37	56	E
DUNS	Dunedin	45	54	24	S	170	28	11	E
GISS	Gisborne 2ZG	38	40	06	S	178	01	21	E
INSS	INS	41	14	07	S	174	55	15	E
KAPS	Kauri Point	36	49	27	S	174	42	13	E
KIKS	Kaikoura	42	25	39	S	173	40	55	E
KOKS	Kokatahi	42	53	36	S	171	08	07	E
MAVS	Martinborough	41	12	45	S	175	27	40	E
MISS	Miramar School	41	19	01	S	174	49	05	E
MSZS	Milford Sound	44	40	29	S	167	55	31	E
NELS	Nelson Hospital	41	17	22	S	173	16	26	E
NGHS	Napier Girls High	39	29	16	S	176	54	51	E
NPCS	New Plymouth Civil Defence	39	03	53	S	174	04	24	E
PGMS	Petone	41	13	34	S	174	52	44	E
POTS	Wellington Potters	41	16	27	S	174	46	26	E
REHS	Resthaven Christchurch	43	31	25	S	172	38	03	E
ROPS	Rotorua Police	38	08	16	S	176	15	14	E
RQGS	Aarue Graphics	41	17	55	S	174	46	50	E
TFSS	Thorndon Fire Stn	41	16	35	S	174	46	59	E
TPPS	Taupo Police	38	41	17	S	176	04	00	E
WCDS	Wanganui Civil Defence	39	56	07	S	175	02	52	E
WDPS	Woodville Police	40	20	24	S	175	52	11	E
WEMS	Wellington Emergency Management	41	16	36	S	174	46	44	E

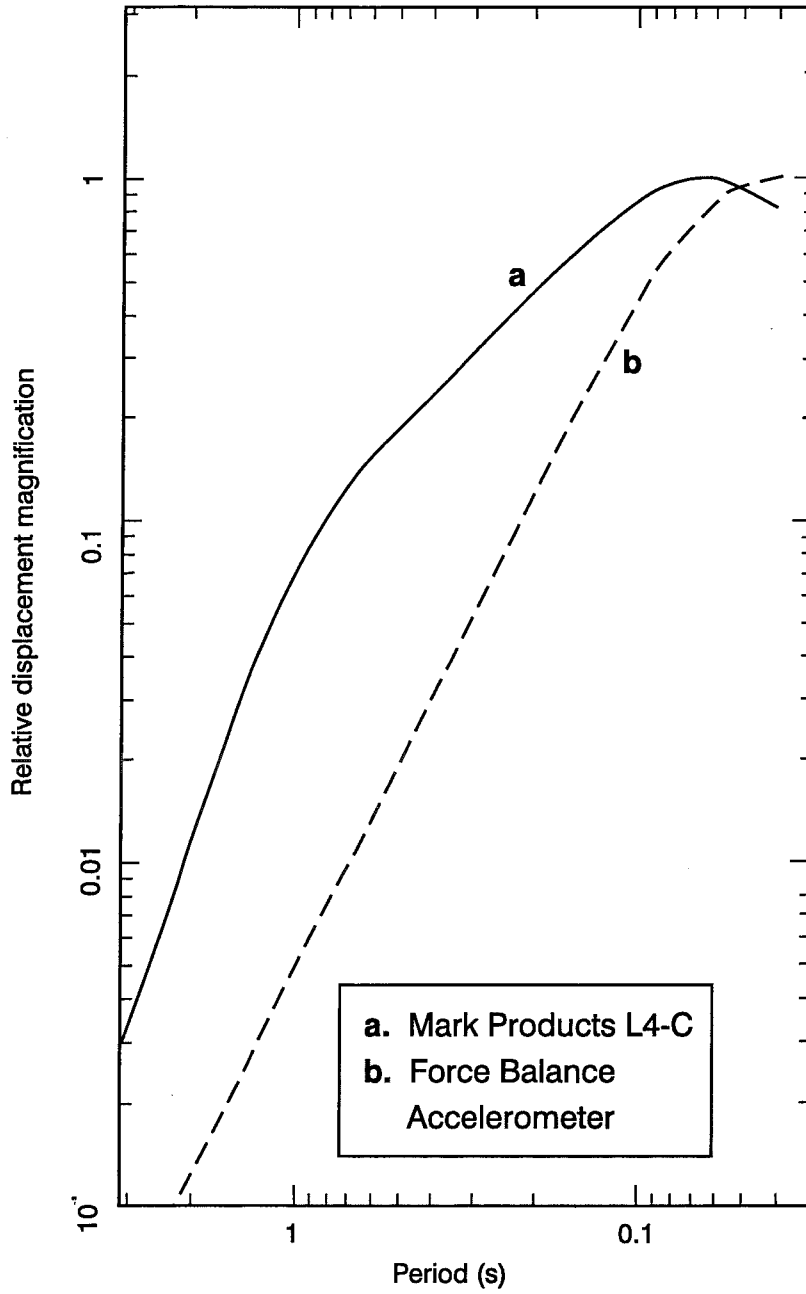
ALPINE FAULT NETWORK

Zillion Hill was deployed from 27 July 1999 until 6 December. The instrument was a three component short period seismometer recorded on an EARSS gain-ranging digital recorder. It was one of two stations installed to study

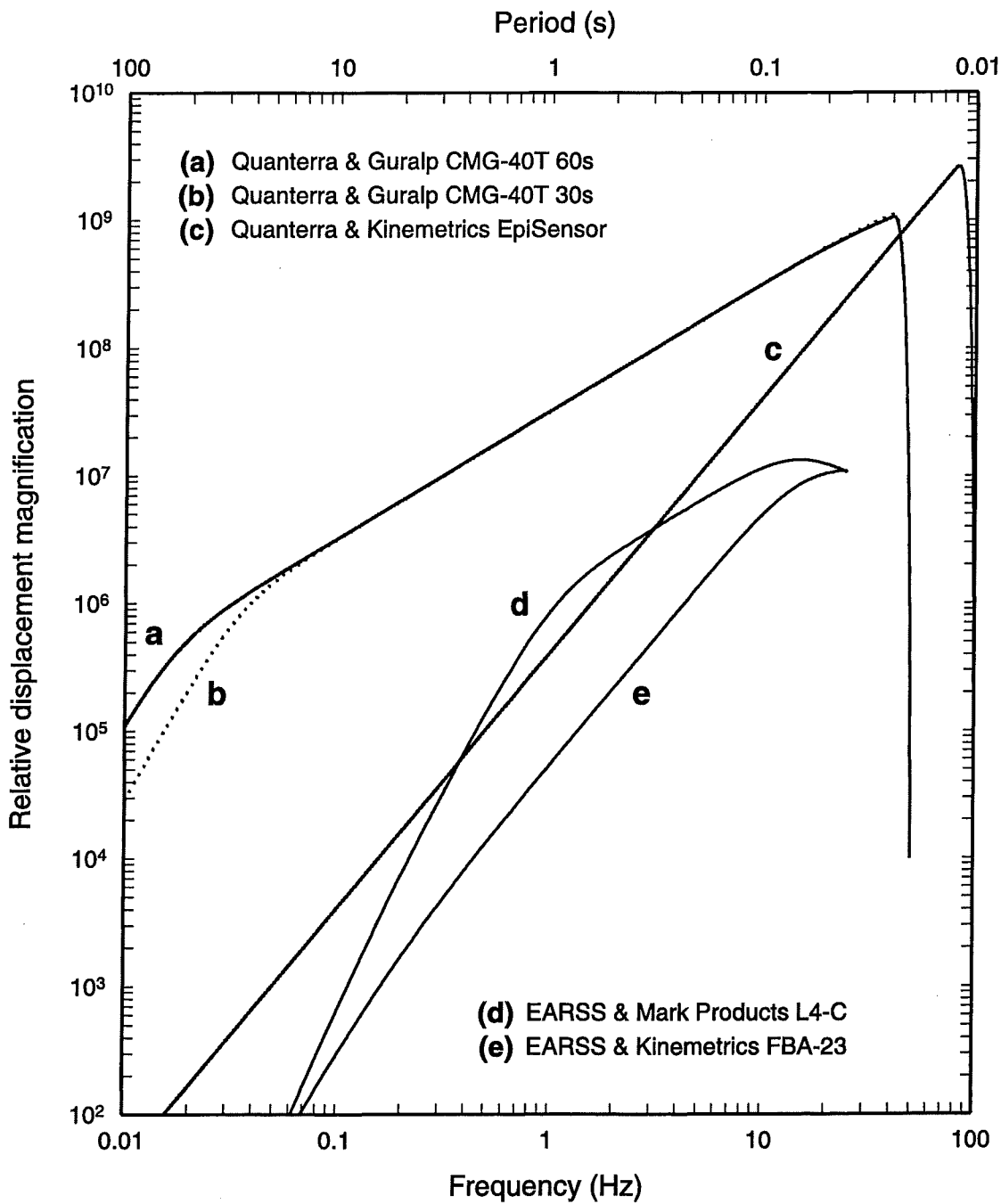
fault zone guided waves on the Alpine fault. Data from the second instrument were not analysed with data from the National network.

CODE	NAME	LATITUDE				LONGITUDE			
		d	m	s		d	m	s	
ZIHA	Zillion Hill	43	53	13	S	169	02	59	E

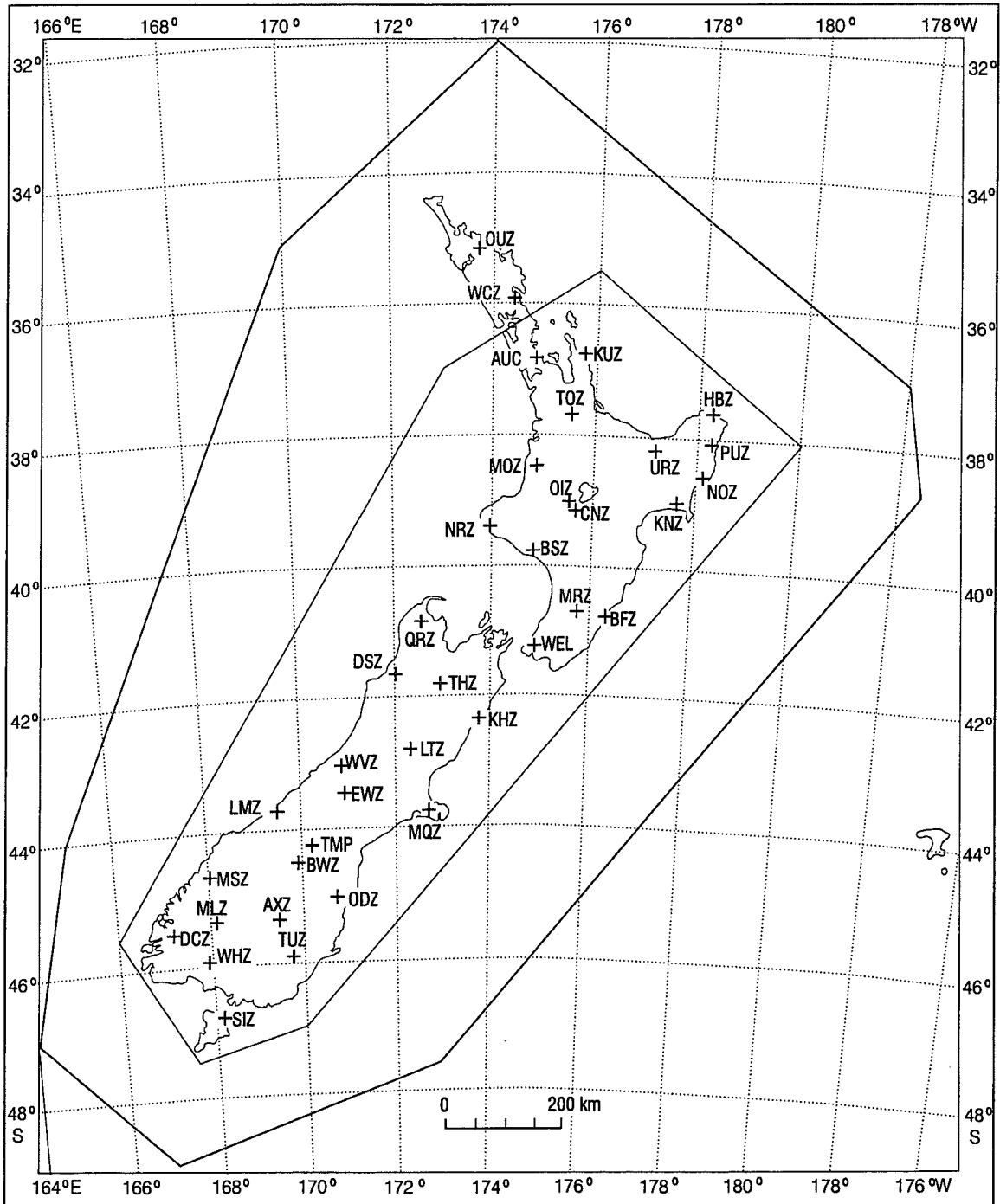
EARSS RESPONSE



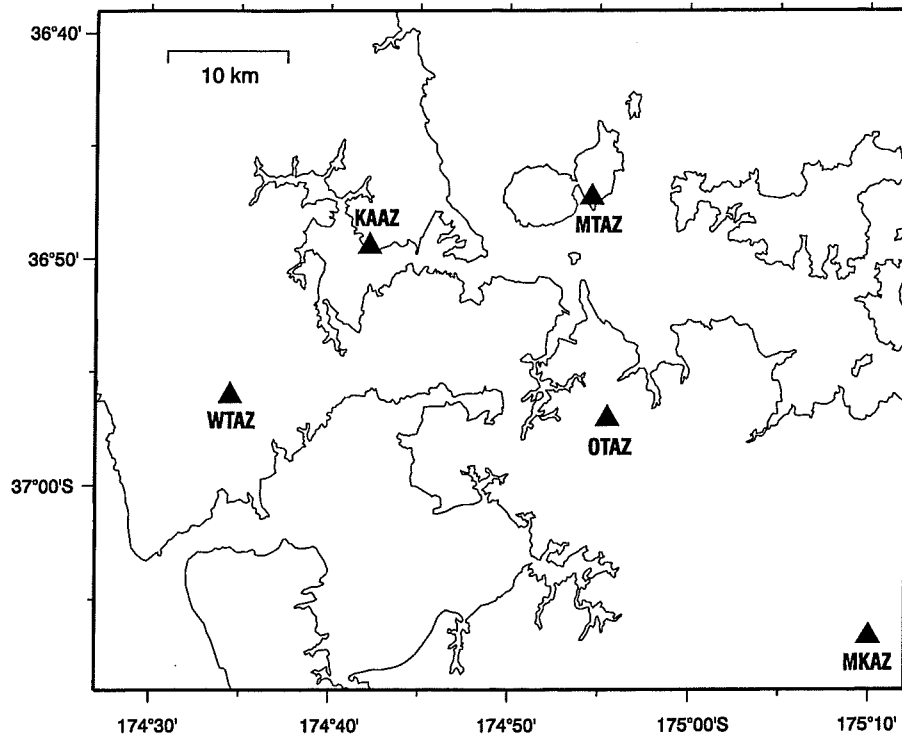
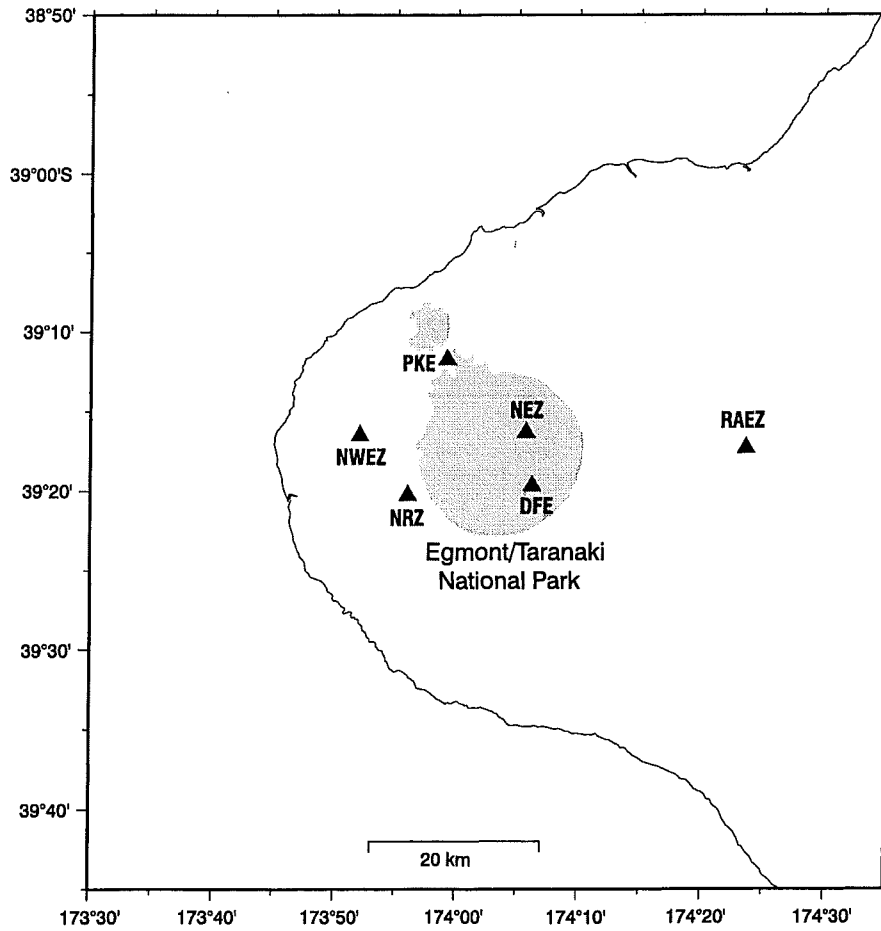
Period response curve of L4C seismometers with EARSS recorders



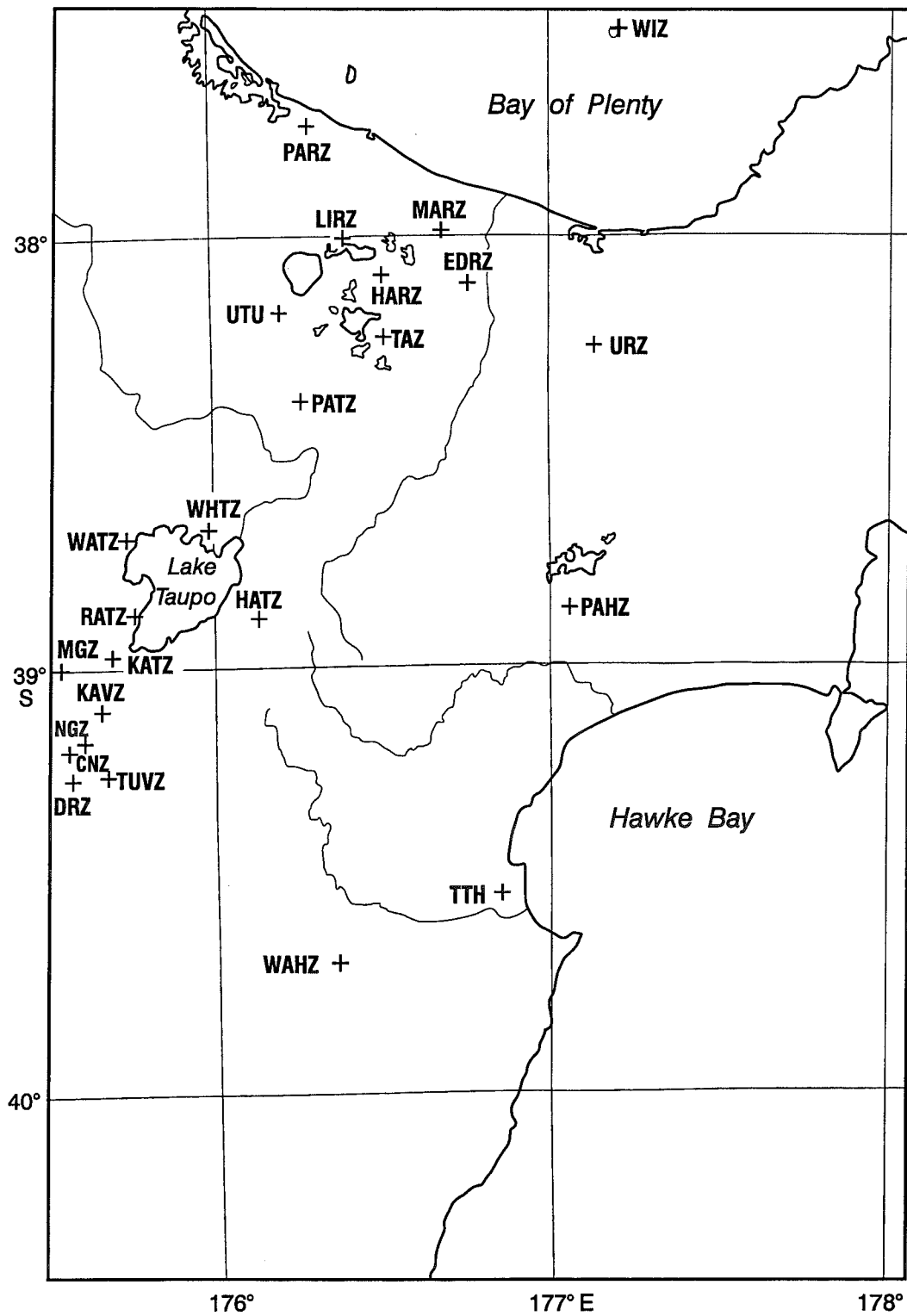
Period response curve of Guralp CMG-40T seismometers with Quanterra Q4126 recorders.



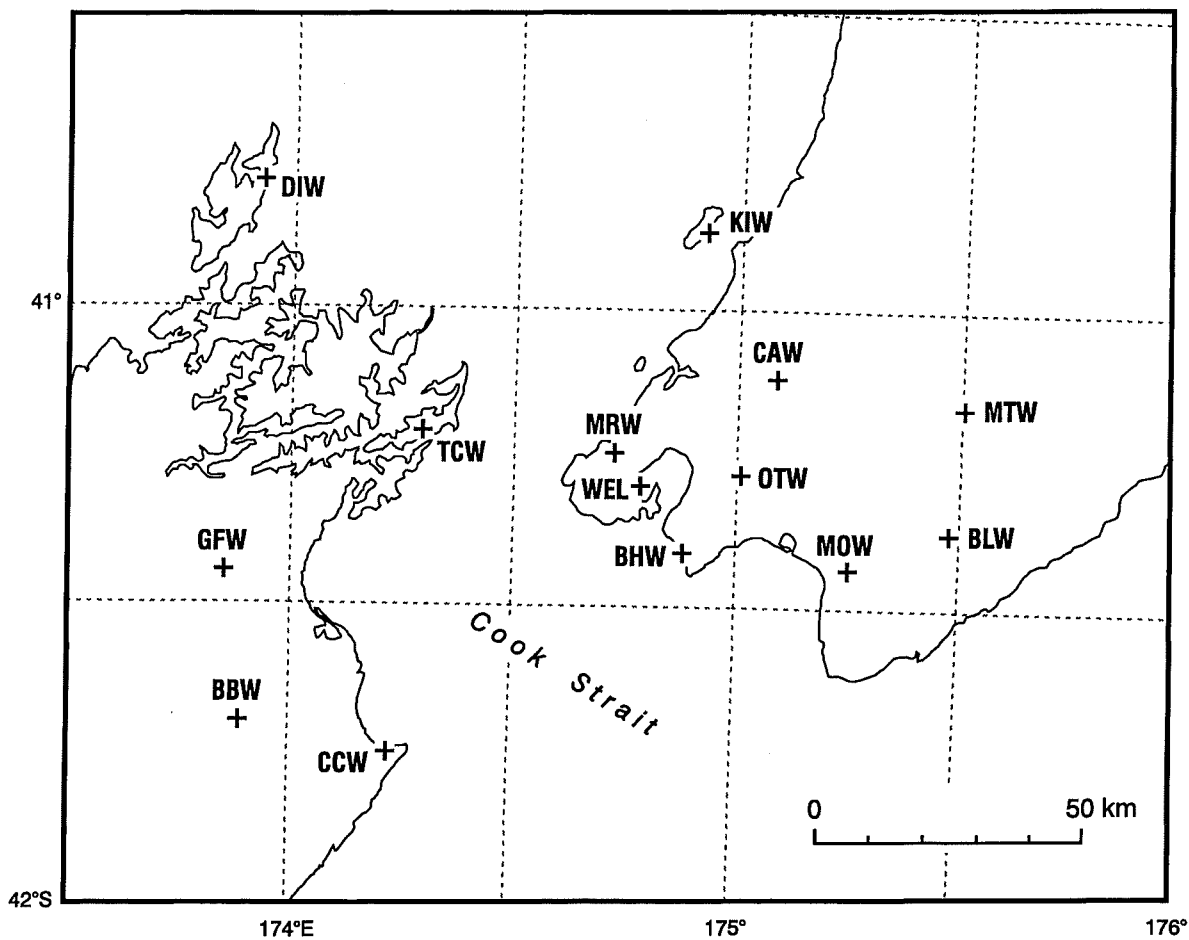
Stations of the National Seismograph Network. Some stations that are too closely spaced to show on this scale are shown instead on the map of the Volcanic and Hawke's Bay Networks. The inner and outer polygons define areas where accuracy of epicentre locations is considered reliable, less reliable and inadequate.



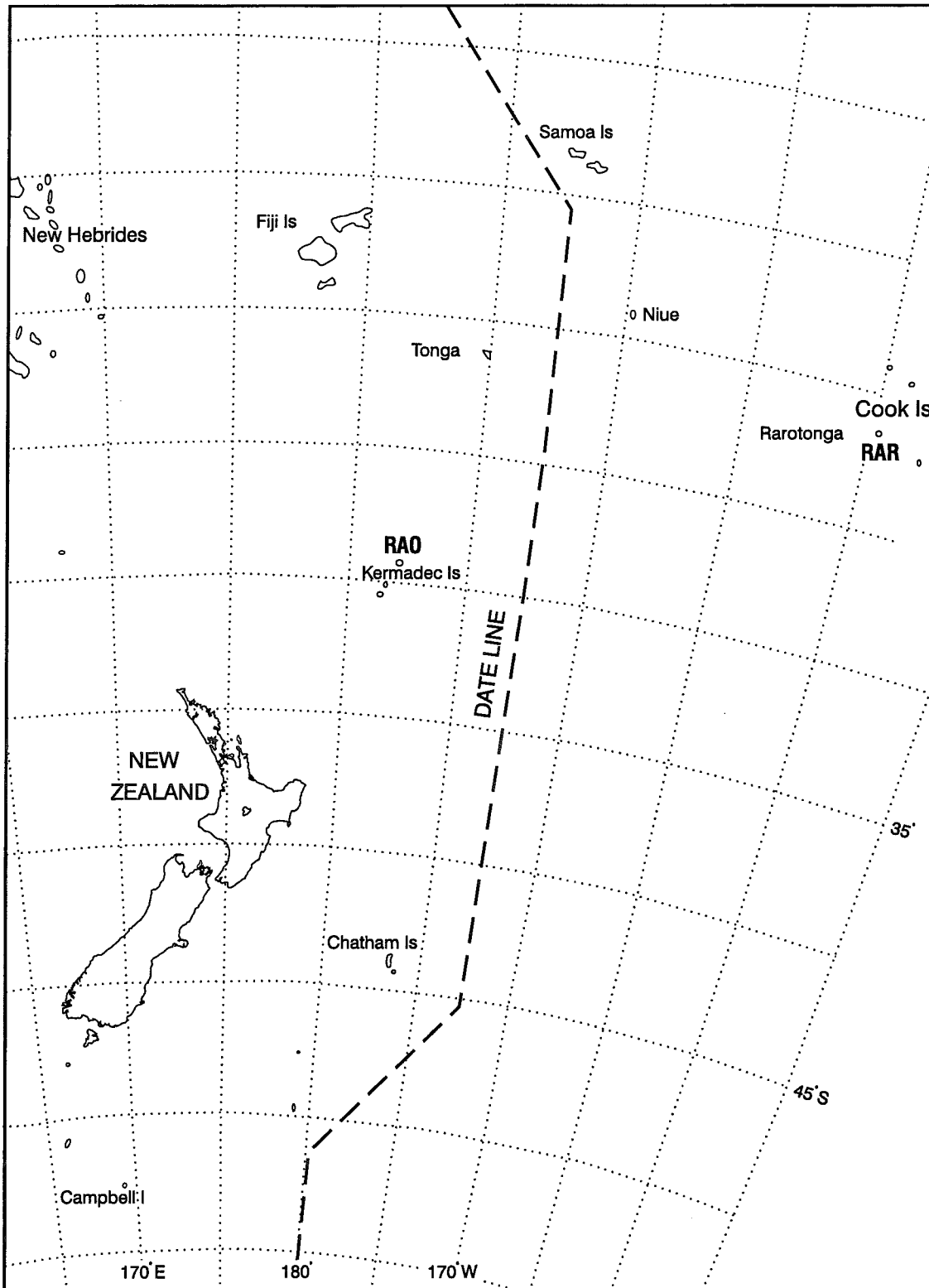
Stations of the Auckland and Taranaki Volcanic Networks.



Stations of the Volcanic and Hawke's Bay Networks. Other stations lying within the boundaries of the map are also shown.



The Wellington Network includes stations on both sides of Cook Strait.



Pacific Island Stations.

TIMING ARRANGEMENTS

Unless stated otherwise, times in this Report are given in Universal Time (U.T. or, more strictly, U.T.C., which is atomically kept time, adjusted when necessary by one second steps ("leap seconds") to agree with the astronomically determined time known as UT1). For most seismological and civil purposes this may be regarded as the Mean Solar Time of the Greenwich meridian.

On paper seismograms made by the national network, minute marks, derived from quartz crystal clocks of high stability, appear on records as abrupt trace deflections of about two seconds duration. Radio time signals also operate the trace deflector so that the relationship between the locally generated minute marks and Universal Time can be established. In most cases the radio signals are those of the New Zealand Time Service, transmitted hourly through the stations of Radio New Zealand, but in areas where local reception is bad, a time signal broadcast from overseas may be used. It is estimated that the total error in time-signal recording resulting from signal transmission and delay in operation of the trace deflector should never exceed 30 milliseconds.

EARSS instruments are equipped with GPS receivers for timing purposes. A temperature compensated quartz crystal clock is synchronised hourly with GPS time. The GPS time is extremely precise (nanosecond accuracy) but the crystal clock may drift between synchronisations at a rate of a few

milliseconds per day. Arrival times in the CUSP analysis system are expressed to a precision of one hundredth of a second; only rarely would the time be inaccurate to that degree.

At Raoul Island, time signals originating from the national Time Service or some other reliable time service are used.

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 hours, and New Zealand Daylight Time 13 hours, ahead of U.T. The period of Daylight Time is specified by Order in Council, as provided by the Act, and in 1999 Daylight Time was in effect until 02h NZST on March 21st, and from 02h NZST on October 3rd until the end of the 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 kept elsewhere in the South Pacific are set by the governments of the respective countries. Those used in places that sometimes report that earthquakes to the Observatory are listed below.

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

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

ORIGIN INFORMATION

CONTENT

This section contains origin times, epicentres, focal depths, and magnitudes of earthquakes in the New Zealand region that the Observatory has located from instrumental data, together with indicators of the quality of the data used.

In the areas within the inner and outer polygons outlined on the map on page 20, the Observatory attempts to determine origins for all shallow earthquakes of M_L 3.5 or more, and

all shocks of M_L 4.0 or more, respectively. (Origins are regarded as shallow if their depth is less than 60 km.) Origins are also calculated for smaller or more distant earthquakes reported to have been felt in New Zealand. Weak shocks felt during earthquake swarms do not automatically get this individual attention, but an origin is found for at least one shock in any sequence giving rise to felt reports.

DETERMINATION OF ORIGINS

Earthquake origins are determined using P & S phases or first-arriving crustal P & S phases. Four different velocity/depth structures are used to calculate travel-times of rays passing through and immediately beneath the crust in different parts of the country (see table below). Beneath the "Moho" defined by these models, velocities are

smoothly merged with those of the Jeffreys-Bullen Tables (British Association for the Advancement of Science, 1958). The Standard velocity model is used to calculate crustal velocities beneath all regions except those defined in the following table.

MODEL	UPPER DEPTH BOUNDARY (km)	V_p (km/s)	V_s (km/s)	CORNERS OF REGION	
				Lat.	Long.
New Zealand Standard	0.0	5.5	3.3	(in clockwise order)	
	12.0	6.5	3.7		
	33.0	8.1	4.6		
Wellington	0.0	4.40	2.54	41.0 S	178.0 E
	0.4	5.63	3.16	43.5 S	175.0 E
	5.0	5.77	3.49	42.0 S	173.0 E
	15.0	6.39	3.50	39.7 S	175.7 E
	25.0	6.79	3.92		
	35.0	8.07	4.80		
Taupo	45.0	8.77	4.86		
	0.0	3.00	1.70	35.6 S	180.0 E
	2.0	5.30	3.00	38.0 S	177.5 E
	5.0	6.00	3.50	39.7 S	175.7 E
	15.0	7.40	4.30	39.0 S	175.0 E
	33.0	7.78	4.39	37.0 S	176.0 E
Clyde	65.0	7.94	4.51	34.6 S	178.5 E
	96.4	8.08	4.52		
	0.0	4.4	2.6	45.5 S	172.0 E
	0.5	6.0	3.3	49.0 S	167.0 E
	12.0	6.5	3.7	44.5 S	168.0 E
	33.0	8.1	4.6	44.0 S	169.0 E

Seismograms are displayed on high-resolution graphics monitor screens under the control of CUSP (Caltech-USGS Seismic Processor) interactive software, for an analyst to select phase onset times by positioning a cursor on the trace. The analyst also selects the amplitude maximum to be used in magnitude calculations. Whenever possible, locations are based exclusively on times of first-arriving P and S phases.

Weights are initially assigned to phase arrival times by analysts according to the precision of the measurement. The weight of readings is further modified by the location program, which, after each iteration, weights the residuals used to adjust the trial origin. The procedure (see Jeffreys, H., 1939: *Probability Theory*, Cambridge University Press) greatly reduces the weight given to phases with residuals greater than three standard errors.

In general, all four coordinates of the earthquake origin are calculated (origin time, latitude, longitude, and focal depth). In some cases, however, the focal depth is not allowed to vary, but 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 usually assigned, according to the crustal phases present and the goodness of fit of the resulting solution. Less often, the depth is restricted to a smaller value, particularly when the strengths of locally reported felt intensities indicate an uncommonly shallow focus. The letter R printed after the depth in the lists which follow indicates a restriction for any of the foregoing reasons. There are also times when data not suitable for input to the location program (e.g. overseas PKP readings), indicate the depth of focus; in such cases the depth is similarly fixed and the restriction shown by following the depth by the letter G (to indicate intervention by a Geophysicist). When convergence of the location program fails for lack of enough data, both epicentre and depth are

fixed at values consistent with the available information, and computation limited to finding a compatible origin time. Such doubly-restricted origins have the letters RR printed after the depth.

In routine origin determinations, sufficient of the stations nearest to the epicentre are read to ensure that there will be enough data for a satisfactory solution. When enough near observations are available, arrival times recorded at stations more distant from the epicentre are excluded from the calculations. Observatory analysts are free to completely reject data which they think to be unreliable, or to assign a low initial weight to it in the location program's procedure for minimising mean residuals. (See earlier details of how the weights are used).

In using the results in this section, it is essential to keep in mind that the positions of earthquakes with epicentres outside the network of seismograph stations can be very uncertain, even though the mean residual is small. With the aim of helping the reader to assess the reliability of the results presented here, the positional relationships between an epicentre, and the stations which recorded the data used to find it, are given after the calculated origin coordinates. Similarly, the number of magnitude estimates contributing to the mean value, and an indication of their scatter, are also shown.

The solutions presented here are in all cases based upon uniform procedures applied to laterally homogeneous models. Because well-established local models have been used to calculate the origins of shocks within the Wellington and Clyde Networks, systematic errors in these areas should be smaller than in other parts of the country.

The extensive development of CUSP software necessary to adapt it for use in New Zealand was undertaken by Dr T Webb and Dr E Smith.

MAGNITUDES

The magnitudes assigned to local earthquakes are intended to be the values of M_L as originally defined by C.F. Richter (Bull. Seism. Soc. Am. 25: 1-32, 1935), but his procedure for performing the magnitude calculation at other than the standard distance of 100 km has been modified, to take account of the observed characteristics of energy propagation in New Zealand, including the effect of focal depth (Haines, A.J., Bull. Seism. Soc. Am. 71: 275-94, 1981).

For stations more than 100 km away from the epicentre, an amplitude-distance relationship of the form

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

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

For all New Zealand crustal earthquakes N is 2 and α generally takes a value close to 0. With these values, the relationship describes head-wave propagation with no attenuation. In the Central Volcanic Region, however, (see Map, page 29), α takes values of 0.8 deg^{-1} for P waves and 1.05 deg^{-1} for S waves. Adjustments are therefore made according to the distance travelled in the volcanic region.

For deep earthquakes in the Main Seismic Region the same parameters as for crustal earthquakes apply ($N = 2$, $\alpha = 0$), 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 there necessitates different spreading and attenuation terms.

For deep earthquakes in Fiordland the same amplitude-distance relationship is used, with (i) N given the value 1 (body wave propagation), (ii) α increasing with focal depth, and (iii) stations in the North Island not used, because of variations of the coefficients N and α . Milford Sound (MSZ), Wether Hill (WHZ), and Deep Cove (DCZ) should ideally be excluded for the same reason, but as they are sometimes the only stations from which any estimate of magnitude can be made, they are used when necessary, with $N = 2$ and $\alpha = 0$.

For stations closer than 100 km to the epicentre, the formula

$$M_A = \log_{10} A + 1.0 \log_{10} R + 0.0029 R + K$$

developed by R. Robinson (Pageoph 125: 579-596, 1987) is used, where A is the maximum digital count, R is the slant distance from the station to the earthquake focus (in kilometres) and K is a station correction allowing for site factors.

Empirical corrections are applied to allow for differences in site effects. They are made in such a manner as to give the most consistent estimates of magnitude from the different stations, and their absolute level is adjusted to give a standard Wood-Anderson instrument at Wellington a zero correction, a procedure that can be justified on *a priori* grounds and provides a smooth connection with previously published New Zealand magnitudes. Station corrections (see Table on page 29 for synthetic Wood-Anderson values) are added to the individual estimates of magnitude, which are then averaged.

The amplitudes on which magnitude calculations are based are no longer published, but the number of measurements and the number of stations contributing to the average magnitude are listed (e.g. "5M/4stn" appearing in a data summary indicates that 5 amplitude measurements of records from 4 stations were used to compute an average).

The definitive local magnitude is finally calculated as a weighted average of all station estimates. Estimates from stations at distances less than 100 km are given half weight, as are stations WHZ, DCZ, and MSZ for deep earthquakes in Fiordland. When 8 or more synthetic Wood-Anderson readings are available, magnitudes derived from vertical component amplitudes are given zero weight.

CALCULATION OF AMPLITUDES

Synthetic Wood-Anderson seismograms are computed for all horizontal components at non-telemetered EARSS stations having Mark Products L4-C 1 Hz seismometers or, in the case of WEL, a Kinometrics force-balance accelerometer (see Map, page 30). The Wood-Anderson gain used is 2080. The maximum amplitude for each computed trace is picked automatically, but can be updated by the analyst. Only amplitudes exceeding a pre-determined level for each station are given weight in the calculations to avoid amplitudes being picked from micro-seismic noise.

Maximum amplitudes are also picked off vertical traces for both telemetered and non-telemetered stations. This is necessary to obtain readings for small events. For very small events, traces are high-pass filtered to enable an amplitude to be picked. Magnitudes are unable to be calculated for only a few small deep events for which no east coast station has been triggered.

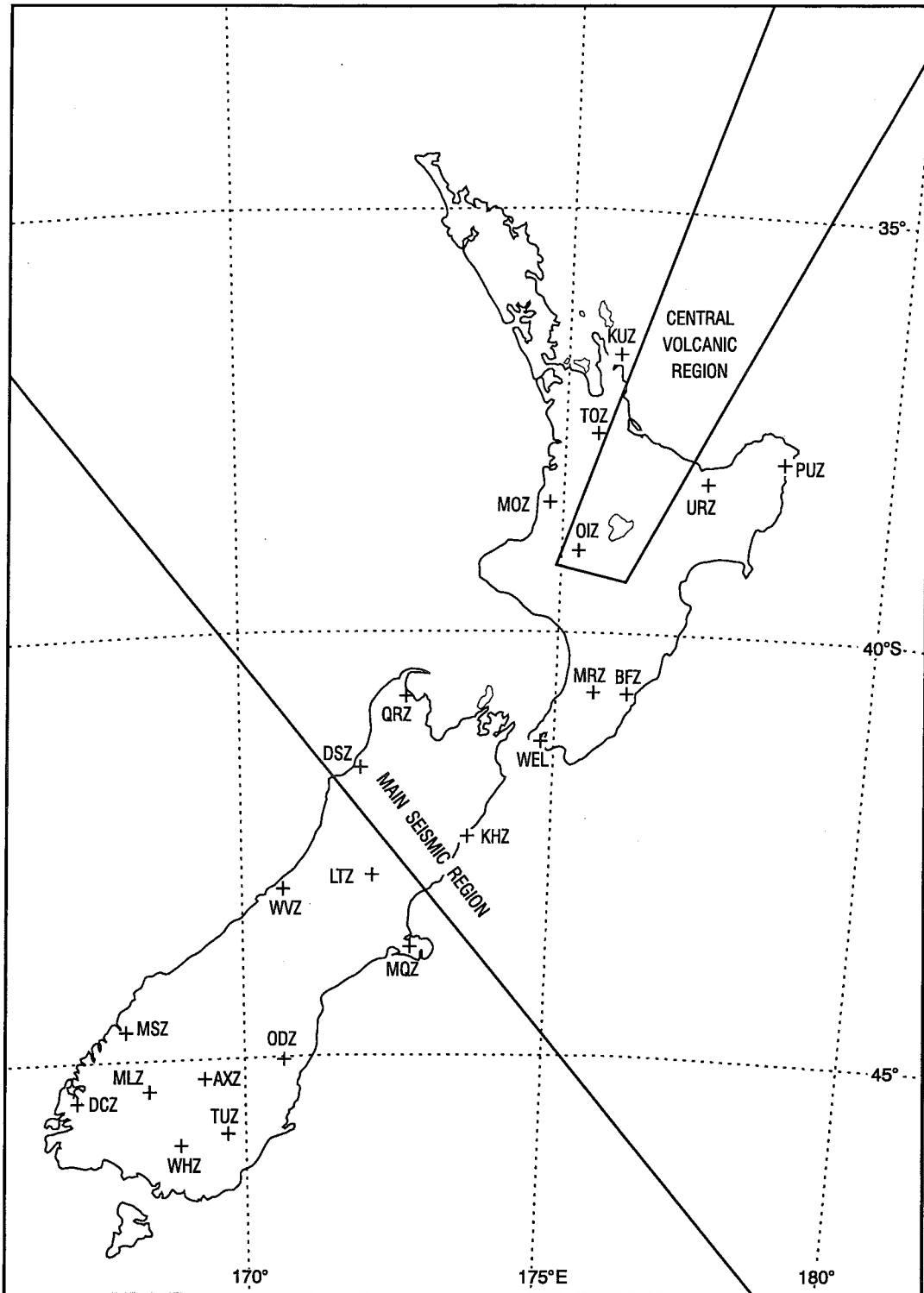
Note that there are usually two horizontal seismograms for each 3-component station, so that synthetic Wood-Anderson values tend to dominate the average magnitude.

Magnitude corrections for the two classes of focal depth, for earthquakes recorded on synthetic Wood-Anderson seismograms.				
Station	Component	Correction ($h \leq 33\text{km}$)	Correction ($h > 33\text{km}$)	Correction ($h > 33\text{km}$ Fiordland Only)
AXZ	H	+0.60		+0.74
BFZ	H	+0.48	+0.42	
DCZ	H	+0.60		+0.59
DSZ	H	+0.26*		+0.26*
KHZ	H	+0.43	+0.33	+0.43
KUZ	H	+0.36		
LTZ	H	+0.59		+0.59
MLZ	H	+0.61		+0.36
MOZ	H	+0.36		
MQZ	H	+0.51*		+0.51*
MRZ	H	+0.42	+0.49	
ODZ	H	+0.45		+0.45
OIZ	H	+0.42		
PUZ	H	+0.37	+0.37	
QRZ	H	+0.35		+0.35
TOZ	H	+0.54*		
TUZ	H	+0.31		+0.31
URZ	H	+0.35	+0.67	
WEL	N	0.00	0.00	
WEL	E	+0.09	+0.09	
WHZ	H	+0.19		+0.35
WVZ	H	+0.52		+0.52

H refers to horizontal seismometers, either N/S or E/W.

* indicates that these stations were not used to calculate magnitudes before 1st October.

Note that WEL E needs a slight empirical correction to agree with the N component and with the standard Wood-Anderson instrument.



Stations and regions used for determination of magnitudes from digital records.

DATA FROM THE NATIONAL NETWORK

LAYOUT

The first entry for each earthquake is the reference number, used throughout the Report. The second line gives the origin coordinates and the magnitude and the third line shows, beneath each of the coordinates in line two, its standard error. Where depth has been restricted, the letter R or G in place of the standard error indicates the fact. The fourth line starts with Rsd, the standard deviation of residuals (in seconds), an indication of how well the adopted origin reconciles the available data with the earth models used by the location program. Formally,

$$Rsd = \left[\sum_{i=1}^n \{ (w_i r_i)^2 / (n - m) \} \right]^{1/2}$$

where r_i is the i th residual, w_i its weight, n the number of readings and m the number of parameters determined (4 for unrestricted depth, 3 when depth is restricted.) When the number of readings used and the number of parameters are the same, the standard errors and Rsd are not defined. This is shown by the letters ND. The remainder of the fourth line and most of the fifth line present information indicating to the reader the degree of constraint on the adopted origin. Xph/Ystn shows that X phases from Y stations were used in the determination of the origin. (All phases given non-zero weight are counted but stations which failed to provide such a phase are not). Dmin is the distance from the epicentre to the nearest of these Y stations and Az. gap is the greatest

angular gap in their distribution about the epicentre.

Corr. is the correlation coefficient of the errors in latitude and longitude. It may be used to construct an epicentral confidence region. (See Flinn, E.A., 1965, "Confidence regions and error determinations for seismic event locations". Rev. Geophys. 3: 156-185.) pM/Qstn shows that p magnitude estimates from phases recorded at Q stations contributed to the average value shown on line two. Msd is the standard deviation of the magnitude estimates.

The numbers of upward and downward first motions recorded are indicated at the end of line five.

Additional information may be appended to the above. This usually consists of a short summary of the places where a shock has been felt and the intensities there, but may include other comments. Further details of reports received by the Observatory concerning the effects of earthquakes and the intensities assessed from these observations appear in later sections of this Report.

The telemetered networks all detect earthquakes of very small magnitude in their respective regions. These are all located and the data are held in the Observatory's archives. The following list, however, contains only those events which were of magnitude 3.5 or greater, or were reported felt. Smaller events have been excluded, as have events located more than 10° from Wellington.

99/10					99/152				
JAN 01 043753.3s	41.40S	172.36E	5km	M=3.6	JAN 04 203900.3s	36.78S	179.10E	212km	M=3.9
	0.2	0.01	0.01	R		0.4	0.07	0.05	3
Rsd 0.4s	9ph/5stn	Dmin 60km	Az.gap 143°		Rsd 0.1s	10ph/8stn	Dmin 162km	Az.gap 337°	
Corr. -0.177	26M/23stn	Msd 0.3	1↓		Corr. -0.738	11M/9stn	Msd 0.3		
99/23					99/214				
JAN 01 151654.8s	41.39S	172.36E	5km	M=3.6	JAN 06 020807.4s	38.25S	177.82E	65km	M=3.7
	0.2	0.01	0.01	R		0.2	0.01	0.01	2
Rsd 0.3s	20ph/14stn	Dmin 61km	Az.gap 144°		Rsd 0.1s	13ph/11stn	Dmin 43km	Az.gap 98°	
Corr. -0.236	28M/24stn	Msd 0.3	2↑ 3↓		Corr. 0.313	18M/14stn	Msd 0.2	2↑ 1↓	
99/27					99/230				
JAN 01 160316.8s	40.51S	173.31E	172km	M=4.4	JAN 06 135525.2s	41.56S	174.24E	5km	M=3.9
	0.4	0.01	0.01	3		0.1	0.01	0.01	R
Rsd 0.3s	38ph/31stn	Dmin 61km	Az.gap 137°		Rsd 0.3s	23ph/19stn	Dmin 21km	Az.gap 105°	
Corr. -0.013	20M/15stn	Msd 0.2	10↑ 7↓		Corr. -0.610	9M/5stn	Msd 0.2	7↑ 2↓	
99/32					99/234				
JAN 01 214151.6s	38.58S	176.00E	171km	M=3.7	JAN 06 150810.2s	44.99S	167.61E	70km	M=3.8
	0.5	0.02	0.02	4		0.5	0.03	0.03	4
Rsd 0.2s	19ph/15stn	Dmin 103km	Az.gap 156°		Rsd 0.2s	12ph/9stn	Dmin 43km	Az.gap 182°	
Corr. -0.164	13M/13stn	Msd 0.3	1↑		Corr. -0.700	12M/6stn	Msd 0.3	1↑ 3↓	
99/58					99/245				
JAN 02 212528.5s	36.63S	179.07E	12km	M=3.6	JAN 06 200358.9s	37.41S	176.72E	212km	M=4.1
	1.8	0.33	0.28	R		0.6	0.07	0.04	5
Rsd 0.7s	4ph/3stn	Dmin 251km	Az.gap 349°		Rsd 0.2s	17ph/14stn	Dmin 64km	Az.gap 257°	
Corr. -0.879	3M/3stn	Msd 0.5			Corr. -0.038	18M/17stn	Msd 0.2		
99/66					99/253				
JAN 03 014922.9s	40.80S	174.38E	66km	M=4.2	JAN 07 023945.8s	38.09S	176.99E	65km	M=3.6
	0.2	0.01	0.01	3		0.3	0.02	0.01	2
Rsd 0.2s	36ph/31stn	Dmin 39km	Az.gap 76°		Rsd 0.2s	19ph/16stn	Dmin 21km	Az.gap 156°	
Corr. 0.102	11M/7stn	Msd 0.2	12↑ 3↓		Corr. 0.300	15M/11stn	Msd 0.2	1↑	
Felt Wanganui (57) to Tawa (68), MM4.									
99/76					99/263				
JAN 03 070021.5s	41.09S	174.51E	57km	M=5.5	JAN 07 171633.1s	46.96S	165.58E	33km	M=3.7
	0.1	0.01	0.01	2		0.2	0.01	0.01	R
Rsd 0.1s	36ph/32stn	Dmin 22km	Az.gap 59°		Rsd 0.1s	12ph/6stn	Dmin 194km	Az.gap 309°	
Corr. -0.302	8M/4stn	Msd 0.1	16↑ 7↓		Corr. -0.183	9M/8stn	Msd 0.2		
Felt Wanganui (57) to Seddon (84), maximum intensity MM5.									
99/82					99/266				
JAN 03 114305.8s	39.55S	175.63E	21km	M=3.6	JAN 07 193329.7s	38.36S	175.93E	151km	M=3.8
	0.1	0.01	0.01	1		0.4	0.03	0.02	3
Rsd 0.2s	33ph/28stn	Dmin 31km	Az.gap 142°		Rsd 0.2s	18ph/15stn	Dmin 42km	Az.gap 181°	
Corr. 0.023	31M/31stn	Msd 0.3	2↑ 4↓		Corr. -0.624	17M/16stn	Msd 0.2	1↑	
99/104					99/270				
JAN 03 193342.1s	37.38S	176.59E	306km	M=3.8	JAN 07 213356.0s	44.66S	168.31E	85km	M=4.0
	0.4	0.06	0.05	4		0.4	0.03	0.02	5
Rsd 0.2s	12ph/10stn	Dmin 108km	Az.gap 241°		Rsd 0.3s	15ph/11stn	Dmin 30km	Az.gap 131°	
Corr. -0.735	11M/11stn	Msd 0.3			Corr. -0.572	12M/6stn	Msd 0.2	1↑ 1↓	
99/135					99/276				
JAN 04 154347.4s	38.41S	175.77E	159km	M=4.0	JAN 08 003621.1s	37.89S	176.17E	176km	M=3.6
	0.5	0.03	0.02	4		1.1	0.08	0.11	9
Rsd 0.2s	26ph/22stn	Dmin 33km	Az.gap 152°		Rsd 0.4s	10ph/8stn	Dmin 92km	Az.gap 254°	
Corr. -0.563	18M/16stn	Msd 0.2			Corr. -0.699	16M/16stn	Msd 0.2		
					Poor station coverage.				

				99/313					99/395		
JAN 09	131848.9s	43.29S	173.75E	12km	M=4.9	JAN 11	193604.9s	37.02S	176.74E	12km	M=3.7
	0.3	0.01	0.02	R			1.1	0.07	0.06	R	
Rsd	0.2s	18ph/12stn	Dmin 98km	Az.gap 190°		Rsd	0.3s	5ph/3stn	Dmin 141km	Az.gap 324°	
Corr.	-0.634	27M/14stn	Msd 0.2	9↑ 2↓		Corr.	-0.230	2M/2stn	Msd 0.2		
Felt Christchurch and Banks Peninsula (110), MM4.											
				99/316							99/402
JAN 09	165559.5s	42.17S	173.06E	57km	M=3.6	JAN 11	215046.8s	37.69S	176.64E	151km	M=4.0
	0.2	0.01	0.01	3			0.6	0.05	0.02	5	
Rsd	0.3s	25ph/18stn	Dmin 47km	Az.gap 66°		Rsd	0.2s	23ph/17stn	Dmin 46km	Az.gap 227°	
Corr.	-0.118	13M/11stn	Msd 0.3	1↑ 2↓		Corr.	-0.319	23M/18stn	Msd 0.2		
				99/321							99/412
JAN 09	192043.7s	37.48S	179.33E	15km	M=3.6	JAN 12	051625.3s	40.70S	174.04E	73km	M=3.5
	0.5	0.04	0.02	3			0.2	0.01	0.01	4	
Rsd	0.2s	5ph/3stn	Dmin 116km	Az.gap 337°		Rsd	0.3s	37ph/30stn	Dmin 15km	Az.gap 92°	
Corr.	-0.505	11M/9stn	Msd 0.3			Corr.	0.022	16M/14stn	Msd 0.2		
				99/323							99/419
JAN 09	205312.9s	37.37S	176.46E	231km	M=3.5	JAN 12	084634.2s	36.66S	177.48E	158km	M=3.6
	0.3	0.03	0.03	2			0.5	0.15	0.05	17	
Rsd	0.1s	10ph/8stn	Dmin 114km	Az.gap 289°		Rsd	0.1s	5ph/3stn	Dmin 127km	Az.gap 315°	
Corr.	-0.774	9M/9stn	Msd 0.2			Corr.	0.524	2M/2stn	Msd 0.0		
				99/361							99/441
JAN 10	192804.0s	37.55S	176.16E	268km	M=3.7	JAN 12	203848.8s	38.04S	176.48E	137km	M=3.5
	1.4	0.11	0.09	11			1.1	0.06	0.03	10	
Rsd	0.3s	9ph/8stn	Dmin 114km	Az.gap 266°		Rsd	0.3s	10ph/9stn	Dmin 61km	Az.gap 224°	
Corr.	-0.500	11M/11stn	Msd 0.2			Corr.	0.003	14M/14stn	Msd 0.3		
				99/372							99/449
JAN 11	012704.7s	38.34S	176.50E	188km	M=3.5	JAN 13	052427.7s	37.01S	176.88E	243km	M=4.0
	0.9	0.19	0.36	17			0.9	0.10	0.06	9	
Rsd	0.2s	11ph/8stn	Dmin 75km	Az.gap 295°		Rsd	0.3s	13ph/11stn	Dmin 140km	Az.gap 274°	
Corr.	-0.973	7M/7stn	Msd 0.4	1↑		Corr.	-0.557	19M/19stn	Msd 0.2	1↑	
Poor station coverage.											
				99/373							99/462
JAN 11	014609.8s	38.11S	176.22E	148km	M=3.6	JAN 13	172843.2s	41.53S	172.19E	5km	M=3.6
	0.8	0.04	0.03	6			0.1	0.01	0.01	R	
Rsd	0.3s	13ph/11stn	Dmin 30km	Az.gap 224°		Rsd	0.2s	19ph/13stn	Dmin 40km	Az.gap 147°	
Corr.	-0.193	14M/14stn	Msd 0.2			Corr.	-0.226	18M/14stn	Msd 0.3	2↑ 3↓	
				99/392							99/464
JAN 11	183729.3s	44.22S	168.75E	5km	M=3.8	JAN 13	185509.5s	38.58S	177.90E	21km	M=3.6
	0.5	0.03	0.03	R			0.3	0.02	0.02	4	
Rsd	0.4s	13ph/10stn	Dmin 70km	Az.gap 165°		Rsd	0.3s	11ph/8stn	Dmin 13km	Az.gap 168°	
Corr.	-0.539	17M/15stn	Msd 1.0			Corr.	-0.472	15M/11stn	Msd 0.2	1↑	
				99/393							99/472
JAN 11	191520.3s	38.22S	176.02E	161km	M=3.7	JAN 14	010325.9s	39.49S	176.98E	25km	M=3.9
	0.6	0.03	0.02	5			0.2	0.01	0.01	1	
Rsd	0.2s	14ph/11stn	Dmin 28km	Az.gap 246°		Rsd	0.2s	33ph/28stn	Dmin 15km	Az.gap 161°	
Corr.	-0.271	11M/11stn	Msd 0.3	1↑ 1↓		Corr.	-0.393	37M/32stn	Msd 0.3	1↑ 4↓	
Felt Napier (52).											
				99/394							99/477
JAN 11	191849.5s	36.07S	179.95E	115km	M=3.9	JAN 14	062536.8s	37.81S	176.63E	144km	M=3.6
	0.3	0.10	0.05	17			1.0	0.07	0.07	6	
Rsd	0.1s	7ph/4stn	Dmin 268km	Az.gap 346°		Rsd	0.4s	12ph/10stn	Dmin 66km	Az.gap 232°	
Corr.	-0.899	2M/2stn	Msd 0.2			Corr.	-0.564	13M/13stn	Msd 0.2	1↑	

99/488					99/538						
JAN 14	155537.5s	36.44S	178.64E	33km	M=3.6	JAN 16	072146.7s	42.56S	175.45E	12km	M=4.1
	0.3	0.02	0.03	R			0.7	0.05	0.03	R	
Rsd 0.1s	8ph/4stn		Dmin 133km	Az.gap 337°		Rsd 0.4s	20ph/13stn		Dmin 158km	Az.gap 202°	
Corr. -0.267	5M/4stn		Msd 0.4			Corr. -0.752	36M/30stn		Msd 0.3	3↑ 3↓	
99/494					99/539						
JAN 14	202541.9s	44.67S	168.31E	87km	M=4.0	JAN 16	080358.5s	45.20S	167.27E	90km	M=4.2
	0.4	0.03	0.02	5			0.2	0.02	0.02	2	
Rsd 0.3s	15ph/10stn		Dmin 30km	Az.gap 126°		Rsd 0.1s	12ph/8stn		Dmin 31km	Az.gap 205°	
Corr. -0.559	12M/6stn		Msd 0.3	5↑ 2↓		Corr. -0.679	12M/6stn		Msd 0.3	7↑ 4↓	
99/500					99/560						
JAN 14	221640.6s	38.45S	176.18E	125km	M=4.0	JAN 17	013128.4s	39.81S	174.12E	201km	M=3.7
	0.4	0.02	0.01	4			0.6	0.03	0.03	5	
Rsd 0.2s	24ph/21stn		Dmin 10km	Az.gap 128°		Rsd 0.3s	20ph/14stn		Dmin 69km	Az.gap 219°	
Corr. -0.587	23M/18stn		Msd 0.2	1↑		Corr. -0.192	19M/18stn		Msd 0.3	1↑	
99/502					99/570						
JAN 14	235309.8s	37.77S	176.35E	219km	M=3.8	JAN 17	143523.5s	37.06S	176.86E	262km	M=3.9
	0.6	0.06	0.04	5			0.3	0.03	0.04	3	
Rsd 0.2s	12ph/10stn		Dmin 37km	Az.gap 255°		Rsd 0.1s	11ph/8stn		Dmin 135km	Az.gap 255°	
Corr. -0.335	13M/13stn		Msd 0.3			Corr. -0.196	9M/9stn		Msd 0.2		
99/503					99/571						
JAN 15	013736.6s	40.60S	175.52E	41km	M=3.6	JAN 17	143635.0s	38.27S	175.54E	157km	M=3.5
	0.1	0.01	0.01	2			0.3	0.02	0.03	3	
Rsd 0.2s	36ph/31stn		Dmin 9km	Az.gap 63°		Rsd 0.1s	15ph/10stn		Dmin 138km	Az.gap 248°	
Corr. -0.357	18M/14stn		Msd 0.3	4↑ 2↓		Corr. -0.805	8M/8stn		Msd 0.3	1↑	
	Felt Manawatu district (62).						Poor station coverage.				
99/504					99/578						
JAN 15	033712.2s	37.16S	177.87E	107km	M=3.9	JAN 17	193623.0s	45.06S	167.51E	89km	M=3.5
	0.4	0.04	0.02	3			0.3	0.02	0.02	3	
Rsd 0.1s	15ph/13stn		Dmin 62km	Az.gap 262°		Rsd 0.2s	12ph/7stn		Dmin 53km	Az.gap 221°	
Corr. 0.353	15M/15stn		Msd 0.3	1↓		Corr. -0.523	8M/7stn		Msd 0.3	1↓	
99/505					99/588						
JAN 15	050235.7s	38.22S	176.31E	156km	M=4.2	JAN 18	020122.5s	39.98S	177.23E	12km	M=3.9
	0.4	0.03	0.02	4			0.3	0.01	0.02	R	
Rsd 0.2s	23ph/20stn		Dmin 11km	Az.gap 115°		Rsd 0.3s	31ph/28stn		Dmin 59km	Az.gap 201°	
Corr. -0.586	18M/15stn		Msd 0.3	1↑		Corr. -0.397	41M/36stn		Msd 0.3	1↑ 1↓	
99/509					99/593						
JAN 15	060958.9s	38.55S	176.56E	103km	M=3.6	JAN 18	045319.5s	45.19S	167.40E	73km	M=3.6
	0.0	0.02	0.01	0			0.3	0.02	0.02	2	
Rsd 0.0s	5ph/4stn		Dmin 58km	Az.gap 187°		Rsd 0.2s	14ph/9stn		Dmin 36km	Az.gap 183°	
Corr. -0.994	1M/1stn		Msd 0.0	1↓		Corr. -0.579	15M/9stn		Msd 0.2	1↓	
99/513					99/607						
JAN 15	101208.3s	45.17S	167.43E	87km	M=4.8	JAN 18	120122.2s	37.63S	176.14E	295km	M=3.7
	0.2	0.02	0.02	2			0.2	0.09	0.11	9	
Rsd 0.1s	13ph/8stn		Dmin 40km	Az.gap 183°		Rsd 0.0s	11ph/8stn		Dmin 199km	Az.gap 280°	
Corr. -0.588	17M/9stn		Msd 0.4	6↑ 4↓		Corr. -0.996	9M/9stn		Msd 0.3		
							Poor station coverage.				
99/535					99/623						
JAN 16	041449.8s	37.24S	178.03E	60km	M=3.7	JAN 18	203329.3s	39.97S	177.19E	12km	M=4.2
	0.5	0.05	0.02	6			0.3	0.01	0.02	R	
Rsd 0.2s	9ph/7stn		Dmin 95km	Az.gap 300°		Rsd 0.2s	28ph/24stn		Dmin 57km	Az.gap 196°	
Corr. -0.051	6M/3stn		Msd 0.2	1↓		Corr. -0.427	13M/7stn		Msd 0.2	3↑ 1↓	
							Felt Hawkes Bay region.				

99/641					99/733				
JAN 19 084342.4s	39.19S	176.17E	71km	M=4.2	JAN 21 100210.8s	45.17S	167.49E	110km	M=3.7
	0.2	0.01	0.01	2		0.3	0.02	0.02	2
Rsd 0.2s	47ph/36stn	Dmin 34km	Az.gap 109°		Rsd 0.2s	13ph/8stn	Dmin 57km	Az.gap 226°	
Corr. -0.477	24M/19stn	Msd 0.3	4↑ 7↓		Corr. -0.441	17M/12stn	Msd 0.3	1↓	
99/668					99/734				
JAN 19 233702.9s	39.95S	177.18E	12km	M=4.2	JAN 21 101815.2s	36.07S	179.16E	174km	M=4.3
	0.3	0.02	0.02	R		0.6	0.24	0.08	34
Rsd 0.3s	29ph/25stn	Dmin 54km	Az.gap 194°		Rsd 0.3s	10ph/8stn	Dmin 186km	Az.gap 334°	
Corr. -0.329	12M/7stn	Msd 0.2	5↑ 2↓		Corr. -0.299	14M/13stn	Msd 0.2		
Felt Hawkes Bay region.									
99/676					99/740				
JAN 20 021118.8s	37.33S	176.60E	207km	M=4.3	JAN 21 145756.0s	40.58S	174.71E	66km	M=3.7
	0.5	0.04	0.03	4		0.2	0.01	0.01	3
Rsd 0.2s	17ph/14stn	Dmin 112km	Az.gap 200°		Rsd 0.2s	32ph/29stn	Dmin 36km	Az.gap 72°	
Corr. 0.288	23M/19stn	Msd 0.2			Corr. -0.111	14M/10stn	Msd 0.3	1↑ 2↓	
99/692					99/743				
JAN 20 112908.2s	41.78S	174.61E	31km	M=3.6	JAN 21 165300.6s	38.39S	176.23E	137km	M=3.9
	0.1	0.01	0.01	1		0.4	0.03	0.01	3
Rsd 0.2s	26ph/21stn	Dmin 33km	Az.gap 158°		Rsd 0.2s	14ph/11stn	Dmin 56km	Az.gap 177°	
Corr. -0.543	8M/5stn	Msd 0.3	2↑ 10↓		Corr. -0.721	15M/14stn	Msd 0.3	5↑ 2↓	
99/701					99/747				
JAN 20 143018.0s	35.86S	179.29E	191km	M=4.4	JAN 21 195223.5s	45.13S	167.04E	5km	M=3.7
	0.3	0.06	0.04	10		0.5	0.02	0.03	R
Rsd 0.1s	15ph/13stn	Dmin 212km	Az.gap 329°		Rsd 0.2s	12ph/9stn	Dmin 86km	Az.gap 248°	
Corr. 0.299	21M/16stn	Msd 0.3	1↓		Corr. -0.057	8M/4stn	Msd 0.2	1↓	
99/707					99/750				
JAN 20 164714.0s	40.39S	176.92E	58km	M=3.6	JAN 21 212558.9s	41.34S	172.89E	103km	M=3.6
	0.3	0.01	0.03	4		0.3	0.02	0.01	3
Rsd 0.2s	20ph/16stn	Dmin 66km	Az.gap 196°		Rsd 0.3s	23ph/17stn	Dmin 47km	Az.gap 89°	
Corr. -0.513	16M/13stn	Msd 0.3	1↑		Corr. -0.179	15M/14stn	Msd 0.3	1↑	
99/713					99/756				
JAN 20 230846.3s	37.55S	176.62E	163km	M=4.1	JAN 22 011422.9s	41.69S	174.40E	5km	M=3.8
	0.5	0.06	0.02	4		0.1	0.01	0.01	R
Rsd 0.2s	16ph/13stn	Dmin 90km	Az.gap 236°		Rsd 0.3s	24ph/20stn	Dmin 17km	Az.gap 152°	
Corr. -0.438	21M/19stn	Msd 0.2	3↑ 2↓		Corr. -0.522	13M/7stn	Msd 0.3	2↑ 1↓	
99/714					99/758				
JAN 20 232037.6s	38.41S	175.90E	155km	M=3.9	JAN 22 012818.8s	41.70S	174.41E	5km	M=3.8
	0.5	0.03	0.02	4		0.1	0.01	0.01	R
Rsd 0.2s	20ph/18stn	Dmin 52km	Az.gap 202°		Rsd 0.2s	24ph/20stn	Dmin 17km	Az.gap 144°	
Corr. -0.492	21M/20stn	Msd 0.3	1↓		Corr. -0.375	13M/7stn	Msd 0.3	5↑ 3↓	
99/716					99/759				
JAN 21 005812.4s	38.20S	175.97E	181km	M=4.0	JAN 22 013927.7s	41.71S	174.42E	5km	M=4.0
	0.7	0.04	0.02	5		0.2	0.02	0.01	R
Rsd 0.2s	16ph/14stn	Dmin 60km	Az.gap 203°		Rsd 0.3s	26ph/22stn	Dmin 17km	Az.gap 156°	
Corr. 0.176	21M/20stn	Msd 0.2	3↑ 1↓		Corr. -0.554	15M/8stn	Msd 0.2	2↑ 1↓	
99/717					99/761				
JAN 21 010813.0s	41.69S	174.42E	5km	M=3.7	JAN 22 020512.2s	41.70S	174.43E	5km	M=4.5
	0.1	0.01	0.01	R		0.1	0.01	0.01	R
Rsd 0.3s	27ph/21stn	Dmin 18km	Az.gap 153°		Rsd 0.2s	25ph/21stn	Dmin 18km	Az.gap 146°	
Corr. -0.699	30M/24stn	Msd 0.3	3↑ 4↓		Corr. -0.649	18M/10stn	Msd 0.2	2↑ 2↓	
					Felt Blenheim (77).				

				99/763					99/841
JAN 22 024833.0s	41.71S	174.43E	5km	M=3.6	JAN 23 174912.6s	36.26S	178.12E	287km	M=4.1
	0.1	0.01	0.01	R		0.6	0.12	0.24	6
Rsd 0.3s	28ph/21stn	Dmin 19km	Az.gap 156°		Rsd 0.1s	10ph/8stn	Dmin 149km	Az.gap 322°	
Corr. -0.580	9M/5stn	Msd 0.3	1↑ 1↓		Corr. -0.961	10M/10stn	Msd 0.2		
				99/765					99/850
JAN 22 025714.9s	41.70S	174.42E	5km	M=4.0	JAN 23 235751.9s	39.48S	174.17E	236km	M=3.6
	0.1	0.01	0.01	R		0.4	0.02	0.03	3
Rsd 0.2s	25ph/20stn	Dmin 18km	Az.gap 154°		Rsd 0.1s	20ph/16stn	Dmin 116km	Az.gap 200°	
Corr. -0.575	14M/8stn	Msd 0.2	5↑ 5↓		Corr. -0.632	11M/11stn	Msd 0.4		
				99/772					99/854
JAN 22 052019.2s	40.55S	173.38E	146km	M=4.0	JAN 24 052642.8s	39.72S	174.35E	227km	M=3.6
	0.5	0.01	0.02	5		0.4	0.02	0.02	3
Rsd 0.3s	39ph/34stn	Dmin 54km	Az.gap 131°		Rsd 0.2s	19ph/15stn	Dmin 51km	Az.gap 229°	
Corr. -0.081	8M/4stn	Msd 0.2	8↑ 4↓		Corr. -0.012	12M/11stn	Msd 0.2	1↑	
				99/774					99/865
JAN 22 065350.3s	41.68S	174.42E	5km	M=4.0	JAN 24 170023.0s	41.69S	174.41E	5km	M=3.8
	0.2	0.02	0.01	R		0.1	0.01	0.01	R
Rsd 0.4s	22ph/20stn	Dmin 18km	Az.gap 143°		Rsd 0.2s	23ph/19stn	Dmin 17km	Az.gap 153°	
Corr. -0.624	15M/8stn	Msd 0.3	6↑ 4↓		Corr. -0.597	13M/7stn	Msd 0.2	2↑ 2↓	
				99/793					99/877
JAN 22 094928.5s	40.22S	179.96E	33km	M=4.1	JAN 25 060118.1s	41.47S	174.45E	24km	M=3.7
	0.7	0.02	0.05	R		0.1	0.01	0.01	1
Rsd 0.3s	18ph/13stn	Dmin 243km	Az.gap 267°		Rsd 0.2s	22ph/19stn	Dmin 32km	Az.gap 124°	
Corr. -0.398	23M/19stn	Msd 0.2	1↑		Corr. -0.609	23M/19stn	Msd 0.2	6↑ 4↓	
				99/797					99/890
JAN 22 112351.1s	41.71S	174.42E	5km	M=3.6	JAN 25 162722.3s	38.12S	176.57E	153km	M=3.6
	0.2	0.01	0.01	R		0.7	0.04	0.03	5
Rsd 0.3s	25ph/19stn	Dmin 18km	Az.gap 155°		Rsd 0.2s	13ph/9stn	Dmin 49km	Az.gap 223°	
Corr. -0.542	29M/23stn	Msd 0.2	2↑ 3↓		Corr. -0.570	13M/12stn	Msd 0.3		
				99/798					99/891
JAN 22 113022.0s	41.69S	174.39E	5km	M=3.5	JAN 25 173335.1s	45.34S	167.31E	111km	M=4.0
	0.1	0.01	0.01	R		0.3	0.02	0.03	2
Rsd 0.3s	24ph/20stn	Dmin 16km	Az.gap 152°		Rsd 0.2s	12ph/8stn	Dmin 68km	Az.gap 234°	
Corr. -0.621	26M/21stn	Msd 0.3	2↑ 3↓		Corr. -0.405	8M/4stn	Msd 0.2	3↑ 3↓	
				99/801					99/894
JAN 22 130412.1s	40.00S	177.19E	12km	M=3.6	JAN 25 213305.3s	37.68S	176.17E	307km	M=3.9
	0.3	0.02	0.02	R		0.6	0.07	0.09	5
Rsd 0.3s	24ph/21stn	Dmin 60km	Az.gap 195°		Rsd 0.2s	13ph/10stn	Dmin 104km	Az.gap 267°	
Corr. -0.441	29M/25stn	Msd 0.3			Corr. -0.620	14M/14stn	Msd 0.3		
				99/818					99/896
JAN 23 022238.3s	37.58S	177.18E	5km	M=3.5	JAN 25 215818.4s	39.46S	178.87E	33km	M=3.6
	0.2	0.01	0.02	R		0.6	0.02	0.04	R
Rsd 0.3s	8ph/7stn	Dmin 5km	Az.gap 139°		Rsd 0.2s	8ph/5stn	Dmin 118km	Az.gap 276°	
Corr. -0.169	12M/8stn	Msd 0.3			Corr. -0.148	13M/13stn	Msd 0.2		
				99/833					99/900
JAN 23 104652.4s	39.00S	178.04E	44km	M=3.5	JAN 25 225525.0s	39.26S	174.86E	202km	M=3.8
	0.4	0.03	0.02	3		0.6	0.02	0.02	5
Rsd 0.1s	6ph/3stn	Dmin 43km	Az.gap 305°		Rsd 0.1s	21ph/18stn	Dmin 60km	Az.gap 193°	
Corr. -0.422	4M/4stn	Msd 0.4			Corr. -0.258	17M/16stn	Msd 0.2	1↑	

Felt Wellington (68) MM4.

99/904					99/960						
JAN 26	013402.5s	37.58S	178.37E	36km	M=3.7	JAN 27	174905.8s	46.40S	166.18E	12km	M=3.5
	0.2	0.01	0.01	2			0.8	0.04	0.06	R	
Rsd 0.1s	13ph/11stn		Dmin 7km		Az.gap 278°	Rsd 0.3s	9ph/6stn		Dmin 148km		Az.gap 304°
Corr. 0.585	15M/11stn		Msd 0.3	1↑		Corr. -0.267	9M/7stn		Msd 0.2	1↓	
99/924					99/966						
JAN 26	165742.0s	40.25S	173.41E	165km	M=3.6	JAN 27	231340.4s	41.07S	174.09E	63km	M=3.7
	0.3	0.01	0.01	3			0.2	0.01	0.01	3	
Rsd 0.2s	27ph/23stn		Dmin 75km		Az.gap 151°	Rsd 0.2s	29ph/26stn		Dmin 22km		Az.gap 53°
Corr. 0.115	11M/11stn		Msd 0.2	1↑		Corr. -0.235	16M/11stn		Msd 0.2	3↑ 2↓	
99/925					99/972						
JAN 26	180927.9s	37.64S	176.19E	265km	M=3.9	JAN 28	050751.7s	35.94S	177.73E	323km	M=4.7
	0.4	0.05	0.03	3			1.0	0.12	0.08	10	
Rsd 0.1s	12ph/11stn		Dmin 106km		Az.gap 264°	Rsd 0.3s	19ph/17stn		Dmin 241km		Az.gap 311°
Corr. -0.655	11M/11stn		Msd 0.3	1↓		Corr. -0.239	24M/19stn		Msd 0.2		
99/930					99/976						
JAN 26	204654.2s	37.09S	177.26E	33km	M=3.8	JAN 28	055439.1s	46.07S	166.54E	5km	M=4.3
	0.4	0.03	0.02	R			0.7	0.05	0.04	R	
Rsd 0.1s	6ph/5stn		Dmin 130km		Az.gap 334°	Rsd 0.3s	11ph/7stn		Dmin 110km		Az.gap 275°
Corr. 0.511	5M/5stn		Msd 0.2	1↑		Corr. -0.439	10M/5stn		Msd 0.3	1↓	
99/932					99/996						
JAN 26	235757.2s	39.04S	176.19E	69km	M=3.5	JAN 28	180156.4s	39.78S	174.68E	106km	M=3.6
	0.2	0.01	0.01	2			0.2	0.01	0.01	3	
Rsd 0.1s	10ph/7stn		Dmin 19km		Az.gap 199°	Rsd 0.3s	38ph/32stn		Dmin 21km		Az.gap 71°
Corr. -0.835	1M/1stn		Msd 0.0			Corr. -0.182	15M/15stn		Msd 0.3	1↑	
99/935					99/1005						
JAN 27	024850.2s	46.68S	166.24E	12km	M=3.8	JAN 28	205715.1s	41.69S	174.42E	5km	M=3.7
	0.4	0.02	0.02	R			0.2	0.02	0.01	R	
Rsd 0.2s	11ph/6stn		Dmin 146km		Az.gap 307°	Rsd 0.3s	21ph/19stn		Dmin 18km		Az.gap 154°
Corr. 0.162	11M/7stn		Msd 0.3	1↑		Corr. -0.555	9M/6stn		Msd 0.3	1↑ 2↓	
99/941					99/1008						
JAN 27	080442.8s	36.87S	178.75E	76km	M=4.0	JAN 28	221855.7s	38.52S	175.85E	144km	M=4.0
	0.4	0.04	0.02	7			0.7	0.03	0.02	6	
Rsd 0.1s	11ph/9stn		Dmin 90km		Az.gap 307°	Rsd 0.3s	20ph/18stn		Dmin 23km		Az.gap 155°
Corr. 0.009	16M/12stn		Msd 0.2	1↑		Corr. -0.536	17M/15stn		Msd 0.2	1↑	
99/942					99/1011						
JAN 27	081915.3s	38.36S	175.83E	143km	M=3.8	JAN 28	230250.4s	41.32S	173.40E	81km	M=3.6
	0.4	0.03	0.03	5			0.3	0.02	0.01	4	
Rsd 0.1s	17ph/13stn		Dmin 93km		Az.gap 224°	Rsd 0.3s	28ph/22stn		Dmin 39km		Az.gap 63°
Corr. -0.915	14M/13stn		Msd 0.2			Corr. -0.252	13M/12stn		Msd 0.3	3↑ 1↓	
99/945					99/1042						
JAN 27	094225.3s	38.15S	176.53E	155km	M=4.3	JAN 29	225929.9s	38.13S	176.08E	171km	M=4.1
	0.4	0.03	0.02	3			0.5	0.03	0.02	4	
Rsd 0.1s	24ph/22stn		Dmin 10km		Az.gap 183°	Rsd 0.2s	21ph/19stn		Dmin 11km		Az.gap 200°
Corr. -0.420	20M/18stn		Msd 0.3	6↑ 1↓		Corr. -0.155	22M/18stn		Msd 0.2	1↑	
99/951					99/1049						
JAN 27	133527.6s	39.68S	179.29E	12km	M=3.7	JAN 30	001806.8s	40.12S	174.95E	18km	M=3.8
	0.5	0.02	0.04	R			0.2	0.01	0.01	3	
Rsd 0.2s	8ph/5stn		Dmin 160km		Az.gap 305°	Rsd 0.4s	39ph/33stn		Dmin 36km		Az.gap 72°
Corr. -0.054	15M/15stn		Msd 0.2			Corr. -0.082	39M/34stn		Msd 0.3	1↑	

99/1054					99/1160				
JAN 30 004821.1s	38.28S	175.95E	146km	M=3.8	FEB 02 194000.6s	39.44S	174.28E	133km	M=3.6
	0.4	0.03	0.02	4		0.4	0.07	0.06	8
Rsd 0.2s	17ph/14stn	Dmin 30km	Az.gap 188°		Rsd 0.1s	11ph/8stn	Dmin 69km	Az.gap 201°	
Corr. -0.348	18M/18stn	Msd 0.2			Corr. -0.948	2M/2stn	Msd 0.1		
99/1062					99/1167				
JAN 30 040802.0s	37.34S	178.52E	49km	M=3.5	FEB 03 031946.0s	35.34S	179.51E	287km	M=4.9
	0.2	0.02	0.01	6		1.0	0.12	0.05	8
Rsd 0.1s	6ph/3stn	Dmin 85km	Az.gap 326°		Rsd 0.1s	17ph/16stn	Dmin 387km	Az.gap 330°	
Corr. -0.156	6M/4stn	Msd 0.2			Corr. 0.668	21M/18stn	Msd 0.3		
99/1067					99/1171				
JAN 30 083156.1s	37.21S	178.01E	63km	M=4.1	FEB 03 050443.3s	38.03S	177.89E	31km	M=3.5
	0.5	0.04	0.03	5		0.2	0.02	0.02	4
Rsd 0.2s	15ph/12stn	Dmin 50km	Az.gap 230°		Rsd 0.3s	11ph/9stn	Dmin 32km	Az.gap 130°	
Corr. 0.492	17M/13stn	Msd 0.2	1↓		Corr. -0.325	17M/13stn	Msd 0.2	1↑ 1↓	
99/1083					99/1186				
JAN 31 001314.1s	46.39S	166.18E	12km	M=5.1	FEB 03 170724.6s	40.38S	174.55E	72km	M=3.7
	0.7	0.06	0.05	R		0.1	0.00	0.01	2
Rsd 0.4s	11ph/7stn	Dmin 147km	Az.gap 292°		Rsd 0.2s	41ph/33stn	Dmin 62km	Az.gap 81°	
Corr. -0.208	15M/8stn	Msd 0.2	1↓		Corr. 0.080	17M/14stn	Msd 0.3	4↑ 2↓	
99/1104					99/1227				
FEB 01 093719.5s	46.35S	166.22E	12km	M=4.1	FEB 04 201035.1s	39.20S	174.74E	208km	M=4.3
	0.5	0.02	0.03	R		0.5	0.02	0.02	4
Rsd 0.3s	10ph/8stn	Dmin 143km	Az.gap 293°		Rsd 0.2s	35ph/30stn	Dmin 32km	Az.gap 151°	
Corr. 0.243	8M/4stn	Msd 0.2	1↓		Corr. -0.134	19M/17stn	Msd 0.3	5↑ 2↓	
99/1121					99/1228				
FEB 01 182605.6s	38.26S	176.10E	181km	M=5.0	FEB 04 220537.2s	38.15S	177.83E	54km	M=3.6
	0.3	0.02	0.01	3		0.3	0.01	0.01	3
Rsd 0.2s	37ph/33stn	Dmin 20km	Az.gap 84°		Rsd 0.2s	10ph/6stn	Dmin 38km	Az.gap 129°	
Corr. -0.238	10M/5stn	Msd 0.2	17↑ 6↓		Corr. -0.403	8M/4stn	Msd 0.1	1↑ 2↓	
99/1130					99/1229				
FEB 02 004906.9s	38.14S	176.16E	150km	M=3.7	FEB 04 224350.8s	39.76S	176.97E	39km	M=3.5
	0.8	0.07	0.04	6		0.3	0.02	0.02	4
Rsd 0.3s	14ph/12stn	Dmin 73km	Az.gap 245°		Rsd 0.3s	30ph/23stn	Dmin 27km	Az.gap 182°	
Corr. -0.630	14M/14stn	Msd 0.2			Corr. -0.479	18M/17stn	Msd 0.3	1↑	
99/1145					99/1232				
FEB 02 085829.9s	37.06S	176.20E	277km	M=3.6	FEB 04 234402.3s	38.01S	179.23E	12km	M=3.8
	0.6	0.08	0.03	19		0.3	0.01	0.02	R
Rsd 0.1s	13ph/11stn	Dmin 404km	Az.gap 331°		Rsd 0.1s	14ph/11stn	Dmin 86km	Az.gap 287°	
Corr. -0.080	6M/6stn	Msd 0.2			Corr. 0.062	28M/24stn	Msd 0.2	1↓	
Very poor station coverage.									
99/1149					99/1244				
FEB 02 111428.4s	36.09S	177.83E	12km	M=3.9	FEB 05 081352.3s	36.10S	179.53W	12km	M=3.9
	1.5	0.09	0.12	R		0.6	0.07	0.06	R
Rsd 0.4s	5ph/3stn	Dmin 224km	Az.gap 335°		Rsd 0.2s	5ph/3stn	Dmin 295km	Az.gap 347°	
Corr. -0.280	7M/6stn	Msd 0.3			Corr. -0.712	3M/3stn	Msd 0.2		
99/1154					99/1246				
FEB 02 152403.7s	35.23S	178.54E	205km	M=4.0	FEB 05 102129.5s	39.12S	174.87E	215km	M=4.7
	0.2	0.04	0.03	6		0.3	0.02	0.02	3
Rsd 0.1s	6ph/4stn	Dmin 264km	Az.gap 333°		Rsd 0.2s	42ph/36stn	Dmin 45km	Az.gap 91°	
Corr. -0.005	12M/12stn	Msd 0.2			Corr. -0.329	9M/5stn	Msd 0.2	7↑ 5↓	

				99/1713					99/1768
FEB 19 015200.9s	40.45S	176.18E	64km	M=3.9	FEB 20 051950.3s	36.32S	178.46E	12km	M=3.8
	0.2	0.01	0.02	2		1.1	0.07	0.08	R
Rsd 0.2s	39ph/33stn	Dmin 26km	Az.gap 158°		Rsd 0.3s	7ph/6stn	Dmin 143km	Az.gap 324°	
Corr. -0.660	21M/16stn	Msd 0.2	5↑ 7↓		Corr. 0.313	8M/6stn	Msd 0.2		
Felt Palmerston North (62) MM4 and Waitare Beach (65).									99/1815
				99/1716	FEB 21 200222.4s	37.90S	179.66E	12km	M=4.6
FEB 19 020819.9s	40.62S	176.10E	40km	M=4.0		0.3	0.02	0.02	R
	0.1	0.01	0.01	2	Rsd 0.2s	19ph/17stn	Dmin 125km	Az.gap 292°	
Rsd 0.2s	33ph/30stn	Dmin 14km	Az.gap 98°		Corr. 0.097	8M/5stn	Msd 0.3		
Corr. -0.549	19M/14stn	Msd 0.3	2↑ 3↓						99/1826
Felt Palmerston North (62) MM3.					FEB 22 054450.3s	38.10S	178.99E	5km	M=3.6
				99/1717		0.5	0.03	0.02	R
FEB 19 024318.9s	40.62S	174.26E	90km	M=3.7	Rsd 0.2s	10ph/7stn	Dmin 65km	Az.gap 267°	
	0.2	0.01	0.01	3	Corr. -0.003	10M/8stn	Msd 0.2		
Rsd 0.3s	32ph/25stn	Dmin 36km	Az.gap 91°						99/1835
Corr. -0.082	16M/14stn	Msd 0.3	5↑ 1↓		FEB 22 124414.6s	36.62S	178.09E	261km	M=3.5
				99/1731		1.8	0.59	0.84	55
FEB 19 085836.4s	37.19S	177.36E	159km	M=3.5	Rsd 0.3s	8ph/7stn	Dmin 222km	Az.gap 328°	
	2.7	0.14	0.14	23	Corr. -0.971	7M/7stn	Msd 0.2		
Rsd 0.7s	7ph/6stn	Dmin 126km	Az.gap 213°		Poor station coverage				
Corr. 0.898	4M/4stn	Msd 0.6	1↑ 1↓						99/1844
				99/1735	FEB 22 190102.5s	37.16S	177.05E	296km	M=3.7
FEB 19 122113.6s	38.66S	177.66E	74km	M=3.7		1.5	0.26	0.31	25
	0.3	0.02	0.01	3	Rsd 0.4s	9ph/7stn	Dmin 147km	Az.gap 290°	
Rsd 0.1s	15ph/12stn	Dmin 33km	Az.gap 127°		Corr. -0.958	9M/9stn	Msd 0.3		
Corr. -0.705	13M/12stn	Msd 0.3							99/1845
				99/1747	FEB 22 201028.8s	38.62S	175.48E	177km	M=4.3
FEB 19 150900.6s	37.00S	179.11W	172km	M=4.4		0.3	0.02	0.01	2
	0.8	0.07	0.06	11	Rsd 0.1s	28ph/24stn	Dmin 25km	Az.gap 123°	
Rsd 0.3s	10ph/6stn	Dmin 238km	Az.gap 311°		Corr. -0.163	23M/20stn	Msd 0.3	3↑ 2↓	
Corr. 0.678	16M/13stn	Msd 0.2							99/1847
				99/1749	FEB 22 213857.2s	37.75S	176.28E	201km	M=4.5
FEB 19 164002.9s	36.70S	178.91W	33km	M=4.4		0.5	0.02	0.02	4
	0.5	0.04	0.03	R	Rsd 0.2s	23ph/21stn	Dmin 70km	Az.gap 109°	
Rsd 0.3s	10ph/7stn	Dmin 267km	Az.gap 314°		Corr. 0.465	25M/20stn	Msd 0.2	1↑	
Corr. -0.075	17M/15stn	Msd 0.2							99/1859
				99/1751	FEB 23 070839.8s	38.39S	176.20E	166km	M=3.7
FEB 19 183548.4s	35.83S	178.92E	266km	M=3.7		0.8	0.04	0.02	7
	1.6	0.41	0.59	26	Rsd 0.2s	12ph/10stn	Dmin 79km	Az.gap 220°	
Rsd 0.3s	7ph/6stn	Dmin 256km	Az.gap 339°		Corr. -0.540	11M/11stn	Msd 0.2	1↑	
Corr. -0.923	6M/6stn	Msd 0.1							99/1865
				99/1755	FEB 23 093247.8s	38.32S	176.27E	150km	M=4.5
FEB 19 215357.7s	36.79S	179.05W	12km	M=4.4		0.3	0.01	0.01	3
	1.0	0.07	0.06	R	Rsd 0.1s	27ph/24stn	Dmin 7km	Az.gap 78°	
Rsd 0.3s	10ph/8stn	Dmin 252km	Az.gap 313°		Corr. -0.280	9M/5stn	Msd 0.4	9↑ 2↓	
Corr. -0.149	25M/22stn	Msd 0.3							99/1867
				99/1757	FEB 23 102712.4s	36.82S	176.37E	189km	M=3.9
FEB 19 220848.4s	37.05S	178.96W	12km	M=4.2		1.0	0.23	0.40	67
	0.9	0.11	0.07	R	Rsd 0.3s	10ph/8stn	Dmin 192km	Az.gap 269°	
Rsd 0.2s	7ph/6stn	Dmin 271km	Az.gap 340°		Corr. -0.928	12M/12stn	Msd 0.2		
Corr. -0.547	11M/9stn	Msd 0.4			Poor station coverage				

99/1871					99/1962				
FEB 23 125536.6s	41.82S	172.81E	79km	M=3.9	FEB 26 174907.3s	41.75S	175.41E	35km	M=4.0
	0.2	0.01	0.01	2		0.4	0.02	0.02	2
Rsd 0.2s	25ph/19stn	Dmin 10km	Az.gap 73°		Rsd 0.2s	20ph/17stn	Dmin 38km	Az.gap 189°	
Corr. -0.259	13M/12stn	Msd 0.3	1↑		Corr. -0.634	8M/4stn	Msd 0.1	7↑ 2↓	
99/1876					99/1963				
FEB 23 221403.7s	37.44S	178.86E	58km	M=3.9	FEB 26 214930.0s	38.35S	175.85E	212km	M=4.0
	0.8	0.05	0.06	10		0.6	0.10	0.14	11
Rsd 0.2s	14ph/11stn	Dmin 88km	Az.gap 285°		Rsd 0.3s	16ph/13stn	Dmin 119km	Az.gap 246°	
Corr. 0.843	7M/5stn	Msd 0.4			Corr. -0.912	14M/14stn	Msd 0.2		
99/1879					99/1966				
FEB 24 010500.0s	38.30S	176.13E	188km	M=3.6	FEB 27 003729.9s	38.47S	176.55E	202km	M=3.7
	0.4	0.05	0.10	7		0.5	0.07	0.09	5
Rsd 0.2s	13ph/9stn	Dmin 102km	Az.gap 288°		Rsd 0.1s	13ph/11stn	Dmin 62km	Az.gap 238°	
Corr. -0.737	11M/11stn	Msd 0.3	1↑		Corr. -0.920	13M/13stn	Msd 0.2	1↑	
99/1893					99/2015				
FEB 24 152624.1s	37.27S	176.96E	229km	M=4.5	FEB 28 210919.2s	39.62S	174.35E	203km	M=3.6
	1.6	0.21	0.08	14		0.4	0.01	0.02	4
Rsd 0.3s	15ph/13stn	Dmin 83km	Az.gap 260°		Rsd 0.1s	17ph/15stn	Dmin 114km	Az.gap 219°	
Corr. 0.295	9M/5stn	Msd 0.2	1↓		Corr. -0.693	13M/13stn	Msd 0.4		
99/1903					99/2018				
FEB 24 190749.1s	39.09S	175.23E	247km	M=3.5	MAR 01 005807.7s	40.81S	175.26E	32km	M=3.5
	0.7	0.02	0.05	6		0.1	0.01	0.01	1
Rsd 0.1s	12ph/11stn	Dmin 30km	Az.gap 253°		Rsd 0.3s	25ph/22stn	Dmin 30km	Az.gap 97°	
Corr. -0.195	11M/11stn	Msd 0.3	1↓		Corr. -0.389	20M/16stn	Msd 0.3	2↑ 5↓	
99/1951					99/2030				
FEB 26 061811.8s	34.70S	177.59E	256km	M=4.0	MAR 01 122627.8s	38.85S	178.27E	28km	M=3.7
	0.6	0.06	0.22	15		0.7	0.03	0.04	2
Rsd 0.1s	10ph/9stn	Dmin 379km	Az.gap 328°		Rsd 0.2s	11ph/9stn	Dmin 32km	Az.gap 259°	
Corr. -0.627	10M/10stn	Msd 0.1			Corr. -0.752	16M/14stn	Msd 0.3	1↑	
99/1953					99/2043				
FEB 26 082432.5s	45.01S	167.61E	95km	M=3.7	MAR 02 045041.5s	35.37S	179.08E	268km	M=4.3
	0.3	0.02	0.02	2		0.7	0.24	0.40	18
Rsd 0.1s	11ph/7stn	Dmin 45km	Az.gap 179°		Rsd 0.2s	8ph/6stn	Dmin 309km	Az.gap 340°	
Corr. -0.501	8M/4stn	Msd 0.2	1↓		Corr. -0.957	9M/9stn	Msd 0.3		
99/1954					99/2055				
FEB 26 083147.2s	37.88S	179.24E	12km	M=4.6	MAR 02 164515.2s	37.00S	178.00E	187km	M=4.0
	0.2	0.02	0.01	R		1.5	0.11	0.08	10
Rsd 0.1s	16ph/15stn	Dmin 89km	Az.gap 289°		Rsd 0.2s	10ph/9stn	Dmin 93km	Az.gap 299°	
Corr. 0.172	36M/30stn	Msd 0.2	2↑ 2↓		Corr. 0.150	3M/3stn	Msd 0.2		
99/1958					99/2079				
FEB 26 142009.6s	38.61S	175.74E	167km	M=4.8	MAR 03 150112.0s	36.97S	177.26E	188km	M=4.0
	0.4	0.02	0.02	3		1.2	0.23	0.31	36
Rsd 0.2s	26ph/22stn	Dmin 11km	Az.gap 122°		Rsd 0.5s	11ph/7stn	Dmin 151km	Az.gap 294°	
Corr. -0.402	10M/5stn	Msd 0.3	15↑ 3↓		Corr. -0.947	6M/5stn	Msd 0.3	1↑	
					Poor station coverage.				
99/1959					99/2085				
FEB 26 155405.7s	37.24S	176.75E	225km	M=4.3	MAR 03 164134.0s	41.97S	175.21E	30km	M=3.5
	0.4	0.05	0.03	5		0.2	0.01	0.01	2
Rsd 0.1s	12ph/11stn	Dmin 163km	Az.gap 273°		Rsd 0.2s	21ph/17stn	Dmin 61km	Az.gap 211°	
Corr. -0.754	13M/13stn	Msd 0.2	1↑		Corr. -0.646	24M/21stn	Msd 0.3	1↑	

				99/2090					99/2205			
MAR 03	233143.9s	37.16S	177.08E	275km	M=4.0	MAR 07	170653.0s	41.27S	172.64E	197km	M=3.9	
		0.7	0.08	0.06	7				0.4	0.03	0.02	3
Rsd 0.2s	13ph/12stn	Dmin	129km	Az.gap	281°	Rsd 0.3s	24ph/18stn	Dmin	51km	Az.gap	116°	
Corr. -0.580	14M/14stn	Msd	0.2			Corr. -0.186	13M/12stn	Msd	0.3		1↑	
				99/2092								99/2208
MAR 04	003313.3s	38.06S	176.17E	199km	M=4.2	MAR 07	190649.2s	36.88S	177.64E	117km	M=4.4	
		1.1	0.04	0.02	9				0.7	0.07	0.04	5
Rsd 0.1s	14ph/13stn	Dmin	36km	Az.gap	252°	Rsd 0.2s	15ph/12stn	Dmin	83km	Az.gap	285°	
Corr. 0.340	22M/18stn	Msd	0.2		1↑	Corr. 0.464	25M/20stn	Msd	0.2			
				99/2094								99/2213
MAR 04	011415.6s	37.00S	178.97W	12km	M=4.0	MAR 08	010237.7s	35.84S	178.36E	211km	M=4.6	
		0.3	0.05	0.03	R				0.3	0.06	0.03	6
Rsd 0.1s	5ph/3stn	Dmin	319km	Az.gap	348°	Rsd 0.1s	16ph/13stn	Dmin	248km	Az.gap	326°	
Corr. -0.728	3M/3stn	Msd	0.0			Corr. -0.731	22M/18stn	Msd	0.2			
				99/2107								99/2224
MAR 04	115247.8s	39.23S	175.05E	28km	M=3.7	MAR 08	165419.9s	36.86S	179.01W	12km	M=3.7	
		0.0	0.01	0.00	1				0.3	0.05	0.03	R
Rsd 0.1s	29ph/24stn	Dmin	36km	Az.gap	73°	Rsd 0.1s	6ph/4stn	Dmin	276km	Az.gap	342°	
Corr. -0.150	10M/6stn	Msd	0.2		3↑ 8↓	Corr. -0.782	5M/5stn	Msd	0.1			
	Felt Taumarunui (37) to Kaponga (47), MM4.											
				99/2114								99/2227
MAR 04	152043.5s	39.92S	174.03E	124km	M=3.6	MAR 08	200321.2s	39.54S	174.58E	119km	M=4.3	
		0.3	0.01	0.01	3				0.3	0.01	0.02	3
Rsd 0.2s	30ph/26stn	Dmin	66km	Az.gap	126°	Rsd 0.2s	35ph/32stn	Dmin	90km	Az.gap	140°	
Corr. -0.278	13M/13stn	Msd	0.3		7↑ 2↓	Corr. -0.406	24M/18stn	Msd	0.3		11↑ 8↓	
				99/2117								99/2238
MAR 04	162001.3s	37.92S	177.46E	62km	M=3.6	MAR 09	063102.9s	36.37S	177.79E	12km	M=3.6	
		0.2	0.01	0.01	2				0.9	0.05	0.07	R
Rsd 0.2s	14ph/10stn	Dmin	48km	Az.gap	132°	Rsd 0.3s	6ph/3stn	Dmin	194km	Az.gap	332°	
Corr. 0.176	12M/8stn	Msd	0.2		1↑	Corr. -0.254	2M/2stn	Msd	0.2			
				99/2123								99/2239
MAR 04	233821.7s	37.51S	175.92E	280km	M=4.1	MAR 09	063527.4s	38.42S	176.16E	157km	M=4.1	
		0.7	0.07	0.10	6				0.7	0.04	0.03	6
Rsd 0.3s	17ph/15stn	Dmin	134km	Az.gap	267°	Rsd 0.3s	14ph/11stn	Dmin	84km	Az.gap	210°	
Corr. -0.742	18M/18stn	Msd	0.3		2↑ 1↓	Corr. -0.745	19M/17stn	Msd	0.3		1↑	
	Poor station coverage.											
				99/2132								99/2246
MAR 05	102718.5s	37.32S	177.41E	143km	M=4.3	MAR 09	105827.6s	36.56S	177.60E	215km	M=3.8	
		0.4	0.07	0.02	4				0.6	0.06	0.06	6
Rsd 0.2s	18ph/16stn	Dmin	85km	Az.gap	233°	Rsd 0.2s	12ph/9stn	Dmin	177km	Az.gap	311°	
Corr. 0.132	21M/17stn	Msd	0.2		1↑ 2↓	Corr. -0.518	12M/11stn	Msd	0.3			
				99/2145								99/2247
MAR 06	022156.2s	38.24S	176.07E	150km	M=3.8	MAR 09	110801.9s	37.85S	176.10E	186km	M=3.5	
		0.7	0.04	0.03	5				0.6	0.06	0.03	4
Rsd 0.2s	13ph/12stn	Dmin	60km	Az.gap	238°	Rsd 0.1s	11ph/9stn	Dmin	100km	Az.gap	255°	
Corr. -0.483	14M/14stn	Msd	0.3		1↑	Corr. -0.466	13M/13stn	Msd	0.2			
				99/2163								99/2254
MAR 06	103151.8s	38.54S	175.90E	147km	M=3.7	MAR 09	191551.4s	37.92S	176.85E	144km	M=3.8	
		0.6	0.05	0.03	4				1.1	0.08	0.03	8
Rsd 0.2s	12ph/10stn	Dmin	24km	Az.gap	216°	Rsd 0.3s	10ph/7stn	Dmin	44km	Az.gap	233°	
Corr. -0.867	12M/12stn	Msd	0.3		1↑ 1↓	Corr. 0.037	15M/14stn	Msd	0.3		1↑	

99/2263					99/2392				
MAR 09 230105.0s	39.70S	174.26E	129km	M=4.0	MAR 13 170315.6s	40.37S	173.42E	172km	M=3.6
	0.3	0.01	0.01	3		0.4	0.01	0.01	3
Rsd 0.1s	37ph/31stn	Dmin 44km	Az.gap 116°		Rsd 0.2s	29ph/25stn	Dmin 64km	Az.gap 145°	
Corr. -0.530	20M/18stn	Msd 0.3	1↓		Corr. -0.036	13M/13stn	Msd 0.2	1↑ 1↓	
99/2264					99/2399				
MAR 09 231031.7s	40.00S	174.32E	134km	M=3.7	MAR 14 012009.6s	38.15S	176.46E	152km	M=3.6
	0.3	0.01	0.02	4		0.3	0.02	0.01	2
Rsd 0.2s	27ph/22stn	Dmin 96km	Az.gap 174°		Rsd 0.1s	11ph/8stn	Dmin 59km	Az.gap 238°	
Corr. -0.581	16M/16stn	Msd 0.3	9↑ 2↓		Corr. -0.210	10M/10stn	Msd 0.3	1↑	
99/2267					99/2401				
MAR 10 022023.0s	41.37S	174.17E	45km	M=4.6	MAR 14 032535.9s	38.87S	175.48E	120km	M=3.6
	0.1	0.01	0.00	2		0.4	0.02	0.01	4
Rsd 0.1s	26ph/21stn	Dmin 20km	Az.gap 84°		Rsd 0.2s	21ph/18stn	Dmin 16km	Az.gap 108°	
Corr. -0.549	8M/4stn	Msd 0.2	5↑ 7↓		Corr. -0.019	16M/16stn	Msd 0.2	2↑ 2↓	
Felt Wellington (68) and Marlborough (77, 78), maximum intensity MM4.									
99/2285					99/2404				
MAR 10 134347.2s	40.87S	174.32E	23km	M=3.8	MAR 14 080506.8s	42.17S	173.67E	40km	M=3.8
	0.1	0.01	0.01	1		0.1	0.01	0.01	2
Rsd 0.1s	30ph/26stn	Dmin 34km	Az.gap 71°		Rsd 0.2s	27ph/19stn	Dmin 30km	Az.gap 143°	
Corr. 0.411	27M/25stn	Msd 0.3	4↑ 4↓		Corr. -0.414	14M/11stn	Msd 0.3	2↑ 4↓	
99/2323					99/2406				
MAR 11 134022.7s	39.09S	174.75E	218km	M=4.5	MAR 14 102356.3s	45.10S	167.34E	52km	M=3.5
	0.5	0.02	0.02	4		0.3	0.02	0.02	5
Rsd 0.2s	35ph/32stn	Dmin 38km	Az.gap 104°		Rsd 0.1s	10ph/6stn	Dmin 66km	Az.gap 253°	
Corr. -0.519	23M/17stn	Msd 0.3	1↑ 1↓		Corr. -0.672	16M/10stn	Msd 0.4	1↓	
99/2333					99/2411				
MAR 11 223759.1s	45.31S	167.35E	5km	M=3.7	MAR 14 143542.9s	41.83S	172.79E	77km	M=3.5
	0.5	0.02	0.03	R		0.2	0.01	0.01	3
Rsd 0.3s	10ph/7stn	Dmin 65km	Az.gap 232°		Rsd 0.2s	24ph/18stn	Dmin 12km	Az.gap 73°	
Corr. -0.457	8M/4stn	Msd 0.3	1↓		Corr. -0.107	11M/11stn	Msd 0.3	1↑	
99/2339					99/2415				
MAR 12 005126.6s	38.51S	175.55E	162km	M=4.1	MAR 14 181849.4s	39.66S	174.33E	214km	M=3.7
	0.7	0.04	0.02	6		0.3	0.01	0.03	3
Rsd 0.3s	20ph/17stn	Dmin 28km	Az.gap 177°		Rsd 0.1s	22ph/17stn	Dmin 116km	Az.gap 187°	
Corr. -0.297	21M/20stn	Msd 0.3	1↑		Corr. -0.682	13M/13stn	Msd 0.2		
99/2359					99/2421				
MAR 12 140118.7s	37.62S	176.38E	194km	M=3.7	MAR 14 215134.9s	38.43S	175.44E	251km	M=3.6
	1.1	0.09	0.08	7		0.4	0.04	0.06	5
Rsd 0.3s	12ph/9stn	Dmin 96km	Az.gap 256°		Rsd 0.2s	12ph/9stn	Dmin 147km	Az.gap 221°	
Corr. -0.739	14M/14stn	Msd 0.3	1↑		Corr. -0.894	9M/9stn	Msd 0.3	1↑	
					Poor station coverage.				
99/2370					99/2425				
MAR 13 014850.1s	38.86S	175.07E	213km	M=4.5	MAR 15 003502.2s	37.94S	175.93E	199km	M=3.8
	0.5	0.02	0.01	4		1.1	0.09	0.13	8
Rsd 0.2s	27ph/25stn	Dmin 44km	Az.gap 86°		Rsd 0.4s	11ph/9stn	Dmin 109km	Az.gap 266°	
Corr. -0.413	25M/21stn	Msd 0.2	5↑ 5↓		Corr. -0.669	13M/13stn	Msd 0.2		
					Poor station coverage.				
99/2374					99/2427				
MAR 13 035320.4s	41.60S	175.06E	27km	M=3.5	MAR 15 013833.5s	38.85S	174.08E	5km	M=3.6
	0.1	0.01	0.01	1		0.2	0.01	0.01	R
Rsd 0.2s	25ph/21stn	Dmin 25km	Az.gap 181°		Rsd 0.2s	21ph/16stn	Dmin 40km	Az.gap 199°	
Corr. -0.326	15M/14stn	Msd 0.2	6↑ 3↓		Corr. -0.828	26M/24stn	Msd 0.3	1↑ 1↓	

				99/2428					99/2519					
MAR 15	015042.1s	39.09S	174.82E	204km	M=4.2				MAR 19	045129.8s	38.18S	176.08E	179km	M=4.0
		0.4	0.02	0.02	3						0.7	0.04	0.02	6
	Rsd 0.2s	32ph/27stn	Dmin 43km	Az.gap 149°						Rsd 0.2s	16ph/14stn	Dmin 27km	Az.gap 235°	
	Corr. -0.289	20M/20stn	Msd 0.3							Corr. -0.375	18M/18stn	Msd 0.3	1↑	
				99/2449										99/2528
MAR 16	004648.5s	39.76S	173.97E	153km	M=3.8				MAR 19	100052.2s	39.29S	175.91E	63km	M=3.8
		0.6	0.02	0.02	6						0.2	0.01	0.01	2
	Rsd 0.3s	28ph/25stn	Dmin 48km	Az.gap 124°						Rsd 0.2s	29ph/24stn	Dmin 22km	Az.gap 100°	
	Corr. -0.522	17M/17stn	Msd 0.3	1↑ 8↓						Corr. -0.160	19M/16stn	Msd 0.3	2↑ 2↓	
				99/2451										99/2530
MAR 16	060655.6s	38.26S	176.02E	170km	M=3.8				MAR 19	111959.1s	40.13S	173.79E	12km	M=3.7
		2.0	0.10	0.07	16						0.1	0.01	0.01	R
	Rsd 0.2s	11ph/10stn	Dmin 56km	Az.gap 233°						Rsd 0.3s	34ph/27stn	Dmin 76km	Az.gap 130°	
	Corr. -0.859	15M/15stn	Msd 0.3	2↑ 1↓						Corr. -0.010	30M/28stn	Msd 0.3	1↑	
				99/2458										99/2538
MAR 16	203026.2s	38.63S	176.06E	5km	M=3.0				MAR 19	150456.8s	38.59S	175.95E	163km	M=3.6
		0.1	0.01	0.01	R						0.7	0.04	0.03	6
	Rsd 0.3s	13ph/11stn	Dmin 4km	Az.gap 139°						Rsd 0.2s	13ph/9stn	Dmin 23km	Az.gap 200°	
	Corr. -0.508	10M/10stn	Msd 0.4	1↑ 4↓						Corr. -0.575	14M/14stn	Msd 0.4	1↑ 1↓	
				Felt Wairakei (41).										
				99/2469										99/2584
MAR 17	010227.3s	38.03S	176.60E	143km	M=3.6				MAR 21	060015.9s	36.33S	179.84E	5km	M=3.6
		0.9	0.06	0.02	7						0.2	0.03	0.03	R
	Rsd 0.2s	10ph/9stn	Dmin 90km	Az.gap 227°						Rsd 0.1s	7ph/5stn	Dmin 196km	Az.gap 343°	
	Corr. -0.511	11M/11stn	Msd 0.2							Corr. -0.759	5M/5stn	Msd 0.2		
				99/2486										99/2586
MAR 17	184609.1s	38.97S	175.04E	220km	M=3.8				MAR 21	080435.1s	39.76S	174.00E	149km	M=3.5
		0.7	0.02	0.06	6						0.5	0.01	0.02	5
	Rsd 0.1s	20ph/18stn	Dmin 32km	Az.gap 214°						Rsd 0.2s	27ph/22stn	Dmin 47km	Az.gap 122°	
	Corr. -0.154	11M/11stn	Msd 0.3	1↑						Corr. -0.414	11M/11stn	Msd 0.2		
				99/2489										99/2587
MAR 17	210242.0s	45.43S	166.98E	56km	M=3.7				MAR 21	081447.8s	39.13S	174.97E	206km	M=4.0
		0.7	0.03	0.05	6						0.3	0.02	0.01	3
	Rsd 0.3s	8ph/6stn	Dmin 15km	Az.gap 294°						Rsd 0.2s	33ph/27stn	Dmin 38km	Az.gap 150°	
	Corr. -0.655	9M/5stn	Msd 0.2	2↑ 2↓						Corr. 0.070	20M/18stn	Msd 0.3		
				99/2495										99/2608
MAR 18	031051.7s	38.62S	177.51E	44km	M=4.8				MAR 22	043622.7s	37.77S	179.28E	5km	M=3.8
		0.2	0.01	0.01	7						0.1	0.02	0.01	R
	Rsd 0.2s	28ph/27stn	Dmin 45km	Az.gap 115°						Rsd 0.1s	5ph/3stn	Dmin 89km	Az.gap 307°	
	Corr. -0.099	8M/4stn	Msd 0.1	5↑ 6↓						Corr. -0.335	5M/3stn	Msd 0.4	1↑ 2↓	
				Felt East Cape (29) to Napier (52), maximum intensity MM5 near Wairoa.										
				99/2496										99/2609
MAR 18	031604.5s	40.80S	174.28E	68km	M=3.5				MAR 22	050356.6s	40.18S	173.53E	167km	M=3.7
		0.2	0.01	0.01	3						0.4	0.01	0.02	4
	Rsd 0.2s	30ph/28stn	Dmin 30km	Az.gap 78°						Rsd 0.2s	26ph/21stn	Dmin 77km	Az.gap 147°	
	Corr. 0.100	16M/14stn	Msd 0.3	1↑ 6↓						Corr. 0.046	15M/15stn	Msd 0.3	1↑	
				99/2497										99/2611
MAR 18	040323.7s	38.51S	175.68E	182km	M=3.8				MAR 22	062940.7s	36.44S	178.47E	12km	M=4.0
		0.3	0.03	0.03	3						0.5	0.03	0.04	R
	Rsd 0.1s	17ph/13stn	Dmin 22km	Az.gap 258°						Rsd 0.2s	10ph/6stn	Dmin 182km	Az.gap 323°	
	Corr. 0.676	15M/15stn	Msd 0.2	1↑ 1↓						Corr. 0.140	13M/11stn	Msd 0.2		

99/2612					99/2647				
MAR 22 065333.5s	38.40S	175.88E	186km	M=3.7	MAR 23 112306.6s	36.45S	179.76W	12km	M=3.7
	1.8	0.07	0.06	15		0.4	0.04	0.05	R
Rsd 0.2s	15ph/14stn	Dmin 36km	Az.gap 198°		Rsd 0.1s	5ph/3stn	Dmin 252km	Az.gap 343°	
Corr. -0.673	15M/15stn	Msd 0.3	1↑		Corr. -0.780	3M/3stn	Msd 0.3		
99/2614					99/2649				
MAR 22 093913.9s	41.70S	172.91E	100km	M=3.8	MAR 23 155051.5s	38.96S	175.82E	192km	M=3.5
	0.4	0.01	0.01	4		0.3	0.06	0.04	9
Rsd 0.3s	28ph/18stn	Dmin 81km	Az.gap 76°		Rsd 0.1s	12ph/9stn	Dmin 195km	Az.gap 318°	
Corr. -0.168	14M/14stn	Msd 0.3	3↑ 2↓		Corr. -0.873	7M/7stn	Msd 0.3		
99/2622					99/2656				
MAR 22 130912.6s	45.87S	168.02E	12km	M=3.8	MAR 24 091325.5s	37.45S	178.05E	245km	M=3.8
	0.1	0.01	0.01	R		0.7	0.21	0.31	10
Rsd 0.1s	11ph/7stn	Dmin 6km	Az.gap 81°		Rsd 0.2s	9ph/7stn	Dmin 28km	Az.gap 268°	
Corr. -0.291	10M/5stn	Msd 0.3	2↑ 2↓		Corr. -0.965	10M/10stn	Msd 0.3	1↓	
99/2623					99/2662				
MAR 22 134112.1s	35.76S	179.67E	33km	M=4.6	MAR 24 134150.2s	38.31S	176.23E	155km	M=4.1
	0.8	0.05	0.06	R		0.8	0.03	0.02	7
Rsd 0.3s	14ph/12stn	Dmin 238km	Az.gap 326°		Rsd 0.1s	15ph/15stn	Dmin 9km	Az.gap 124°	
Corr. 0.038	30M/28stn	Msd 0.2			Corr. -0.833	15M/14stn	Msd 0.3	1↓	
99/2629					99/2670				
MAR 22 212725.2s	38.85S	175.21E	181km	M=3.7	MAR 24 215130.4s	40.13S	173.62E	198km	M=3.9
	0.6	0.04	0.03	5		0.4	0.02	0.02	3
Rsd 0.1s	14ph/13stn	Dmin 27km	Az.gap 239°		Rsd 0.2s	32ph/25stn	Dmin 79km	Az.gap 182°	
Corr. -0.874	8M/8stn	Msd 0.2			Corr. -0.329	17M/17stn	Msd 0.3	1↑	
99/2634					99/2676				
MAR 23 001944.7s	39.54S	174.43E	121km	M=3.7	MAR 25 034436.0s	37.63S	178.32E	53km	M=3.6
	0.4	0.01	0.02	6		0.3	0.02	0.01	2
Rsd 0.2s	17ph/14stn	Dmin 99km	Az.gap 189°		Rsd 0.1s	7ph/4stn	Dmin 4km	Az.gap 214°	
Corr. -0.431	10M/10stn	Msd 0.2	1↓		Corr. 0.107	8M/4stn	Msd 0.2	1↑ 2↓	
99/2636					99/2681				
MAR 23 025212.4s	39.93S	173.62E	215km	M=3.9	MAR 25 065700.2s	38.78S	175.37E	213km	M=3.6
	0.7	0.03	0.04	6		0.7	0.04	0.03	7
Rsd 0.2s	20ph/17stn	Dmin 100km	Az.gap 195°		Rsd 0.3s	20ph/16stn	Dmin 49km	Az.gap 182°	
Corr. -0.560	11M/11stn	Msd 0.3	1↑		Corr. -0.463	15M/15stn	Msd 0.3	1↓	
99/2640					99/2686				
MAR 23 082454.7s	38.25S	176.05E	206km	M=4.4	MAR 25 113215.9s	46.41S	165.98E	33km	M=4.7
	0.3	0.02	0.02	3		0.6	0.05	0.04	R
Rsd 0.1s	21ph/17stn	Dmin 15km	Az.gap 96°		Rsd 0.2s	10ph/7stn	Dmin 139km	Az.gap 321°	
Corr. -0.411	21M/17stn	Msd 0.3	1↓		Corr. -0.317	9M/5stn	Msd 0.2		
99/2641					99/2688				
MAR 23 083702.7s	40.25S	173.51E	174km	M=3.6	MAR 25 123010.5s	40.26S	174.80E	65km	M=4.4
	0.5	0.05	0.02	4		0.1	0.00	0.01	3
Rsd 0.2s	17ph/12stn	Dmin 71km	Az.gap 231°		Rsd 0.2s	43ph/35stn	Dmin 52km	Az.gap 72°	
Corr. -0.111	9M/9stn	Msd 0.3			Corr. 0.227	12M/6stn	Msd 0.4	1↑	
99/2646					99/2692				
MAR 23 104418.2s	37.68S	177.13E	151km	M=5.9	MAR 25 163304.0s	38.65S	175.94E	121km	M=3.6
	0.7	0.04	0.02	5		0.6	0.05	0.03	5
Rsd 0.2s	28ph/24stn	Dmin 18km	Az.gap 110°		Rsd 0.2s	12ph/9stn	Dmin 19km	Az.gap 178°	
Corr. 0.240	10M/5stn	Msd 0.1	3↑ 1↓		Corr. -0.853	13M/13stn	Msd 0.3		
Felt from East Cape (29) to Wellington (68), maximum intensity MM5.									

	99/2706		99/2776
MAR 26 081218.7s	37.77S 175.90E 247km M=4.2	MAR 28 105056.3s	40.17S 173.56E 161km M=3.6
	0.4 0.11 0.07 6		0.4 0.02 0.02 3
Rsd 0.1s	11ph/8stn Dmin 119km Az.gap 257°	Rsd 0.2s	27ph/20stn Dmin 77km Az.gap 149°
Corr. -0.928	16M/16stn Msd 0.4	Corr. -0.347	11M/11stn Msd 0.3 1↑
	99/2708		99/2778
MAR 26 095404.9s	38.44S 175.89E 166km M=4.0	MAR 28 144144.8s	37.05S 176.84E 211km M=3.7
	0.2 0.04 0.03 1		0.6 0.09 0.06 7
Rsd 0.1s	12ph/10stn Dmin 33km Az.gap 214°	Rsd 0.2s	7ph/5stn Dmin 137km Az.gap 281°
Corr. -0.920	18M/18stn Msd 0.3	Corr. -0.302	9M/9stn Msd 0.3
	99/2724		99/2779
MAR 26 202205.2s	38.44S 177.59E 48km M=4.2	MAR 28 150331.7s	36.80S 177.15E 261km M=4.0
	0.2 0.01 0.01 4		0.9 0.15 0.06 10
Rsd 0.2s	22ph/20stn Dmin 43km Az.gap 113°	Rsd 0.3s	12ph/10stn Dmin 162km Az.gap 293°
Corr. 0.300	26M/20stn Msd 0.3 1↑ 4↓	Corr. -0.290	11M/11stn Msd 0.3
	99/2728		99/2789
MAR 26 235509.8s	45.23S 166.85E 5km M=3.6	MAR 28 223628.6s	36.01S 179.21E 152km M=5.5
	0.4 0.02 0.02 R		0.4 0.04 0.03 8
Rsd 0.3s	10ph/8stn Dmin 36km Az.gap 263°	Rsd 0.2s	23ph/19stn Dmin 194km Az.gap 305°
Corr. -0.099	8M/4stn Msd 0.2 1↓	Corr. 0.610	12M/6stn Msd 0.2
	99/2735		99/2790
MAR 27 041955.3s	38.43S 177.59E 48km M=3.9	MAR 28 225638.5s	38.57S 175.93E 146km M=3.8
	0.2 0.01 0.01 4		0.6 0.03 0.02 5
Rsd 0.2s	20ph/17stn Dmin 44km Az.gap 114°	Rsd 0.3s	21ph/18stn Dmin 23km Az.gap 112°
Corr. 0.316	24M/19stn Msd 0.3 3↑ 3↓	Corr. -0.449	19M/17stn Msd 0.2 1↑
	99/2737		99/2797
MAR 27 055940.5s	39.02S 175.92E 108km M=4.1	MAR 29 073013.0s	37.65S 178.92E 28km M=4.1
	0.4 0.01 0.02 4		0.6 0.04 0.03 3
Rsd 0.3s	34ph/28stn Dmin 21km Az.gap 47°	Rsd 0.2s	11ph/8stn Dmin 55km Az.gap 299°
Corr. -0.310	25M/20stn Msd 0.2 4↑ 7↓	Corr. -0.258	28M/24stn Msd 0.3 1↓
	99/2743		99/2798
MAR 27 130124.4s	42.93S 171.92E 12km M=3.6	MAR 29 073621.3s	37.14S 176.52E 232km M=3.7
	0.1 0.01 0.01 R		0.2 0.01 0.02 1
Rsd 0.2s	15ph/9stn Dmin 33km Az.gap 96°	Rsd 0.0s	12ph/10stn Dmin 135km Az.gap 292°
Corr. -0.302	23M/18stn Msd 0.2 3↑ 3↓	Corr. -0.537	13M/13stn Msd 0.2
	99/2763		99/2801
MAR 28 004506.6s	39.45S 174.23E 247km M=3.8	MAR 29 101805.5s	41.44S 172.22E 5km M=4.0
	0.4 0.02 0.03 3		0.1 0.01 0.01 R
Rsd 0.2s	27ph/24stn Dmin 110km Az.gap 195°	Rsd 0.1s	21ph/15stn Dmin 49km Az.gap 155°
Corr. -0.759	19M/19stn Msd 0.3 1↓	Corr. -0.300	13M/7stn Msd 0.2 1↑ 3↓
	99/2766		99/2812
MAR 28 030909.4s	45.48S 167.21E 98km M=3.7	MAR 29 174853.5s	37.15S 179.66E 33km M=4.0
	0.4 0.02 0.03 2		0.6 0.08 0.05 R
Rsd 0.2s	11ph/7stn Dmin 5km Az.gap 135°	Rsd 0.2s	10ph/6stn Dmin 130km Az.gap 329°
Corr. -0.524	15M/8stn Msd 0.2 1↑	Corr. -0.704	16M/14stn Msd 0.2
	99/2774		99/2827
MAR 28 101838.9s	40.23S 173.54E 180km M=3.9	MAR 30 053849.8s	37.58S 179.81E 12km M=4.0
	0.4 0.01 0.02 3		0.8 0.13 0.05 R
Rsd 0.2s	31ph/27stn Dmin 72km Az.gap 143°	Rsd 0.2s	10ph/7stn Dmin 147km Az.gap 328°
Corr. 0.090	16M/15stn Msd 0.4 1↑	Corr. -0.519	14M/12stn Msd 0.2

Felt Westport (79) MM4.

99/2831					99/2876				
MAR 30 085413.7s	38.27S	175.26E	217km	M=4.0	APR 01 175721.7s	46.97S	165.47E	33km	M=4.5
	0.6	0.06	0.03	6		0.3	0.02	0.02	R
Rsd 0.2s	15ph/13stn	Dmin 80km	Az.gap 219°		Rsd 0.1s	10ph/7stn	Dmin 203km	Az.gap 310°	
Corr. -0.802	15M/15stn	Msd 0.3	1↓		Corr. -0.033	11M/6stn	Msd 0.2		
99/2842					99/2882				
MAR 30 205522.3s	41.22S	173.99E	55km	M=3.6	APR 02 013402.5s	38.35S	176.07E	160km	M=4.4
	0.1	0.01	0.01	2		0.3	0.02	0.01	2
Rsd 0.2s	29ph/21stn	Dmin 24km	Az.gap 64°		Rsd 0.2s	32ph/28stn	Dmin 17km	Az.gap 89°	
Corr. -0.218	13M/12stn	Msd 0.2	1↑		Corr. 0.001	12M/6stn	Msd 0.2	12↑ 1↓	
99/2855					99/2884				
MAR 31 115754.1s	37.30S	179.59E	86km	M=3.7	APR 02 043233.8s	37.57S	176.02E	201km	M=3.5
	0.6	0.06	0.06	10		1.2	0.10	0.10	9
Rsd 0.2s	8ph/6stn	Dmin 119km	Az.gap 324°		Rsd 0.4s	10ph/8stn	Dmin 123km	Az.gap 289°	
Corr. -0.344	7M/5stn	Msd 0.2			Corr. -0.789	7M/7stn	Msd 0.3		
99/2860					99/2904				
MAR 31 193910.9s	37.12S	179.04W	12km	M=4.0	APR 02 195719.8s	44.58S	169.81E	12km	M=3.6
	0.7	0.07	0.06	R		0.1	0.01	0.01	1
Rsd 0.2s	8ph/6stn	Dmin 242km	Az.gap 330°		Rsd 0.1s	11ph/7stn	Dmin 8km	Az.gap 140°	
Corr. -0.540	7M/7stn	Msd 0.2			Corr. -0.537	17M/10stn	Msd 0.3	1↑	
99/2861					99/2925				
MAR 31 194041.9s	37.12S	179.03W	12km	M=3.7	APR 03 160842.4s	37.87S	179.16E	25km	M=4.3
	0.5	0.09	0.03	R		0.3	0.02	0.01	2
Rsd 0.1s	5ph/3stn	Dmin 262km	Az.gap 347°		Rsd 0.1s	13ph/9stn	Dmin 82km	Az.gap 287°	
Corr. -0.718	4M/4stn	Msd 0.1			Corr. 0.259	40M/34stn	Msd 0.3	1↑	
99/2862					99/2933				
MAR 31 202615.2s	38.51S	176.19E	153km	M=4.0	APR 03 173855.5s	41.43S	173.79E	55km	M=3.8
	1.2	0.06	0.05	9		0.1	0.01	0.01	3
Rsd 0.4s	11ph/9stn	Dmin 85km	Az.gap 201°		Rsd 0.2s	31ph/24stn	Dmin 5km	Az.gap 61°	
Corr. -0.463	14M/14stn	Msd 0.4			Corr. -0.301	8M/4stn	Msd 0.1	2↑ 12↓	
					Felt Rarangi (77) MM4 and Tory Channel (78).				
99/2864					99/2939				
APR 01 013934.4s	40.82S	172.90E	217km	M=5.1	APR 03 204443.1s	35.18S	178.69E	317km	M=4.1
	0.4	0.02	0.02	3		0.9	0.07	0.16	4
Rsd 0.3s	33ph/26stn	Dmin 31km	Az.gap 117°		Rsd 0.1s	14ph/12stn	Dmin 324km	Az.gap 334°	
Corr. -0.010	12M/6stn	Msd 0.2	6↑ 6↓		Corr. -0.148	13M/13stn	Msd 0.2		
Felt Marton (62) and Tawa (68), MM3.									
99/2867					99/2945				
APR 01 102635.2s	44.98S	167.49E	58km	M=3.7	APR 04 005835.6s	38.46S	175.93E	167km	M=4.2
	0.3	0.02	0.02	3		0.5	0.02	0.02	4
Rsd 0.1s	10ph/6stn	Dmin 61km	Az.gap 199°		Rsd 0.3s	33ph/26stn	Dmin 23km	Az.gap 99°	
Corr. -0.617	11M/6stn	Msd 0.3	1↓		Corr. -0.184	11M/6stn	Msd 0.3	12↑ 2↓	
99/2872					99/2965				
APR 01 154239.7s	38.44S	176.19E	165km	M=3.6	APR 04 094618.6s	36.62S	179.55E	12km	M=3.8
	0.7	0.03	0.02	5		0.6	0.06	0.04	R
Rsd 0.2s	13ph/10stn	Dmin 50km	Az.gap 203°		Rsd 0.2s	8ph/6stn	Dmin 198km	Az.gap 333°	
Corr. -0.415	13M/13stn	Msd 0.3			Corr. -0.280	7M/6stn	Msd 0.4		
99/2874					99/2966				
APR 01 161935.8s	37.39S	179.98E	12km	M=3.7	APR 04 120419.2s	38.85S	176.01E	119km	M=3.6
	1.2	0.14	0.06	R		0.3	0.01	0.01	2
Rsd 0.4s	7ph/5stn	Dmin 150km	Az.gap 320°		Rsd 0.2s	32ph/26stn	Dmin 29km	Az.gap 92°	
Corr. -0.256	6M/4stn	Msd 0.2			Corr. -0.690	16M/15stn	Msd 0.2	1↑	

99/3054					99/3120				
APR 08 080715.9s	37.18S	177.13E	5km	M=4.7	APR 10 223045.7s	40.78S	175.23E	57km	M=3.7
	0.8	0.05	0.03	R		0.1	0.01	0.01	2
Rsd 0.3s	18ph/12stn	Dmin 39km	Az.gap 213°		Rsd 0.2s	29ph/23stn	Dmin 29km	Az.gap 69°	
Corr. 0.669	34M/28stn	Msd 0.3	1↑ 1↓		Corr. -0.423	16M/11stn	Msd 0.3	2↑ 8↓	
99/3059					99/3123				
APR 08 123318.2s	37.34S	178.90W	12km	M=4.4	APR 11 000744.9s	40.28S	176.63E	65km	M=4.1
	0.9	0.10	0.06	R		0.2	0.01	0.02	3
Rsd 0.3s	10ph/6stn	Dmin 249km	Az.gap 325°		Rsd 0.2s	37ph/31stn	Dmin 55km	Az.gap 182°	
Corr. -0.251	20M/15stn	Msd 0.2			Corr. -0.557	25M/19stn	Msd 0.3	7↑ 1↓	
					Felt Waipawa (63) MM4.				
99/3064					99/3126				
APR 08 191541.2s	37.41S	177.16E	5km	M=3.5	APR 11 005937.3s	37.85S	176.72E	124km	M=3.9
	0.4	0.02	0.01	R		0.5	0.02	0.02	4
Rsd 0.1s	11ph/9stn	Dmin 13km	Az.gap 270°		Rsd 0.1s	18ph/16stn	Dmin 15km	Az.gap 241°	
Corr. -0.332	13M/10stn	Msd 0.3			Corr. 0.037	16M/16stn	Msd 0.2		
99/3066					99/3150				
APR 08 203409.3s	44.09S	168.89E	12km	M=4.0	APR 11 213815.1s	39.80S	175.81E	5km	M=3.9
	0.4	0.02	0.03	R		0.1	0.01	0.01	R
Rsd 0.3s	11ph/9stn	Dmin 51km	Az.gap 175°		Rsd 0.3s	37ph/29stn	Dmin 48km	Az.gap 83°	
Corr. -0.579	10M/5stn	Msd 0.2	1↑		Corr. 0.101	9M/5stn	Msd 0.1	2↑ 3↓	
					Felt Dannevirke (63).				
99/3079					99/3158				
APR 09 094852.3s	40.12S	178.55E	12km	M=3.9	APR 12 015444.0s	37.64S	177.61E	67km	M=3.5
	0.6	0.02	0.05	R		0.4	0.03	0.01	3
Rsd 0.3s	21ph/16stn	Dmin 172km	Az.gap 244°		Rsd 0.2s	11ph/8stn	Dmin 39km	Az.gap 202°	
Corr. -0.707	21M/20stn	Msd 0.3	1↑ 1↓		Corr. 0.640	4M/2stn	Msd 0.2		
99/3085					99/3166				
APR 09 161850.4s	43.66S	172.83E	10km	M=3.7	APR 12 083343.0s	40.50S	173.45E	157km	M=3.7
	0.1	0.01	0.01	1		0.3	0.01	0.01	2
Rsd 0.1s	10ph/5stn	Dmin 15km	Az.gap 189°		Rsd 0.2s	25ph/19stn	Dmin 52km	Az.gap 130°	
Corr. -0.323	13M/10stn	Msd 0.3	1↓		Corr. 0.120	12M/12stn	Msd 0.3	1↓	
					Felt Christchurch (110).				
99/3088					99/3175				
APR 09 184350.1s	37.14S	177.14E	5km	M=4.7	APR 12 214415.9s	37.32S	177.57E	144km	M=3.9
	0.4	0.03	0.02	R		1.6	0.13	0.07	15
Rsd 0.2s	18ph/15stn	Dmin 43km	Az.gap 217°		Rsd 0.5s	10ph/8stn	Dmin 103km	Az.gap 263°	
Corr. 0.545	24M/18stn	Msd 0.3	1↓		Corr. -0.206	18M/16stn	Msd 0.2	1↑	
99/3106					99/3176				
APR 10 084101.0s	44.66S	167.50E	65km	M=3.8	APR 12 215737.4s	37.49S	179.84W	12km	M=3.9
	0.3	0.03	0.02	9		0.4	0.03	0.03	R
Rsd 0.1s	10ph/7stn	Dmin 94km	Az.gap 212°		Rsd 0.1s	7ph/5stn	Dmin 180km	Az.gap 334°	
Corr. -0.700	12M/6stn	Msd 0.3	3↑ 1↓		Corr. -0.060	6M/4stn	Msd 0.2		
99/3112					99/3181				
APR 10 135518.4s	38.12S	176.31E	155km	M=3.8	APR 13 031708.9s	37.18S	179.99W	12km	M=3.7
	0.9	0.07	0.03	8		1.7	0.30	0.13	R
Rsd 0.3s	9ph/6stn	Dmin 72km	Az.gap 148°		Rsd 0.3s	4ph/3stn	Dmin 158km	Az.gap 335°	
Corr. 0.455	15M/14stn	Msd 0.2	1↑		Corr. -0.847	5M/3stn	Msd 0.2		
99/3114					99/3183				
APR 10 165114.8s	39.14S	174.92E	224km	M=4.5	APR 13 043042.6s	39.69S	174.24E	184km	M=3.8
	0.5	0.02	0.02	4		0.4	0.01	0.02	4
Rsd 0.2s	27ph/22stn	Dmin 42km	Az.gap 156°		Rsd 0.2s	20ph/17stn	Dmin 42km	Az.gap 118°	
Corr. 0.355	25M/19stn	Msd 0.3	1↑		Corr. 0.066	16M/16stn	Msd 0.3		

99/3193					99/3264				
APR 13 151329.6s	39.32S	173.73E	18km	M=3.3	APR 17 044934.1s	38.73S	175.91E	207km	M=3.7
	0.3	0.02	0.02	1		0.2	0.05	0.03	6
Rsd 0.2s	12ph/8stn	Dmin 13km	Az.gap 308°		Rsd 0.1s	9ph/7stn	Dmin 216km	Az.gap 337°	
Corr. -0.074	19M/18stn	Msd 0.2	4↑ 1↓		Corr. -0.585	7M/7stn	Msd 0.2		
Felt New Plymouth (47).					Poor station coverage.				
99/3195					99/3267				
APR 13 163628.9s	36.83S	176.39E	12km	M=4.5	APR 17 114009.1s	36.92S	176.87E	267km	M=4.5
	0.4	0.03	0.02	R		0.7	0.03	0.03	6
Rsd 0.1s	14ph/10stn	Dmin 190km	Az.gap 275°		Rsd 0.2s	17ph/16stn	Dmin 105km	Az.gap 217°	
Corr. 0.191	13M/13stn	Msd 0.4			Corr. 0.371	18M/15stn	Msd 0.2		
99/3199					99/3271				
APR 13 181507.3s	41.68S	173.13E	70km	M=3.7	APR 17 150629.1s	36.17S	178.23E	184km	M=4.9
	0.3	0.01	0.01	3		0.2	0.02	0.02	3
Rsd 0.3s	27ph/20stn	Dmin 21km	Az.gap 67°		Rsd 0.1s	21ph/19stn	Dmin 159km	Az.gap 285°	
Corr. 0.066	15M/13stn	Msd 0.3	2↑ 4↓		Corr. 0.894	21M/17stn	Msd 0.3		
99/3215					99/3274				
APR 14 105256.6s	39.30S	175.60E	84km	M=3.8	APR 17 181646.3s	36.17S	178.28E	183km	M=4.6
	0.2	0.01	0.01	2		0.3	0.07	0.03	9
Rsd 0.2s	32ph/25stn	Dmin 12km	Az.gap 90°		Rsd 0.1s	17ph/16stn	Dmin 158km	Az.gap 305°	
Corr. -0.056	21M/16stn	Msd 0.2	1↓		Corr. 0.692	18M/14stn	Msd 0.3		
99/3216					99/3280				
APR 14 122926.3s	47.61S	164.80E	33km	M=4.5	APR 18 025231.7s	37.69S	177.03E	147km	M=4.4
	0.3	0.02	0.02	R		0.4	0.02	0.01	3
Rsd 0.1s	10ph/5stn	Dmin 265km	Az.gap 334°		Rsd 0.1s	30ph/26stn	Dmin 53km	Az.gap 133°	
Corr. -0.157	10M/5stn	Msd 0.2			Corr. 0.470	23M/19stn	Msd 0.3	1↑ 4↓	
99/3232					99/3282				
APR 15 041658.8s	37.59S	176.63E	207km	M=4.1	APR 18 043213.1s	38.22S	176.01E	173km	M=4.1
	1.3	0.16	0.17	20		0.7	0.04	0.02	5
Rsd 0.4s	9ph/6stn	Dmin 146km	Az.gap 258°		Rsd 0.2s	15ph/14stn	Dmin 59km	Az.gap 233°	
Corr. -0.908	15M/13stn	Msd 0.2	1↓		Corr. -0.463	20M/18stn	Msd 0.2		
99/3237					99/3285				
APR 15 104716.3s	46.06S	166.97E	89km	M=4.4	APR 18 075301.4s	39.49S	173.71E	7km	M=3.8
	0.3	0.01	0.02	2		0.2	0.01	0.02	2
Rsd 0.1s	10ph/7stn	Dmin 67km	Az.gap 236°		Rsd 0.2s	23ph/20stn	Dmin 25km	Az.gap 175°	
Corr. -0.671	12M/6stn	Msd 0.1	1↑		Corr. -0.416	28M/25stn	Msd 0.4	1↑	
99/3242					99/3288				
APR 15 225016.0s	37.58S	176.70E	200km	M=4.2	APR 18 173339.1s	37.73S	177.67E	77km	M=3.6
	0.7	0.06	0.03	6		0.3	0.03	0.05	7
Rsd 0.2s	9ph/7stn	Dmin 142km	Az.gap 236°		Rsd 0.1s	7ph/5stn	Dmin 64km	Az.gap 254°	
Corr. -0.694	16M/16stn	Msd 0.1	1↑		Corr. -0.491	11M/9stn	Msd 0.3	1↑	
99/3245					99/3290				
APR 16 072946.9s	41.23S	172.75E	150km	M=3.9	APR 18 180018.9s	38.05S	177.75E	33km	M=3.6
	0.4	0.02	0.02	3		0.4	0.03	0.02	R
Rsd 0.3s	28ph/19stn	Dmin 49km	Az.gap 104°		Rsd 0.2s	8ph/7stn	Dmin 45km	Az.gap 193°	
Corr. -0.118	14M/13stn	Msd 0.3	2↑ 1↓		Corr. -0.752	10M/8stn	Msd 0.3	1↑ 2↓	
99/3261					99/3295				
APR 17 014243.2s	41.33S	172.30E	5km	M=3.6	APR 18 211941.3s	38.90S	176.46E	210km	M=3.6
	0.2	0.01	0.01	R		1.0	0.15	0.19	11
Rsd 0.3s	8ph/6stn	Dmin 59km	Az.gap 157°		Rsd 0.3s	15ph/12stn	Dmin 52km	Az.gap 198°	
Corr. -0.314	12M/10stn	Msd 0.7	1↓		Corr. -0.965	14M/12stn	Msd 0.1		
					Poor station coverage.				

99/3299					99/3357				
APR 19 034913.5s	41.42S	172.82E	112km	M=3.6	APR 21 055740.9s	37.27S	178.57E	33km	M=4.0
	0.4	0.01	0.01	3		0.4	0.02	0.03	R
Rsd 0.3s	28ph/20stn	Dmin 39km	Az.gap 93°		Rsd 0.2s	10ph/7stn	Dmin 44km	Az.gap 275°	
Corr. -0.128	11M/11stn	Msd 0.3	2↑ 4↓		Corr. 0.350	22M/20stn	Msd 0.2	1↓	
99/3306					99/3367				
APR 19 100136.9s	37.51S	176.43E	175km	M=4.1	APR 21 191838.3s	37.37S	176.82E	244km	M=3.9
	0.4	0.07	0.03	6		1.2	0.08	0.04	9
Rsd 0.1s	12ph/10stn	Dmin 166km	Az.gap 226°		Rsd 0.2s	11ph/10stn	Dmin 69km	Az.gap 269°	
Corr. -0.899	15M/15stn	Msd 0.2			Corr. 0.005	14M/14stn	Msd 0.3		
99/3313					99/3383				
APR 19 152211.3s	40.51S	173.31E	190km	M=3.9	APR 22 122437.2s	38.66S	175.93E	165km	M=3.8
	0.4	0.01	0.01	4		1.1	0.04	0.04	9
Rsd 0.2s	34ph/27stn	Dmin 61km	Az.gap 137°		Rsd 0.1s	14ph/10stn	Dmin 18km	Az.gap 181°	
Corr. -0.029	14M/14stn	Msd 0.3	1↑ 1↓		Corr. -0.708	14M/14stn	Msd 0.3		
99/3330					99/3393				
APR 20 055055.3s	45.00S	167.73E	5km	M=3.5	APR 22 201028.4s	38.76S	175.75E	133km	M=3.8
	0.5	0.02	0.02	R		0.3	0.02	0.02	3
Rsd 0.2s	11ph/7stn	Dmin 52km	Az.gap 180°		Rsd 0.2s	24ph/21stn	Dmin 5km	Az.gap 94°	
Corr. -0.546	10M/5stn	Msd 0.2	1↑		Corr. -0.171	15M/13stn	Msd 0.2	2↑ 1↓	
99/3332					99/3399				
APR 20 061522.3s	36.06S	178.10E	211km	M=5.6	APR 23 031805.7s	39.62S	176.98E	23km	M=3.7
	0.4	0.04	0.03	5		0.3	0.01	0.02	2
Rsd 0.1s	29ph/26stn	Dmin 171km	Az.gap 281°		Rsd 0.3s	26ph/22stn	Dmin 16km	Az.gap 168°	
Corr. 0.724	8M/4stn	Msd 0.3	1↑		Corr. -0.192	23M/23stn	Msd 0.5	1↑ 3↓	
Felt Ruatuna Rd (35) MM3.									
99/3333					99/3412				
APR 20 062521.0s	39.43S	173.51E	5km	M=3.5	APR 23 160408.3s	37.79S	177.75E	63km	M=4.5
	0.2	0.01	0.01	R		0.3	0.02	0.01	3
Rsd 0.1s	21ph/14stn	Dmin 38km	Az.gap 227°		Rsd 0.1s	28ph/24stn	Dmin 53km	Az.gap 125°	
Corr. -0.815	21M/21stn	Msd 0.3	1↑		Corr. 0.698	22M/16stn	Msd 0.3	6↑ 2↓	
					Felt Ruatuna Rd (35) MM4.				
99/3346					99/3414				
APR 20 165757.1s	40.03S	173.66E	210km	M=3.7	APR 23 164805.5s	37.25S	179.91E	12km	M=4.1
	0.6	0.02	0.02	5		0.8	0.13	0.06	R
Rsd 0.2s	25ph/21stn	Dmin 89km	Az.gap 187°		Rsd 0.3s	5ph/3stn	Dmin 148km	Az.gap 333°	
Corr. -0.438	13M/13stn	Msd 0.3	6↑ 5↓		Corr. -0.788	5M/3stn	Msd 0.2	1↓	
99/3349					99/3416				
APR 20 190404.5s	32.46S	177.51W	208km	M=7.0	APR 23 204543.2s	37.41S	177.60E	182km	M=3.9
	1.3	0.12	0.08	63		1.1	0.08	0.08	9
Rsd 0.4s	22ph/19stn	Dmin 732km	Az.gap 338°		Rsd 0.4s	10ph/7stn	Dmin 66km	Az.gap 243°	
Corr. -0.118	8M/4stn	Msd 0.1			Corr. -0.241	13M/11stn	Msd 0.1		
Felt on the east coast from Opotiki to Wellington.									
99/3351					99/3432				
APR 20 203454.3s	38.49S	176.10E	129km	M=3.6	APR 24 144746.8s	41.75S	173.54E	84km	M=3.6
	0.7	0.05	0.02	5		0.2	0.01	0.01	2
Rsd 0.2s	11ph/9stn	Dmin 75km	Az.gap 253°		Rsd 0.2s	31ph/23stn	Dmin 28km	Az.gap 89°	
Corr. -0.069	12M/12stn	Msd 0.2	3↑ 1↓		Corr. -0.232	18M/13stn	Msd 0.2	2↑ 3↓	
99/3354					99/3435				
APR 20 221332.7s	45.19S	167.38E	99km	M=3.7	APR 24 210350.9s	39.83S	175.21E	64km	M=3.9
	0.3	0.02	0.02	2		0.2	0.01	0.01	4
Rsd 0.2s	13ph/8stn	Dmin 35km	Az.gap 222°		Rsd 0.2s	33ph/27stn	Dmin 24km	Az.gap 55°	
Corr. -0.520	10M/5stn	Msd 0.2	3↑ 1↓		Corr. 0.326	24M/19stn	Msd 0.3	1↓	
					Felt Marton (61) MM4.				

99/3437					99/3515						
APR 24	230653.1s	44.13S	168.73E	12km	M=5.1	APR 27	223913.2s	38.16S	176.55E	202km	M=3.6
	0.2	0.01	0.01	R			0.2	0.02	0.03	3	
Rsd 0.1s	10ph/8stn		Dmin 88km		Az.gap 174°	Rsd 0.1s	10ph/9stn		Dmin 139km		Az.gap 260°
Corr. -0.215	23M/12stn		Msd 0.3		1↓	Corr. -0.912	9M/9stn		Msd 0.3		
Felt Lake Paringa (103) to Queenstown (132), MM4.					Poor station coverage.						
99/3443					99/3516						
APR 25	003332.1s	46.79S	165.88E	12km	M=3.9	APR 27	231607.2s	45.53S	167.14E	80km	M=4.6
	0.5	0.02	0.03	R			0.4	0.02	0.03	3	
Rsd 0.2s	11ph/7stn		Dmin 172km		Az.gap 300°	Rsd 0.2s	11ph/7stn		Dmin 7km		Az.gap 216°
Corr. -0.071	15M/8stn		Msd 0.7			Corr. -0.485	15M/8stn		Msd 0.2		2↑ 4↓
99/3457					99/3523						
APR 25	131818.0s	41.31S	172.62E	219km	M=3.9	APR 28	051629.5s	37.51S	178.07E	68km	M=4.1
	0.3	0.02	0.02	2			0.4	0.02	0.02	3	
Rsd 0.1s	22ph/16stn		Dmin 56km		Az.gap 233°	Rsd 0.1s	17ph/14stn		Dmin 78km		Az.gap 250°
Corr. -0.579	13M/13stn		Msd 0.3		1↑	Corr. 0.875	10M/10stn		Msd 0.2		
99/3467					99/3537						
APR 25	201825.7s	45.14S	167.54E	115km	M=5.3	APR 28	185120.6s	37.97S	176.09E	202km	M=3.7
	0.4	0.02	0.03	3			0.8	0.09	0.11	18	
Rsd 0.2s	15ph/9stn		Dmin 48km		Az.gap 172°	Rsd 0.2s	15ph/11stn		Dmin 185km		Az.gap 271°
Corr. 0.000	18M/9stn		Msd 0.1		6↑ 1↓	Corr. -0.951	12M/12stn		Msd 0.2		
Felt Manapouri (138) MM4.					Poor station coverage.						
99/3468					99/3546						
APR 25	205413.9s	38.13S	176.37E	174km	M=4.4	APR 29	001759.3s	40.50S	173.47E	173km	M=3.7
	0.3	0.02	0.01	3			0.3	0.02	0.01	3	
Rsd 0.2s	34ph/30stn		Dmin 12km		Az.gap 119°	Rsd 0.2s	25ph/19stn		Dmin 51km		Az.gap 186°
Corr. -0.255	10M/5stn		Msd 0.2		9↑ 4↓	Corr. -0.149	15M/15stn		Msd 0.3		1↑
99/3470					99/3549						
APR 25	211305.4s	38.49S	175.91E	164km	M=3.5	APR 29	025337.7s	38.76S	175.60E	183km	M=3.6
	0.5	0.02	0.02	5			0.3	0.01	0.02	3	
Rsd 0.2s	19ph/15stn		Dmin 66km		Az.gap 228°	Rsd 0.1s	14ph/12stn		Dmin 47km		Az.gap 241°
Corr. -0.513	15M/15stn		Msd 0.2			Corr. -0.713	13M/13stn		Msd 0.2		
99/3475					99/3551						
APR 25	234018.1s	38.65S	175.50E	129km	M=3.7	APR 29	034511.9s	38.12S	176.00E	179km	M=4.5
	0.6	0.03	0.03	4			0.4	0.01	0.02	3	
Rsd 0.2s	21ph/18stn		Dmin 21km		Az.gap 224°	Rsd 0.2s	29ph/27stn		Dmin 36km		Az.gap 85°
Corr. -0.092	17M/17stn		Msd 0.2		1↑	Corr. 0.163	22M/17stn		Msd 0.3		1↑
99/3480					99/3556						
APR 26	033429.1s	45.45S	167.51E	5km	M=3.6	APR 29	114117.8s	39.41S	174.61E	161km	M=3.8
	0.2	0.01	0.01	R			0.3	0.01	0.01	3	
Rsd 0.2s	13ph/8stn		Dmin 28km		Az.gap 115°	Rsd 0.1s	30ph/26stn		Dmin 23km		Az.gap 107°
Corr. -0.001	8M/4stn		Msd 0.2		3↑ 1↓	Corr. -0.398	15M/15stn		Msd 0.4		
99/3491					99/3561						
APR 26	171743.9s	38.41S	175.95E	163km	M=4.1	APR 29	165235.3s	43.20S	172.05E	12km	M=3.5
	0.3	0.01	0.01	2			0.1	0.00	0.01	R	
Rsd 0.1s	24ph/21stn		Dmin 29km		Az.gap 108°	Rsd 0.1s	11ph/7stn		Dmin 50km		Az.gap 92°
Corr. 0.083	17M/15stn		Msd 0.2		1↑	Corr. -0.312	16M/12stn		Msd 0.2		2↑ 2↓
					Felt northwest Canterbury.						
99/3495					99/3567						
APR 26	224841.7s	38.04S	177.96E	59km	M=4.0	APR 29	231149.9s	36.74S	176.69E	12km	M=4.4
	0.4	0.02	0.02	7			2.2	0.16	0.06	R	
Rsd 0.2s	15ph/12stn		Dmin 89km		Az.gap 256°	Rsd 0.3s	8ph/7stn		Dmin 240km		Az.gap 307°
Corr. 0.165	13M/13stn		Msd 0.2		1↓	Corr. 0.528	5M/5stn		Msd 0.3		

99/3576					99/3628				
APR 30 112415.8s	38.46S	179.54E	12km	M=3.6	MAY 03 083840.5s	38.64S	176.92E	45km	M=4.7
	1.2	0.08	0.07	R		0.2	0.01	0.01	4
Rsd 0.4s	9ph/8stn	Dmin 132km	Az.gap 324°		Rsd 0.1s	29ph/25stn	Dmin 58km	Az.gap 96°	
Corr. 0.432	7M/7stn	Msd 0.2			Corr. -0.515	19M/13stn	Msd 0.2	1↑	
Poor station coverage.									
99/3580					99/3630				
APR 30 201306.7s	41.40S	172.97E	101km	M=3.6	MAY 03 115132.4s	38.18S	176.47E	194km	M=3.8
	0.3	0.02	0.01	3		0.4	0.02	0.02	4
Rsd 0.3s	27ph/19stn	Dmin 41km	Az.gap 82°		Rsd 0.1s	11ph/9stn	Dmin 139km	Az.gap 255°	
Corr. -0.232	13M/13stn	Msd 0.4	2↑ 1↓		Corr. -0.721	7M/7stn	Msd 0.2		
99/3590					99/3633				
MAY 01 074204.7s	40.52S	173.28E	240km	M=3.6	MAY 03 153824.0s	45.96S	166.21E	5km	M=4.2
	0.3	0.05	0.02	3		0.7	0.04	0.05	R
Rsd 0.2s	20ph/15stn	Dmin 63km	Az.gap 192°		Rsd 0.3s	10ph/7stn	Dmin 135km	Az.gap 279°	
Corr. -0.661	11M/11stn	Msd 0.3	1↑		Corr. -0.005	8M/4stn	Msd 0.2		
99/3594					99/3657				
MAY 01 120424.7s	38.58S	175.74E	209km	M=3.5	MAY 04 060316.6s	38.61S	176.54E	69km	M=3.6
	0.4	0.03	0.04	5		0.3	0.02	0.02	5
Rsd 0.1s	12ph/9stn	Dmin 71km	Az.gap 324°		Rsd 0.2s	19ph/16stn	Dmin 36km	Az.gap 112°	
Corr. -0.178	6M/6stn	Msd 0.3			Corr. -0.762	9M/9stn	Msd 0.2		
99/3603					99/3659				
MAY 01 204332.1s	47.79S	165.52E	12km	M=3.6	MAY 04 080129.6s	39.85S	176.29E	76km	M=4.1
	0.5	0.04	0.04	R		0.3	0.01	0.02	5
Rsd 0.2s	12ph/6stn	Dmin 222km	Az.gap 325°		Rsd 0.2s	33ph/29stn	Dmin 58km	Az.gap 129°	
Corr. -0.223	6M/6stn	Msd 0.1			Corr. -0.002	18M/14stn	Msd 0.3	1↑	
					Felt Waipawa (63).				
99/3604					99/3660				
MAY 02 015006.3s	37.11S	177.45E	142km	M=3.8	MAY 04 094404.3s	40.98S	174.47E	69km	M=3.5
	0.5	0.02	0.02	4		0.1	0.01	0.01	2
Rsd 0.1s	11ph/8stn	Dmin 52km	Az.gap 306°		Rsd 0.2s	26ph/18stn	Dmin 31km	Az.gap 138°	
Corr. 0.375	8M/8stn	Msd 0.2			Corr. -0.253	17M/14stn	Msd 0.2	2↑	
99/3608					99/3663				
MAY 02 060238.8s	39.38S	174.73E	25km	M=3.6	MAY 04 122929.4s	38.45S	176.02E	176km	M=3.5
	0.1	0.01	0.00	1		0.4	0.02	0.03	5
Rsd 0.2s	31ph/25stn	Dmin 31km	Az.gap 75°		Rsd 0.1s	15ph/12stn	Dmin 89km	Az.gap 251°	
Corr. -0.418	21M/19stn	Msd 0.3	1↑		Corr. -0.773	11M/11stn	Msd 0.3		
99/3613					99/3665				
MAY 02 162057.7s	45.32S	167.30E	101km	M=4.6	MAY 04 161504.6s	39.52S	174.85E	235km	M=3.9
	0.4	0.02	0.03	3		0.7	0.04	0.06	7
Rsd 0.2s	13ph/8stn	Dmin 69km	Az.gap 235°		Rsd 0.2s	16ph/13stn	Dmin 70km	Az.gap 169°	
Corr. 0.247	10M/5stn	Msd 0.3	1↑ 3↓		Corr. -0.211	14M/13stn	Msd 0.2	5↑ 1↓	
99/3615					99/3668				
MAY 02 203452.9s	38.91S	174.99E	220km	M=3.8	MAY 04 185734.2s	36.82S	177.94E	254km	M=4.1
	0.6	0.04	0.04	6		0.3	0.03	0.03	3
Rsd 0.2s	15ph/13stn	Dmin 147km	Az.gap 263°		Rsd 0.1s	10ph/8stn	Dmin 199km	Az.gap 319°	
Corr. -0.404	9M/9stn	Msd 0.2	1↑		Corr. -0.560	8M/8stn	Msd 0.2		
Poor station coverage.									
99/3618					99/3669				
MAY 02 214539.6s	38.50S	176.74E	264km	M=3.8	MAY 04 191337.2s	40.55S	174.17E	98km	M=4.0
	0.4	0.04	0.05	4		0.2	0.01	0.01	3
Rsd 0.1s	11ph/8stn	Dmin 114km	Az.gap 241°		Rsd 0.3s	40ph/30stn	Dmin 35km	Az.gap 93°	
Corr. -0.962	10M/9stn	Msd 0.2			Corr. 0.131	15M/9stn	Msd 0.3	9↑ 4↓	
Poor station coverage.									

				99/3689					99/3789
MAY 05	125356.5s	37.86S	178.93E	12km	M=4.4				MAY 10
	0.7	0.02	0.05	R				1.1	0.30
Rsd 0.1s	15ph/12stn	Dmin 114km	Az.gap 283°					0.17	87
Corr. -0.350	31M/27stn	Msd 0.3	1↑					Rsd 0.2s	11ph/10stn
								Dmin 416km	Az.gap 340°
								Corr. -0.765	7M/7stn
								Msd 0.2	Very poor station coverage.
				99/3705					99/3791
MAY 06	085056.6s	45.03S	167.62E	138km	M=4.0				MAY 10
	0.4	0.02	0.03	3				0.1	0.01
Rsd 0.3s	12ph/7stn	Dmin 47km	Az.gap 222°					0.01	1
Corr. -0.039	16M/10stn	Msd 0.3	1↓					Rsd 0.0s	18ph/14stn
								Dmin 50km	Az.gap 289°
								Corr. -0.130	13M/13stn
								Msd 0.3	
				99/3711					99/3795
MAY 06	224919.1s	37.24S	177.86E	146km	M=4.3				MAY 11
	0.9	0.05	0.12	20				0.4	0.02
Rsd 0.2s	10ph/8stn	Dmin 198km	Az.gap 278°					0.02	3
Corr. -0.241	8M/8stn	Msd 0.2						Rsd 0.2s	12ph/8stn
								Dmin 47km	Az.gap 170°
								Corr. -0.046	10M/8stn
								Msd 0.2	3↑ 2↓
				99/3718					99/3800
MAY 07	091626.5s	45.40S	167.35E	111km	M=3.6				MAY 11
	0.3	0.02	0.02	3				0.2	0.01
Rsd 0.2s	10ph/6stn	Dmin 65km	Az.gap 230°					0.01	3
Corr. 0.003	10M/7stn	Msd 0.2	1↑ 2↓					Rsd 0.2s	42ph/31stn
								Dmin 83km	Az.gap 98°
								Corr. -0.009	20M/16stn
								Msd 0.4	1↑
				99/3735					99/3801
MAY 08	001124.2s	36.82S	176.61E	256km	M=3.8				MAY 11
	0.3	0.03	0.03	2				1.0	0.12
Rsd 0.0s	12ph/10stn	Dmin 165km	Az.gap 304°					0.04	8
Corr. -0.707	10M/10stn	Msd 0.3						Rsd 0.2s	11ph/9stn
								Dmin 116km	Az.gap 290°
								Corr. -0.566	13M/13stn
								Msd 0.2	
				99/3739					99/3831
MAY 08	044431.6s	37.61S	175.69E	207km	M=3.6				MAY 12
	0.7	0.07	0.23	19				0.1	0.01
Rsd 0.3s	11ph/8stn	Dmin 144km	Az.gap 288°					0.01	3
Corr. -0.846	14M/14stn	Msd 0.2						Rsd 0.2s	33ph/29stn
								Dmin 13km	Az.gap 67°
								Corr. -0.222	10M/5stn
								Msd 0.2	8↑ 3↓
									Felt Raumatī (65) MM4 to Wellington (68).
				99/3749					99/3832
MAY 08	141434.2s	38.78S	179.12E	21km	M=3.6				MAY 12
	0.5	0.07	0.03	3				1.0	0.15
Rsd 0.1s	5ph/3stn	Dmin 96km	Az.gap 310°					0.12	7
Corr. 0.690	3M/3stn	Msd 0.2						Rsd 0.1s	12ph/10stn
								Dmin 311km	Az.gap 330°
								Corr. -0.881	9M/9stn
								Msd 0.3	
				99/3757					99/3840
MAY 09	000648.5s	40.41S	174.00E	97km	M=3.8				MAY 12
	0.2	0.01	0.01	3				0.5	0.02
Rsd 0.2s	41ph/33stn	Dmin 44km	Az.gap 106°					0.02	4
Corr. 0.183	21M/18stn	Msd 0.3	1↓					Rsd 0.3s	33ph/29stn
								Dmin 15km	Az.gap 68°
								Corr. -0.206	23M/17stn
								Msd 0.3	6↑ 4↓
				99/3768					99/3842
MAY 09	135648.8s	38.23S	175.99E	141km	M=3.6				MAY 13
	0.3	0.03	0.02	2				1.5	0.11
Rsd 0.1s	13ph/12stn	Dmin 98km	Az.gap 242°					0.10	11
Corr. -0.758	10M/10stn	Msd 0.3	1↓					Rsd 0.5s	7ph/4stn
								Dmin 107km	Az.gap 303°
								Corr. -0.500	5M/5stn
								Msd 0.4	
				99/3777					99/3851
MAY 10	081542.5s	37.72S	176.38E	190km	M=3.9				MAY 13
	1.1	0.13	0.06	8				0.1	0.01
Rsd 0.3s	9ph/7stn	Dmin 74km	Az.gap 272°					0.01	2
Corr. -0.009	11M/11stn	Msd 0.2						Rsd 0.1s	14ph/10stn
								Dmin 45km	Az.gap 174°
								Corr. 0.305	4M/2stn
								Msd 0.1	1↓

99/3856					99/3885				
MAY 14 004800.1s	37.51S	177.28E	81km	M=4.3	MAY 15 224936.0s	40.23S	174.46E	21km	M=3.6
	0.3	0.02	0.02	3		0.2	0.01	0.01	3
Rsd 0.1s	14ph/13stn	Dmin 8km	Az.gap 155°		Rsd 0.3s	26ph/21stn	Dmin 78km	Az.gap 124°	
Corr. 0.436	20M/16stn	Msd 0.2	1↑ 1↓		Corr. 0.204	26M/22stn	Msd 0.3	1↑	
99/3858					99/3886				
MAY 14 043357.0s	36.76S	176.52E	228km	M=3.7	MAY 15 233139.2s	36.89S	177.42E	201km	M=3.7
	1.4	0.16	0.13	11		2.0	0.24	0.11	8
Rsd 0.4s	7ph/4stn	Dmin 174km	Az.gap 300°		Rsd 0.2s	7ph/6stn	Dmin 154km	Az.gap 328°	
Corr. -0.799	2M/2stn	Msd 0.3	1↑		Corr. -0.836	5M/5stn	Msd 0.1		
Poor station coverage.									
99/3863					99/3889				
MAY 14 075506.3s	40.01S	177.39E	12km	M=3.6	MAY 16 110035.6s	45.14S	167.54E	116km	M=3.7
	0.2	0.01	0.01	R		0.5	0.05	0.04	4
Rsd 0.1s	11ph/9stn	Dmin 71km	Az.gap 224°		Rsd 0.2s	7ph/3stn	Dmin 55km	Az.gap 336°	
Corr. -0.529	9M/9stn	Msd 0.3			Corr. 0.313	3M/3stn	Msd 0.4	1↓	
99/3866					99/3892				
MAY 14 140235.2s	45.06S	167.53E	114km	M=3.6	MAY 16 172002.1s	37.63S	177.50E	62km	M=4.2
	0.3	0.02	0.02	3		0.2	0.01	0.01	2
Rsd 0.2s	11ph/7stn	Dmin 53km	Az.gap 184°		Rsd 0.1s	14ph/13stn	Dmin 29km	Az.gap 216°	
Corr. 0.060	7M/7stn	Msd 0.3	2↑ 2↓		Corr. 0.208	14M/11stn	Msd 0.2	1↑	
99/3867					99/3894				
MAY 14 152708.2s	37.33S	176.54E	317km	M=4.4	MAY 16 182450.3s	41.94S	173.95E	15km	M=3.5
	0.8	0.09	0.05	6		0.3	0.02	0.01	3
Rsd 0.2s	11ph/9stn	Dmin 115km	Az.gap 280°		Rsd 0.3s	20ph/14stn	Dmin 25km	Az.gap 172°	
Corr. -0.477	8M/5stn	Msd 0.1	1↑		Corr. -0.626	14M/11stn	Msd 0.2	7↑ 2↓	
99/3868					99/3899				
MAY 14 200151.6s	37.94S	176.15E	161km	M=3.7	MAY 17 045354.7s	38.05S	174.58E	16km	M=4.4
	0.3	0.02	0.03	2		0.2	0.01	0.01	2
Rsd 0.1s	8ph/4stn	Dmin 91km	Az.gap 284°		Rsd 0.2s	26ph/21stn	Dmin 55km	Az.gap 151°	
Corr. -0.722	4M/4stn	Msd 0.2			Corr. 0.150	11M/7stn	Msd 0.2	5↑ 1↓	
Poor station coverage.					Felt Hamilton (24), Taharoa (25) and Kawhia (30).				
99/3870					99/3900				
MAY 15 032231.7s	40.50S	173.41E	157km	M=3.6	MAY 17 081534.7s	36.69S	176.99E	12km	M=4.3
	0.5	0.02	0.02	4		0.5	0.04	0.02	R
Rsd 0.3s	22ph/16stn	Dmin 55km	Az.gap 135°		Rsd 0.3s	10ph/6stn	Dmin 114km	Az.gap 251°	
Corr. 0.142	12M/12stn	Msd 0.4	1↓		Corr. 0.803	8M/6stn	Msd 0.3	1↓	
99/3876					99/3921				
MAY 15 124239.0s	39.16S	174.80E	198km	M=3.9	MAY 18 091935.7s	38.59S	175.48E	264km	M=6.5
	0.7	0.02	0.09	6		0.5	0.03	0.02	4
Rsd 0.2s	15ph/13stn	Dmin 53km	Az.gap 209°		Rsd 0.3s	37ph/33stn	Dmin 26km	Az.gap 57°	
Corr. -0.071	13M/12stn	Msd 0.3	1↑		Corr. -0.615	8M/4stn	Msd 0.2	20↑ 21↓	
					Felt widely in the North Island and northern South Island, maximum intensity MM5 at Owhiro Bay Quarry (68).				
99/3878					99/3926				
MAY 15 185057.4s	39.44S	176.97E	33km	M=3.8	MAY 18 164115.0s	37.93S	175.99E	173km	M=3.7
	0.2	0.01	0.01	R		0.6	0.04	0.05	5
Rsd 0.2s	26ph/21stn	Dmin 16km	Az.gap 158°		Rsd 0.2s	10ph/9stn	Dmin 105km	Az.gap 260°	
Corr. -0.489	31M/25stn	Msd 0.3	2↑ 1↓		Corr. -0.738	10M/10stn	Msd 0.2	1↓	
Felt Patoka (52) MM4.					Poor station coverage.				
99/3879					99/3935				
MAY 15 191738.2s	37.98S	176.22E	238km	M=3.9	MAY 18 222852.5s	37.07S	176.78E	245km	M=3.9
	0.3	0.03	0.06	3		0.9	0.07	0.08	7
Rsd 0.1s	13ph/9stn	Dmin 139km	Az.gap 327°		Rsd 0.2s	11ph/10stn	Dmin 135km	Az.gap 307°	
Corr. 0.425	10M/10stn	Msd 0.2			Corr. -0.623	13M/12stn	Msd 0.2		

				99/3942					99/4065
MAY 19 060218.6s	38.13S	176.20E	147km	M=4.6	MAY 22 231504.7s	37.69S	177.76E	201km	M=3.6
	0.3	0.01	0.01	2		0.3	0.10	0.15	8
Rsd 0.1s	31ph/27stn	Dmin 5km		Az.gap 69°	Rsd 0.0s	12ph/8stn	Dmin 106km		Az.gap 309°
Corr. -0.210	21M/15stn	Msd 0.2		2↑ 2↓	Corr. -0.990	8M/8stn	Msd 0.2		
									Poor station coverage
				99/3945					99/4068
MAY 19 075028.3s	40.42S	173.52E	155km	M=5.2	MAY 23 004510.1s	47.18S	165.60E	12km	M=3.7
	0.3	0.01	0.01	3		0.4	0.02	0.03	R
Rsd 0.2s	42ph/33stn	Dmin 54km		Az.gap 135°	Rsd 0.1s	11ph/7stn	Dmin 196km		Az.gap 312°
Corr. 0.015	8M/4stn	Msd 0.4		14↑ 12↓	Corr. -0.242	11M/10stn	Msd 0.3		
				Felt Taranaki (48), Nelson (76) and Christchurch (110).					
				99/3948					99/4073
MAY 19 113429.4s	40.99S	172.91E	214km	M=3.7	MAY 23 031225.7s	40.60S	174.26E	78km	M=3.8
	0.4	0.03	0.02	3		0.2	0.01	0.01	3
Rsd 0.2s	21ph/14stn	Dmin 37km		Az.gap 105°	Rsd 0.2s	26ph/22stn	Dmin 37km		Az.gap 87°
Corr. -0.306	12M/12stn	Msd 0.3		1↑	Corr. 0.115	16M/11stn	Msd 0.2		3↑ 5↓
				99/3989					99/4096
MAY 21 014453.3s	38.13S	175.98E	272km	M=3.7	MAY 23 164311.8s	37.18S	177.86E	224km	M=4.0
	0.5	0.20	0.12	23		1.1	0.07	0.06	10
Rsd 0.1s	10ph/8stn	Dmin 284km		Az.gap 335°	Rsd 0.3s	13ph/10stn	Dmin 160km		Az.gap 294°
Corr. -0.921	8M/8stn	Msd 0.3			Corr. 0.083	12M/12stn	Msd 0.2		
				Very poor station coverage.					
				99/4000					99/4097
MAY 21 080707.7s	44.59S	169.91E	5km	M=4.9	MAY 23 171241.2s	47.28S	165.23E	12km	M=4.8
	0.2	0.01	0.02	R		0.5	0.03	0.03	R
Rsd 0.3s	13ph/9stn	Dmin 7km		Az.gap 93°	Rsd 0.2s	12ph/7stn	Dmin 225km		Az.gap 318°
Corr. -0.161	16M/9stn	Msd 0.3		1↑	Corr. -0.391	12M/6stn	Msd 0.2		1↑ 1↓
				Felt Omarama and district, maximum intensity MM6.					
				99/4010					99/4098
MAY 21 123645.6s	37.91S	175.82E	289km	M=3.7	MAY 23 171814.9s	36.95S	177.83E	272km	M=4.0
	0.4	0.07	0.07	8		0.6	0.03	0.04	6
Rsd 0.1s	10ph/8stn	Dmin 209km		Az.gap 264°	Rsd 0.1s	14ph/12stn	Dmin 186km		Az.gap 316°
Corr. -0.975	7M/7stn	Msd 0.3			Corr. -0.639	12M/12stn	Msd 0.2		1↓
				Poor station coverage.					
				99/4030					99/4102
MAY 22 030256.5s	47.61S	165.45E	12km	M=3.7	MAY 23 191015.1s	47.27S	165.51E	12km	M=4.5
	0.4	0.03	0.03	R		0.4	0.03	0.03	R
Rsd 0.1s	10ph/5stn	Dmin 219km		Az.gap 332°	Rsd 0.1s	11ph/8stn	Dmin 204km		Az.gap 314°
Corr. -0.100	7M/7stn	Msd 0.2			Corr. -0.362	13M/7stn	Msd 0.2		
				99/4034					99/4109
MAY 22 042545.9s	40.19S	174.91E	20km	M=3.8	MAY 24 005802.9s	47.24S	165.46E	12km	M=4.4
	0.2	0.01	0.01	4		0.2	0.02	0.02	R
Rsd 0.4s	42ph/33stn	Dmin 75km		Az.gap 68°	Rsd 0.1s	12ph/7stn	Dmin 208km		Az.gap 314°
Corr. -0.140	33M/28stn	Msd 0.4		1↑	Corr. -0.127	10M/6stn	Msd 0.3		2↑ 1↓
				99/4060					99/4117
MAY 22 210824.7s	40.68S	176.66E	29km	M=3.9	MAY 24 060612.9s	39.19S	175.55E	94km	M=4.1
	0.3	0.01	0.02	1		0.2	0.01	0.01	2
Rsd 0.2s	22ph/18stn	Dmin 35km		Az.gap 195°	Rsd 0.2s	38ph/31stn	Dmin 1km		Az.gap 85°
Corr. -0.364	36M/33stn	Msd 0.3		1↑ 1↓	Corr. -0.116	17M/13stn	Msd 0.2		4↑ 2↓
				99/4060					99/4121
MAY 22 210824.7s	40.68S	176.66E	29km	M=3.9	MAY 24 083600.3s	47.22S	165.34E	12km	M=4.7
	0.3	0.01	0.02	1		0.3	0.03	0.02	R
Rsd 0.2s	22ph/18stn	Dmin 35km		Az.gap 195°	Rsd 0.2s	12ph/7stn	Dmin 215km		Az.gap 315°
Corr. -0.364	36M/33stn	Msd 0.3		1↑ 1↓	Corr. -0.352	12M/6stn	Msd 0.2		1↑

99/4123					99/4142				
MAY 24 085300.7s	47.21S	165.33E	12km	M=4.2	MAY 24 154628.6s	47.30S	165.24E	12km	M=5.2
	0.4	0.02	0.04	R		0.3	0.02	0.03	R
Rsd 0.1s	11ph/7stn	Dmin 216km	Az.gap 316°		Rsd 0.1s	11ph/7stn	Dmin 225km	Az.gap 323°	
Corr. -0.515	10M/5stn	Msd 0.2			Corr. -0.275	16M/8stn	Msd 0.2		
99/4125					99/4144				
MAY 24 093300.8s	47.24S	165.43E	12km	M=4.4	MAY 24 163348.1s	47.28S	165.34E	12km	M=3.5
	0.3	0.02	0.02	R		0.8	0.04	0.06	R
Rsd 0.1s	12ph/7stn	Dmin 210km	Az.gap 315°		Rsd 0.2s	10ph/6stn	Dmin 217km	Az.gap 328°	
Corr. -0.197	10M/5stn	Msd 0.2	1↑		Corr. -0.084	7M/7stn	Msd 0.2		
99/4126					99/4146				
MAY 24 101536.2s	47.21S	165.58E	12km	M=3.7	MAY 24 170954.2s	44.56S	169.92E	5km	M=3.5
	0.5	0.03	0.04	R		0.1	0.01	0.01	R
Rsd 0.2s	12ph/8stn	Dmin 198km	Az.gap 313°		Rsd 0.3s	15ph/9stn	Dmin 5km	Az.gap 88°	
Corr. -0.130	10M/10stn	Msd 0.2			Corr. -0.030	8M/4stn	Msd 0.2	1↓	
99/4128					99/4150				
MAY 24 104454.2s	47.22S	165.47E	12km	M=3.7	MAY 24 182934.9s	45.39S	167.26E	82km	M=4.0
	0.5	0.03	0.04	R		0.4	0.02	0.03	2
Rsd 0.2s	10ph/6stn	Dmin 206km	Az.gap 314°		Rsd 0.1s	12ph/8stn	Dmin 12km	Az.gap 179°	
Corr. -0.242	10M/10stn	Msd 0.2	1↑		Corr. -0.539	12M/6stn	Msd 0.3	1↓	
99/4129					99/4153				
MAY 24 112750.6s	44.58S	169.91E	5km	M=4.2	MAY 24 192016.7s	47.26S	165.25E	12km	M=4.1
	0.2	0.01	0.01	R		0.4	0.03	0.04	R
Rsd 0.3s	14ph/9stn	Dmin 5km	Az.gap 97°		Rsd 0.1s	10ph/6stn	Dmin 223km	Az.gap 317°	
Corr. -0.027	15M/8stn	Msd 0.2	1↑ 5↓		Corr. -0.590	8M/5stn	Msd 0.2		
99/4131					99/4155				
MAY 24 130347.1s	47.28S	165.41E	12km	M=3.6	MAY 24 214842.7s	38.40S	176.05E	193km	M=3.7
	0.4	0.02	0.03	R		0.7	0.03	0.05	6
Rsd 0.2s	10ph/6stn	Dmin 212km	Az.gap 315°		Rsd 0.2s	17ph/13stn	Dmin 99km	Az.gap 275°	
Corr. -0.209	7M/7stn	Msd 0.2			Corr. -0.282	12M/12stn	Msd 0.3		
99/4134					99/4157				
MAY 24 134059.8s	47.21S	165.48E	12km	M=4.7	MAY 24 231703.1s	37.92S	176.25E	193km	M=3.8
	0.2	0.01	0.02	R		1.5	0.05	0.02	12
Rsd 0.1s	11ph/7stn	Dmin 205km	Az.gap 314°		Rsd 0.1s	10ph/10stn	Dmin 51km	Az.gap 266°	
Corr. -0.195	13M/7stn	Msd 0.2	3↑ 1↓		Corr. -0.757	15M/15stn	Msd 0.3	1↑	
99/4135					99/4158				
MAY 24 135142.1s	47.21S	165.50E	12km	M=4.6	MAY 25 003538.7s	43.69S	169.51E	12km	M=3.4
	0.5	0.03	0.04	R		0.3	0.02	0.02	R
Rsd 0.2s	12ph/7stn	Dmin 204km	Az.gap 314°		Rsd 0.2s	12ph/7stn	Dmin 19km	Az.gap 138°	
Corr. -0.269	12M/6stn	Msd 0.2	3↑ 1↓		Corr. -0.670	11M/10stn	Msd 0.3	1↑ 2↓	
99/4136					99/4177				
MAY 24 140914.3s	47.21S	165.43E	12km	M=4.3	MAY 25 123237.6s	38.50S	175.88E	171km	M=4.0
	0.4	0.02	0.03	R		0.3	0.02	0.02	2
Rsd 0.1s	13ph/8stn	Dmin 209km	Az.gap 314°		Rsd 0.1s	22ph/17stn	Dmin 26km	Az.gap 79°	
Corr. -0.244	10M/5stn	Msd 0.2			Corr. 0.059	16M/14stn	Msd 0.2	2↑ 1↓	
99/4140					99/4191				
MAY 24 145342.6s	47.28S	165.32E	12km	M=3.6	MAY 26 033917.9s	41.33S	173.17E	98km	M=3.6
	0.4	0.03	0.03	R		0.4	0.02	0.01	4
Rsd 0.1s	10ph/6stn	Dmin 219km	Az.gap 322°		Rsd 0.3s	23ph/17stn	Dmin 53km	Az.gap 91°	
Corr. -0.253	8M/8stn	Msd 0.2			Corr. -0.228	12M/12stn	Msd 0.2	1↓	

Felt Omarama district.

Felt Omarama district.

Felt Mahitahi (104) MM4.

99/4373					99/4450				
JUN 02 211152.5s	36.80S	179.06W	182km	M=4.4	JUN 05 062257.1s	45.23S	166.72E	5km	M=3.7
	0.6	0.03	0.04	8		0.8	0.04	0.05	R
Rsd 0.3s	8ph/6stn	Dmin 326km	Az.gap 313°		Rsd 0.3s	10ph/7stn	Dmin 43km	Az.gap 265°	
Corr. -0.047	12M/11stn	Msd 0.2			Corr. 0.098	8M/4stn	Msd 0.2	1↓	
99/4387					99/4465				
JUN 03 123540.8s	47.37S	165.84E	12km	M=3.5	JUN 05 222543.5s	37.88S	175.13E	12km	M=3.9
	0.3	0.02	0.02	R		0.9	0.06	0.05	R
Rsd 0.2s	10ph/6stn	Dmin 183km	Az.gap 313°		Rsd 0.3s	10ph/7stn	Dmin 179km	Az.gap 279°	
Corr. -0.160	6M/6stn	Msd 0.2			Corr. -0.803	11M/11stn	Msd 0.3		
99/4400					99/4466				
JUN 03 160034.3s	37.39S	177.10E	5km	M=4.1	JUN 05 235633.8s	37.09S	178.75E	130km	M=3.7
	0.4	0.02	0.02	R		1.0	0.08	0.09	17
Rsd 0.4s	17ph/13stn	Dmin 17km	Az.gap 209°		Rsd 0.4s	7ph/4stn	Dmin 181km	Az.gap 283°	
Corr. 0.638	20M/16stn	Msd 0.3	2↑ 1↓		Corr. 0.730	4M/3stn	Msd 0.2		
99/4412					99/4477				
JUN 03 233020.3s	45.11S	167.55E	112km	M=3.7	JUN 06 111216.7s	37.79S	176.48E	170km	M=4.0
	0.5	0.03	0.03	3		0.3	0.01	0.01	3
Rsd 0.2s	10ph/7stn	Dmin 50km	Az.gap 214°		Rsd 0.1s	13ph/12stn	Dmin 33km	Az.gap 210°	
Corr. -0.599	8M/8stn	Msd 0.5	1↑ 1↓		Corr. 0.064	14M/14stn	Msd 0.2		
99/4420					99/4484				
JUN 04 090147.0s	36.73S	179.06W	146km	M=4.2	JUN 06 204011.1s	38.73S	175.78E	193km	M=3.6
	0.8	0.04	0.04	19		0.5	0.04	0.05	5
Rsd 0.2s	6ph/4stn	Dmin 330km	Az.gap 317°		Rsd 0.2s	18ph/13stn	Dmin 52km	Az.gap 239°	
Corr. 0.199	6M/6stn	Msd 0.1			Corr. -0.780	16M/16stn	Msd 0.2		
99/4425					99/4493				
JUN 04 140640.2s	39.13S	175.52E	153km	M=4.0	JUN 07 045041.3s	35.59S	179.73E	312km	M=4.4
	0.7	0.03	0.04	6		0.8	0.05	0.07	8
Rsd 0.3s	19ph/16stn	Dmin 8km	Az.gap 76°		Rsd 0.1s	12ph/9stn	Dmin 368km	Az.gap 332°	
Corr. -0.601	14M/14stn	Msd 0.2	1↑		Corr. -0.226	9M/9stn	Msd 0.2		
99/4435					99/4494				
JUN 04 204350.5s	45.97S	168.50E	25km	M=3.5	JUN 07 050455.1s	46.90S	165.55E	33km	M=4.5
	0.1	0.01	0.01	2		0.3	0.02	0.02	R
Rsd 0.1s	12ph/7stn	Dmin 44km	Az.gap 106°		Rsd 0.1s	12ph/7stn	Dmin 197km	Az.gap 308°	
Corr. -0.143	10M/5stn	Msd 0.2	1↑ 6↓		Corr. -0.024	9M/5stn	Msd 0.1		
99/4436					99/4499				
JUN 04 204531.8s	37.92S	179.46E	12km	M=3.6	JUN 07 074313.9s	40.05S	173.72E	163km	M=3.9
	1.1	0.05	0.06	R		0.5	0.01	0.02	4
Rsd 0.2s	8ph/6stn	Dmin 147km	Az.gap 328°		Rsd 0.2s	33ph/25stn	Dmin 86km	Az.gap 145°	
Corr. -0.133	5M/5stn	Msd 0.4			Corr. -0.248	15M/15stn	Msd 0.3	1↑ 1↓	
Poor station coverage.					99/4504				
99/4441					99/4505				
JUN 04 234909.6s	38.36S	175.99E	159km	M=3.6	JUN 07 152631.7s	36.59S	176.15E	5km	M=3.6
	0.8	0.07	0.17	12		0.4	0.02	0.02	R
Rsd 0.3s	15ph/10stn	Dmin 99km	Az.gap 231°		Rsd 0.2s	9ph/5stn	Dmin 42km	Az.gap 306°	
Corr. -0.873	14M/14stn	Msd 0.3			Corr. 0.079	6M/4stn	Msd 0.2	1↓	
Poor station coverage.					99/4505				
99/4449					99/4505				
JUN 05 034356.1s	39.65S	174.25E	197km	M=4.2	JUN 07 162045.5s	38.19S	175.80E	274km	M=3.6
	0.5	0.01	0.02	4		0.5	0.23	0.09	27
Rsd 0.2s	40ph/33stn	Dmin 38km	Az.gap 108°		Rsd 0.1s	10ph/8stn	Dmin 306km	Az.gap 333°	
Corr. -0.289	26M/20stn	Msd 0.3	4↑ 3↓		Corr. -0.707	4M/4stn	Msd 0.3		
					Very poor station coverage.				

99/4506					99/4616				
JUN 07 163627.4s	45.05S	167.58E	124km	M=3.6	JUN 12 142412.5s	40.44S	173.39E	166km	M=4.2
	0.5	0.04	0.03	4		0.3	0.01	0.01	3
Rsd 0.2s	11ph/7stn	Dmin 57km	Az.gap 218°		Rsd 0.2s	44ph/34stn	Dmin 60km	Az.gap 139°	
Corr. -0.490	9M/7stn	Msd 0.2	1↑		Corr. -0.041	18M/13stn	Msd 0.4	8↑ 2↓	
99/4524					99/4617				
JUN 08 161904.0s	45.27S	167.30E	69km	M=3.9	JUN 12 161859.6s	38.26S	176.01E	196km	M=3.8
	0.4	0.03	0.03	3		0.7	0.03	0.02	6
Rsd 0.2s	12ph/8stn	Dmin 25km	Az.gap 203°		Rsd 0.2s	13ph/10stn	Dmin 102km	Az.gap 252°	
Corr. -0.660	10M/5stn	Msd 0.2	1↓		Corr. -0.611	13M/11stn	Msd 0.2		
99/4527					99/4620				
JUN 08 190934.5s	37.18S	177.10E	275km	M=4.1	JUN 12 225333.9s	39.03S	175.80E	103km	M=4.2
	0.4	0.01	0.02	4		0.3	0.01	0.01	2
Rsd 0.1s	14ph/12stn	Dmin 180km	Az.gap 298°		Rsd 0.2s	37ph/32stn	Dmin 11km	Az.gap 45°	
Corr. -0.392	11M/11stn	Msd 0.2			Corr. 0.068	23M/19stn	Msd 0.3	9↑ 1↓	
99/4570					99/4639				
JUN 10 123059.9s	37.63S	179.39E	33km	M=4.1	JUN 13 132042.0s	36.54S	176.14E	12km	M=3.7
	0.9	0.04	0.06	R		0.3	0.02	0.02	R
Rsd 0.1s	12ph/10stn	Dmin 162km	Az.gap 292°		Rsd 0.1s	6ph/3stn	Dmin 107km	Az.gap 307°	
Corr. 0.682	26M/24stn	Msd 0.2			Corr. 0.316	2M/2stn	Msd 0.1		
99/4578					99/4652				
JUN 10 210127.8s	38.41S	176.19E	153km	M=3.7	JUN 14 041858.3s	38.77S	175.39E	234km	M=3.8
	0.5	0.02	0.02	4		0.5	0.02	0.07	5
Rsd 0.2s	19ph/14stn	Dmin 91km	Az.gap 138°		Rsd 0.2s	18ph/14stn	Dmin 49km	Az.gap 251°	
Corr. 0.301	14M/14stn	Msd 0.3			Corr. -0.303	9M/9stn	Msd 0.2	1↑	
99/4586					99/4656				
JUN 11 062617.2s	38.39S	176.12E	169km	M=3.9	JUN 14 073056.9s	40.23S	173.68E	162km	M=3.6
	0.6	0.03	0.02	5		0.4	0.02	0.03	4
Rsd 0.1s	12ph/10stn	Dmin 12km	Az.gap 180°		Rsd 0.2s	22ph/18stn	Dmin 67km	Az.gap 192°	
Corr. -0.535	14M/13stn	Msd 0.3	1↑		Corr. -0.454	12M/12stn	Msd 0.2	1↑ 2↓	
99/4587					99/4659				
JUN 11 065219.5s	45.03S	167.80E	86km	M=3.7	JUN 14 094549.1s	36.29S	179.48E	12km	M=4.1
	0.8	0.05	0.05	4		0.8	0.06	0.05	R
Rsd 0.3s	10ph/8stn	Dmin 41km	Az.gap 149°		Rsd 0.3s	11ph/8stn	Dmin 246km	Az.gap 330°	
Corr. -0.837	9M/5stn	Msd 0.2	3↑ 2↓		Corr. 0.183	3M/3stn	Msd 0.3		
99/4596					99/4663				
JUN 11 141807.5s	39.70S	177.11E	24km	M=3.6	JUN 14 123247.7s	38.59S	177.39E	259km	M=3.9
	0.6	0.04	0.03	2		0.8	0.25	0.27	7
Rsd 0.1s	13ph/9stn	Dmin 31km	Az.gap 310°		Rsd 0.2s	9ph/6stn	Dmin 57km	Az.gap 227°	
Corr. -0.388	7M/7stn	Msd 0.2	1↓		Corr. -0.988	8M/8stn	Msd 0.3		
99/4599					99/4667				
JUN 11 152959.6s	40.03S	176.98E	12km	M=3.6	JUN 14 180857.0s	37.52S	177.46E	93km	M=4.2
	0.4	0.02	0.03	R		0.8	0.06	0.03	4
Rsd 0.3s	21ph/15stn	Dmin 56km	Az.gap 190°		Rsd 0.3s	10ph/9stn	Dmin 24km	Az.gap 251°	
Corr. -0.504	25M/21stn	Msd 0.3			Corr. 0.378	13M/13stn	Msd 0.1	1↑ 1↓	
99/4601					99/4668				
JUN 11 213723.3s	44.80S	166.57E	12km	M=3.8	JUN 14 220007.6s	38.77S	175.92E	98km	M=4.0
	0.4	0.03	0.03	R		0.3	0.01	0.01	2
Rsd 0.2s	12ph/8stn	Dmin 87km	Az.gap 266°		Rsd 0.1s	16ph/13stn	Dmin 17km	Az.gap 152°	
Corr. 0.234	15M/9stn	Msd 0.2	1↓		Corr. -0.063	13M/13stn	Msd 0.2	2↑ 4↓	

Poor station coverage.

99/4674					99/4741				
JUN 15 045859.9s	37.24S	177.66E	104km	M=4.0	JUN 18 163317.2s	38.09S	176.11E	202km	M=3.5
	0.3	0.02	0.01	3		0.4	0.07	0.10	13
Rsd 0.1s	11ph/9stn	Dmin 53km	Az.gap 275°		Rsd 0.1s	14ph/11stn	Dmin 179km	Az.gap 263°	
Corr. 0.452	9M/9stn	Msd 0.2	1↑		Corr. -0.970	8M/8stn	Msd 0.2		
					Poor station coverage.				
99/4678					99/4745				
JUN 15 082351.5s	36.93S	176.61E	284km	M=3.9	JUN 18 185126.2s	36.33S	177.91E	180km	M=3.8
	0.8	0.04	0.06	8		1.0	0.14	0.28	31
Rsd 0.2s	13ph/11stn	Dmin 84km	Az.gap 293°		Rsd 0.2s	7ph/6stn	Dmin 254km	Az.gap 327°	
Corr. -0.286	10M/10stn	Msd 0.2			Corr. -0.883	4M/4stn	Msd 0.2	1↓	
					Poor station coverage.				
99/4680					99/4762				
JUN 15 094915.1s	38.10S	176.69E	5km	M=3.2	JUN 19 075447.1s	38.65S	175.33E	281km	M=3.9
	0.1	0.01	0.01	R		0.4	0.01	0.03	4
Rsd 0.1s	5ph/3stn	Dmin 4km	Az.gap 175°		Rsd 0.1s	18ph/16stn	Dmin 36km	Az.gap 248°	
Corr. 0.233	4M/4stn	Msd 0.3	1↑		Corr. -0.050	14M/14stn	Msd 0.3		
Felt Kawerau (34) MM4.									
99/4687					99/4780				
JUN 15 185014.5s	38.35S	176.72E	256km	M=3.6	JUN 20 003724.2s	41.30S	172.59E	206km	M=3.5
	0.3	0.14	0.05	18		0.4	0.02	0.02	3
Rsd 0.1s	10ph/6stn	Dmin 319km	Az.gap 343°		Rsd 0.2s	20ph/15stn	Dmin 53km	Az.gap 121°	
Corr. -0.201	5M/5stn	Msd 0.3			Corr. -0.463	10M/10stn	Msd 0.3	1↑ 1↓	
Very poor station coverage.									
99/4692					99/4781				
JUN 16 001653.1s	37.49S	177.63E	216km	M=3.6	JUN 20 005822.2s	41.80S	174.16E	5km	M=3.8
	1.5	0.11	0.09	11		0.2	0.02	0.01	R
Rsd 0.2s	9ph/8stn	Dmin 130km	Az.gap 309°		Rsd 0.5s	24ph/18stn	Dmin 8km	Az.gap 150°	
Corr. -0.518	6M/6stn	Msd 0.2	1↓		Corr. -0.403	26M/21stn	Msd 0.3	2↑ 2↓	
Poor station coverage.					Felt Cape Campbell, Seddon and Ward (84).				
99/4711					99/4782				
JUN 17 110426.7s	38.21S	175.92E	195km	M=3.6	JUN 20 010548.9s	41.81S	174.12E	12km	M=3.2
	0.8	0.08	0.10	19		0.2	0.01	0.01	R
Rsd 0.2s	14ph/11stn	Dmin 190km	Az.gap 252°		Rsd 0.4s	22ph/17stn	Dmin 10km	Az.gap 148°	
Corr. -0.935	11M/11stn	Msd 0.3			Corr. -0.521	15M/15stn	Msd 0.2	2↑ 1↓	
Poor station coverage.					Felt Ward (84).				
99/4723					99/4786				
JUN 17 203157.5s	40.48S	173.22E	236km	M=3.5	JUN 20 015148.6s	38.76S	175.22E	246km	M=3.6
	0.3	0.01	0.02	2		0.6	0.03	0.02	5
Rsd 0.1s	21ph/16stn	Dmin 70km	Az.gap 186°		Rsd 0.1s	16ph/15stn	Dmin 57km	Az.gap 241°	
Corr. -0.133	10M/10stn	Msd 0.4			Corr. -0.777	10M/10stn	Msd 0.3	1↓	
99/4725					99/4787				
JUN 17 235703.8s	38.92S	175.81E	9km	M=2.6	JUN 20 033934.8s	37.59S	179.96W	119km	M=3.9
	0.1	0.01	0.01	1		1.2	0.03	0.11	19
Rsd 0.2s	9ph/7stn	Dmin 7km	Az.gap 128°		Rsd 0.3s	10ph/6stn	Dmin 210km	Az.gap 295°	
Corr. -0.262	5M/5stn	Msd 0.0	1↓		Corr. 0.310	3M/3stn	Msd 0.0		
Felt Turangi (40) MM4.									
99/4734					99/4788				
JUN 18 071949.2s	38.61S	175.72E	166km	M=3.9	JUN 20 034207.3s	41.83S	174.14E	5km	M=3.4
	1.0	0.04	0.04	8		0.2	0.01	0.01	R
Rsd 0.1s	15ph/12stn	Dmin 11km	Az.gap 144°		Rsd 0.4s	18ph/16stn	Dmin 11km	Az.gap 151°	
Corr. -0.428	14M/13stn	Msd 0.3	5↑ 1↓		Corr. -0.391	16M/16stn	Msd 0.2	2↑ 2↓	
					Felt Ward (84).				

99/4813					99/4881				
JUN 21 002152.8s	38.74S	176.16E	98km	M=3.5	JUN 23 080620.4s	35.11S	178.50E	253km	M=4.4
	0.3	0.01	0.01	2		0.3	0.08	0.08	10
Rsd 0.2s	21ph/18stn	Dmin 18km	Az.gap 74°		Rsd 0.1s	10ph/8stn	Dmin 276km	Az.gap 332°	
Corr. -0.133	12M/12stn	Msd 0.2	1↑		Corr. -0.344	13M/12stn	Msd 0.2		
99/4825					99/4919				
JUN 21 071250.8s	41.24S	174.67E	33km	M=3.4	JUN 24 165243.0s	38.85S	176.01E	98km	M=5.2
	0.1	0.01	0.01	1		0.2	0.01	0.01	2
Rsd 0.2s	24ph/21stn	Dmin 3km	Az.gap 75°		Rsd 0.2s	37ph/32stn	Dmin 9km	Az.gap 64°	
Corr. -0.031	15M/14stn	Msd 0.3	6↑ 5↓		Corr. -0.466	8M/4stn	Msd 0.4	1↑ 1↓	
Felt Wellington (68).					Felt Marton (61); Raumati South (65); Hutt Valley (68), MM4.				
99/4826					99/4924				
JUN 21 072236.6s	38.93S	176.02E	84km	M=4.4	JUN 24 203936.7s	37.92S	176.65E	176km	M=3.5
	0.2	0.01	0.01	2		0.0	0.00	0.00	0
Rsd 0.2s	25ph/22stn	Dmin 8km	Az.gap 95°		Rsd 0.0s	4ph/3stn	Dmin 144km	Az.gap 224°	
Corr. -0.373	19M/15stn	Msd 0.4	10↑ 2↓		Corr. -0.711	8M/8stn	Msd 0.2		
99/4827					99/4929				
JUN 21 081937.7s	44.11S	168.79E	12km	M=4.7	JUN 25 024053.7s	40.35S	173.36E	214km	M=4.9
	0.4	0.03	0.01	R		0.3	0.01	0.01	3
Rsd 0.2s	12ph/10stn	Dmin 58km	Az.gap 173°		Rsd 0.2s	40ph/32stn	Dmin 69km	Az.gap 137°	
Corr. -0.610	18M/9stn	Msd 0.2	6↑ 3↓		Corr. -0.011	8M/4stn	Msd 0.2	13↑ 11↓	
Felt Mahitahi (104), Mt Aspiring (113), Glenorchy (121) and Wanaka (123).					Felt Tawa (68) MM3.				
99/4828					99/4944				
JUN 21 090313.4s	39.97S	173.22E	12km	M=4.2	JUN 25 200207.6s	37.20S	177.43E	114km	M=3.6
	0.1	0.00	0.01	R		0.8	0.07	0.05	7
Rsd 0.1s	33ph/29stn	Dmin 95km	Az.gap 146°		Rsd 0.3s	7ph/4stn	Dmin 89km	Az.gap 192°	
Corr. -0.532	12M/7stn	Msd 0.2	2↑ 4↓		Corr. 0.887	3M/3stn	Msd 0.1		
99/4843					99/4960				
JUN 21 203641.7s	39.21S	177.21E	12km	M=3.5	JUN 26 121124.4s	46.45S	166.54E	12km	M=4.0
	0.2	0.01	0.02	R		1.4	0.05	0.08	R
Rsd 0.3s	14ph/11stn	Dmin 41km	Az.gap 174°		Rsd 0.6s	10ph/7stn	Dmin 119km	Az.gap 272°	
Corr. -0.412	11M/11stn	Msd 0.2			Corr. -0.114	14M/7stn	Msd 0.3		
99/4868					99/4962				
JUN 22 171803.7s	38.11S	176.01E	164km	M=3.7	JUN 26 122110.3s	41.27S	172.75E	160km	M=3.7
	0.5	0.11	0.02	6		0.4	0.02	0.02	3
Rsd 0.1s	13ph/13stn	Dmin 87km	Az.gap 233°		Rsd 0.3s	25ph/15stn	Dmin 52km	Az.gap 103°	
Corr. -0.934	11M/11stn	Msd 0.2			Corr. -0.187	11M/11stn	Msd 0.2	1↑	
99/4871					99/4970				
JUN 22 191203.3s	37.50S	177.07E	189km	M=4.0	JUN 27 012954.0s	41.05S	172.95E	196km	M=3.6
	0.7	0.08	0.17	16		0.5	0.03	0.02	5
Rsd 0.1s	14ph/12stn	Dmin 110km	Az.gap 240°		Rsd 0.3s	19ph/14stn	Dmin 79km	Az.gap 201°	
Corr. -0.924	15M/14stn	Msd 0.3			Corr. -0.513	11M/11stn	Msd 0.2	1↓	
99/4877					99/4972				
JUN 23 025736.7s	37.55S	176.66E	207km	M=4.3	JUN 27 014559.9s	46.15S	166.83E	33km	M=3.9
	0.5	0.03	0.02	4		0.9	0.03	0.07	R
Rsd 0.1s	22ph/20stn	Dmin 47km	Az.gap 211°		Rsd 0.3s	10ph/8stn	Dmin 80km	Az.gap 250°	
Corr. -0.330	20M/18stn	Msd 0.2	1↓		Corr. -0.438	16M/10stn	Msd 0.2		
99/4878					99/4973				
JUN 23 055859.0s	39.30S	173.85E	10km	M=3.6	JUN 27 024851.2s	38.91S	175.25E	257km	M=3.5
	0.2	0.01	0.02	1		0.1	0.01	0.01	1
Rsd 0.2s	26ph/23stn	Dmin 3km	Az.gap 172°		Rsd 0.0s	17ph/15stn	Dmin 42km	Az.gap 232°	
Corr. -0.109	26M/24stn	Msd 0.3	1↑		Corr. -0.573	7M/7stn	Msd 0.2		
Felt Paora Road (46) MM4.									

99/4988				99/5081			
JUN 27 125728.6s	38.67S	175.84E	149km M=4.3	JUL 01 181619.1s	39.21S	179.08E	12km M=4.0
	0.2	0.01	0.01		0.7	0.03	0.05
			2				R
Rsd 0.1s	36ph/30stn	Dmin 10km	Az.gap 60°	Rsd 0.2s	12ph/11stn	Dmin 112km	Az.gap 252°
Corr. -0.369	8M/4stn	Msd 0.3	2↑ 2↓	Corr. -0.704	22M/21stn	Msd 0.3	
99/4989				99/5083			
JUN 27 135854.5s	35.78S	179.18W	12km M=4.0	JUL 01 200438.5s	40.42S	174.00E	98km M=3.8
	1.1	0.18	0.16		0.3	0.01	0.01
			R				3
Rsd 0.2s	5ph/3stn	Dmin 302km	Az.gap 350°	Rsd 0.3s	39ph/28stn	Dmin 43km	Az.gap 105°
Corr. -0.868	4M/3stn	Msd 0.3		Corr. 0.098	19M/16stn	Msd 0.4	8↑ 5↓
99/4993				99/5089			
JUN 27 181443.3s	38.46S	176.45E	109km M=3.5	JUL 02 030608.8s	37.32S	177.55E	94km M=4.1
	0.5	0.04	0.02		0.3	0.02	0.01
			5				2
Rsd 0.2s	15ph/14stn	Dmin 26km	Az.gap 126°	Rsd 0.1s	16ph/14stn	Dmin 40km	Az.gap 234°
Corr. -0.845	11M/11stn	Msd 0.3		Corr. 0.384	19M/16stn	Msd 0.3	1↑
99/5007				99/5090			
JUN 28 064327.6s	39.01S	175.85E	105km M=4.4	JUL 02 044219.0s	39.80S	177.03E	50km M=3.6
	0.2	0.01	0.01		0.2	0.01	0.01
			2				3
Rsd 0.2s	36ph/31stn	Dmin 14km	Az.gap 109°	Rsd 0.2s	30ph/26stn	Dmin 34km	Az.gap 180°
Corr. -0.633	17M/12stn	Msd 0.3	4↑ 1↓	Corr. -0.403	15M/11stn	Msd 0.2	2↑ 1↓
99/5012				99/5092			
JUN 28 124500.6s	45.03S	167.69E	130km M=3.5	JUL 02 134524.0s	40.15S	173.86E	156km M=3.6
	0.6	0.04	0.06		0.3	0.03	0.02
			3				3
Rsd 0.2s	8ph/5stn	Dmin 43km	Az.gap 166°	Rsd 0.1s	12ph/10stn	Dmin 73km	Az.gap 286°
Corr. -0.908	5M/5stn	Msd 0.5	1↑	Corr. 0.122	6M/6stn	Msd 0.3	1↑
99/5039				99/5094			
JUN 29 140418.5s	35.53S	179.37E	201km M=4.2	JUL 02 221142.8s	39.01S	175.08E	228km M=3.7
	0.3	0.05	0.04		0.3	0.02	0.02
			8				3
Rsd 0.1s	7ph/5stn	Dmin 249km	Az.gap 338°	Rsd 0.1s	15ph/13stn	Dmin 46km	Az.gap 263°
Corr. -0.229	12M/12stn	Msd 0.2		Corr. -0.460	10M/10stn	Msd 0.3	
99/5049				99/5095			
JUN 30 023305.8s	44.52S	169.47E	12km M=4.2	JUL 02 222246.5s	41.96S	178.28E	33km M=3.5
	0.2	0.02	0.02		0.4	0.03	0.02
			R				R
Rsd 0.3s	12ph/8stn	Dmin 90km	Az.gap 120°	Rsd 0.2s	15ph/11stn	Dmin 222km	Az.gap 285°
Corr. -0.620	9M/5stn	Msd 0.3	1↑	Corr. -0.647	6M/6stn	Msd 0.2	
99/5060				99/5098			
JUN 30 143828.8s	37.89S	178.34E	53km M=3.7	JUL 03 062022.7s	38.81S	177.71E	67km M=4.3
	0.2	0.01	0.02		0.2	0.01	0.01
			2				4
Rsd 0.2s	9ph/5stn	Dmin 22km	Az.gap 204°	Rsd 0.1s	28ph/24stn	Dmin 36km	Az.gap 158°
Corr. 0.051	13M/11stn	Msd 0.2	1↓	Corr. -0.365	8M/4stn	Msd 0.2	1↓
99/5066				99/5102			
JUN 30 232305.5s	42.54S	173.75E	23km M=2.8	JUL 03 172152.2s	38.18S	176.24E	195km M=4.0
	0.3	0.02	0.02		0.6	0.03	0.03
			2				5
Rsd 0.2s	14ph/10stn	Dmin 22km	Az.gap 177°	Rsd 0.3s	17ph/13stn	Dmin 121km	Az.gap 214°
Corr. -0.842	8M/6stn	Msd 0.3	1↓	Corr. -0.739	13M/12stn	Msd 0.2	
99/5076				99/5106			
JUL 01 065346.8s	36.51S	179.71E	33km M=4.2	JUL 03 190312.3s	38.83S	174.07E	5km M=3.9
	0.9	0.05	0.05		0.2	0.01	0.01
			R				R
Rsd 0.3s	10ph/7stn	Dmin 174km	Az.gap 307°	Rsd 0.2s	23ph/18stn	Dmin 41km	Az.gap 183°
Corr. 0.658	18M/16stn	Msd 0.3		Corr. -0.744	26M/26stn	Msd 0.4	1↑

Felt McCormacks Bay (110) MM4.

Felt Otoko (36) MM4.

99/5117					99/5210				
JUL 04 091146.0s	38.60S	175.78E	159km	M=3.7	JUL 08 153339.9s	45.00S	167.56E	78km	M=3.8
	0.5	0.05	0.04	4		0.2	0.01	0.02	1
Rsd 0.2s	13ph/12stn	Dmin 13km	Az.gap 222°		Rsd 0.1s	10ph/7stn	Dmin 47km	Az.gap 188°	
Corr. -0.717	10M/10stn	Msd 0.2	1↑ 1↓		Corr. -0.584	8M/4stn	Msd 0.3	3↑ 2↓	
99/5119					99/5212				
JUL 04 110800.2s	39.15S	174.92E	212km	M=3.8	JUL 08 182911.5s	40.91S	174.74E	66km	M=4.7
	0.6	0.02	0.03	5		0.1	0.01	0.01	2
Rsd 0.1s	15ph/14stn	Dmin 55km	Az.gap 206°		Rsd 0.2s	33ph/27stn	Dmin 16km	Az.gap 58°	
Corr. -0.554	8M/8stn	Msd 0.2	1↑		Corr. -0.053	10M/5stn	Msd 0.3	7↑ 6↓	
					Felt Wanganui (59) to Wellington (68), maximum intensity MM4.				
99/5130					99/5217				
JUL 04 232550.4s	38.64S	176.03E	5km	M=2.3	JUL 09 004346.4s	34.82S	177.33E	33km	M=5.1
	0.6	0.10	0.09	R		1.5	0.10	0.11	R
Rsd 0.5s	5ph/4stn	Dmin 7km	Az.gap 178°		Rsd 0.4s	10ph/7stn	Dmin 321km	Az.gap 322°	
Corr. -0.967	4M/4stn	Msd 0.2			Corr. 0.107	9M/9stn	Msd 0.3		
Felt Taupo (41).									
99/5135					99/5224				
JUL 05 075933.6s	44.33S	168.06E	5km	M=4.2	JUL 09 043306.1s	38.09S	176.31E	151km	M=4.0
	0.7	0.03	0.05	R		0.4	0.01	0.01	3
Rsd 0.4s	11ph/8stn	Dmin 40km	Az.gap 196°		Rsd 0.1s	13ph/10stn	Dmin 82km	Az.gap 173°	
Corr. -0.623	10M/5stn	Msd 0.2	1↑		Corr. 0.442	17M/15stn	Msd 0.3	2↑ 2↓	
99/5140					99/5236				
JUL 05 123517.3s	42.18S	172.75E	63km	M=3.7	JUL 09 193222.8s	37.24S	178.14E	68km	M=4.1
	0.3	0.01	0.01	5		0.4	0.02	0.02	3
Rsd 0.3s	27ph/20stn	Dmin 70km	Az.gap 70°		Rsd 0.1s	13ph/10stn	Dmin 42km	Az.gap 236°	
Corr. -0.229	14M/12stn	Msd 0.4	1↑		Corr. 0.408	13M/11stn	Msd 0.2	1↓	
99/5141					99/5238				
JUL 05 144842.7s	37.50S	179.36E	33km	M=3.7	JUL 09 205903.5s	37.61S	176.18E	316km	M=4.4
	0.3	0.02	0.02	R		0.4	0.05	0.03	4
Rsd 0.1s	6ph/3stn	Dmin 94km	Az.gap 320°		Rsd 0.1s	18ph/13stn	Dmin 86km	Az.gap 230°	
Corr. 0.073	4M/2stn	Msd 0.2			Corr. -0.683	17M/17stn	Msd 0.2	1↓	
99/5149					99/5247				
JUL 05 194538.4s	37.58S	179.41E	12km	M=4.0	JUL 10 025428.2s	39.32S	174.79E	22km	M=3.9
	0.4	0.02	0.03	R		0.1	0.01	0.00	1
Rsd 0.1s	10ph/8stn	Dmin 98km	Az.gap 299°		Rsd 0.2s	36ph/29stn	Dmin 34km	Az.gap 99°	
Corr. 0.430	13M/11stn	Msd 0.2			Corr. -0.310	24M/24stn	Msd 0.3	2↑ 3↓	
99/5153					99/5249				
JUL 05 235456.1s	41.22S	172.60E	208km	M=3.7	JUL 10 045505.4s	39.02S	176.17E	63km	M=3.7
	0.5	0.03	0.03	4		0.2	0.01	0.01	3
Rsd 0.2s	19ph/14stn	Dmin 66km	Az.gap 200°		Rsd 0.2s	24ph/22stn	Dmin 16km	Az.gap 103°	
Corr. -0.455	9M/9stn	Msd 0.3	1↑		Corr. -0.486	11M/11stn	Msd 0.3		
99/5177					99/5251				
JUL 06 223158.4s	39.60S	174.21E	157km	M=3.5	JUL 10 051648.2s	37.30S	177.13E	228km	M=4.0
	0.6	0.03	0.07	6		0.6	0.03	0.03	5
Rsd 0.2s	16ph/13stn	Dmin 66km	Az.gap 216°		Rsd 0.2s	10ph/8stn	Dmin 132km	Az.gap 273°	
Corr. -0.804	7M/7stn	Msd 0.2	1↑		Corr. -0.327	11M/11stn	Msd 0.2		
99/5188					99/5264				
JUL 07 135648.2s	40.52S	175.16E	5km	M=4.4	JUL 10 155556.5s	40.24S	173.98E	138km	M=3.7
	0.1	0.01	0.01	R		0.3	0.01	0.01	3
Rsd 0.4s	43ph/35stn	Dmin 39km	Az.gap 61°		Rsd 0.2s	24ph/20stn	Dmin 62km	Az.gap 123°	
Corr. -0.050	13M/7stn	Msd 0.2	1↑ 5↓		Corr. -0.086	12M/12stn	Msd 0.3	3↑ 2↓	
Felt Palmerston North (62) to Nelson (76), MM4.									

99/5283					99/5363				
JUL 11 093924.4s	36.28S	177.33E	12km	M=4.5	JUL 14 213727.4s	38.75S	176.22E	113km	M=4.2
	0.8	0.06	0.03	R		0.2	0.01	0.01	2
Rsd 0.5s	7ph/4stn	Dmin 139km	Az.gap 260°		Rsd 0.2s	31ph/24stn	Dmin 16km	Az.gap 50°	
Corr. 0.596	16M/12stn	Msd 0.2			Corr. -0.504	18M/18stn	Msd 0.2	6↑ 4↓	
99/5286					99/5370				
JUL 11 104321.9s	45.03S	167.55E	83km	M=3.7	JUL 15 051619.1s	39.07S	175.24E	148km	M=3.9
	0.3	0.02	0.03	2		0.4	0.02	0.01	3
Rsd 0.1s	10ph/7stn	Dmin 49km	Az.gap 185°		Rsd 0.2s	27ph/23stn	Dmin 14km	Az.gap 150°	
Corr. -0.515	12M/8stn	Msd 0.2	1↑ 1↓		Corr. -0.298	14M/14stn	Msd 0.2	7↑ 2↓	
99/5303					99/5378				
JUL 12 103956.3s	40.49S	173.39E	159km	M=4.2	JUL 15 122008.5s	37.01S	177.54E	161km	M=3.9
	0.4	0.01	0.02	4		0.7	0.03	0.04	6
Rsd 0.2s	28ph/25stn	Dmin 57km	Az.gap 138°		Rsd 0.3s	11ph/8stn	Dmin 134km	Az.gap 232°	
Corr. 0.021	17M/14stn	Msd 0.3	7↑ 6↓		Corr. 0.734	11M/9stn	Msd 0.3	1↑ 1↓	
99/5305					99/5379				
JUL 12 125750.3s	45.01S	167.61E	102km	M=3.7	JUL 15 125836.6s	36.83S	177.00E	12km	M=4.2
	0.4	0.02	0.03	2		0.7	0.05	0.03	R
Rsd 0.2s	10ph/7stn	Dmin 45km	Az.gap 179°		Rsd 0.3s	11ph/7stn	Dmin 177km	Az.gap 294°	
Corr. -0.553	8M/4stn	Msd 0.1	1↑		Corr. 0.167	8M/8stn	Msd 0.2		
99/5308					99/5382				
JUL 12 192755.2s	39.92S	176.85E	61km	M=3.6	JUL 15 145254.7s	35.55S	178.64E	186km	M=5.5
	0.3	0.01	0.03	5		0.4	0.04	0.03	8
Rsd 0.2s	24ph/19stn	Dmin 42km	Az.gap 175°		Rsd 0.2s	18ph/14stn	Dmin 255km	Az.gap 274°	
Corr. -0.222	16M/14stn	Msd 0.2			Corr. 0.716	8M/4stn	Msd 0.3	2↑ 2↓	
99/5329					99/5385				
JUL 13 221825.4s	40.39S	176.74E	41km	M=3.8	JUL 15 172011.0s	39.21S	177.21E	12km	M=3.5
	0.4	0.02	0.04	5		0.3	0.02	0.02	R
Rsd 0.2s	20ph/16stn	Dmin 53km	Az.gap 197°		Rsd 0.3s	16ph/14stn	Dmin 50km	Az.gap 174°	
Corr. -0.682	17M/15stn	Msd 0.2	1↓		Corr. -0.530	10M/10stn	Msd 0.1		
99/5333					99/5386				
JUL 14 005107.2s	37.14S	177.41E	5km	M=4.0	JUL 15 172217.2s	39.24S	177.23E	12km	M=3.8
	0.3	0.02	0.01	R		0.2	0.02	0.01	R
Rsd 0.2s	11ph/8stn	Dmin 48km	Az.gap 182°		Rsd 0.3s	18ph/14stn	Dmin 49km	Az.gap 161°	
Corr. 0.331	17M/15stn	Msd 0.2			Corr. -0.542	24M/23stn	Msd 0.2		
99/5344					99/5392				
JUL 14 073514.9s	36.77S	176.70E	33km	M=4.2	JUL 15 232412.8s	37.03S	176.24E	166km	M=3.9
	0.8	0.06	0.03	R		0.5	0.06	0.08	19
Rsd 0.3s	10ph/8stn	Dmin 169km	Az.gap 281°		Rsd 0.1s	9ph/7stn	Dmin 212km	Az.gap 282°	
Corr. -0.367	7M/7stn	Msd 0.4			Corr. -0.937	6M/6stn	Msd 0.2	Poor station coverage.	
99/5356					99/5400				
JUL 14 174159.9s	41.14S	174.16E	53km	M=3.7	JUL 16 100309.4s	41.50S	178.43E	33km	M=4.0
	0.1	0.01	0.01	2		1.2	0.06	0.07	R
Rsd 0.2s	26ph/22stn	Dmin 12km	Az.gap 48°		Rsd 0.4s	21ph/17stn	Dmin 247km	Az.gap 247°	
Corr. -0.039	9M/8stn	Msd 0.3	7↑ 1↓		Corr. -0.869	17M/17stn	Msd 0.2		
99/5362					99/5405				
JUL 14 205339.7s	44.30S	168.01E	5km	M=3.6	JUL 16 170627.8s	36.50S	175.12E	12km	M=4.0
	0.3	0.02	0.02	R		0.3	0.02	0.02	R
Rsd 0.1s	11ph/8stn	Dmin 43km	Az.gap 198°		Rsd 0.3s	12ph/7stn	Dmin 37km	Az.gap 161°	
Corr. -0.774	13M/10stn	Msd 0.4	1↑		Corr. 0.033	10M/8stn	Msd 0.3	1↑	

99/5412					99/5491				
JUL 17 081043.1s	41.25S	173.17E	117km	M=3.8	JUL 21 093644.7s	36.54S	176.36E	12km	M=4.8
	0.3	0.02	0.01	3		0.6	0.04	0.03	R
Rsd 0.3s	25ph/17stn	Dmin 60km	Az. gap 92°		Rsd 0.2s	11ph/9stn	Dmin 209km	Az. gap 284°	
Corr. -0.327	15M/14stn	Msd 0.4	3↑ 4↓		Corr. -0.450	11M/10stn	Msd 0.4	Poor station coverage.	
99/5421					99/5498				
JUL 17 190958.2s	38.56S	175.91E	181km	M=3.8	JUL 21 194544.3s	38.80S	175.30E	220km	M=3.9
	0.7	0.05	0.03	6		1.1	0.04	0.03	9
Rsd 0.2s	11ph/10stn	Dmin 23km	Az. gap 229°		Rsd 0.2s	17ph/14stn	Dmin 41km	Az. gap 191°	
Corr. -0.365	10M/10stn	Msd 0.2			Corr. -0.091	16M/16stn	Msd 0.4	7↑ 1↓	
99/5432					99/5500				
JUL 18 080806.3s	45.20S	167.35E	119km	M=3.7	JUL 21 212613.1s	37.34S	177.30E	145km	M=4.4
	0.4	0.03	0.04	2		0.4	0.02	0.01	4
Rsd 0.2s	10ph/7stn	Dmin 33km	Az. gap 190°		Rsd 0.2s	18ph/15stn	Dmin 23km	Az. gap 164°	
Corr. -0.364	12M/7stn	Msd 0.3	5↑ 2↓		Corr. 0.612	27M/21stn	Msd 0.2	1↑ 2↓	
99/5437					99/5503				
JUL 18 115838.8s	41.98S	174.08E	14km	M=4.7	JUL 22 004346.6s	37.88S	177.02E	134km	M=4.1
	0.4	0.02	0.02	4		0.3	0.02	0.01	3
Rsd 0.4s	25ph/22stn	Dmin 28km	Az. gap 151°		Rsd 0.2s	25ph/20stn	Dmin 35km	Az. gap 104°	
Corr. -0.439	14M/7stn	Msd 0.2	4↑ 6↓		Corr. -0.020	21M/18stn	Msd 0.2		
Felt Ward (84) MM3.									
99/5447					99/5512				
JUL 19 000429.0s	36.30S	177.34E	252km	M=4.1	JUL 22 065525.1s	40.83S	174.60E	44km	M=4.2
	0.9	0.13	0.20	20		0.1	0.01	0.01	2
Rsd 0.2s	13ph/10stn	Dmin 213km	Az. gap 301°		Rsd 0.2s	37ph/31stn	Dmin 26km	Az. gap 68°	
Corr. -0.894	9M/9stn	Msd 0.2			Corr. -0.047	9M/5stn	Msd 0.3	9↑ 5↓	
					Felt Kapiti Coast (65) and Wellington-Hutt Valley (68), MM4.				
99/5451					99/5518				
JUL 19 042625.8s	37.84S	176.30E	185km	M=4.7	JUL 22 104811.2s	36.88S	177.02E	239km	M=4.2
	0.4	0.02	0.01	3		0.4	0.03	0.02	4
Rsd 0.1s	28ph/25stn	Dmin 34km	Az. gap 122°		Rsd 0.2s	11ph/9stn	Dmin 117km	Az. gap 208°	
Corr. -0.001	8M/4stn	Msd 0.1	10↑ 3↓		Corr. 0.668	18M/17stn	Msd 0.2		
99/5454					99/5520				
JUL 19 090909.8s	40.04S	176.78E	64km	M=3.9	JUL 22 124416.0s	37.99S	179.11E	12km	M=4.2
	0.3	0.01	0.02	4		0.3	0.01	0.02	R
Rsd 0.2s	26ph/22stn	Dmin 55km	Az. gap 177°		Rsd 0.2s	17ph/14stn	Dmin 76km	Az. gap 278°	
Corr. -0.502	23M/17stn	Msd 0.2	3↑ 1↓		Corr. 0.014	32M/29stn	Msd 0.2		
99/5457					99/5541				
JUL 19 144340.3s	39.27S	174.89E	219km	M=4.0	JUL 23 022424.1s	45.17S	167.46E	126km	M=3.7
	0.3	0.01	0.01	2		0.3	0.02	0.03	2
Rsd 0.1s	22ph/19stn	Dmin 43km	Az. gap 157°		Rsd 0.2s	10ph/5stn	Dmin 60km	Az. gap 239°	
Corr. 0.588	19M/17stn	Msd 0.3	1↑		Corr. -0.357	5M/5stn	Msd 0.2	2↑ 3↓	
99/5470					99/5550				
JUL 20 114239.5s	38.44S	176.09E	169km	M=3.7	JUL 23 112438.6s	44.56S	170.10E	5km	M=3.6
	1.2	0.04	0.04	10		0.2	0.01	0.02	R
Rsd 0.2s	13ph/11stn	Dmin 56km	Az. gap 240°		Rsd 0.3s	12ph/10stn	Dmin 17km	Az. gap 127°	
Corr. -0.689	12M/12stn	Msd 0.3			Corr. -0.475	13M/9stn	Msd 0.4	2↑ 1↓	
99/5474					99/5558				
JUL 20 140720.6s	36.52S	177.85E	252km	M=4.0	JUL 23 201910.6s	41.13S	174.23E	59km	M=3.6
	0.9	0.34	0.42	37		0.1	0.01	0.01	3
Rsd 0.2s	10ph/8stn	Dmin 234km	Az. gap 325°		Rsd 0.2s	35ph/27stn	Dmin 11km	Az. gap 74°	
Corr. -0.980	9M/9stn	Msd 0.2			Corr. -0.468	13M/10stn	Msd 0.2	4↑ 2↓	

99/5564					99/5663				
JUL 24	012717.7s	41.96S	174.00E	17km M=3.5	JUL 28	060036.8s	40.34S	173.41E	165km M=3.7
	0.2	0.02	0.01	3		0.4	0.01	0.02	4
Rsd 0.3s	25ph/19stn	Dmin 30km	Az.gap 147°		Rsd 0.2s	32ph/26stn	Dmin 67km	Az.gap 144°	
Corr. -0.666	19M/13stn	Msd 0.2	4↑ 3↓		Corr. -0.162	10M/10stn	Msd 0.3	1↑	
99/5569					99/5670				
JUL 24	060204.3s	38.62S	175.77E	163km M=4.3	JUL 28	110314.4s	38.12S	177.11E	69km M=3.8
	0.4	0.02	0.03	3		0.3	0.02	0.01	2
Rsd 0.1s	23ph/17stn	Dmin 11km	Az.gap 131°		Rsd 0.1s	16ph/14stn	Dmin 33km	Az.gap 204°	
Corr. -0.408	18M/15stn	Msd 0.2	4↑ 3↓		Corr. 0.078	6M/6stn	Msd 0.2	2↑ 3↓	
99/5583					99/5693				
JUL 24	164629.6s	37.40S	177.17E	5km M=3.6	JUL 29	090107.7s	38.37S	175.67E	189km M=3.9
	0.6	0.04	0.05	R		0.6	0.04	0.02	4
Rsd 0.4s	10ph/7stn	Dmin 15km	Az.gap 212°		Rsd 0.1s	13ph/11stn	Dmin 38km	Az.gap 234°	
Corr. 0.840	9M/8stn	Msd 0.3			Corr. -0.568	15M/13stn	Msd 0.1		
99/5584					99/5700				
JUL 24	170826.9s	37.43S	177.14E	5km M=3.6	JUL 29	152125.5s	37.98S	176.45E	179km M=3.9
	0.5	0.03	0.03	R		0.7	0.03	0.02	7
Rsd 0.5s	13ph/8stn	Dmin 12km	Az.gap 208°		Rsd 0.1s	10ph/8stn	Dmin 102km	Az.gap 251°	
Corr. 0.667	11M/10stn	Msd 0.3			Corr. -0.338	9M/9stn	Msd 0.2		
99/5589					99/5706				
JUL 25	002951.8s	38.32S	177.98E	68km M=3.6	JUL 29	214602.1s	38.56S	175.86E	247km M=3.8
	0.4	0.02	0.02	3		0.2	0.03	0.05	3
Rsd 0.1s	15ph/12stn	Dmin 33km	Az.gap 250°		Rsd 0.1s	13ph/10stn	Dmin 134km	Az.gap 314°	
Corr. 0.597	10M/10stn	Msd 0.3	1↑ 1↓		Corr. -0.891	10M/10stn	Msd 0.3	1↓	
99/5602					99/5707				
JUL 25	090520.5s	38.60S	176.16E	5km M=2.6	JUL 29	223915.7s	41.14S	174.04E	61km M=3.5
	0.1	0.01	0.02	R		0.2	0.01	0.01	3
Rsd 0.2s	12ph/10stn	Dmin 7km	Az.gap 180°		Rsd 0.2s	33ph/26stn	Dmin 22km	Az.gap 60°	
Corr. -0.896	11M/11stn	Msd 0.3	3↑ 1↓		Corr. -0.169	14M/11stn	Msd 0.2	3↑ 5↓	
Felt Reporoa (33) MM4.					99/5713				
JUL 25	134205.9s	40.08S	173.92E	126km M=3.7	JUL 30	075109.5s	41.21S	172.73E	195km M=3.6
	0.3	0.01	0.01	3		0.4	0.03	0.02	3
Rsd 0.2s	35ph/28stn	Dmin 81km	Az.gap 153°		Rsd 0.3s	18ph/12stn	Dmin 46km	Az.gap 106°	
Corr. -0.093	14M/13stn	Msd 0.2	1↓		Corr. -0.176	6M/6stn	Msd 0.1	1↑	
99/5610					99/5717				
JUL 25	151123.7s	40.31S	176.45E	68km M=3.5	JUL 30	135427.4s	37.75S	177.54E	46km M=3.9
	0.2	0.01	0.02	2		0.4	0.01	0.03	3
Rsd 0.1s	21ph/18stn	Dmin 45km	Az.gap 167°		Rsd 0.2s	12ph/8stn	Dmin 40km	Az.gap 250°	
Corr. -0.078	17M/13stn	Msd 0.2	6↑ 1↓		Corr. -0.397	2M/2stn	Msd 0.1		
99/5639					99/5719				
JUL 26	230523.0s	37.82S	176.29E	297km M=4.1	JUL 30	182121.8s	44.35S	167.74E	5km M=3.6
	0.3	0.02	0.02	3		0.4	0.02	0.03	R
Rsd 0.1s	16ph/14stn	Dmin 125km	Az.gap 298°		Rsd 0.2s	8ph/6stn	Dmin 39km	Az.gap 221°	
Corr. -0.035	15M/15stn	Msd 0.2	1↓		Corr. -0.609	7M/7stn	Msd 0.4		
99/5656					99/5733				
JUL 27	210244.4s	40.41S	179.25E	12km M=4.5	JUL 31	055140.1s	42.56S	173.67E	5km M=3.5
	0.7	0.03	0.05	R		0.3	0.02	0.02	R
Rsd 0.4s	29ph/24stn	Dmin 224km	Az.gap 257°		Rsd 0.4s	19ph/14stn	Dmin 19km	Az.gap 175°	
Corr. -0.475	37M/35stn	Msd 0.3			Corr. -0.417	18M/12stn	Msd 0.3	1↓	

				99/5738					99/5797
JUL 31	103549.0s	37.52S	176.39E	12km M=3.5	AUG 03	193017.0s	40.03S	173.84E	154km M=3.5
	0.1	0.01	0.01	R		0.6	0.01	0.03	5
Rsd 0.3s	15ph/13stn	Dmin 54km	Az.gap 126°		Rsd 0.2s	16ph/15stn	Dmin 81km	Az.gap 158°	
Corr. 0.456	14M/13stn	Msd 0.3			Corr. 0.363	12M/12stn	Msd 0.3		
				99/5740					99/5800
JUL 31	105634.4s	39.15S	174.89E	221km M=3.9	AUG 03	220413.9s	46.92S	165.57E	33km M=3.8
	0.4	0.02	0.02	3		0.7	0.04	0.05	R
Rsd 0.1s	24ph/21stn	Dmin 45km	Az.gap 155°		Rsd 0.3s	7ph/5stn	Dmin 196km	Az.gap 308°	
Corr. -0.125	10M/10stn	Msd 0.2	3↑ 2↓		Corr. -0.386	8M/5stn	Msd 0.2		
				99/5747					99/5804
JUL 31	221105.7s	38.57S	175.99E	111km M=4.0	AUG 04	022721.5s	37.06S	176.80E	445km M=4.9
	0.5	0.02	0.02	4		0.7	0.06	0.08	6
Rsd 0.2s	18ph/16stn	Dmin 27km	Az.gap 115°		Rsd 0.1s	14ph/12stn	Dmin 103km	Az.gap 253°	
Corr. -0.479	11M/11stn	Msd 0.1	4↑ 2↓		Corr. 0.507	2M/2stn	Msd 0.4	1↓	
				99/5749					99/5807
AUG 01	012318.3s	40.54S	174.80E	29km M=2.8	AUG 04	050234.1s	39.91S	175.16E	80km M=3.6
	0.1	0.01	0.01	2		0.2	0.01	0.01	4
Rsd 0.2s	12ph/10stn	Dmin 37km	Az.gap 115°		Rsd 0.3s	33ph/29stn	Dmin 23km	Az.gap 97°	
Corr. -0.013	11M/11stn	Msd 0.1			Corr. -0.178	15M/14stn	Msd 0.3	1↑ 2↓	
	Felt Marton (62).								
				99/5760					99/5820
AUG 01	154430.8s	36.95S	176.77E	337km M=4.3	AUG 04	124402.5s	36.93S	176.90E	239km M=4.8
	0.7	0.03	0.03	6		0.5	0.02	0.03	4
Rsd 0.1s	13ph/12stn	Dmin 74km	Az.gap 226°		Rsd 0.1s	19ph/15stn	Dmin 108km	Az.gap 210°	
Corr. 0.543	12M/12stn	Msd 0.2	1↑		Corr. -0.235	18M/14stn	Msd 0.3	2↑ 2↓	
				99/5761					99/5823
AUG 01	163201.9s	38.15S	176.51E	314km M=3.9	AUG 04	132040.3s	37.29S	177.60E	298km M=3.8
	0.2	0.05	0.05	3		1.0	0.14	0.17	14
Rsd 0.1s	9ph/7stn	Dmin 143km	Az.gap 244°		Rsd 0.2s	9ph/8stn	Dmin 153km	Az.gap 312°	
Corr. -0.960	7M/7stn	Msd 0.3			Corr. -0.954	5M/5stn	Msd 0.3		
	Poor station coverage.								
				99/5762					99/5829
AUG 01	170353.8s	38.46S	175.73E	194km M=3.6	AUG 05	040228.6s	40.48S	173.88E	107km M=5.3
	0.5	0.03	0.03	4		0.4	0.01	0.01	5
Rsd 0.1s	14ph/11stn	Dmin 72km	Az.gap 252°		Rsd 0.3s	32ph/29stn	Dmin 36km	Az.gap 106°	
Corr. -0.382	9M/9stn	Msd 0.2			Corr. 0.257	9M/4stn	Msd 0.4	10↑ 3↓	
					Felt from Taranaki to Wellington, maximum intensity MM4.				
				99/5789					99/5832
AUG 03	095623.8s	39.44S	174.63E	207km M=3.5	AUG 05	050211.5s	44.73S	167.57E	5km M=5.2
	0.7	0.03	0.04	5		0.3	0.01	0.01	R
Rsd 0.2s	15ph/13stn	Dmin 48km	Az.gap 231°		Rsd 0.1s	15ph/10stn	Dmin 29km	Az.gap 187°	
Corr. -0.102	9M/9stn	Msd 0.2	1↑ 1↓		Corr. -0.452	15M/8stn	Msd 0.2	3↑ 1↓	
					Felt Glenorchy (121) MM4.				
				99/5792					99/5834
AUG 03	123117.5s	38.01S	177.31E	257km M=3.8	AUG 05	050742.4s	44.72S	167.58E	5km M=4.3
	0.2	0.05	0.03	6		0.7	0.02	0.05	R
Rsd 0.0s	11ph/8stn	Dmin 310km	Az.gap 340°		Rsd 0.4s	10ph/7stn	Dmin 28km	Az.gap 203°	
Corr. -0.914	3M/3stn	Msd 0.2			Corr. -0.233	18M/11stn	Msd 0.2	1↑	
	Very poor station coverage.								
				99/5793					99/5849
AUG 03	131217.1s	40.84S	176.92E	19km M=3.5	AUG 05	190319.6s	38.64S	175.78E	190km M=3.7
	0.5	0.02	0.02	3		0.3	0.01	0.03	3
Rsd 0.1s	14ph/11stn	Dmin 59km	Az.gap 252°		Rsd 0.0s	13ph/11stn	Dmin 38km	Az.gap 323°	
Corr. -0.472	18M/16stn	Msd 0.2	1↑ 1↓		Corr. 0.204	6M/6stn	Msd 0.2	1↑ 1↓	

99/5852					99/5939				
AUG 06 005713.0s	39.01S	175.14E	214km	M=3.6	AUG 09 043006.5s	38.32S	175.41E	281km	M=3.8
	0.6	0.02	0.03	5		0.2	0.01	0.01	2
Rsd 0.1s	11ph/10stn	Dmin 41km	Az.gap 264°		Rsd 0.0s	13ph/11stn	Dmin 97km	Az.gap 251°	
Corr. -0.277	5M/5stn	Msd 0.3			Corr. -0.283	11M/11stn	Msd 0.2		
99/5862					99/5945				
AUG 06 115856.3s	38.53S	175.74E	184km	M=3.9	AUG 09 093146.4s	37.28S	177.32E	5km	M=3.9
	0.3	0.02	0.05	2		0.3	0.02	0.02	R
Rsd 0.1s	14ph/11stn	Dmin 64km	Az.gap 322°		Rsd 0.2s	11ph/9stn	Dmin 30km	Az.gap 225°	
Corr. 0.575	9M/9stn	Msd 0.3	1↑		Corr. 0.716	11M/11stn	Msd 0.3		
99/5865					99/5946				
AUG 06 161146.4s	38.80S	175.36E	247km	M=4.1	AUG 09 094315.4s	37.25S	177.35E	5km	M=3.7
	0.7	0.06	0.03	6		0.6	0.04	0.03	R
Rsd 0.2s	15ph/13stn	Dmin 27km	Az.gap 265°		Rsd 0.3s	10ph/7stn	Dmin 34km	Az.gap 229°	
Corr. -0.054	10M/10stn	Msd 0.4	1↑		Corr. 0.395	9M/9stn	Msd 0.3	1↑	
99/5884					99/5950				
AUG 07 161342.9s	36.99S	176.38E	317km	M=3.9	AUG 09 131022.0s	36.85S	176.98E	180km	M=3.8
	0.6	0.09	0.08	10		0.8	0.11	0.11	12
Rsd 0.1s	13ph/9stn	Dmin 448km	Az.gap 341°		Rsd 0.1s	11ph/9stn	Dmin 217km	Az.gap 310°	
Corr. -0.651	5M/5stn	Msd 0.3			Corr. -0.957	6M/6stn	Msd 0.2		
Very poor station coverage.					Poor station coverage.				
99/5887					99/5952				
AUG 07 201553.0s	47.56S	165.37E	12km	M=3.8	AUG 09 143556.5s	37.45S	176.77E	279km	M=4.1
	1.6	0.13	0.08	R		0.4	0.03	0.03	3
Rsd 0.5s	7ph/5stn	Dmin 223km	Az.gap 325°		Rsd 0.1s	13ph/10stn	Dmin 113km	Az.gap 287°	
Corr. 0.177	6M/6stn	Msd 0.2			Corr. -0.555	11M/11stn	Msd 0.2	1↑	
99/5926					99/5980				
AUG 08 234304.0s	47.27S	165.41E	12km	M=3.5	AUG 10 074845.2s	44.46S	168.79E	12km	M=2.5
	0.8	0.04	0.06	R		0.2	0.01	0.02	R
Rsd 0.2s	6ph/4stn	Dmin 212km	Az.gap 327°		Rsd 0.3s	8ph/6stn	Dmin 67km	Az.gap 128°	
Corr. -0.309	4M/3stn	Msd 0.5			Corr. -0.564	4M/4stn	Msd 0.4	1↑	
99/5928					99/5982				
AUG 09 012505.8s	38.28S	176.35E	128km	M=4.0	AUG 10 100816.6s	44.46S	168.79E	12km	M=2.9
	2.0	0.09	0.04	17		0.2	0.01	0.02	R
Rsd 0.4s	10ph/9stn	Dmin 13km	Az.gap 165°		Rsd 0.3s	9ph/6stn	Dmin 67km	Az.gap 127°	
Corr. -0.756	9M/9stn	Msd 0.8	1↑		Corr. -0.534	7M/7stn	Msd 0.3	1↑	
99/5931					99/5983				
AUG 09 020241.4s	37.34S	177.30E	5km	M=4.2	AUG 10 113845.4s	45.05S	167.55E	113km	M=3.6
	0.5	0.02	0.04	R		0.4	0.02	0.03	3
Rsd 0.2s	11ph/10stn	Dmin 24km	Az.gap 212°		Rsd 0.2s	11ph/7stn	Dmin 52km	Az.gap 228°	
Corr. 0.732	18M/16stn	Msd 0.3	1↑		Corr. -0.526	8M/6stn	Msd 0.2	4↑ 3↓	
99/5934					99/6000				
AUG 09 025229.3s	37.39S	177.19E	5km	M=3.7	AUG 11 091058.8s	38.04S	175.94E	207km	M=4.6
	0.5	0.03	0.03	R		0.3	0.02	0.03	3
Rsd 0.3s	10ph/9stn	Dmin 16km	Az.gap 214°		Rsd 0.2s	26ph/22stn	Dmin 39km	Az.gap 110°	
Corr. 0.531	6M/6stn	Msd 0.2			Corr. -0.262	18M/15stn	Msd 0.3	1↓	
99/5938					99/6000				
AUG 09 034157.9s	37.47S	177.10E	5km	M=4.1	AUG 11 091058.8s	38.04S	175.94E	207km	M=4.6
	0.6	0.03	0.04	R		0.3	0.02	0.03	3
Rsd 0.3s	14ph/12stn	Dmin 10km	Az.gap 185°		Rsd 0.2s	26ph/22stn	Dmin 39km	Az.gap 110°	
Corr. 0.653	29M/27stn	Msd 0.3			Corr. -0.262	18M/15stn	Msd 0.3	1↓	

99/6001					99/6060				
AUG 11 102747.9s	40.39S	174.18E	108km	M=4.5	AUG 14 003842.7s	40.89S	172.60E	446km	M=3.6
	0.2	0.01	0.01	3		0.2	0.03	0.03	2
Rsd 0.2s	46ph/36stn	Dmin 51km	Az.gap 116°		Rsd 0.1s	15ph/11stn	Dmin 100km	Az.gap 189°	
Corr. 0.391	11M/6stn	Msd 0.4	16↑ 2↓		Corr. -0.519	11M/11stn	Msd 0.3		
Felt Palmerston North (62).					Unusual depth.				
99/6010					99/6061				
AUG 11 220055.2s	39.51S	174.83E	252km	M=3.5	AUG 14 005913.0s	40.26S	174.37E	106km	M=3.7
	1.1	0.04	0.07	10		0.2	0.00	0.01	3
Rsd 0.2s	12ph/10stn	Dmin 71km	Az.gap 208°		Rsd 0.2s	30ph/25stn	Dmin 70km	Az.gap 106°	
Corr. -0.361	8M/8stn	Msd 0.1	1↑		Corr. 0.290	13M/12stn	Msd 0.4	5↑ 4↓	
99/6018					99/6062				
AUG 12 061750.6s	45.06S	167.65E	120km	M=4.0	AUG 14 011112.9s	39.68S	174.85E	121km	M=3.7
	0.4	0.02	0.03	3		0.4	0.01	0.01	4
Rsd 0.2s	12ph/8stn	Dmin 48km	Az.gap 218°		Rsd 0.2s	31ph/24stn	Dmin 15km	Az.gap 80°	
Corr. -0.373	13M/7stn	Msd 0.3	1↑ 1↓		Corr. -0.056	11M/11stn	Msd 0.2	4↑ 5↓	
99/6023					99/6063				
AUG 12 075516.2s	39.83S	174.12E	152km	M=4.2	AUG 14 024738.3s	44.64S	168.24E	84km	M=4.3
	0.4	0.01	0.02	4		0.4	0.01	0.03	4
Rsd 0.3s	42ph/32stn	Dmin 55km	Az.gap 118°		Rsd 0.2s	13ph/9stn	Dmin 25km	Az.gap 124°	
Corr. -0.191	17M/15stn	Msd 0.3	2↑ 1↓		Corr. -0.659	8M/5stn	Msd 0.3	3↑ 4↓	
99/6033					99/6064				
AUG 12 120813.7s	37.54S	177.28E	85km	M=3.9	AUG 14 075308.0s	38.05S	175.78E	184km	M=3.6
	0.5	0.02	0.03	3		1.1	0.13	0.07	11
Rsd 0.2s	13ph/11stn	Dmin 8km	Az.gap 209°		Rsd 0.2s	10ph/9stn	Dmin 73km	Az.gap 258°	
Corr. 0.466	10M/10stn	Msd 0.3	1↑		Corr. -0.511	12M/12stn	Msd 0.2	1↑	
99/6038					99/6067				
AUG 12 170404.0s	39.33S	179.43W	12km	M=3.6	AUG 14 084059.8s	39.76S	174.52E	108km	M=3.8
	1.2	0.05	0.08	R		0.3	0.01	0.01	4
Rsd 0.4s	8ph/6stn	Dmin 233km	Az.gap 314°		Rsd 0.3s	35ph/30stn	Dmin 36km	Az.gap 88°	
Corr. -0.105	7M/7stn	Msd 0.3			Corr. -0.402	12M/12stn	Msd 0.3	8↑ 3↓	
Poor station coverage.					99/6075				
99/6044					99/6079				
AUG 13 031509.2s	37.55S	176.40E	12km	M=3.9	AUG 15 014023.0s	37.77S	176.31E	230km	M=4.3
	0.5	0.04	0.02	R		0.7	0.24	0.06	14
Rsd 0.1s	12ph/8stn	Dmin 187km	Az.gap 284°		Rsd 0.2s	11ph/9stn	Dmin 116km	Az.gap 272°	
Corr. -0.351	4M/4stn	Msd 0.3			Corr. -0.873	13M/13stn	Msd 0.2	2↑ 2↓	
Poor station coverage.					99/6081				
99/6049					99/6082				
AUG 13 083000.8s	38.15S	176.47E	158km	M=3.6	AUG 15 051828.2s	40.29S	176.28E	75km	M=3.5
	0.8	0.04	0.10	8		0.3	0.01	0.02	4
Rsd 0.2s	11ph/10stn	Dmin 90km	Az.gap 318°		Rsd 0.2s	28ph/25stn	Dmin 44km	Az.gap 154°	
Corr. 0.423	9M/9stn	Msd 0.3	1↑		Corr. -0.427	13M/10stn	Msd 0.1	7↑ 2↓	
99/6050					99/6082				
AUG 13 085938.7s	36.52S	179.79W	12km	M=4.2	AUG 15 053409.2s	38.81S	174.07E	5km	M=4.3
	0.4	0.09	0.10	R		0.2	0.01	0.01	R
Rsd 0.1s	6ph/5stn	Dmin 302km	Az.gap 353°		Rsd 0.2s	24ph/19stn	Dmin 43km	Az.gap 183°	
Corr. -0.948	7M/7stn	Msd 0.2			Corr. -0.810	34M/32stn	Msd 0.4	2↑ 5↓	
Poor station coverage.									

				99/6085					99/6150		
AUG 15	080932.0s	40.47S	173.79E	145km	M=4.5	AUG 17	161230.8s	42.05S	173.82E	12km	M=4.5
	0.2	0.01	0.01	2			0.2	0.02	0.01	R	
Rsd	0.2s	36ph/28stn	Dmin 38km	Az.gap 153°		Rsd	0.3s	28ph/19stn	Dmin 37km	Az.gap 145°	
Corr.	-0.486	15M/10stn	Msd 0.3	10↑ 4↓		Corr.	-0.498	11M/6stn	Msd 0.3	2↑ 5↓	
				99/6099					99/6166		
AUG 15	195528.3s	37.81S	177.58E	12km	M=3.7	AUG 18	011647.3s	37.03S	177.64E	156km	M=6.0
	0.1	0.01	0.01	R			0.7	0.03	0.04	6	
Rsd	0.1s	10ph/7stn	Dmin 47km	Az.gap 204°		Rsd	0.1s	20ph/18stn	Dmin 68km	Az.gap 232°	
Corr.	0.599	16M/16stn	Msd 0.3	1↓		Corr.	0.741	6M/3stn	Msd 0.3	4↑ 7↓	
				99/6103					99/6170		
AUG 16	002723.0s	37.42S	177.14E	5km	M=3.9	AUG 18	034433.9s	40.50S	173.41E	170km	M=3.6
	0.8	0.03	0.06	R			0.4	0.02	0.02	4	
Rsd	0.3s	12ph/10stn	Dmin 13km	Az.gap 221°		Rsd	0.3s	19ph/16stn	Dmin 55km	Az.gap 176°	
Corr.	0.698	12M/12stn	Msd 0.3	1↑ 1↓		Corr.	-0.196	8M/8stn	Msd 0.2	4↑ 1↓	
				99/6106					99/6174		
AUG 16	031358.9s	40.40S	176.19E	69km	M=4.0	AUG 18	080426.7s	45.21S	167.36E	81km	M=3.7
	0.3	0.01	0.02	4			0.7	0.03	0.06	4	
Rsd	0.2s	32ph/27stn	Dmin 32km	Az.gap 164°		Rsd	0.3s	13ph/9stn	Dmin 33km	Az.gap 187°	
Corr.	-0.498	15M/13stn	Msd 0.2	12↑ 3↓		Corr.	-0.489	8M/4stn	Msd 0.1	1↑ 2↓	
				99/6107					99/6177		
AUG 16	034215.4s	38.59S	176.11E	166km	M=3.7	AUG 18	085416.1s	38.17S	176.62E	5km	M=3.7
	0.8	0.04	0.16	9			0.1	0.01	0.01	R	
Rsd	0.2s	9ph/7stn	Dmin 42km	Az.gap 310°		Rsd	0.2s	20ph/18stn	Dmin 12km	Az.gap 154°	
Corr.	0.486	8M/8stn	Msd 0.3	2↑ 1↓		Corr.	-0.404	20M/20stn	Msd 0.2	3↑ 1↓	
				99/6117					99/6193		
AUG 16	134615.8s	39.32S	176.29E	70km	M=4.1	AUG 18	111121.6s	39.54S	174.38E	226km	M=5.2
	0.4	0.02	0.03	6			0.4	0.01	0.02	3	
Rsd	0.3s	29ph/23stn	Dmin 51km	Az.gap 166°		Rsd	0.2s	51ph/42stn	Dmin 28km	Az.gap 77°	
Corr.	-0.178	15M/13stn	Msd 0.2	8↑ 8↓		Corr.	-0.217	9M/4stn	Msd 0.2	19↑ 11↓	
				99/6118					99/6211		
AUG 16	142930.2s	43.52S	170.04E	5km	M=3.7	AUG 18	231442.2s	38.30S	176.26E	181km	M=3.8
	0.1	0.01	0.01	R			0.4	0.07	0.06	5	
Rsd	0.2s	14ph/12stn	Dmin 66km	Az.gap 147°		Rsd	0.1s	11ph/9stn	Dmin 89km	Az.gap 299°	
Corr.	-0.704	12M/10stn	Msd 0.4	1↑ 1↓		Corr.	0.913	12M/12stn	Msd 0.3		
				99/6120					99/6212		
AUG 16	154151.9s	40.68S	176.85E	12km	M=3.6	AUG 18	233827.4s	39.58S	174.40E	214km	M=4.1
	0.4	0.02	0.03	R			0.7	0.02	0.02	6	
Rsd	0.2s	15ph/12stn	Dmin 51km	Az.gap 271°		Rsd	0.2s	33ph/30stn	Dmin 33km	Az.gap 78°	
Corr.	-0.349	16M/14stn	Msd 0.2	1↑		Corr.	-0.351	14M/14stn	Msd 0.3	6↑ 1↓	
				99/6124					99/6221		
AUG 16	223935.4s	41.21S	172.57E	203km	M=3.8	AUG 19	063232.3s	43.70S	169.87E	5km	M=3.6
	0.5	0.04	0.03	4			0.3	0.02	0.03	R	
Rsd	0.3s	18ph/13stn	Dmin 67km	Az.gap 202°		Rsd	0.2s	11ph/9stn	Dmin 48km	Az.gap 127°	
Corr.	-0.597	9M/9stn	Msd 0.3	2↑ 1↓		Corr.	-0.814	10M/10stn	Msd 0.2	1↑ 3↓	
				99/6136							
AUG 17	130347.1s	45.39S	166.90E	56km	M=4.0	Felt Mt Cook Village (105) MM4.					
	0.3	0.02	0.03	5							
Rsd	0.1s	11ph/8stn	Dmin 22km	Az.gap 254°							
Corr.	-0.636	8M/4stn	Msd 0.1	1↓							

99/6229					99/6326				
AUG 19 143743.0s	44.74S	167.58E	5km	M=4.0	AUG 22 213236.6s	37.96S	176.03E	290km	M=3.8
	0.3	0.01	0.01	R		0.3	0.06	0.09	6
Rsd 0.2s	16ph/10stn	Dmin 28km	Az.gap 202°		Rsd 0.1s	11ph/8stn	Dmin 135km	Az.gap 276°	
Corr. -0.463	8M/4stn	Msd 0.1	1↑ 2↓		Corr. -0.938	8M/8stn	Msd 0.3	Poor station coverage.	
99/6234					99/6339				
AUG 19 193646.3s	45.06S	167.49E	78km	M=3.6	AUG 23 122741.0s	38.26S	177.31E	47km	M=4.0
	0.3	0.01	0.03	2		0.2	0.01	0.01	4
Rsd 0.1s	13ph/8stn	Dmin 52km	Az.gap 189°		Rsd 0.2s	29ph/25stn	Dmin 52km	Az.gap 84°	
Corr. -0.548	11M/7stn	Msd 0.2	1↑ 2↓		Corr. 0.082	17M/15stn	Msd 0.2	2↑ 1↓	
99/6235					99/6344				
AUG 19 200316.5s	38.98S	178.23E	12km	M=3.7	AUG 23 150526.5s	37.29S	177.41E	149km	M=4.4
	0.6	0.03	0.04	R		1.4	0.07	0.06	13
Rsd 0.2s	14ph/11stn	Dmin 103km	Az.gap 296°		Rsd 0.6s	12ph/11stn	Dmin 115km	Az.gap 197°	
Corr. -0.119	13M/13stn	Msd 0.2			Corr. 0.301	19M/15stn	Msd 0.3	2↑ 1↓	
99/6241					99/6346				
AUG 20 052036.6s	37.97S	176.62E	162km	M=4.3	AUG 23 191306.0s	38.19S	176.09E	178km	M=3.7
	0.6	0.02	0.02	5		0.5	0.05	0.03	4
Rsd 0.2s	26ph/21stn	Dmin 18km	Az.gap 126°		Rsd 0.2s	11ph/10stn	Dmin 80km	Az.gap 279°	
Corr. 0.090	19M/16stn	Msd 0.3	2↑ 1↓		Corr. 0.034	13M/13stn	Msd 0.2	1↑	
99/6248					99/6348				
AUG 20 180232.0s	41.42S	175.00E	25km	M=4.5	AUG 23 205838.4s	38.70S	175.47E	151km	M=3.6
	0.1	0.01	0.00	1		0.4	0.03	0.03	3
Rsd 0.1s	39ph/30stn	Dmin 11km	Az.gap 127°		Rsd 0.1s	16ph/15stn	Dmin 39km	Az.gap 297°	
Corr. -0.278	10M/6stn	Msd 0.2	10↑ 3↓		Corr. -0.104	9M/9stn	Msd 0.2	1↑	
Felt Wellington and Hutt Valley (68) MM4.					99/6359				
99/6304					99/6359				
AUG 22 010935.6s	37.67S	176.56E	327km	M=5.2	AUG 24 093714.9s	45.01S	167.41E	99km	M=3.7
	0.9	0.07	0.05	7		0.4	0.02	0.03	3
Rsd 0.4s	28ph/24stn	Dmin 41km	Az.gap 144°		Rsd 0.2s	14ph/9stn	Dmin 55km	Az.gap 205°	
Corr. -0.022	17M/13stn	Msd 0.2	6↑ 2↓		Corr. -0.529	11M/8stn	Msd 0.3	1↑	
99/6309					99/6362				
AUG 22 051338.5s	39.79S	173.97E	198km	M=4.2	AUG 24 115908.1s	37.75S	176.75E	131km	M=3.7
	0.5	0.02	0.02	5		1.1	0.13	0.14	23
Rsd 0.2s	30ph/26stn	Dmin 82km	Az.gap 186°		Rsd 0.5s	7ph/5stn	Dmin 126km	Az.gap 258°	
Corr. -0.636	18M/16stn	Msd 0.3			Corr. -0.915	13M/13stn	Msd 0.2	1↑	
99/6312					99/6372				
AUG 22 071518.0s	38.21S	177.97E	65km	M=4.2	AUG 24 175916.6s	40.17S	174.74E	12km	M=3.6
	0.4	0.02	0.02	4		0.2	0.01	0.02	R
Rsd 0.1s	10ph/9stn	Dmin 29km	Az.gap 172°		Rsd 0.3s	27ph/22stn	Dmin 44km	Az.gap 114°	
Corr. 0.151	14M/12stn	Msd 0.4	1↑ 1↓		Corr. -0.466	21M/21stn	Msd 0.3	1↑ 1↓	
99/6314					99/6377				
AUG 22 100212.6s	41.71S	172.18E	101km	M=3.7	AUG 25 005326.3s	38.32S	176.09E	184km	M=3.7
	0.2	0.01	0.01	2		0.2	0.04	0.05	6
Rsd 0.2s	19ph/12stn	Dmin 32km	Az.gap 114°		Rsd 0.1s	14ph/12stn	Dmin 150km	Az.gap 254°	
Corr. -0.445	12M/12stn	Msd 0.2	1↑ 4↓		Corr. -0.946	9M/9stn	Msd 0.3	Poor station coverage.	
99/6317					99/6384				
AUG 22 134345.4s	37.56S	177.65E	170km	M=3.8	AUG 25 062159.7s	40.30S	174.13E	115km	M=3.6
	1.4	0.11	0.06	10		0.4	0.01	0.01	5
Rsd 0.5s	11ph/8stn	Dmin 78km	Az.gap 251°		Rsd 0.3s	30ph/25stn	Dmin 59km	Az.gap 103°	
Corr. -0.125	9M/8stn	Msd 0.2	1↑		Corr. 0.219	14M/13stn	Msd 0.3		

99/6392					99/6496				
AUG 25	160503.1s	41.75S	171.57E	12km M=3.3	AUG 29	214323.7s	37.16S	176.68E	309km M=4.9
	0.1	0.01	0.01	R		0.6	0.03	0.03	5
Rsd 0.1s	10ph/5stn	Dmin 19km	Az.gap 193°		Rsd 0.1s	26ph/25stn	Dmin 61km	Az.gap 179°	
Corr. -0.392	3M/3stn	Msd 0.1	1↑ 1↓		Corr. 0.369	8M/4stn	Msd 0.3	1↑	
Felt Westport (79) MM4.									
99/6402					99/6501				
AUG 26	034459.6s	45.06S	167.36E	88km M=3.7	AUG 30	053256.5s	37.53S	177.13E	259km M=4.1
	0.3	0.02	0.03	2		1.2	0.14	0.17	14
Rsd 0.2s	12ph/10stn	Dmin 48km	Az.gap 208°		Rsd 0.2s	11ph/9stn	Dmin 116km	Az.gap 255°	
Corr. -0.587	15M/9stn	Msd 0.2	7↑ 1↓		Corr. -0.828	17M/16stn	Msd 0.2		
99/6413					99/6506				
AUG 26	174346.3s	36.54S	177.03E	12km M=5.5	AUG 30	093513.9s	38.41S	176.98E	232km M=3.6
	0.8	0.05	0.03	R		0.4	0.10	0.10	6
Rsd 0.3s	14ph/10stn	Dmin 110km	Az.gap 214°		Rsd 0.1s	10ph/8stn	Dmin 95km	Az.gap 242°	
Corr. 0.696	10M/6stn	Msd 0.3	2↑ 2↓		Corr. -0.973	8M/8stn	Msd 0.3		
Felt Great Barrier Island (14), Auckland (16) and Coromandel Peninsula.					Poor station coverage.				
99/6415					99/6522				
AUG 27	035647.9s	39.01S	174.95E	227km M=3.5	AUG 31	021110.0s	38.12S	175.84E	321km M=4.1
	0.9	0.12	0.05	11		0.5	0.06	0.08	6
Rsd 0.3s	15ph/14stn	Dmin 192km	Az.gap 285°		Rsd 0.1s	13ph/11stn	Dmin 123km	Az.gap 266°	
Corr. 0.242	8M/8stn	Msd 0.2			Corr. -0.853	9M/9stn	Msd 0.3		
Poor station coverage.									
99/6428					99/6542				
AUG 27	094429.9s	38.30S	176.14E	144km M=3.6	AUG 31	202703.9s	40.42S	173.37E	181km M=3.6
	0.4	0.02	0.01	4		0.3	0.01	0.01	2
Rsd 0.2s	15ph/10stn	Dmin 14km	Az.gap 185°		Rsd 0.1s	28ph/22stn	Dmin 64km	Az.gap 142°	
Corr. -0.198	8M/8stn	Msd 0.3	1↑		Corr. 0.190	11M/11stn	Msd 0.2	1↑	
99/6447					99/6549				
AUG 28	001413.4s	37.45S	177.20E	266km M=3.7	SEP 01	012419.1s	47.47S	165.38E	12km M=3.8
	0.7	0.01	0.12	16		0.4	0.03	0.03	R
Rsd 0.0s	11ph/8stn	Dmin 241km	Az.gap 318°		Rsd 0.2s	11ph/6stn	Dmin 219km	Az.gap 319°	
Corr. 0.508	8M/8stn	Msd 0.2			Corr. -0.092	9M/8stn	Msd 0.2		
Very poor station coverage.									
99/6456					99/6552				
AUG 28	094522.8s	36.34S	176.24E	33km M=4.8	SEP 01	051630.3s	45.06S	167.57E	70km M=3.9
	0.4	0.03	0.02	R		0.5	0.03	0.03	4
Rsd 0.1s	8ph/6stn	Dmin 263km	Az.gap 305°		Rsd 0.2s	13ph/9stn	Dmin 51km	Az.gap 177°	
Corr. -0.418	7M/7stn	Msd 0.3			Corr. -0.647	12M/6stn	Msd 0.3	1↓	
99/6457					99/6559				
AUG 28	102435.3s	39.14S	175.12E	177km M=3.6	SEP 01	104705.3s	38.55S	176.14E	105km M=4.3
	0.4	0.02	0.01	3		0.2	0.01	0.01	1
Rsd 0.1s	25ph/18stn	Dmin 37km	Az.gap 162°		Rsd 0.1s	42ph/36stn	Dmin 11km	Az.gap 50°	
Corr. 0.468	12M/12stn	Msd 0.3	1↑		Corr. -0.229	8M/4stn	Msd 0.1	9↑ 2↓	
99/6493					99/6564				
AUG 29	203719.9s	45.20S	167.36E	97km M=3.5	SEP 01	153023.9s	40.68S	173.18E	165km M=4.2
	0.3	0.02	0.03	2		0.4	0.01	0.02	4
Rsd 0.1s	13ph/9stn	Dmin 34km	Az.gap 190°		Rsd 0.3s	36ph/28stn	Dmin 58km	Az.gap 128°	
Corr. -0.543	11M/8stn	Msd 0.3	1↑ 2↓		Corr. -0.040	21M/16stn	Msd 0.3	13↑ 3↓	
99/6493					99/6588				
SEP 03	025830.1s	39.83S	177.14E	33km M=4.0		0.3	0.01	0.03	R
	0.3	0.01	0.03	R	Rsd 0.2s	27ph/24stn	Dmin 42km	Az.gap 192°	
Rsd 0.2s	27ph/24stn	Dmin 42km	Az.gap 192°		Corr. -0.600	38M/34stn	Msd 0.3	1↑	
Corr. -0.600	38M/34stn	Msd 0.3	1↑		Felt Napier (52) and Hastings (60).				

99/6605					99/6686						
SEP 03	170717.9s	38.29S	176.07E	189km	M=4.1	SEP 06	132500.4s	38.10S	176.13E	235km	M=3.7
	1.2	0.04	0.04	11			1.0	0.06	0.10	11	
Rsd 0.4s	18ph/16stn		Dmin 19km		Az.gap 144°	Rsd 0.2s	10ph/9stn		Dmin 117km		Az.gap 293°
Corr. 0.010	16M/16stn		Msd 0.3		9↑ 1↓	Corr. -0.786	9M/9stn		Msd 0.2		
99/6626					99/6687						
SEP 04	092105.6s	38.04S	176.16E	211km	M=4.2	SEP 06	135743.3s	45.06S	167.44E	60km	M=3.8
	0.5	0.02	0.02	4			0.2	0.01	0.02	3	
Rsd 0.2s	28ph/23stn		Dmin 20km		Az.gap 99°	Rsd 0.1s	15ph/9stn		Dmin 50km		Az.gap 196°
Corr. -0.120	13M/13stn		Msd 0.2		1↑	Corr. -0.453	12M/6stn		Msd 0.3		1↑ 5↓
99/6633					99/6693						
SEP 04	150105.9s	37.87S	177.19E	273km	M=3.8	SEP 06	162812.7s	38.74S	175.58E	125km	M=3.6
	0.6	0.07	0.09	6			0.5	0.02	0.01	5	
Rsd 0.2s	11ph/9stn		Dmin 96km		Az.gap 240°	Rsd 0.1s	16ph/14stn		Dmin 49km		Az.gap 165°
Corr. -0.870	8M/8stn		Msd 0.2			Corr. 0.279	9M/9stn		Msd 0.2		
99/6641					99/6696						
SEP 04	222514.4s	45.27S	167.40E	119km	M=4.4	SEP 06	180459.9s	38.93S	175.13E	177km	M=3.8
	0.4	0.03	0.03	3			0.4	0.02	0.02	3	
Rsd 0.2s	13ph/8stn		Dmin 30km		Az.gap 171°	Rsd 0.1s	15ph/13stn		Dmin 46km		Az.gap 120°
Corr. -0.272	12M/6stn		Msd 0.2		6↑ 2↓	Corr. 0.240	12M/12stn		Msd 0.2		1↑
99/6642					99/6701						
SEP 04	230629.5s	38.72S	176.00E	116km	M=3.7	SEP 07	014156.3s	38.27S	176.29E	196km	M=3.6
	0.3	0.01	0.01	3			1.0	0.07	0.05	10	
Rsd 0.1s	16ph/14stn		Dmin 6km		Az.gap 97°	Rsd 0.3s	12ph/9stn		Dmin 117km		Az.gap 231°
Corr. -0.333	12M/12stn		Msd 0.2		1↑	Corr. -0.807	10M/10stn		Msd 0.2		
99/6658					99/6704						
SEP 05	044047.3s	38.68S	175.79E	140km	M=3.7	SEP 07	050301.7s	37.66S	177.84E	211km	M=3.6
	0.5	0.02	0.02	5			0.2	0.02	0.02	2	
Rsd 0.3s	17ph/13stn		Dmin 21km		Az.gap 122°	Rsd 0.0s	10ph/8stn		Dmin 150km		Az.gap 338°
Corr. -0.057	11M/11stn		Msd 0.3		1↑	Corr. -0.434	4M/4stn		Msd 0.2		
99/6669					99/6704						
SEP 05	170205.4s	38.53S	179.31W	12km	M=3.8	SEP 07	050301.7s	37.66S	177.84E	211km	M=3.6
	0.7	0.06	0.05	R			0.2	0.02	0.02	2	
Rsd 0.2s	6ph/4stn		Dmin 218km		Az.gap 336°	Rsd 0.0s	10ph/8stn		Dmin 150km		Az.gap 338°
Corr. 0.571	3M/3stn		Msd 0.2			Corr. -0.434	4M/4stn		Msd 0.2		
99/6671					99/6704						
SEP 05	182131.3s	38.06S	176.70E	96km	M=3.7	SEP 07	050301.7s	37.66S	177.84E	211km	M=3.6
	0.2	0.01	0.01	2			0.2	0.02	0.02	2	
Rsd 0.1s	14ph/12stn		Dmin 6km		Az.gap 105°	Rsd 0.0s	10ph/8stn		Dmin 150km		Az.gap 338°
Corr. 0.082	6M/6stn		Msd 0.1		1↑	Corr. -0.434	4M/4stn		Msd 0.2		
99/6680					99/6704						
SEP 06	042802.9s	38.66S	176.80E	54km	M=3.9	SEP 07	050301.7s	37.66S	177.84E	211km	M=3.6
	0.2	0.02	0.01	4			0.2	0.02	0.02	2	
Rsd 0.3s	12ph/9stn		Dmin 31km		Az.gap 148°	Rsd 0.0s	10ph/8stn		Dmin 150km		Az.gap 338°
Corr. -0.373	13M/13stn		Msd 0.3		1↑	Corr. -0.434	4M/4stn		Msd 0.2		
99/6682					99/6726						
SEP 06	084116.6s	38.00S	176.61E	180km	M=3.7	SEP 08	030256.9s	40.25S	174.54E	5km	M=3.5
	0.7	0.05	0.05	8			0.2	0.01	0.02	R	
Rsd 0.2s	9ph/8stn		Dmin 103km		Az.gap 304°	Rsd 0.4s	21ph/18stn		Dmin 60km		Az.gap 172°
Corr. 0.088	9M/9stn		Msd 0.3		3↑ 1↓	Corr. -0.508	23M/19stn		Msd 0.3		1↓
99/6682					99/6727						
SEP 06	084116.6s	38.00S	176.61E	180km	M=3.7	SEP 08	032720.9s	40.48S	173.76E	126km	M=3.7
	0.7	0.05	0.05	8			0.4	0.02	0.01	4	
Rsd 0.2s	9ph/8stn		Dmin 103km		Az.gap 304°	Rsd 0.3s	19ph/14stn		Dmin 38km		Az.gap 164°
Corr. 0.088	9M/9stn		Msd 0.3		3↑ 1↓	Corr. -0.140	10M/10stn		Msd 0.3		1↑
99/6680					99/6740						
SEP 06	042802.9s	38.66S	176.80E	54km	M=3.9	SEP 09	015036.1s	37.38S	177.10E	5km	M=4.0
	0.2	0.02	0.01	4			0.3	0.02	0.02	R	
Rsd 0.3s	12ph/9stn		Dmin 31km		Az.gap 148°	Rsd 0.3s	12ph/10stn		Dmin 18km		Az.gap 188°
Corr. -0.373	13M/13stn		Msd 0.3		1↑	Corr. 0.592	11M/9stn		Msd 0.2		1↑
99/6682					99/6744						
SEP 06	084116.6s	38.00S	176.61E	180km	M=3.7	SEP 09	033525.0s	37.39S	177.05E	5km	M=4.1
	0.7	0.05	0.05	8			0.2	0.01	0.01	R	
Rsd 0.2s	9ph/8stn		Dmin 103km		Az.gap 304°	Rsd 0.3s	14ph/11stn		Dmin 74km		Az.gap 185°
Corr. 0.088	9M/9stn		Msd 0.3		3↑ 1↓	Corr. 0.425	14M/11stn		Msd 0.2		1↑ 1↓

Poor station coverage.

				99/6747					99/6822
SEP	09	053258.5s	38.75S 175.85E	209km M=3.7	SEP	12	054742.7s	36.16S 179.37W	33km M=4.3
		2.7	0.14	0.22			2.6	0.11	0.21
				22					R
Rsd	0.6s	10ph/8stn	Dmin 57km	Az.gap 338°	Rsd	0.6s	7ph/5stn	Dmin 299km	Az.gap 316°
Corr.	-0.549	6M/6stn	Msd 0.3	1↑	Corr.	-0.077	5M/4stn	Msd 0.3	1↑
				Poor station coverage.					
				99/6751					99/6824
SEP	09	083311.7s	37.42S 177.08E	5km M=3.9	SEP	12	084641.5s	45.97S 170.31E	5km M=3.5
		0.3	0.02	0.02			0.2	0.02	0.01
				R					R
Rsd	0.3s	16ph/11stn	Dmin 15km	Az.gap 183°	Rsd	0.2s	14ph/8stn	Dmin 14km	Az.gap 212°
Corr.	0.331	15M/13stn	Msd 0.2		Corr.	-0.653	14M/8stn	Msd 0.3	1↓
									Felt Brighton (144).
				99/6754					99/6826
SEP	09	104115.1s	37.37S 177.11E	5km M=3.6	SEP	12	090953.7s	41.02S 173.38E	93km M=3.9
		0.4	0.03	0.02			0.3	0.01	0.01
				R					3
Rsd	0.5s	9ph/8stn	Dmin 19km	Az.gap 189°	Rsd	0.3s	32ph/24stn	Dmin 52km	Az.gap 86°
Corr.	0.463	11M/10stn	Msd 0.2	1↓	Corr.	-0.069	15M/14stn	Msd 0.3	2↑ 2↓
				99/6760					99/6838
SEP	09	154140.5s	37.41S 177.17E	5km M=3.6	SEP	13	010437.1s	39.24S 174.89E	211km M=3.5
		1.8	0.09	0.08			0.4	0.02	0.01
				R					3
Rsd	0.5s	6ph/5stn	Dmin 13km	Az.gap 235°	Rsd	0.1s	16ph/13stn	Dmin 57km	Az.gap 236°
Corr.	0.826	7M/7stn	Msd 0.2	1↓	Corr.	-0.679	11M/11stn	Msd 0.3	1↑
				99/6764					99/6839
SEP	09	175052.2s	37.14S 177.15E	299km M=3.8	SEP	13	013256.7s	37.34S 177.75E	162km M=3.9
		0.9	0.04	0.05			0.4	0.05	0.07
				8					7
Rsd	0.0s	12ph/11stn	Dmin 241km	Az.gap 339°	Rsd	0.1s	9ph/7stn	Dmin 93km	Az.gap 297°
Corr.	-0.149	3M/3stn	Msd 0.3		Corr.	-0.915	7M/6stn	Msd 0.2	
				99/6766					Poor station coverage.
SEP	09	200809.5s	42.53S 172.84E	51km M=4.2					99/6842
		0.2	0.01	0.01					SEP
				3					13
Rsd	0.2s	21ph/15stn	Dmin 55km	Az.gap 109°					035848.1s
Corr.	-0.164	13M/11stn	Msd 0.3	2↑ 4↓					38.13S 176.24E
				99/6777					199km M=3.7
SEP	10	094252.3s	41.71S 174.32E	12km M=4.4					Rsd
		0.1	0.01	0.01					0.3s
				R					12ph/11stn
Rsd	0.3s	23ph/20stn	Dmin 9km	Az.gap 142°					Dmin 78km
Corr.	-0.591	10M/5stn	Msd 0.3	9↑ 7↓					Az.gap 285°
									Corr.
									-0.158
									11M/11stn
									Msd 0.2
				99/6792					99/6855
SEP	11	072029.3s	37.98S 177.73E	69km M=4.1	SEP	13	162719.2s	38.56S 175.91E	188km M=3.8
		0.4	0.02	0.02			0.9	0.05	0.10
				4					11
Rsd	0.1s	25ph/23stn	Dmin 48km	Az.gap 147°	Rsd	0.3s	18ph/14stn	Dmin 104km	Az.gap 261°
Corr.	0.696	13M/12stn	Msd 0.3	1↑ 1↓	Corr.	-0.501	12M/12stn	Msd 0.2	1↑ 1↓
									Poor station coverage.
				99/6799					99/6870
SEP	11	125050.7s	40.43S 176.47E	49km M=3.8	SEP	14	050737.3s	38.13S 176.24E	5km M=2.8
		0.1	0.01	0.01			0.1	0.01	0.01
				2					R
Rsd	0.2s	31ph/28stn	Dmin 34km	Az.gap 197°	Rsd	0.1s	7ph/6stn	Dmin 1km	Az.gap 182°
Corr.	-0.678	20M/15stn	Msd 0.2	1↑	Corr.	-0.589	4M/4stn	Msd 0.2	1↑
									Felt Rotorua (33) MM4.
				99/6818					99/6876
SEP	12	005236.4s	38.75S 175.72E	146km M=4.2	SEP	14	140732.3s	39.64S 176.40E	54km M=3.9
		0.6	0.03	0.03			0.2	0.01	0.02
				5					4
Rsd	0.2s	20ph/16stn	Dmin 5km	Az.gap 148°	Rsd	0.3s	36ph/32stn	Dmin 7km	Az.gap 113°
Corr.	-0.203	18M/17stn	Msd 0.3	1↑	Corr.	-0.111	18M/14stn	Msd 0.2	5↑ 1↓
									Felt Waipawa (60) MM4.

				99/6880					99/6930		
SEP 14 205435.3s	42.93S	171.83E	12km	M=4.5	SEP 17 074403.1s	45.01S	167.69E	5km	M=4.0		
	0.1	0.01	0.01	R		0.2	0.01	0.02	R		
Rsd 0.1s	16ph/10stn	Dmin 39km	Az.gap 100°		Rsd 0.2s	14ph/10stn	Dmin 42km	Az.gap 168°			
Corr. -0.008	18M/10stn	Msd 0.2	4↑ 5↓		Corr. -0.180	12M/6stn	Msd 0.3	5↑ 3↓			
Felt Christchurch (110) MM4.											
				99/6884					99/6932		
SEP 14 225738.9s	40.48S	173.58E	141km	M=3.9	SEP 17 093754.6s	38.32S	175.99E	170km	M=5.0		
	0.3	0.01	0.01	3		0.3	0.01	0.01	3		
Rsd 0.2s	32ph/25stn	Dmin 46km	Az.gap 128°		Rsd 0.1s	33ph/29stn	Dmin 25km	Az.gap 90°			
Corr. 0.052	18M/14stn	Msd 0.3	6↑ 3↓		Corr. -0.087	14M/8stn	Msd 0.3	17↑ 10↓			
				99/6885					99/6936		
SEP 15 095329.4s	45.92S	167.08E	98km	M=3.5	SEP 17 134030.0s	39.32S	173.85E	9km	M=3.8		
	0.3	0.01	0.03	2		0.2	0.01	0.01	1		
Rsd 0.1s	12ph/8stn	Dmin 51km	Az.gap 224°		Rsd 0.2s	19ph/16stn	Dmin 5km	Az.gap 196°			
Corr. -0.462	14M/9stn	Msd 0.2	1↑ 5↓		Corr. 0.105	32M/30stn	Msd 0.3	5↑ 1↓			
				99/6901					99/6949		
SEP 16 044142.5s	37.97S	176.31E	205km	M=3.8	SEP 18 023638.1s	38.27S	176.23E	163km	M=3.7		
	1.6	0.07	0.04	12		0.4	0.02	0.02	3		
Rsd 0.2s	11ph/9stn	Dmin 96km	Az.gap 295°		Rsd 0.1s	13ph/11stn	Dmin 65km	Az.gap 272°			
Corr. 0.281	9M/9stn	Msd 0.3	1↑ 1↓		Corr. 0.345	12M/12stn	Msd 0.2	1↑ 3↓			
				99/6903					99/6957		
SEP 16 054511.4s	38.38S	175.96E	195km	M=3.7	SEP 18 124615.0s	37.99S	176.46E	216km	M=3.8		
	0.6	0.04	0.05	6		1.0	0.17	0.31	17		
Rsd 0.1s	12ph/10stn	Dmin 150km	Az.gap 320°		Rsd 0.2s	12ph/9stn	Dmin 110km	Az.gap 303°			
Corr. -0.346	12M/12stn	Msd 0.2	1↑ 3↓		Corr. -0.933	9M/9stn	Msd 0.2	Poor station coverage.			
Poor station coverage.											
				99/6915					99/6958		
SEP 16 201204.5s	36.49S	177.00E	5km	M=4.0	SEP 18 133228.8s	38.35S	176.07E	143km	M=3.7		
	2.2	0.13	0.08	R		0.4	0.02	0.02	4		
Rsd 0.5s	7ph/4stn	Dmin 116km	Az.gap 273°		Rsd 0.1s	14ph/10stn	Dmin 63km	Az.gap 199°			
Corr. 0.824	6M/4stn	Msd 0.3	Poorly recorded.		Corr. 0.047	10M/10stn	Msd 0.2				
				99/6916					99/6962		
SEP 16 222246.4s	38.88S	175.16E	231km	M=4.0	SEP 18 194312.9s	38.14S	176.25E	5km	M=3.0		
	0.5	0.03	0.02	4		0.1	0.00	0.00	R		
Rsd 0.1s	20ph/17stn	Dmin 48km	Az.gap 205°		Rsd 0.1s	9ph/7stn	Dmin 6km	Az.gap 94°			
Corr. 0.030	11M/11stn	Msd 0.2	3↑ 5↓		Corr. -0.587	4M/4stn	Msd 0.2	Felt Rotorua (33) MM4.			
				99/6919					99/6963		
SEP 17 014722.2s	39.38S	177.72E	12km	M=3.9	SEP 18 194434.3s	38.14S	176.28E	5km	M=3.0		
	0.5	0.03	0.03	R		0.2	0.02	0.01	R		
Rsd 0.3s	15ph/12stn	Dmin 79km	Az.gap 202°		Rsd 0.2s	9ph/8stn	Dmin 2km	Az.gap 88°			
Corr. -0.753	26M/26stn	Msd 0.3	1↑		Corr. -0.494	5M/5stn	Msd 0.2	1↑			
				99/6923					99/6965		
SEP 17 031354.4s	41.82S	172.80E	78km	M=4.4	SEP 18 195016.6s	38.13S	176.26E	5km	M=2.8		
	0.2	0.01	0.01	2		0.1	0.01	0.00	R		
Rsd 0.2s	28ph/21stn	Dmin 11km	Az.gap 96°		Rsd 0.1s	8ph/5stn	Dmin 8km	Az.gap 171°			
Corr. -0.198	17M/12stn	Msd 0.2	4↑ 2↓		Corr. -0.731	5M/5stn	Msd 0.3	Felt Rotorua (33) MM4.			
Felt Dovedale (75) MM3.											

99/6972					99/7056				
SEP 18 201635.2s	38.12S	176.23E	5km	M=3.0	SEP 23 015256.6s	38.30S	176.08E	166km	M=4.3
	0.1	0.00	0.00	R		0.4	0.01	0.01	4
Rsd 0.1s	9ph/6stn	Dmin 7km	Az.gap 102°		Rsd 0.2s	27ph/25stn	Dmin 17km	Az.gap 91°	
Corr. -0.073	6M/6stn	Msd 0.3			Corr. -0.287	19M/16stn	Msd 0.2	4↑ 1↓	
Felt Rotorua (33) MM4.									
99/6973					99/7061				
SEP 18 201652.7s	38.12S	176.24E	5km	M=3.5	SEP 23 050757.1s	37.43S	176.76E	206km	M=4.0
	0.1	0.01	0.01	R		0.5	0.05	0.04	4
Rsd 0.2s	16ph/14stn	Dmin 2km	Az.gap 87°		Rsd 0.2s	12ph/10stn	Dmin 63km	Az.gap 266°	
Corr. -0.472	17M/17stn	Msd 0.2	1↓		Corr. -0.539	6M/6stn	Msd 0.2		
Felt Ngakuru and Rotorua (33) MM4.									
99/6977					99/7098				
SEP 18 203137.0s	38.13S	176.26E	5km	M=3.2	SEP 24 133728.4s	35.46S	179.29E	12km	M=4.2
	0.1	0.01	0.01	R		1.5	0.10	0.12	R
Rsd 0.2s	18ph/12stn	Dmin 1km	Az.gap 73°		Rsd 0.5s	6ph/4stn	Dmin 304km	Az.gap 329°	
Corr. -0.311	13M/13stn	Msd 0.2	3↑ 1↓		Corr. -0.122	3M/3stn	Msd 0.2		
Felt Rotorua (33) MM4.									
99/6984					99/7105				
SEP 18 205846.1s	38.13S	176.25E	5km	M=2.9	SEP 24 174921.1s	37.73S	176.48E	266km	M=3.9
	0.1	0.01	0.01	R		0.5	0.04	0.03	4
Rsd 0.2s	10ph/6stn	Dmin 7km	Az.gap 174°		Rsd 0.1s	11ph/10stn	Dmin 81km	Az.gap 244°	
Corr. -0.682	6M/6stn	Msd 0.2			Corr. -0.492	12M/12stn	Msd 0.3	1↑ 1↓	
Felt Rotorua (33) MM4.									
99/7012					99/7109				
SEP 21 001524.6s	40.95S	174.01E	36km	M=3.6	SEP 24 212838.0s	40.68S	173.25E	243km	M=3.6
	0.1	0.01	0.01	5		0.2	0.05	0.03	3
Rsd 0.2s	26ph/23stn	Dmin 18km	Az.gap 60°		Rsd 0.1s	11ph/9stn	Dmin 58km	Az.gap 308°	
Corr. 0.156	11M/8stn	Msd 0.2	1↓		Corr. -0.121	7M/7stn	Msd 0.2	1↑	
Felt Nelson (76).									
99/7017					99/7114				
SEP 21 063808.9s	38.03S	176.03E	226km	M=3.6	SEP 25 054709.1s	37.44S	177.07E	5km	M=3.8
	1.2	0.08	0.10	16		0.2	0.01	0.01	R
Rsd 0.3s	6ph/5stn	Dmin 128km	Az.gap 294°		Rsd 0.3s	16ph/10stn	Dmin 14km	Az.gap 182°	
Corr. -0.784	2M/2stn	Msd 0.0			Corr. 0.316	14M/10stn	Msd 0.3	1↑	
Very poor station coverage.									
99/7022					99/7116				
SEP 21 135251.4s	40.74S	174.85E	42km	M=4.2	SEP 25 074350.9s	36.88S	177.89E	138km	M=4.3
	0.1	0.01	0.01	2		0.5	0.05	0.03	5
Rsd 0.2s	41ph/34stn	Dmin 15km	Az.gap 66°		Rsd 0.2s	13ph/10stn	Dmin 95km	Az.gap 252°	
Corr. -0.091	11M/6stn	Msd 0.1	2↑ 1↓		Corr. 0.613	19M/16stn	Msd 0.2	2↑ 1↓	
Felt Foxton (65) to Wellington (68), maximum intensity MM4.									
99/7051					99/7117				
SEP 22 204611.7s	41.19S	172.65E	169km	M=4.1	SEP 25 075135.2s	42.43S	172.91E	33km	M=3.5
	0.4	0.02	0.02	3		0.2	0.01	0.02	R
Rsd 0.3s	24ph/18stn	Dmin 42km	Az.gap 116°		Rsd 0.3s	17ph/14stn	Dmin 65km	Az.gap 126°	
Corr. -0.334	14M/13stn	Msd 0.3	6↑ 1↓		Corr. -0.285	17M/15stn	Msd 0.2	1↑ 3↓	
99/7053					99/7119				
SEP 22 211021.8s	38.78S	176.00E	93km	M=3.6	SEP 25 094212.2s	37.89S	177.62E	141km	M=3.6
	0.4	0.01	0.02	3		0.1	0.02	0.01	1
Rsd 0.2s	21ph/17stn	Dmin 15km	Az.gap 100°		Rsd 0.1s	13ph/10stn	Dmin 60km	Az.gap 216°	
Corr. -0.415	14M/14stn	Msd 0.2	3↑ 1↓		Corr. -0.318	9M/7stn	Msd 0.2	1↑	
99/7053					99/7121				
SEP 22 211021.8s	38.78S	176.00E	93km	M=3.6	SEP 25 120007.3s	38.19S	179.23E	12km	M=3.8
	0.4	0.01	0.02	3		0.7	0.03	0.04	R
Rsd 0.2s	21ph/17stn	Dmin 15km	Az.gap 100°		Rsd 0.3s	10ph/7stn	Dmin 86km	Az.gap 304°	
Corr. -0.415	14M/14stn	Msd 0.2	3↑ 1↓		Corr. 0.605	12M/10stn	Msd 0.3	1↑	

99/7123					99/7168				
SEP 25	150143.0s	43.18S	170.87E	5km M=4.3	SEP 27	013957.0s	37.21S	178.44E	33km M=5.0
	0.1	0.01	0.01	R		0.5	0.03	0.03	R
Rsd 0.2s	15ph/10stn	Dmin 16km	Az.gap 73°		Rsd 0.2s	31ph/27stn	Dmin 98km	Az.gap 255°	
Corr. -0.198	11M/6stn	Msd 0.3	1↑ 6↓		Corr. 0.808	12M/7stn	Msd 0.1	3↑ 6↓	
99/7124					99/7171				
SEP 25	150632.9s	41.82S	172.56E	86km M=3.6	SEP 27	090838.5s	36.75S	178.20E	33km M=4.4
	0.3	0.02	0.02	4		0.2	0.01	0.01	R
Rsd 0.2s	15ph/12stn	Dmin 29km	Az.gap 145°		Rsd 0.1s	12ph/10stn	Dmin 125km	Az.gap 269°	
Corr. -0.332	9M/9stn	Msd 0.2	2↑ 3↓		Corr. 0.144	19M/18stn	Msd 0.3		
99/7127					99/7181				
SEP 25	170012.8s	43.19S	170.85E	5km M=4.0	SEP 27	204726.1s	37.39S	177.15E	5km M=3.7
	0.1	0.01	0.01	R		0.5	0.03	0.03	R
Rsd 0.2s	15ph/10stn	Dmin 16km	Az.gap 78°		Rsd 0.5s	12ph/9stn	Dmin 16km	Az.gap 189°	
Corr. -0.265	30M/25stn	Msd 0.3	1↑ 4↓		Corr. 0.444	8M/7stn	Msd 0.2	1↓	
99/7144					99/7182				
SEP 26	042440.3s	39.74S	177.13E	18km M=3.5	SEP 27	204803.3s	37.51S	177.08E	5km M=3.8
	0.8	0.04	0.04	3		0.2	0.02	0.01	R
Rsd 0.3s	15ph/14stn	Dmin 34km	Az.gap 274°		Rsd 0.4s	8ph/5stn	Dmin 10km	Az.gap 156°	
Corr. -0.756	14M/14stn	Msd 0.3	1↑		Corr. 0.055	2M/2stn	Msd 0.1		
99/7149					99/7183				
SEP 26	072825.1s	38.05S	175.26E	141km M=3.7	SEP 27	205617.0s	38.94S	178.02E	24km M=3.8
	1.3	0.10	0.16	28		0.3	0.02	0.01	3
Rsd 0.4s	16ph/13stn	Dmin 164km	Az.gap 261°		Rsd 0.1s	14ph/10stn	Dmin 84km	Az.gap 206°	
Corr. -0.775	11M/11stn	Msd 0.2	1↑		Corr. -0.700	23M/23stn	Msd 0.2	1↑	
99/7154					99/7184				
SEP 26	121056.1s	38.51S	176.07E	165km M=3.5	SEP 27	212750.9s	39.34S	175.66E	98km M=4.2
	0.3	0.06	0.03	9		0.2	0.01	0.01	2
Rsd 0.1s	12ph/9stn	Dmin 243km	Az.gap 339°		Rsd 0.2s	38ph/34stn	Dmin 8km	Az.gap 58°	
Corr. -0.412	8M/7stn	Msd 0.3			Corr. -0.060	20M/16stn	Msd 0.2	9↑ 6↓	
	Poor station coverage.								
99/7158					99/7185				
SEP 26	161105.6s	38.97S	175.23E	253km M=3.5	SEP 27	215442.4s	37.38S	177.08E	5km M=3.8
	0.4	0.14	0.05	13		0.2	0.01	0.01	R
Rsd 0.1s	11ph/8stn	Dmin 212km	Az.gap 313°		Rsd 0.2s	13ph/10stn	Dmin 19km	Az.gap 187°	
Corr. -0.627	6M/6stn	Msd 0.3	1↓		Corr. 0.310	11M/9stn	Msd 0.2		
	Very poor station coverage.								
99/7164					99/7198				
SEP 26	204906.4s	36.13S	179.15E	275km M=4.5	SEP 28	025614.7s	40.32S	173.46E	161km M=3.7
	0.6	0.10	0.11	5		0.4	0.01	0.01	4
Rsd 0.3s	11ph/8stn	Dmin 230km	Az.gap 343°		Rsd 0.2s	30ph/27stn	Dmin 66km	Az.gap 143°	
Corr. -0.641	9M/7stn	Msd 0.2			Corr. 0.087	11M/11stn	Msd 0.3	7↑ 3↓	
99/7166					99/7201				
SEP 26	221544.8s	40.18S	177.20E	23km M=3.7	SEP 28	081813.6s	40.64S	175.32E	29km M=2.8
	0.3	0.01	0.02	3		0.1	0.01	0.01	2
Rsd 0.1s	16ph/13stn	Dmin 78km	Az.gap 251°		Rsd 0.2s	16ph/13stn	Dmin 43km	Az.gap 121°	
Corr. 0.040	22M/18stn	Msd 0.3	1↑		Corr. -0.028	11M/11stn	Msd 0.2	1↑	
						Felt Raumatī South (65) MM4.			
99/7167					99/7205				
SEP 26	224604.8s	40.03S	176.80E	27km M=3.6	SEP 28	104443.5s	37.54S	177.14E	5km M=3.5
	0.4	0.01	0.02	3		0.2	0.03	0.02	R
Rsd 0.2s	16ph/13stn	Dmin 53km	Az.gap 211°		Rsd 0.2s	7ph/6stn	Dmin 5km	Az.gap 136°	
Corr. -0.733	19M/17stn	Msd 0.2	1↓		Corr. -0.894	9M/8stn	Msd 0.2	1↓	

				99/7210					99/7271
SEP	28	173834.8s	37.53S 177.13E	5km M=3.6	SEP	30	220019.4s	39.08S 177.32E	32km M=4.1
		0.4 0.04 0.02	R				0.2 0.01 0.01	1	
Rsd	0.3s	9ph/7stn	Dmin 6km	Az.gap 144°	Rsd	0.1s	24ph/22stn	Dmin 34km	Az.gap 171°
Corr.	-0.830	9M/8stn	Msd 0.3		Corr.	-0.551	45M/39stn	Msd 0.3	1↑
									Felt Whakatane (27).
				99/7213					99/7278
SEP	28	225459.5s	39.07S 173.90E	5km M=3.6	OCT	01	001735.5s	38.58S 175.87E	154km M=4.4
		0.3 0.01 0.02	R				0.3 0.01 0.01	2	
Rsd	0.2s	20ph/17stn	Dmin 16km	Az.gap 216°	Rsd	0.1s	30ph/28stn	Dmin 12km	Az.gap 66°
Corr.	-0.734	23M/21stn	Msd 0.4	1↑ 5↓	Corr.	0.093	20M/17stn	Msd 0.3	2↑ 1↓
				99/7214					99/7279
SEP	28	231730.9s	39.99S 178.64E	12km M=3.6	OCT	01	005556.0s	37.82S 177.35E	287km M=4.0
		0.6 0.02 0.04	R				0.1 0.02 0.02	2	
Rsd	0.3s	17ph/14stn	Dmin 268km	Az.gap 283°	Rsd	0.0s	14ph/12stn	Dmin 84km	Az.gap 253°
Corr.	-0.454	13M/13stn	Msd 0.2		Corr.	-0.935	12M/12stn	Msd 0.2	
				99/7228					99/7281
SEP	29	133423.0s	40.39S 176.59E	28km M=4.1	OCT	01	013551.1s	40.88S 172.50E	5km M=3.8
		0.3 0.01 0.01	3				0.2 0.01 0.01	R	
Rsd	0.2s	38ph/31stn	Dmin 79km	Az.gap 207°	Rsd	0.2s	18ph/14stn	Dmin 6km	Az.gap 165°
Corr.	-0.671	35M/32stn	Msd 0.3	4↑ 7↓	Corr.	-0.528	19M/16stn	Msd 0.2	1↑
									Felt Bainham (72).
				99/7235					99/7282
SEP	29	225505.0s	37.35S 177.11E	5km M=3.8	OCT	01	022959.7s	40.89S 172.59E	5km M=2.8
		0.3 0.03 0.03	R				0.0 0.00 0.00	R	
Rsd	0.3s	7ph/5stn	Dmin 21km	Az.gap 191°	Rsd	0.1s	9ph/6stn	Dmin 9km	Az.gap 125°
Corr.	0.794	4M/3stn	Msd 0.3	1↑	Corr.	0.394	9M/7stn	Msd 0.1	1↑
									Felt Bainham (72).
				99/7240					99/7307
SEP	30	015400.5s	38.42S 176.25E	95km M=4.0	OCT	02	095953.0s	37.33S 177.12E	5km M=3.8
		0.3 0.01 0.01	3				0.2 0.01 0.01	R	
Rsd	0.2s	28ph/23stn	Dmin 4km	Az.gap 54°	Rsd	0.2s	13ph/10stn	Dmin 23km	Az.gap 193°
Corr.	-0.416	15M/15stn	Msd 0.2	3↑ 1↓	Corr.	0.382	11M/9stn	Msd 0.2	
				99/7243					99/7308
SEP	30	063926.3s	37.30S 176.58E	229km M=4.1	OCT	02	100135.9s	37.42S 177.09E	5km M=3.8
		0.5 0.09 0.09	11				0.2 0.02 0.01	R	
Rsd	0.1s	9ph/7stn	Dmin 171km	Az.gap 270°	Rsd	0.3s	10ph/8stn	Dmin 15km	Az.gap 185°
Corr.	-0.881	16M/16stn	Msd 0.2		Corr.	0.399	11M/8stn	Msd 0.2	
				99/7244					99/7310
SEP	30	071333.9s	36.45S 178.97E	12km M=5.0	OCT	02	102845.9s	45.19S 169.72E	5km M=3.2
		0.7 0.04 0.03	R				0.1 0.01 0.01	R	
Rsd	0.2s	25ph/23stn	Dmin 191km	Az.gap 275°	Rsd	0.3s	14ph/10stn	Dmin 32km	Az.gap 107°
Corr.	0.595	10M/6stn	Msd 0.2		Corr.	-0.297	14M/9stn	Msd 0.3	1↓
									Felt Omakau (134) MM4.
				99/7253					99/7326
SEP	30	102253.2s	39.64S 174.57E	198km M=3.6	OCT	03	000947.0s	38.28S 177.07E	182km M=3.7
		0.4 0.01 0.02	4				0.2 0.03 0.05	4	
Rsd	0.2s	22ph/18stn	Dmin 36km	Az.gap 181°	Rsd	0.0s	11ph/9stn	Dmin 92km	Az.gap 257°
Corr.	-0.495	12M/12stn	Msd 0.3	4↑ 1↓	Corr.	-0.989	9M/9stn	Msd 0.2	
				99/7260					Poor station coverage.
SEP	30	143237.5s	38.03S 176.64E	144km M=3.8					
		0.9 0.04 0.02	7						
Rsd	0.2s	17ph/15stn	Dmin 5km	Az.gap 118°					
Corr.	-0.152	13M/13stn	Msd 0.3	1↑ 1↓					

99/7329					99/7371				
OCT 03 021235.3s	37.39S	177.07E	5km	M=4.1	OCT 04 103327.4s	37.34S	177.22E	5km	M=3.7
	0.2	0.03	0.02	R		0.4	0.02	0.03	R
Rsd 0.3s	8ph/7stn	Dmin 19km	Az.gap 186°		Rsd 0.4s	10ph/8stn	Dmin 21km	Az.gap 196°	
Corr. 0.726	9M/6stn	Msd 0.2			Corr. 0.497	12M/11stn	Msd 0.2		
99/7333					99/7372				
OCT 03 061046.5s	38.84S	177.49E	52km	M=4.7	OCT 04 103755.8s	41.09S	174.59E	32km	M=3.4
	0.1	0.01	0.01	2		0.1	0.01	0.01	1
Rsd 0.1s	26ph/24stn	Dmin 38km	Az.gap 144°		Rsd 0.2s	22ph/18stn	Dmin 19km	Az.gap 109°	
Corr. -0.352	9M/5stn	Msd 0.3	1↑ 5↓		Corr. -0.116	19M/14stn	Msd 0.2	3↑ 3↓	
					Felt Wellington (68).				
99/7339					99/7375				
OCT 03 081725.0s	44.79S	167.53E	5km	M=4.3	OCT 04 111825.0s	37.43S	177.05E	5km	M=3.8
	0.3	0.01	0.02	R		0.3	0.02	0.02	R
Rsd 0.2s	13ph/10stn	Dmin 34km	Az.gap 204°		Rsd 0.3s	15ph/11stn	Dmin 16km	Az.gap 182°	
Corr. -0.270	12M/6stn	Msd 0.1	1↑		Corr. 0.429	12M/11stn	Msd 0.2	1↓	
99/7340					99/7377				
OCT 03 082229.6s	40.34S	176.55E	50km	M=3.7	OCT 04 142052.1s	37.42S	177.04E	5km	M=4.3
	0.2	0.01	0.02	4		0.2	0.01	0.01	R
Rsd 0.2s	34ph/30stn	Dmin 45km	Az.gap 184°		Rsd 0.2s	19ph/16stn	Dmin 17km	Az.gap 177°	
Corr. -0.561	22M/18stn	Msd 0.2	1↑ 7↓		Corr. 0.422	22M/18stn	Msd 0.3	1↓	
99/7345					99/7378				
OCT 03 131700.9s	37.38S	177.28E	5km	M=3.7	OCT 04 153533.1s	37.54S	177.32E	5km	M=3.7
	0.5	0.02	0.04	R		0.6	0.03	0.03	R
Rsd 0.2s	8ph/7stn	Dmin 18km	Az.gap 268°		Rsd 0.2s	8ph/6stn	Dmin 12km	Az.gap 278°	
Corr. -0.057	10M/9stn	Msd 0.3			Corr. 0.770	8M/7stn	Msd 0.3		
99/7352					99/7380				
OCT 03 222832.6s	44.64S	168.25E	84km	M=3.7	OCT 04 205752.4s	37.28S	176.72E	245km	M=5.0
	0.3	0.01	0.02	3		0.5	0.03	0.03	3
Rsd 0.2s	16ph/10stn	Dmin 26km	Az.gap 135°		Rsd 0.2s	31ph/26stn	Dmin 50km	Az.gap 175°	
Corr. -0.479	8M/5stn	Msd 0.2	5↑ 1↓		Corr. 0.607	8M/5stn	Msd 0.3	2↑ 3↓	
99/7364					99/7383				
OCT 04 052159.8s	38.51S	175.71E	194km	M=3.7	OCT 04 220933.0s	37.45S	177.08E	5km	M=3.9
	0.3	0.02	0.02	3		0.5	0.12	0.08	R
Rsd 0.1s	14ph/12stn	Dmin 51km	Az.gap 294°		Rsd 0.4s	6ph/4stn	Dmin 13km	Az.gap 182°	
Corr. 0.550	9M/9stn	Msd 0.2	2↑ 1↓		Corr. 0.931	3M/3stn	Msd 0.1		
99/7365					99/7384				
OCT 04 064329.1s	37.39S	177.07E	5km	M=4.0	OCT 04 230549.4s	36.75S	177.58E	33km	M=4.0
	0.2	0.02	0.01	R		1.3	0.11	0.08	R
Rsd 0.3s	16ph/13stn	Dmin 18km	Az.gap 186°		Rsd 0.3s	5ph/3stn	Dmin 158km	Az.gap 248°	
Corr. 0.482	21M/18stn	Msd 0.2	1↓		Corr. 0.934	3M/3stn	Msd 0.2		
99/7366					99/7385				
OCT 04 064434.7s	37.39S	177.12E	5km	M=3.8	OCT 05 002309.1s	37.50S	177.11E	5km	M=3.6
	0.4	0.02	0.03	R		0.5	0.03	0.02	R
Rsd 0.4s	12ph/10stn	Dmin 17km	Az.gap 189°		Rsd 0.4s	11ph/8stn	Dmin 7km	Az.gap 168°	
Corr. 0.600	9M/8stn	Msd 0.2	1↓		Corr. -0.176	8M/8stn	Msd 0.2		
99/7368					99/7386				
OCT 04 072426.7s	37.44S	177.13E	5km	M=3.5	OCT 05 010300.8s	37.46S	177.11E	5km	M=3.6
	0.5	0.03	0.02	R		0.7	0.05	0.01	R
Rsd 0.1s	6ph/5stn	Dmin 11km	Az.gap 213°		Rsd 0.3s	11ph/9stn	Dmin 11km	Az.gap 183°	
Corr. 0.781	9M/8stn	Msd 0.2	1↑		Corr. 0.250	8M/8stn	Msd 0.2	1↑	

				99/7387					99/7433
OCT 05	021650.2s	37.50S	177.05E	5km M=3.8	OCT 05	202132.2s	37.42S	177.10E	5km M=3.9
	0.2	0.01	0.01	R		0.3	0.02	0.02	R
Rsd 0.3s	18ph/15stn	Dmin 13km	Az.gap 158°		Rsd 0.4s	18ph/14stn	Dmin 15km	Az.gap 185°	
Corr. 0.073	22M/18stn	Msd 0.2	1↑		Corr. 0.223	17M/14stn	Msd 0.2	1↓	
				99/7392					99/7435
OCT 05	052347.8s	37.49S	177.12E	5km M=3.6	OCT 05	205815.7s	37.47S	177.11E	5km M=3.5
	0.3	0.02	0.02	R		0.4	0.03	0.02	R
Rsd 0.3s	11ph/7stn	Dmin 8km	Az.gap 184°		Rsd 0.4s	13ph/10stn	Dmin 9km	Az.gap 181°	
Corr. 0.311	9M/9stn	Msd 0.2			Corr. 0.309	8M/8stn	Msd 0.2	1↓	
				99/7401					99/7436
OCT 05	091140.8s	37.49S	177.07E	5km M=3.7	OCT 05	210036.3s	37.41S	177.09E	5km M=3.9
	0.4	0.03	0.02	R		0.4	0.03	0.02	R
Rsd 0.4s	15ph/11stn	Dmin 11km	Az.gap 167°		Rsd 0.3s	13ph/11stn	Dmin 16km	Az.gap 185°	
Corr. 0.013	9M/9stn	Msd 0.2	1↑		Corr. 0.208	17M/14stn	Msd 0.3	1↓	
				99/7407					99/7437
OCT 05	115524.1s	40.37S	173.43E	157km M=4.1	OCT 05	211752.6s	37.41S	177.06E	5km M=4.0
	0.3	0.01	0.01	2		0.2	0.01	0.01	R
Rsd 0.2s	42ph/33stn	Dmin 64km	Az.gap 141°		Rsd 0.3s	12ph/10stn	Dmin 17km	Az.gap 184°	
Corr. 0.120	20M/16stn	Msd 0.3	7↑ 2↓		Corr. 0.337	19M/17stn	Msd 0.2		
				99/7410					99/7438
OCT 05	122413.7s	37.51S	177.08E	5km M=3.6	OCT 05	211838.2s	37.45S	177.18E	5km M=3.7
	0.3	0.02	0.02	R		0.7	0.03	0.04	R
Rsd 0.3s	14ph/10stn	Dmin 9km	Az.gap 154°		Rsd 0.3s	10ph/7stn	Dmin 9km	Az.gap 235°	
Corr. 0.270	9M/9stn	Msd 0.3	1↑		Corr. 0.626	10M/8stn	Msd 0.2		
				99/7414					99/7439
OCT 05	125156.9s	37.44S	177.11E	5km M=3.7	OCT 05	212418.3s	37.46S	177.12E	5km M=3.6
	0.7	0.10	0.08	R		0.3	0.02	0.02	R
Rsd 0.5s	7ph/5stn	Dmin 13km	Az.gap 184°		Rsd 0.3s	10ph/7stn	Dmin 10km	Az.gap 183°	
Corr. 0.916	4M/4stn	Msd 0.2			Corr. 0.635	9M/9stn	Msd 0.3		
				99/7416					99/7440
OCT 05	135040.8s	37.50S	177.03E	5km M=3.7	OCT 05	213643.7s	37.46S	177.04E	5km M=4.3
	0.1	0.02	0.01	R		0.4	0.02	0.02	R
Rsd 0.1s	6ph/4stn	Dmin 14km	Az.gap 160°		Rsd 0.3s	17ph/15stn	Dmin 15km	Az.gap 171°	
Corr. 0.819	3M/3stn	Msd 0.3			Corr. 0.495	29M/23stn	Msd 0.2		
				99/7425					99/7445
OCT 05	171350.0s	37.49S	177.02E	5km M=3.8	OCT 05	225408.0s	37.44S	177.06E	5km M=4.5
	0.3	0.02	0.01	R		0.3	0.02	0.02	R
Rsd 0.3s	14ph/10stn	Dmin 16km	Az.gap 162°		Rsd 0.3s	23ph/19stn	Dmin 15km	Az.gap 177°	
Corr. 0.200	13M/10stn	Msd 0.3	1↑		Corr. 0.305	31M/25stn	Msd 0.2	1↓	
				99/7426					99/7446
OCT 05	171648.0s	37.46S	177.08E	5km M=3.8	OCT 05	225548.2s	37.47S	177.14E	5km M=3.8
	0.4	0.03	0.02	R		0.6	0.04	0.03	R
Rsd 0.5s	12ph/9stn	Dmin 12km	Az.gap 181°		Rsd 0.4s	10ph/8stn	Dmin 8km	Az.gap 183°	
Corr. 0.319	13M/10stn	Msd 0.3	1↑		Corr. 0.367	7M/7stn	Msd 0.2		
				99/7429					99/7447
OCT 05	174849.6s	37.46S	177.11E	5km M=3.7	OCT 05	225722.2s	37.45S	177.08E	5km M=4.0
	0.3	0.02	0.01	R		0.3	0.02	0.02	R
Rsd 0.3s	12ph/8stn	Dmin 10km	Az.gap 182°		Rsd 0.3s	15ph/12stn	Dmin 13km	Az.gap 181°	
Corr. 0.442	9M/8stn	Msd 0.2			Corr. 0.309	18M/15stn	Msd 0.1		

				99/7448					99/7469
OCT 05 225818.7s	37.46S	177.06E	5km	M=3.9	OCT 06 003022.4s	37.51S	177.09E	5km	M=3.5
	0.4	0.03	0.02	R		0.6	0.05	0.02	R
Rsd 0.3s	12ph/11stn	Dmin 13km	Az.gap 180°		Rsd 0.3s	9ph/7stn	Dmin 9km	Az.gap 236°	
Corr. 0.107	11M/10stn	Msd 0.2			Corr. -0.804	7M/7stn	Msd 0.2		
				99/7449					99/7470
OCT 05 230125.9s	37.48S	177.06E	5km	M=3.6	OCT 06 004156.7s	37.51S	177.11E	5km	M=3.6
	0.1	0.06	0.04	R		1.1	0.10	0.03	R
Rsd 0.2s	5ph/3stn	Dmin 124km	Az.gap 178°		Rsd 0.4s	10ph/8stn	Dmin 7km	Az.gap 236°	
Corr. 0.972	4M/3stn	Msd 0.1			Corr. -0.855	7M/6stn	Msd 0.3	1↑	
				99/7452					99/7471
OCT 05 231005.0s	37.52S	177.05E	5km	M=3.5	OCT 06 005224.0s	37.51S	177.08E	5km	M=3.7
	1.1	0.09	0.03	R		0.1	0.04	0.03	R
Rsd 0.4s	11ph/9stn	Dmin 12km	Az.gap 225°		Rsd 0.2s	5ph/4stn	Dmin 10km	Az.gap 159°	
Corr. -0.721	8M/7stn	Msd 0.1			Corr. 0.961	5M/3stn	Msd 0.2		
				99/7454					99/7472
OCT 05 231942.6s	37.46S	177.06E	5km	M=4.1	OCT 06 022427.5s	37.47S	177.04E	5km	M=4.0
	0.4	0.03	0.02	R		0.3	0.02	0.02	R
Rsd 0.3s	16ph/14stn	Dmin 13km	Az.gap 175°		Rsd 0.4s	14ph/10stn	Dmin 15km	Az.gap 173°	
Corr. 0.272	25M/21stn	Msd 0.3			Corr. 0.311	21M/18stn	Msd 0.2	1↓	
				99/7455					99/7476
OCT 05 232016.3s	37.50S	177.10E	5km	M=3.9	OCT 06 040230.0s	37.40S	177.06E	5km	M=3.9
	0.3	0.03	0.01	R		0.3	0.02	0.02	R
Rsd 0.3s	6ph/5stn	Dmin 9km	Az.gap 168°		Rsd 0.3s	13ph/10stn	Dmin 18km	Az.gap 185°	
Corr. -0.232	3M/3stn	Msd 0.3			Corr. 0.372	14M/11stn	Msd 0.2	1↓	
				99/7456					99/7482
OCT 05 233251.8s	37.51S	177.12E	5km	M=3.8	OCT 06 064314.7s	40.94S	172.98E	182km	M=3.8
	0.4	0.03	0.02	R		0.4	0.02	0.01	4
Rsd 0.4s	13ph/11stn	Dmin 7km	Az.gap 165°		Rsd 0.2s	25ph/20stn	Dmin 81km	Az.gap 156°	
Corr. 0.095	17M/15stn	Msd 0.3			Corr. -0.333	14M/14stn	Msd 0.2		
				99/7458					99/7483
OCT 05 234519.0s	37.45S	177.04E	5km	M=4.2	OCT 06 065628.3s	37.45S	177.07E	5km	M=3.9
	0.3	0.02	0.01	R		0.2	0.02	0.01	R
Rsd 0.3s	19ph/16stn	Dmin 15km	Az.gap 175°		Rsd 0.3s	13ph/10stn	Dmin 14km	Az.gap 181°	
Corr. 0.192	27M/23stn	Msd 0.2			Corr. 0.289	11M/10stn	Msd 0.2	1↑	
				99/7459					99/7496
OCT 05 234656.0s	37.47S	177.13E	5km	M=4.0	OCT 06 120520.4s	35.70S	179.39E	220km	M=4.1
	0.4	0.02	0.02	R		0.7	0.02	0.04	5
Rsd 0.3s	14ph/12stn	Dmin 9km	Az.gap 182°		Rsd 0.1s	7ph/6stn	Dmin 282km	Az.gap 311°	
Corr. 0.353	12M/10stn	Msd 0.2			Corr. 0.002	7M/7stn	Msd 0.2		
				99/7460					99/7498
OCT 05 234941.0s	37.44S	177.06E	5km	M=3.5	OCT 06 125323.9s	37.42S	177.16E	5km	M=3.7
	1.2	0.09	0.03	R		0.5	0.03	0.03	R
Rsd 0.4s	9ph/8stn	Dmin 15km	Az.gap 261°		Rsd 0.5s	12ph/9stn	Dmin 13km	Az.gap 187°	
Corr. -0.671	6M/6stn	Msd 0.1			Corr. 0.422	10M/8stn	Msd 0.3		
				99/7463					99/7500
OCT 06 000414.2s	37.51S	177.07E	5km	M=3.8	OCT 06 125420.9s	37.45S	177.18E	5km	M=3.8
	0.3	0.02	0.01	R		0.4	0.03	0.03	R
Rsd 0.2s	17ph/15stn	Dmin 11km	Az.gap 153°		Rsd 0.4s	12ph/10stn	Dmin 9km	Az.gap 187°	
Corr. 0.081	23M/20stn	Msd 0.2	1↓		Corr. 0.477	11M/8stn	Msd 0.3		

Poor station coverage.

99/7510					99/7563				
OCT 06 151918.5s	41.74S	174.35E	30km	M=3.5	OCT 08 012457.0s	38.27S	175.49E	33km	M=4.1
	0.2	0.01	0.01	2		1.0	0.06	0.05	R
Rsd 0.3s	26ph/19stn	Dmin 11km	Az.gap 154°		Rsd 0.4s	9ph/7stn	Dmin 151km	Az.gap 285°	
Corr. -0.343	23M/20stn	Msd 0.2	2↑ 2↓		Corr. -0.708	8M/8stn	Msd 0.5		
					Poor station coverage.				
99/7511					99/7588				
OCT 06 153825.8s	39.21S	177.56E	33km	M=3.8	OCT 08 181822.3s	40.27S	173.77E	114km	M=3.7
	0.4	0.02	0.03	R		0.3	0.01	0.01	3
Rsd 0.3s	23ph/19stn	Dmin 58km	Az.gap 188°		Rsd 0.2s	38ph/31stn	Dmin 60km	Az.gap 125°	
Corr. -0.502	31M/29stn	Msd 0.3	1↑		Corr. 0.116	11M/11stn	Msd 0.3	1↑ 3↓	
99/7512					99/7593				
OCT 06 163352.8s	37.43S	177.15E	5km	M=3.6	OCT 08 212506.3s	40.88S	174.60E	49km	M=3.9
	0.7	0.04	0.02	R		0.1	0.01	0.01	2
Rsd 0.2s	10ph/8stn	Dmin 12km	Az.gap 187°		Rsd 0.2s	40ph/32stn	Dmin 26km	Az.gap 63°	
Corr. 0.750	5M/5stn	Msd 0.2			Corr. 0.007	12M/7stn	Msd 0.2	2↑ 8↓	
99/7527					99/7601				
OCT 06 214321.9s	37.59S	177.12E	5km	M=3.6	OCT 09 045042.9s	40.21S	174.78E	23km	M=3.7
	0.1	0.03	0.03	R		0.2	0.01	0.01	4
Rsd 0.3s	10ph/8stn	Dmin 9km	Az.gap 97°		Rsd 0.4s	37ph/31stn	Dmin 74km	Az.gap 74°	
Corr. -0.935	8M/8stn	Msd 0.2			Corr. 0.002	35M/29stn	Msd 0.2	1↑ 1↓	
99/7533					99/7610				
OCT 07 011810.1s	37.48S	177.13E	5km	M=3.6	OCT 09 094842.6s	37.80S	176.46E	200km	M=4.2
	0.6	0.04	0.01	R		0.9	0.04	0.02	7
Rsd 0.2s	10ph/8stn	Dmin 8km	Az.gap 181°		Rsd 0.2s	17ph/16stn	Dmin 28km	Az.gap 249°	
Corr. 0.128	10M/8stn	Msd 0.3	1↑		Corr. -0.312	17M/15stn	Msd 0.3	1↑	
99/7534					99/7622				
OCT 07 011842.6s	37.43S	177.20E	5km	M=4.0	OCT 09 141920.0s	37.95S	179.97W	12km	M=3.8
	0.6	0.02	0.05	R		0.6	0.04	0.03	R
Rsd 0.3s	10ph/8stn	Dmin 11km	Az.gap 246°		Rsd 0.2s	10ph/9stn	Dmin 157km	Az.gap 321°	
Corr. 0.745	11M/8stn	Msd 0.3	1↑		Corr. 0.515	9M/9stn	Msd 0.2		
99/7542					99/7642				
OCT 07 085257.1s	36.82S	178.16E	12km	M=3.9	OCT 10 075843.6s	40.54S	173.55E	145km	M=3.8
	0.5	0.03	0.03	R		0.3	0.01	0.01	2
Rsd 0.3s	15ph/12stn	Dmin 117km	Az.gap 266°		Rsd 0.2s	38ph/31stn	Dmin 43km	Az.gap 122°	
Corr. 0.625	17M/16stn	Msd 0.2	1↓		Corr. 0.128	14M/13stn	Msd 0.3	7↑ 2↓	
99/7551					99/7643				
OCT 07 195423.4s	37.89S	176.34E	204km	M=4.6	OCT 10 082634.2s	44.97S	167.56E	88km	M=3.5
	0.6	0.02	0.02	5		0.3	0.01	0.02	3
Rsd 0.1s	22ph/20stn	Dmin 31km	Az.gap 121°		Rsd 0.2s	14ph/9stn	Dmin 44km	Az.gap 192°	
Corr. 0.169	21M/18stn	Msd 0.3	6↑ 4↓		Corr. -0.503	12M/9stn	Msd 0.3	4↑ 1↓	
99/7557					99/7647				
OCT 08 000501.9s	40.93S	175.75E	30km	M=3.7	OCT 10 101216.3s	38.41S	176.00E	165km	M=4.1
	0.1	0.01	0.01	2		0.4	0.02	0.02	3
Rsd 0.3s	18ph/15stn	Dmin 33km	Az.gap 148°		Rsd 0.1s	15ph/13stn	Dmin 23km	Az.gap 216°	
Corr. -0.488	20M/15stn	Msd 0.2	2↑ 4↓		Corr. 0.417	15M/14stn	Msd 0.3	1↑	
99/7560					99/7650				
OCT 08 003506.6s	39.78S	179.60W	12km	M=3.7	OCT 10 114306.7s	40.36S	177.13E	25km	M=3.8
	0.9	0.04	0.06	R		0.5	0.02	0.03	4
Rsd 0.2s	6ph/6stn	Dmin 307km	Az.gap 313°		Rsd 0.3s	24ph/21stn	Dmin 83km	Az.gap 201°	
Corr. -0.451	9M/9stn	Msd 0.2	1↑ 1↓		Corr. -0.593	32M/27stn	Msd 0.2	1↓	

99/7653					99/7708				
OCT 10 141849.7s	38.39S	175.87E	192km	M=3.8	OCT 13 155420.0s	38.85S	175.50E	125km	M=3.8
	0.4	0.02	0.01	3		0.3	0.02	0.01	3
Rsd 0.1s	13ph/11stn	Dmin 37km	Az.gap 266°		Rsd 0.1s	21ph/19stn	Dmin 17km	Az.gap 63°	
Corr. 0.127	10M/10stn	Msd 0.3	1↑		Corr. 0.341	13M/11stn	Msd 0.2	1↑	
99/7667					99/7711				
OCT 11 025613.0s	39.44S	176.33E	79km	M=3.9	OCT 13 191305.7s	37.61S	175.76E	163km	M=3.5
	0.4	0.02	0.01	4		0.9	0.10	0.17	18
Rsd 0.4s	32ph/25stn	Dmin 29km	Az.gap 71°		Rsd 0.3s	8ph/6stn	Dmin 139km	Az.gap 290°	
Corr. -0.051	18M/16stn	Msd 0.2	2↑ 1↓		Corr. -0.852	2M/2stn	Msd 0.1	1↑	
					Poor station coverage.				
99/7673					99/7714				
OCT 11 051815.6s	41.12S	174.85E	30km	M=3.6	OCT 14 035623.2s	38.91S	175.58E	116km	M=3.8
	0.1	0.01	0.01	1		0.3	0.01	0.01	2
Rsd 0.3s	23ph/18stn	Dmin 17km	Az.gap 65°		Rsd 0.2s	28ph/22stn	Dmin 11km	Az.gap 88°	
Corr. -0.298	16M/13stn	Msd 0.2	4↑ 3↓		Corr. -0.155	18M/16stn	Msd 0.2	4↑ 4↓	
Felt Wellington and Lower Hutt (68).									
99/7680					99/7724				
OCT 11 170333.8s	39.20S	174.84E	23km	M=3.5	OCT 14 184726.5s	45.09S	167.57E	118km	M=3.8
	0.1	0.00	0.01	1		0.4	0.02	0.03	3
Rsd 0.2s	26ph/21stn	Dmin 61km	Az.gap 99°		Rsd 0.2s	15ph/9stn	Dmin 54km	Az.gap 174°	
Corr. -0.070	20M/19stn	Msd 0.3	4↑ 4↓		Corr. -0.347	16M/9stn	Msd 0.2	3↑ 4↓	
99/7681					99/7726				
OCT 11 175822.3s	39.13S	175.72E	78km	M=3.7	OCT 14 201847.4s	42.72S	173.19E	29km	M=3.6
	0.2	0.01	0.01	2		0.2	0.02	0.01	1
Rsd 0.2s	26ph/21stn	Dmin 7km	Az.gap 58°		Rsd 0.1s	15ph/12stn	Dmin 45km	Az.gap 169°	
Corr. 0.137	14M/12stn	Msd 0.2	2↑ 3↓		Corr. -0.844	20M/15stn	Msd 0.2	2↑ 1↓	
99/7693					99/7727				
OCT 12 212540.8s	40.52S	176.26E	37km	M=3.7	OCT 14 211844.3s	40.11S	173.61E	190km	M=3.9
	0.2	0.01	0.03	3		0.4	0.01	0.02	3
Rsd 0.3s	28ph/24stn	Dmin 18km	Az.gap 179°		Rsd 0.2s	30ph/25stn	Dmin 81km	Az.gap 145°	
Corr. -0.399	19M/15stn	Msd 0.2	1↑ 1↓		Corr. -0.073	14M/12stn	Msd 0.3	1↑	
99/7695					99/7729				
OCT 12 232243.4s	41.35S	172.92E	115km	M=3.8	OCT 14 230418.3s	40.76S	176.57E	26km	M=3.8
	0.5	0.02	0.02	5		0.4	0.02	0.02	2
Rsd 0.3s	21ph/17stn	Dmin 46km	Az.gap 108°		Rsd 0.2s	22ph/18stn	Dmin 29km	Az.gap 213°	
Corr. -0.102	15M/13stn	Msd 0.3	1↑ 2↓		Corr. -0.582	29M/24stn	Msd 0.3	1↓	
99/7697					99/7735				
OCT 13 005657.7s	37.14S	177.96E	199km	M=4.0	OCT 15 071822.4s	36.91S	177.49E	12km	M=3.8
	0.6	0.17	0.19	11		0.2	0.01	0.01	R
Rsd 0.2s	6ph/4stn	Dmin 107km	Az.gap 312°		Rsd 0.1s	11ph/5stn	Dmin 73km	Az.gap 236°	
Corr. -0.956	10M/10stn	Msd 0.2			Corr. 0.748	10M/7stn	Msd 0.2		
Poor azimuthal distribution.									
99/7705					99/7736				
OCT 13 125328.0s	37.46S	177.03E	5km	M=3.7	OCT 15 073001.7s	38.49S	175.98E	151km	M=4.2
	0.2	0.02	0.01	R		0.7	0.03	0.02	5
Rsd 0.2s	11ph/8stn	Dmin 16km	Az.gap 172°		Rsd 0.2s	20ph/17stn	Dmin 27km	Az.gap 119°	
Corr. 0.243	10M/8stn	Msd 0.3	1↑		Corr. -0.243	19M/18stn	Msd 0.3	5↑ 1↓	
99/7707					99/7745				
OCT 13 134410.3s	37.41S	177.09E	5km	M=3.7	OCT 15 171001.1s	37.94S	176.27E	186km	M=4.0
	0.2	0.01	0.01	R		0.5	0.03	0.02	4
Rsd 0.3s	15ph/12stn	Dmin 16km	Az.gap 186°		Rsd 0.2s	14ph/12stn	Dmin 36km	Az.gap 214°	
Corr. 0.350	15M/13stn	Msd 0.2			Corr. 0.005	14M/14stn	Msd 0.2	1↑	

99/7746
OCT 15 171928.5s 38.53S 176.45E 94km M=3.6
 0.7 0.03 0.02 6
 Rsd 0.4s 21ph/16stn Dmin 23km Az.gap 63°
 Corr. -0.022 7M/5stn Msd 0.2

99/7754
OCT 16 020901.5s 38.51S 175.85E 151km M=3.6
 1.1 0.04 0.03 9
 Rsd 0.2s 12ph/11stn Dmin 24km Az.gap 230°
 Corr. -0.585 14M/14stn Msd 0.3

99/7756
OCT 16 031544.2s 45.35S 174.84W 33km M=5.4
 0.6 0.04 0.04 R
 Rsd 0.3s 46ph/38stn Dmin 892km Az.gap 299°
 Corr. -0.102 29M/15stn Msd 0.3
 Felt Chatham Islands (159).

99/7765
OCT 16 144451.2s 40.03S 173.62E 226km M=3.5
 0.4 0.08 0.05 10
 Rsd 0.1s 6ph/5stn Dmin 201km Az.gap 327°
 Corr. -0.493 1M/1stn Msd 0.0

99/7766
OCT 16 183723.0s 38.50S 175.75E 149km M=3.8
 0.7 0.04 0.02 6
 Rsd 0.2s 16ph/14stn Dmin 23km Az.gap 232°
 Corr. -0.583 15M/15stn Msd 0.2 1↑

99/7769
OCT 16 213632.7s 38.94S 175.17E 164km M=3.6
 0.2 0.01 0.01 2
 Rsd 0.1s 18ph/17stn Dmin 33km Az.gap 119°
 Corr. 0.352 11M/11stn Msd 0.2

99/7771
OCT 17 030155.4s 38.32S 176.08E 168km M=3.5
 0.7 0.05 0.02 6
 Rsd 0.2s 11ph/10stn Dmin 67km Az.gap 274°
 Corr. 0.196 8M/8stn Msd 0.2 1↑

99/7789
OCT 17 135409.0s 36.61S 177.58E 215km M=3.7
 1.0 0.05 0.06 8
 Rsd 0.4s 9ph/6stn Dmin 167km Az.gap 256°
 Corr. 0.160 2M/2stn Msd 0.1

99/7793
OCT 17 162016.4s 43.12S 171.44E 5km M=3.5
 0.1 0.01 0.00 R
 Rsd 0.1s 9ph/5stn Dmin 57km Az.gap 96°
 Corr. -0.132 3M/3stn Msd 0.9 1↓

99/7795
OCT 17 192007.1s 44.89S 167.79E 74km M=4.4
 0.3 0.01 0.02 2
 Rsd 0.2s 17ph/11stn Dmin 26km Az.gap 165°
 Corr. -0.270 20M/10stn Msd 0.3 3↑ 6↓
 Felt Milford Sound (120).

99/7797
OCT 17 214041.2s 38.51S 176.03E 2km M=3.3
 0.2 0.01 0.01 1
 Rsd 0.2s 32ph/27stn Dmin 16km Az.gap 62°
 Corr. -0.300 29M/24stn Msd 0.3 3↑ 2↓
 Felt Waihora Rd (40) and Taupo (41).

99/7807
OCT 18 000829.1s 45.70S 166.95E 5km M=4.0
 0.7 0.03 0.04 R
 Rsd 0.3s 11ph/8stn Dmin 30km Az.gap 286°
 Corr. -0.242 9M/5stn Msd 0.2 2↑ 2↓

99/7814
OCT 18 074809.9s 38.04S 178.14E 55km M=3.8
 0.4 0.03 0.02 3
 Rsd 0.1s 8ph/6stn Dmin 11km Az.gap 165°
 Corr. -0.447 5M/2stn Msd 0.1 1↓

99/7828
OCT 18 205056.8s 37.24S 177.62E 144km M=4.2
 0.5 0.05 0.02 4
 Rsd 0.2s 18ph/16stn Dmin 108km Az.gap 269°
 Corr. -0.137 17M/14stn Msd 0.2 1↓

99/7852
OCT 19 213203.2s 47.24S 165.76E 12km M=3.6
 1.0 0.06 0.09 R
 Rsd 0.4s 9ph/7stn Dmin 224km Az.gap 323°
 Corr. -0.454 6M/6stn Msd 0.2

99/7857
OCT 20 032318.6s 39.66S 177.10E 22km M=3.7
 0.5 0.03 0.03 2
 Rsd 0.2s 15ph/12stn Dmin 27km Az.gap 266°
 Corr. -0.810 14M/14stn Msd 0.3 1↑

99/7865
OCT 20 110539.9s 39.33S 175.01E 137km M=4.0
 0.5 0.02 0.01 4
 Rsd 0.3s 19ph/15stn Dmin 49km Az.gap 70°
 Corr. 0.059 3M/3stn Msd 0.5 1↑ 1↓

99/7867
OCT 20 214539.4s 39.22S 174.84E 194km M=3.6
 0.4 0.03 0.03 3
 Rsd 0.1s 8ph/7stn Dmin 182km Az.gap 331°
 Corr. -0.086 4M/4stn Msd 0.2
 Poor station coverage.

99/7870
OCT 20 225443.0s 42.77S 176.44E 12km M=3.8
 0.8 0.04 0.05 R
 Rsd 0.4s 19ph/16stn Dmin 176km Az.gap 245°
 Corr. -0.667 13M/13stn Msd 0.3 1↑

99/7876
OCT 21 130646.6s 45.07S 167.54E 115km M=3.7
 0.3 0.02 0.02 3
 Rsd 0.2s 13ph/9stn Dmin 54km Az.gap 180°
 Corr. -0.417 13M/8stn Msd 0.2 3↑ 1↓

				99/7880					99/7954		
OCT 21	202031.9s	37.44S	177.45E	65km	M=4.1	OCT 24	183502.3s	38.14S	176.15E	158km	M=3.8
	0.2	0.01	0.01	1			0.9	0.05	0.08	9	
Rsd 0.1s	16ph/12stn		Dmin 25km		Az.gap 247°	Rsd 0.3s	10ph/6stn		Dmin 85km		Az.gap 249°
Corr. 0.159	19M/16stn		Msd 0.2		1↑ 2↓	Corr. -0.534	14M/14stn		Msd 0.3		2↑ 2↓
				99/7881					99/7955		
OCT 21	210949.8s	42.86S	171.34E	13km	M=3.8	OCT 24	184953.4s	37.38S	177.78E	79km	M=3.6
	0.1	0.01	0.01	2			0.5	0.04	0.02	3	
Rsd 0.2s	18ph/11stn		Dmin 17km		Az.gap 119°	Rsd 0.2s	14ph/12stn		Dmin 55km		Az.gap 259°
Corr. -0.247	9M/5stn		Msd 0.3		1↑ 2↓	Corr. 0.308	9M/7stn		Msd 0.2		1↑
Felt Paroa (92) and Hokitika (91).											
				99/7882					99/7963		
OCT 21	221025.2s	37.56S	178.34E	50km	M=4.1	OCT 25	010953.1s	38.24S	177.84E	87km	M=3.5
	0.3	0.02	0.02	5			0.1	0.03	0.01	1	
Rsd 0.1s	15ph/10stn		Dmin 58km		Az.gap 247°	Rsd 0.0s	6ph/4stn		Dmin 41km		Az.gap 206°
Corr. 0.164	13M/10stn		Msd 0.3		2↑ 1↓	Corr. -0.952	4M/2stn		Msd 0.1		1↓
				99/7910					99/7974		
OCT 23	055205.6s	41.23S	172.67E	219km	M=3.6	OCT 25	114134.8s	38.62S	175.07E	213km	M=3.7
	0.4	0.02	0.02	3			0.7	0.03	0.04	9	
Rsd 0.2s	15ph/11stn		Dmin 46km		Az.gap 154°	Rsd 0.3s	16ph/12stn		Dmin 182km		Az.gap 217°
Corr. -0.072	8M/8stn		Msd 0.2		1↑	Corr. -0.790	11M/11stn		Msd 0.3		2↑ 2↓
Poor station coverage.											
				99/7911					99/7984		
OCT 23	072709.1s	35.43S	178.71E	209km	M=4.7	OCT 25	175542.8s	40.86S	176.16E	27km	M=3.9
	0.4	0.03	0.03	5			0.2	0.02	0.02	2	
Rsd 0.1s	24ph/22stn		Dmin 270km		Az.gap 307°	Rsd 0.3s	24ph/19stn		Dmin 22km		Az.gap 200°
Corr. 0.718	20M/16stn		Msd 0.2			Corr. -0.697	33M/28stn		Msd 0.3		2↑ 7↓
				99/7913					99/7987		
OCT 23	080521.5s	37.40S	177.43E	122km	M=3.8	OCT 25	203142.5s	38.57S	175.92E	161km	M=6.9
	0.9	0.06	0.05	5			0.5	0.02	0.02	4	
Rsd 0.3s	17ph/16stn		Dmin 93km		Az.gap 310°	Rsd 0.2s	48ph/44stn		Dmin 11km		Az.gap 52°
Corr. 0.571	11M/11stn		Msd 0.2		1↓	Corr. -0.117	12M/6stn		Msd 0.2		14↑ 5↓
Felt from Te Kuiti (31) to Cromwell (133), maximum intensity MM5.											
				99/7918					99/7988		
OCT 23	153706.7s	45.13S	167.45E	66km	M=3.8	OCT 25	203645.5s	38.44S	175.90E	140km	M=4.0
	0.4	0.02	0.03	5			0.9	0.04	0.02	7	
Rsd 0.3s	16ph/10stn		Dmin 45km		Az.gap 186°	Rsd 0.1s	18ph/16stn		Dmin 32km		Az.gap 213°
Corr. -0.477	9M/5stn		Msd 0.3		1↑ 1↓	Corr. -0.497	11M/11stn		Msd 0.2		
				99/7919					99/7989		
OCT 23	155903.1s	38.61S	175.98E	116km	M=3.8	OCT 25	205147.7s	38.60S	175.84E	150km	M=3.8
	0.4	0.01	0.01	3			0.3	0.02	0.02	3	
Rsd 0.2s	32ph/24stn		Dmin 24km		Az.gap 61°	Rsd 0.1s	13ph/10stn		Dmin 31km		Az.gap 244°
Corr. -0.353	14M/13stn		Msd 0.2		1↑	Corr. 0.912	11M/11stn		Msd 0.2		3↑ 1↓
				99/7928					99/7996		
OCT 24	044437.9s	37.08S	177.27E	152km	M=4.8	OCT 26	004502.0s	38.46S	175.86E	150km	M=4.0
	0.3	0.02	0.02	3			0.3	0.01	0.01	2	
Rsd 0.1s	22ph/19stn		Dmin 51km		Az.gap 218°	Rsd 0.1s	17ph/14stn		Dmin 30km		Az.gap 172°
Corr. 0.548	8M/5stn		Msd 0.2		1↑	Corr. -0.250	15M/14stn		Msd 0.2		6↑ 1↓
				99/7940					99/8003		
OCT 24	103918.9s	39.74S	177.05E	47km	M=4.9	OCT 26	051503.0s	36.39S	178.32E	228km	M=4.0
	0.2	0.01	0.02	2			1.0	0.12	0.07	8	
Rsd 0.1s	34ph/29stn		Dmin 29km		Az.gap 183°	Rsd 0.1s	10ph/9stn		Dmin 187km		Az.gap 310°
Corr. -0.675	11M/6stn		Msd 0.2		17↑ 8↓	Corr. 0.423	8M/8stn		Msd 0.2		
Felt Hawkes Bay, maximum intensity MM5 at Flaxmere (60).											

99/8007					99/8053						
OCT 26	102552.4s	38.50S	175.85E	147km	M=3.8	OCT 28	094630.2s	37.02S	179.35E	12km	M=3.6
	0.6	0.03	0.02	5			0.9	0.03	0.06	R	
Rsd 0.3s	21ph/18stn	Dmin 21km	Az.gap 161°			Rsd 0.3s	6ph/3stn	Dmin 152km	Az.gap 305°		
Corr. -0.209	16M/14stn	Msd 0.2	3↑ 2↓			Corr. 0.118	3M/2stn	Msd 0.1			
99/8010					99/8054						
OCT 26	121402.8s	44.24S	167.75E	5km	M=3.6	OCT 28	140542.4s	37.68S	176.56E	172km	M=4.6
	0.6	0.02	0.04	R			0.4	0.02	0.01	3	
Rsd 0.4s	15ph/10stn	Dmin 51km	Az.gap 226°			Rsd 0.1s	27ph/23stn	Dmin 35km	Az.gap 109°		
Corr. -0.706	13M/10stn	Msd 0.3	1↑			Corr. 0.263	10M/6stn	Msd 0.2	2↑ 1↓		
99/8012					99/8069						
OCT 26	133813.8s	38.79S	175.84E	187km	M=3.6	OCT 29	025058.0s	45.67S	166.62E	12km	M=4.0
	0.3	0.03	0.05	4			0.9	0.06	0.05	R	
Rsd 0.1s	10ph/8stn	Dmin 110km	Az.gap 318°			Rsd 0.5s	10ph/7stn	Dmin 47km	Az.gap 317°		
Corr. -0.844	5M/5stn	Msd 0.0	1↑ 1↓			Corr. -0.112	10M/5stn	Msd 0.2	1↑		
Very poor station coverage.											
99/8031					99/8088						
OCT 27	151015.8s	47.31S	165.88E	12km	M=3.9	OCT 29	190529.5s	48.64S	164.57E	12km	M=3.9
	0.4	0.04	0.04	R			0.8	0.09	0.08	R	
Rsd 0.2s	13ph/9stn	Dmin 224km	Az.gap 322°			Rsd 0.2s	8ph/5stn	Dmin 398km	Az.gap 344°		
Corr. -0.543	13M/8stn	Msd 0.2				Corr. -0.622	4M/4stn	Msd 0.2			
99/8033					99/8101						
OCT 27	172704.4s	39.73S	174.65E	112km	M=3.9	OCT 30	150329.5s	37.47S	179.04E	12km	M=3.5
	0.3	0.01	0.01	3			0.1	0.00	0.01	R	
Rsd 0.3s	30ph/24stn	Dmin 25km	Az.gap 70°			Rsd 0.0s	6ph/3stn	Dmin 96km	Az.gap 302°		
Corr. -0.190	19M/17stn	Msd 0.2	5↑ 2↓			Corr. 0.046	4M/2stn	Msd 0.1			
99/8035					99/8103						
OCT 27	191641.3s	45.08S	167.45E	88km	M=3.6	OCT 30	174846.9s	41.03S	174.61E	39km	M=3.9
	0.4	0.02	0.04	4			0.1	0.01	0.01	2	
Rsd 0.3s	15ph/9stn	Dmin 49km	Az.gap 193°			Rsd 0.2s	27ph/22stn	Dmin 24km	Az.gap 50°		
Corr. -0.421	13M/8stn	Msd 0.2	4↑ 4↓			Corr. 0.013	11M/6stn	Msd 0.2	5↑ 6↓		
					Felt Kapiti Coast (65).						
99/8037					99/8109						
OCT 27	212826.7s	40.47S	177.25E	33km	M=3.7	OCT 30	205002.2s	41.67S	173.02E	74km	M=3.5
	0.2	0.01	0.02	R			0.2	0.01	0.01	4	
Rsd 0.1s	17ph/15stn	Dmin 109km	Az.gap 205°			Rsd 0.2s	23ph/16stn	Dmin 14km	Az.gap 71°		
Corr. -0.727	22M/20stn	Msd 0.2				Corr. -0.179	9M/9stn	Msd 0.3			
99/8043					99/8127						
OCT 28	043554.3s	38.26S	176.12E	152km	M=3.7	OCT 31	190009.5s	37.57S	176.49E	290km	M=4.7
	1.0	0.05	0.03	8			0.7	0.06	0.04	6	
Rsd 0.3s	12ph/11stn	Dmin 61km	Az.gap 236°			Rsd 0.3s	22ph/19stn	Dmin 49km	Az.gap 147°		
Corr. -0.265	11M/10stn	Msd 0.2				Corr. -0.154	10M/6stn	Msd 0.3	1↑		
99/8049					99/8130						
OCT 28	075528.2s	42.66S	174.97E	33km	M=3.6	OCT 31	210948.3s	40.33S	174.20E	99km	M=3.5
	0.4	0.03	0.02	R			0.3	0.01	0.01	4	
Rsd 0.2s	21ph/15stn	Dmin 119km	Az.gap 207°			Rsd 0.2s	27ph/17stn	Dmin 57km	Az.gap 104°		
Corr. -0.509	8M/5stn	Msd 0.3	3↑ 1↓			Corr. 0.096	9M/9stn	Msd 0.3			
99/8050					99/8131						
OCT 28	092443.5s	37.74S	175.54E	150km	M=3.5	OCT 31	233515.4s	39.61S	174.45E	141km	M=3.6
	0.4	0.03	0.03	R			0.6	0.02	0.03	6	
Rsd 0.2s	12ph/9stn	Dmin 150km	Az.gap 274°			Rsd 0.4s	25ph/19stn	Dmin 36km	Az.gap 86°		
Corr. -0.690	10M/10stn	Msd 0.2				Corr. -0.184	10M/9stn	Msd 0.1	1↑		
Poor station coverage.											

99/8299					99/8338				
NOV 07 183910.0s	44.34S	168.11E	5km	M=3.7	NOV 11 025247.4s	44.96S	167.60E	100km	M=3.6
	0.5	0.02	0.03	R		0.3	0.01	0.03	3
Rsd 0.2s	15ph/9stn	Dmin 90km	Az.gap 193°		Rsd 0.2s	13ph/8stn	Dmin 40km	Az.gap 187°	
Corr. -0.816	11M/6stn	Msd 0.2	1↓		Corr. -0.635	9M/7stn	Msd 0.3	5↑ 4↓	
Felt Martins Bay (112).									
99/8301					99/8339				
NOV 07 193409.7s	38.43S	175.89E	178km	M=4.8	NOV 11 031410.7s	36.91S	177.89E	123km	M=4.3
	0.4	0.01	0.01	3		0.5	0.06	0.02	7
Rsd 0.2s	37ph/33stn	Dmin 26km	Az.gap 66°		Rsd 0.2s	11ph/8stn	Dmin 93km	Az.gap 299°	
Corr. -0.155	11M/6stn	Msd 0.2	19↑ 5↓		Corr. 0.247	18M/14stn	Msd 0.2	1↑ 2↓	
99/8304					99/8345				
NOV 08 025406.0s	37.37S	177.02E	5km	M=3.7	NOV 11 072758.8s	37.81S	177.46E	48km	M=3.8
	2.6	0.13	0.10	R		0.3	0.03	0.01	7
Rsd 0.7s	6ph/3stn	Dmin 23km	Az.gap 311°		Rsd 0.3s	11ph/9stn	Dmin 39km	Az.gap 150°	
Corr. -0.385	3M/2stn	Msd 0.4			Corr. 0.190	5M/2stn	Msd 0.1	1↓	
99/8310					99/8352				
NOV 08 101502.3s	37.45S	179.46E	12km	M=4.2	NOV 11 110744.6s	39.10S	176.67E	60km	M=3.8
	0.4	0.03	0.03	R		0.2	0.01	0.01	2
Rsd 0.2s	14ph/11stn	Dmin 127km	Az.gap 299°		Rsd 0.2s	33ph/25stn	Dmin 43km	Az.gap 112°	
Corr. -0.542	19M/16stn	Msd 0.2			Corr. -0.358	18M/14stn	Msd 0.2	3↑ 5↓	
99/8311					99/8353				
NOV 08 101531.9s	38.76S	176.16E	98km	M=3.7	NOV 11 132342.8s	41.27S	172.75E	187km	M=3.5
	0.3	0.02	0.01	2		0.4	0.03	0.02	3
Rsd 0.1s	18ph/15stn	Dmin 20km	Az.gap 116°		Rsd 0.2s	15ph/12stn	Dmin 52km	Az.gap 174°	
Corr. 0.506	16M/14stn	Msd 0.2	1↑		Corr. 0.437	7M/7stn	Msd 0.2	1↑	
99/8312					99/8357				
NOV 08 101554.8s	37.84S	179.54E	33km	M=3.6	NOV 11 153930.7s	44.93S	167.65E	127km	M=4.0
	1.3	0.16	0.09	R		0.3	0.02	0.03	3
Rsd 0.4s	10ph/6stn	Dmin 116km	Az.gap 324°		Rsd 0.2s	15ph/9stn	Dmin 36km	Az.gap 185°	
Corr. -0.560	4M/4stn	Msd 0.2			Corr. -0.492	14M/9stn	Msd 0.5	6↑ 1↓	
99/8316					99/8381				
NOV 08 170253.0s	39.91S	174.52E	128km	M=3.5	NOV 12 181541.0s	38.45S	175.98E	192km	M=3.6
	0.3	0.01	0.01	3		0.4	0.03	0.03	3
Rsd 0.3s	29ph/23stn	Dmin 38km	Az.gap 83°		Rsd 0.1s	13ph/11stn	Dmin 50km	Az.gap 263°	
Corr. 0.077	12M/12stn	Msd 0.3	1↑ 3↓		Corr. 0.461	9M/9stn	Msd 0.2		
99/8319					99/8382				
NOV 09 044534.2s	38.11S	176.19E	170km	M=3.7	NOV 13 012230.7s	37.07S	177.96E	98km	M=3.7
	0.7	0.04	0.02	5		0.8	0.05	0.03	5
Rsd 0.3s	15ph/13stn	Dmin 77km	Az.gap 212°		Rsd 0.1s	8ph/6stn	Dmin 85km	Az.gap 294°	
Corr. 0.133	15M/15stn	Msd 0.2	1↑		Corr. 0.648	11M/8stn	Msd 0.2		
99/8322					99/8394				
NOV 09 090300.1s	38.67S	175.90E	145km	M=3.7	NOV 13 170009.4s	36.69S	177.02E	300km	M=5.0
	0.5	0.02	0.01	5		0.7	0.06	0.05	6
Rsd 0.2s	11ph/8stn	Dmin 62km	Az.gap 147°		Rsd 0.2s	24ph/22stn	Dmin 94km	Az.gap 238°	
Corr. -0.329	12M/12stn	Msd 0.2	1↑		Corr. 0.761	11M/6stn	Msd 0.2	6↑ 1↓	
99/8327					99/8427				
NOV 09 194847.5s	40.53S	176.80E	45km	M=3.6	NOV 14 202651.8s	36.68S	178.33E	33km	M=4.7
	0.2	0.01	0.02	3		0.3	0.02	0.02	R
Rsd 0.2s	26ph/20stn	Dmin 50km	Az.gap 229°		Rsd 0.2s	31ph/26stn	Dmin 138km	Az.gap 274°	
Corr. -0.632	18M/14stn	Msd 0.2	1↑		Corr. 0.664	9M/5stn	Msd 0.2	1↓	

				99/8430					99/8482		
NOV 15	001112.1s	38.52S	175.85E	151km	M=4.3	NOV 17	123720.4s	41.08S	174.38E	58km	M=3.7
	0.6	0.03	0.02	5			0.1	0.01	0.00	2	
Rsd 0.3s	22ph/17stn		Dmin 19km		Az.gap 165°	Rsd 0.1s	34ph/27stn		Dmin 17km		Az.gap 58°
Corr. -0.086	21M/18stn		Msd 0.3		1↑	Corr. -0.282	18M/13stn		Msd 0.2		8↑ 1↓
				99/8436							99/8487
NOV 15	060019.5s	36.08S	177.84E	233km	M=4.6	NOV 17	212311.6s	38.54S	175.69E	188km	M=4.6
	0.5	0.04	0.03	5			0.3	0.01	0.02	3	
Rsd 0.2s	14ph/10stn		Dmin 204km		Az.gap 283°	Rsd 0.2s	37ph/31stn		Dmin 19km		Az.gap 75°
Corr. 0.630	24M/19stn		Msd 0.2			Corr. -0.122	11M/6stn		Msd 0.1		7↑ 3↓
				99/8438							99/8491
NOV 15	070624.3s	39.29S	174.80E	220km	M=4.2	NOV 18	023516.4s	37.32S	176.37E	228km	M=4.1
	0.4	0.02	0.02	4			0.4	0.07	0.08	5	
Rsd 0.2s	36ph/32stn		Dmin 35km		Az.gap 140°	Rsd 0.1s	12ph/11stn		Dmin 123km		Az.gap 300°
Corr. -0.117	21M/18stn		Msd 0.3		1↑	Corr. -0.404	12M/12stn		Msd 0.3		3↑ 2↓
				99/8446							99/8500
NOV 15	211045.6s	37.28S	177.13E	235km	M=3.7	NOV 18	104624.1s	35.76S	178.91E	249km	M=4.1
	0.5	0.05	0.03	4			1.1	0.17	0.15	7	
Rsd 0.2s	12ph/10stn		Dmin 109km		Az.gap 275°	Rsd 0.2s	10ph/7stn		Dmin 263km		Az.gap 343°
Corr. -0.583	4M/4stn		Msd 0.1		1↑	Corr. -0.859	2M/2stn		Msd 0.1		
				99/8455							99/8503
NOV 16	042002.6s	37.28S	177.51E	113km	M=4.6	NOV 18	163019.7s	36.66S	178.17E	12km	M=3.7
	0.5	0.04	0.02	3			0.3	0.02	0.02	R	
Rsd 0.2s	24ph/20stn		Dmin 39km		Az.gap 249°	Rsd 0.2s	10ph/5stn		Dmin 157km		Az.gap 270°
Corr. 0.542	21M/16stn		Msd 0.3		2↑ 3↓	Corr. 0.684	5M/5stn		Msd 0.2		1↓
				99/8462							99/8505
NOV 16	084847.1s	38.44S	175.87E	176km	M=4.2	NOV 18	174957.8s	39.34S	177.35E	31km	M=3.8
	0.5	0.02	0.01	4			0.4	0.01	0.03	2	
Rsd 0.2s	34ph/29stn		Dmin 26km		Az.gap 138°	Rsd 0.2s	21ph/16stn		Dmin 50km		Az.gap 227°
Corr. -0.343	8M/4stn		Msd 0.2		11↑ 3↓	Corr. -0.812	29M/27stn		Msd 0.3		1↑
				99/8465							99/8542
NOV 16	214608.4s	38.95S	175.30E	239km	M=3.6	NOV 20	070128.3s	45.47S	167.26E	108km	M=3.6
	0.4	0.02	0.03	4			0.4	0.02	0.03	3	
Rsd 0.1s	15ph/12stn		Dmin 35km		Az.gap 265°	Rsd 0.2s	13ph/6stn		Dmin 72km		Az.gap 268°
Corr. -0.347	9M/9stn		Msd 0.2		1↓	Corr. -0.308	9M/6stn		Msd 0.2		1↑ 2↓
				99/8472							99/8544
NOV 17	045312.8s	45.05S	167.54E	97km	M=4.7	NOV 20	080143.7s	40.32S	174.38E	99km	M=3.6
	0.4	0.01	0.03	3			0.3	0.01	0.01	3	
Rsd 0.2s	17ph/10stn		Dmin 52km		Az.gap 183°	Rsd 0.2s	30ph/25stn		Dmin 66km		Az.gap 89°
Corr. -0.319	12M/6stn		Msd 0.2		3↑ 4↓	Corr. 0.296	12M/11stn		Msd 0.4		2↑
					Felt Frankton (132).						
				99/8475							99/8545
NOV 17	081554.3s	38.51S	175.67E	146km	M=3.7	NOV 20	092846.9s	38.55S	175.85E	141km	M=3.9
	0.6	0.03	0.02	5			0.8	0.03	0.03	7	
Rsd 0.3s	17ph/13stn		Dmin 23km		Az.gap 233°	Rsd 0.3s	14ph/11stn		Dmin 49km		Az.gap 129°
Corr. -0.339	15M/13stn		Msd 0.3		1↓	Corr. 0.013	14M/14stn		Msd 0.4		1↑
				99/8477							99/8556
NOV 17	084712.5s	37.93S	176.86E	5km	M=3.0	NOV 21	005437.9s	38.41S	176.31E	226km	M=3.7
	0.2	0.01	0.01	R			0.4	0.12	0.04	13	
Rsd 0.3s	10ph/7stn		Dmin 18km		Az.gap 134°	Rsd 0.1s	11ph/9stn		Dmin 258km		Az.gap 343°
Corr. -0.042	5M/5stn		Msd 0.2		1↑ 1↓	Corr. 0.521	7M/7stn		Msd 0.3		
					Felt Whakatane (27).						Very poor station coverage.

99/8558					99/8639				
NOV 21	031408.1s	45.10S	167.48E	121km M=3.7	NOV 24	202511.7s	40.42S	173.83E	139km M=4.1
	0.3	0.02	0.02	3		0.3	0.02	0.01	3
Rsd 0.2s	13ph/7stn		Dmin 61km	Az.gap 245°	Rsd 0.3s	29ph/21stn		Dmin 43km	Az.gap 161°
Corr. -0.430	7M/6stn		Msd 0.2	2↑ 1↓	Corr. -0.035	17M/12stn		Msd 0.3	7↑ 1↓
99/8567					99/8640				
NOV 21	123506.7s	41.02S	175.51E	20km M=3.6	NOV 24	202819.9s	38.56S	176.13E	108km M=3.8
	0.1	0.01	0.01	1		0.4	0.02	0.01	4
Rsd 0.2s	28ph/21stn		Dmin 15km	Az.gap 124°	Rsd 0.2s	15ph/12stn		Dmin 46km	Az.gap 199°
Corr. -0.560	25M/20stn		Msd 0.3	4↑ 1↓	Corr. -0.658	13M/12stn		Msd 0.2	
99/8574					99/8650				
NOV 21	184724.5s	42.94S	171.81E	5km M=3.6	NOV 25	072322.1s	39.76S	174.83E	125km M=3.9
	0.1	0.01	0.01	R		0.3	0.01	0.01	4
Rsd 0.2s	14ph/10stn		Dmin 41km	Az.gap 100°	Rsd 0.3s	37ph/31stn		Dmin 9km	Az.gap 63°
Corr. 0.052	16M/13stn		Msd 0.3	2↑ 1↓	Corr. 0.080	21M/18stn		Msd 0.2	7↑ 2↓
99/8602					99/8651				
NOV 22	230647.5s	40.45S	173.43E	157km M=3.5	NOV 25	100652.2s	38.36S	175.77E	174km M=3.5
	0.3	0.01	0.01	3		0.8	0.07	0.12	10
Rsd 0.2s	28ph/24stn		Dmin 57km	Az.gap 135°	Rsd 0.3s	7ph/5stn		Dmin 95km	Az.gap 242°
Corr. 0.078	13M/13stn		Msd 0.2	1↑	Corr. -0.754	7M/7stn		Msd 0.3	1↓
99/8609					99/8656				
NOV 23	064035.1s	41.71S	172.27E	5km M=3.6	NOV 25	212340.2s	37.62S	177.68E	281km M=3.6
	0.1	0.01	0.01	R		1.1	0.57	0.69	27
Rsd 0.2s	20ph/14stn		Dmin 39km	Az.gap 109°	Rsd 0.2s	10ph/8stn		Dmin 71km	Az.gap 280°
Corr. -0.178	8M/5stn		Msd 0.4	2↑ 2↓	Corr. -0.997	7M/7stn		Msd 0.2	1↓
	Felt Murchison (80).					Poor station coverage.			
99/8612					99/8657				
NOV 23	095923.6s	38.43S	175.82E	156km M=4.0	NOV 25	213053.1s	38.27S	175.89E	248km M=3.5
	0.4	0.03	0.01	3		1.7	0.07	0.03	12
Rsd 0.2s	26ph/21stn		Dmin 32km	Az.gap 176°	Rsd 0.0s	10ph/8stn		Dmin 104km	Az.gap 323°
Corr. 0.008	21M/17stn		Msd 0.2	1↑	Corr. 0.484	3M/3stn		Msd 0.1	
99/8618					99/8679				
NOV 23	170940.2s	36.94S	177.64E	180km M=3.9	NOV 26	213354.2s	47.60S	168.45E	12km M=3.8
	1.5	0.14	0.12	8		1.0	0.07	0.05	R
Rsd 0.4s	10ph/9stn		Dmin 154km	Az.gap 336°	Rsd 0.4s	8ph/4stn		Dmin 193km	Az.gap 321°
Corr. 0.013	12M/12stn		Msd 0.2		Corr. 0.110	5M/4stn		Msd 0.2	
99/8619					99/8681				
NOV 23	180836.9s	43.11S	171.51E	12km M=3.5	NOV 27	004725.8s	45.13S	167.45E	113km M=4.0
	0.1	0.01	0.01	R		0.4	0.03	0.03	4
Rsd 0.2s	11ph/8stn		Dmin 63km	Az.gap 96°	Rsd 0.2s	12ph/7stn		Dmin 62km	Az.gap 247°
Corr. 0.030	17M/11stn		Msd 0.3	1↑ 3↓	Corr. -0.526	8M/4stn		Msd 0.1	3↑ 1↓
	Felt Harper River (99).								
99/8624					99/8698				
NOV 24	013504.5s	40.96S	176.02E	27km M=4.2	NOV 27	194648.3s	40.87S	173.23E	140km M=3.6
	0.2	0.01	0.02	2		0.3	0.02	0.01	3
Rsd 0.3s	21ph/17stn		Dmin 36km	Az.gap 190°	Rsd 0.2s	20ph/15stn		Dmin 59km	Az.gap 169°
Corr. -0.434	10M/5stn		Msd 0.2	3↑ 6↓	Corr. -0.240	7M/7stn		Msd 0.3	5↑ 2↓
99/8636					99/8703				
NOV 24	152304.7s	38.77S	176.50E	60km M=3.9	NOV 28	053915.9s	36.60S	176.95E	33km M=3.8
	0.2	0.01	0.01	3		0.3	0.02	0.01	R
Rsd 0.2s	31ph/27stn		Dmin 38km	Az.gap 60°	Rsd 0.1s	7ph/3stn		Dmin 112km	Az.gap 244°
Corr. -0.667	10M/6stn		Msd 0.2	1↓	Corr. 0.739	4M/3stn		Msd 0.2	

				99/8722					99/8785
NOV 30	003322.4s	37.86S	176.49E	200km	M=4.5				DEC 03 221241.3s
	0.7	0.04	0.04	6					39.86S 174.26E 201km M=3.6
Rsd 0.3s	24ph/22stn		Dmin 19km		Az.gap 238°				Rsd 0.1s
Corr. -0.078	24M/18stn		Msd 0.2	1↑					15ph/12stn Dmin 58km Az.gap 208°
									Corr. -0.212 13M/13stn Msd 0.3 1↑
				99/8728					99/8799
NOV 30	113956.6s	40.53S	173.47E	205km	M=3.6				DEC 04 173823.6s
	0.3	0.04	0.03	3					40.26S 173.60E 159km M=4.4
Rsd 0.1s	13ph/10stn		Dmin 49km		Az.gap 278°				Rsd 0.2s
Corr. 0.012	7M/7stn		Msd 0.3	4↑ 1↓					48ph/38stn Dmin 66km Az.gap 137°
									Corr. 0.062 19M/13stn Msd 0.3 5↑ 9↓
				99/8740					99/8800
DEC 01	093130.5s	38.11S	175.94E	5km	M=3.7				DEC 04 174847.6s
	0.1	0.01	0.01	R					37.58S 176.29E 234km M=3.8
Rsd 0.2s	35ph/29stn		Dmin 23km		Az.gap 71°				0.4 0.06 0.04 3
Corr. -0.200	36M/32stn		Msd 0.3	6↑ 2↓					Rsd 0.1s
									11ph/9stn Dmin 104km Az.gap 250°
									Corr. -0.743 12M/12stn Msd 0.3 1↑
									Felt Kinleith, Putaruru and Tokoroa (32).
				99/8741					99/8801
DEC 01	095916.9s	38.67S	175.81E	179km	M=3.5				DEC 04 191639.4s
	0.2	0.03	0.07	4					38.89S 178.13E 49km M=3.9
Rsd 0.1s	14ph/12stn		Dmin 122km		Az.gap 223°				0.2 0.01 0.01 5
Corr. -0.953	10M/10stn		Msd 0.2						Rsd 0.1s
									21ph/15stn Dmin 91km Az.gap 211°
									Corr. -0.390 25M/19stn Msd 0.2 2↑ 1↓
									Poor station coverage.
				99/8748					99/8805
DEC 01	142507.1s	37.08S	176.91E	240km	M=4.5				DEC 04 210214.4s
	0.7	0.06	0.05	5					37.41S 176.97E 195km M=3.8
Rsd 0.3s	19ph/16stn		Dmin 102km		Az.gap 204°				0.7 0.06 0.05 5
Corr. 0.718	9M/5stn		Msd 0.1	1↑ 1↓					Rsd 0.2s
									10ph/9stn Dmin 95km Az.gap 266°
									Corr. -0.233 12M/12stn Msd 0.2 1↑
				99/8758					99/8821
DEC 02	010424.2s	37.71S	176.04E	229km	M=3.8				DEC 05 132708.6s
	0.8	0.07	0.10	7					39.68S 174.54E 244km M=3.5
Rsd 0.2s	7ph/6stn		Dmin 112km		Az.gap 265°				0.9 0.03 0.11 8
Corr. -0.463	12M/12stn		Msd 0.3						Rsd 0.3s
									16ph/14stn Dmin 35km Az.gap 180°
									Corr. -0.759 12M/12stn Msd 0.4 3↑ 2↓
				99/8762					99/8822
DEC 02	075642.7s	46.01S	166.46E	5km	M=3.6				DEC 05 141239.1s
	1.0	0.08	0.06	R					38.26S 175.84E 180km M=4.0
Rsd 0.3s	8ph/5stn		Dmin 116km		Az.gap 314°				0.9 0.03 0.02 7
Corr. 0.250	8M/5stn		Msd 0.2						Rsd 0.3s
									25ph/22stn Dmin 33km Az.gap 166°
									Corr. -0.347 21M/19stn Msd 0.2 4↑ 1↓
				99/8764					99/8823
DEC 02	092900.7s	37.72S	176.00E	246km	M=4.2				DEC 05 143158.1s
	0.8	0.10	0.08	8					39.19S 174.86E 203km M=3.5
Rsd 0.2s	11ph/9stn		Dmin 114km		Az.gap 242°				0.4 0.01 0.02 3
Corr. -0.725	15M/15stn		Msd 0.3						Rsd 0.1s
									11ph/10stn Dmin 60km Az.gap 207°
									Corr. -0.618 13M/13stn Msd 0.2
				99/8769					99/8825
DEC 02	193040.2s	38.87S	175.60E	163km	M=4.1				DEC 05 162255.6s
	0.5	0.04	0.04	4					38.18S 176.37E 202km M=3.7
Rsd 0.3s	19ph/14stn		Dmin 14km		Az.gap 93°				0.5 0.03 0.03 4
Corr. -0.694	15M/13stn		Msd 0.3	6↑ 8↓					Rsd 0.1s
									14ph/11stn Dmin 66km Az.gap 223°
									Corr. -0.492 11M/11stn Msd 0.2 1↑
				99/8776					99/8836
DEC 03	043444.9s	45.03S	167.59E	116km	M=3.6				DEC 06 050444.9s
	0.8	0.06	0.05	10					37.12S 177.61E 158km M=4.0
Rsd 0.4s	7ph/4stn		Dmin 100km		Az.gap 270°				0.6 0.06 0.03 5
Corr. -0.530	4M/4stn		Msd 0.4	1↓					Rsd 0.3s
									15ph/12stn Dmin 120km Az.gap 275°
									Corr. -0.179 10M/8stn Msd 0.3

				99/8843					99/8953		
DEC 06	092253.5s	44.25S	168.50E	5km	M=3.6	DEC 10	094707.2s	37.10S	177.34E	196km	M=3.8
	0.4	0.02	0.03	R			1.9	0.20	0.08	7	
Rsd 0.4s	8ph/5stn		Dmin 85km		Az.gap 212°	Rsd 0.3s	8ph/7stn		Dmin 131km		Az.gap 334°
Corr. -0.472	11M/7stn		Msd 0.4			Corr. 0.117	11M/11stn		Msd 0.3		1↑
				99/8859						99/8960	
DEC 07	054126.9s	37.97S	177.32E	88km	M=5.2	DEC 10	144813.8s	46.63S	166.20E	33km	M=5.2
	0.3	0.02	0.02	2			0.8	0.07	0.04	R	
Rsd 0.3s	38ph/30stn		Dmin 36km		Az.gap 111°	Rsd 0.2s	10ph/7stn		Dmin 157km		Az.gap 323°
Corr. 0.216	11M/6stn		Msd 0.2		6↑ 9↓	Corr. 0.191	16M/9stn		Msd 0.2		1↓
	Felt Opotiki (35).										
				99/8867						99/8965	
DEC 07	105609.9s	45.39S	166.79E	5km	M=4.8	DEC 10	155153.0s	46.24S	166.21E	5km	M=3.6
	0.6	0.03	0.04	R			0.5	0.05	0.03	R	
Rsd 0.3s	10ph/7stn		Dmin 106km		Az.gap 282°	Rsd 0.2s	6ph/3stn		Dmin 139km		Az.gap 333°
Corr. 0.316	17M/9stn		Msd 0.2		1↓	Corr. -0.156	7M/3stn		Msd 0.2		1↓
				99/8874						99/8968	
DEC 07	153928.5s	35.61S	178.94E	261km	M=4.0	DEC 10	183952.2s	38.37S	175.87E	168km	M=3.7
	0.5	0.08	0.10	4			0.8	0.04	0.02	7	
Rsd 0.2s	8ph/6stn		Dmin 280km		Az.gap 342°	Rsd 0.3s	19ph/17stn		Dmin 40km		Az.gap 184°
Corr. -0.799	3M/3stn		Msd 0.2			Corr. -0.247	13M/13stn		Msd 0.3		2↑ 1↓
				99/8889						99/8975	
DEC 08	112154.3s	39.33S	174.84E	22km	M=3.5	DEC 10	235702.5s	46.23S	166.15E	5km	M=4.1
	0.1	0.01	0.00	1			0.6	0.05	0.04	R	
Rsd 0.2s	35ph/28stn		Dmin 38km		Az.gap 77°	Rsd 0.2s	7ph/4stn		Dmin 144km		Az.gap 329°
Corr. -0.191	33M/29stn		Msd 0.3		4↑ 9↓	Corr. 0.081	10M/4stn		Msd 0.2		1↓
	Felt Makahu (48).										
				99/8905						99/8978	
DEC 09	020825.1s	45.21S	167.08E	12km	M=3.7	DEC 11	041932.9s	37.75S	176.43E	180km	M=4.0
	0.4	0.02	0.03	R			0.6	0.06	0.04	5	
Rsd 0.3s	11ph/7stn		Dmin 87km		Az.gap 267°	Rsd 0.2s	15ph/13stn		Dmin 72km		Az.gap 252°
Corr. 0.173	13M/7stn		Msd 0.2		1↓	Corr. -0.647	18M/16stn		Msd 0.2		
				99/8919						99/8981	
DEC 09	092038.8s	40.40S	174.68E	75km	M=4.3	DEC 11	064816.3s	36.42S	177.75E	236km	M=4.2
	0.2	0.00	0.01	3			0.4	0.03	0.03	3	
Rsd 0.2s	47ph/40stn		Dmin 55km		Az.gap 75°	Rsd 0.1s	9ph/7stn		Dmin 186km		Az.gap 268°
Corr. 0.022	8M/4stn		Msd 0.3		6↑ 2↓	Corr. 0.733	17M/16stn		Msd 0.2		
	Felt Taranaki (47) to Wellington (68).										
				99/8944						99/8982	
DEC 10	031500.2s	36.27S	179.40E	263km	M=4.3	DEC 11	071021.3s	46.44S	166.32E	12km	M=4.3
	0.9	0.19	0.10	14			1.0	0.07	0.07	R	
Rsd 0.3s	11ph/8stn		Dmin 224km		Az.gap 330°	Rsd 0.4s	10ph/6stn		Dmin 140km		Az.gap 320°
Corr. -0.642	13M/9stn		Msd 0.3			Corr. -0.047	12M/6stn		Msd 0.2		1↑
				99/8945						99/8994	
DEC 10	044203.6s	35.63S	179.72E	256km	M=4.4	DEC 11	210720.6s	39.85S	174.36E	102km	M=3.7
	0.7	0.17	0.07	16			0.3	0.01	0.02	3	
Rsd 0.3s	12ph/10stn		Dmin 301km		Az.gap 333°	Rsd 0.2s	26ph/22stn		Dmin 49km		Az.gap 93°
Corr. -0.378	8M/6stn		Msd 0.3			Corr. 0.163	17M/15stn		Msd 0.3		1↑
				99/8950						99/8998	
DEC 10	065350.1s	37.11S	177.45E	118km	M=3.9	DEC 12	010800.2s	42.08S	173.99E	15km	M=3.7
	0.7	0.04	0.03	7			0.2	0.01	0.01	2	
Rsd 0.3s	10ph/8stn		Dmin 128km		Az.gap 223°	Rsd 0.3s	29ph/19stn		Dmin 41km		Az.gap 153°
Corr. 0.356	11M/8stn		Msd 0.2			Corr. -0.580	13M/7stn		Msd 0.3		2↑ 3↓

99/9185					99/9269				
DEC 20 073104.9s	38.54S	175.86E	152km	M=4.1	DEC 23 084253.1s	38.25S	175.63E	192km	M=3.7
	0.6	0.03	0.02	5		0.4	0.04	0.09	8
Rsd 0.2s	23ph/20stn	Dmin 22km	Az.gap 152°		Rsd 0.2s	14ph/11stn	Dmin 130km	Az.gap 215°	
Corr. -0.354	20M/20stn	Msd 0.3	3↑ 3↓		Corr. -0.915	15M/15stn	Msd 0.2	1↓	
99/9187					99/9270				
DEC 20 080205.7s	35.47S	178.37E	237km	M=3.9	DEC 23 090059.4s	37.21S	177.46E	5km	M=3.8
	2.3	0.52	0.34	38		0.3	0.02	0.02	R
Rsd 0.2s	7ph/5stn	Dmin 289km	Az.gap 342°		Rsd 0.3s	12ph/9stn	Dmin 42km	Az.gap 192°	
Corr. -0.961	3M/3stn	Msd 0.1			Corr. 0.426	20M/17stn	Msd 0.3		
99/9193					99/9271				
DEC 20 114244.7s	40.47S	174.97E	57km	M=4.3	DEC 23 090810.9s	37.18S	177.46E	5km	M=3.8
	0.2	0.01	0.01	6		0.3	0.02	0.01	R
Rsd 0.3s	39ph/35stn	Dmin 44km	Az.gap 66°		Rsd 0.3s	11ph/9stn	Dmin 45km	Az.gap 195°	
Corr. -0.042	15M/9stn	Msd 0.2	10↑ 5↓		Corr. 0.350	16M/13stn	Msd 0.3	1↑	
99/9194					99/9279				
DEC 20 115238.1s	38.01S	176.05E	173km	M=3.7	DEC 23 110758.6s	38.45S	177.25E	42km	M=4.0
	1.1	0.08	0.04	8		0.1	0.01	0.01	2
Rsd 0.2s	11ph/10stn	Dmin 97km	Az.gap 244°		Rsd 0.2s	30ph/26stn	Dmin 25km	Az.gap 51°	
Corr. -0.692	16M/14stn	Msd 0.3			Corr. -0.055	12M/9stn	Msd 0.3	1↑ 1↓	
99/9195					99/9287				
DEC 20 124649.7s	36.70S	178.18E	12km	M=3.7	DEC 23 180051.2s	35.35S	178.81E	211km	M=4.4
	1.1	0.07	0.05	R		0.5	0.09	0.08	14
Rsd 0.5s	9ph/6stn	Dmin 101km	Az.gap 315°		Rsd 0.2s	13ph/10stn	Dmin 254km	Az.gap 325°	
Corr. 0.348	8M/6stn	Msd 0.3	1↓		Corr. -0.463	18M/16stn	Msd 0.3		
99/9201					99/9295				
DEC 20 232128.5s	38.68S	175.85E	186km	M=3.6	DEC 24 012425.7s	40.27S	173.62E	158km	M=4.1
	0.5	0.06	0.10	9		0.3	0.01	0.01	3
Rsd 0.2s	12ph/10stn	Dmin 122km	Az.gap 300°		Rsd 0.2s	43ph/35stn	Dmin 65km	Az.gap 135°	
Corr. -0.916	6M/6stn	Msd 0.4	1↓		Corr. 0.124	25M/19stn	Msd 0.3	6↑ 1↓	
99/9211					99/9299				
DEC 21 070859.6s	38.69S	176.20E	82km	M=4.0	DEC 24 083551.9s	39.42S	175.93E	63km	M=3.7
	0.3	0.01	0.01	3		0.2	0.01	0.01	2
Rsd 0.2s	32ph/27stn	Dmin 10km	Az.gap 46°		Rsd 0.3s	28ph/23stn	Dmin 29km	Az.gap 72°	
Corr. -0.440	24M/20stn	Msd 0.2	3↑ 1↓		Corr. -0.108	18M/15stn	Msd 0.2	2↑ 3↓	
99/9218					99/9313				
DEC 21 112649.1s	45.59S	166.85E	5km	M=5.2	DEC 25 014323.3s	38.19S	176.07E	172km	M=4.1
	0.6	0.02	0.04	R		1.2	0.06	0.07	10
Rsd 0.2s	10ph/6stn	Dmin 92km	Az.gap 291°		Rsd 0.4s	10ph/7stn	Dmin 92km	Az.gap 243°	
Corr. 0.580	19M/10stn	Msd 0.1	1↑		Corr. -0.533	15M/14stn	Msd 0.2	4↑ 1↓	
99/9235					99/9314				
DEC 22 011119.4s	37.86S	176.94E	134km	M=3.9	DEC 25 014745.0s	36.80S	177.03E	251km	M=3.7
	0.4	0.02	0.02	3		0.4	0.05	0.05	5
Rsd 0.2s	22ph/18stn	Dmin 27km	Az.gap 186°		Rsd 0.1s	8ph/6stn	Dmin 143km	Az.gap 282°	
Corr. 0.144	18M/16stn	Msd 0.2	1↑		Corr. -0.785	8M/8stn	Msd 0.2		
99/9242					99/9346				
DEC 22 053313.3s	40.12S	173.67E	168km	M=4.2	DEC 26 063925.1s	46.82S	165.24E	33km	M=3.6
	0.4	0.01	0.02	3		0.4	0.04	0.04	R
Rsd 0.2s	43ph/37stn	Dmin 79km	Az.gap 140°		Rsd 0.2s	7ph/4stn	Dmin 211km	Az.gap 329°	
Corr. -0.025	24M/20stn	Msd 0.3	3↑ 5↓		Corr. -0.503	4M/4stn	Msd 0.2		

LISTS OF ORIGINS AND MAGNITUDE DETERMINATIONS

HIGHER MAGNITUDE EARTHQUAKES

A chronological list of 1999 New Zealand earthquakes of $M_L \geq 5.0$ follows. A reference number at the beginning of each entry identifies the origin with the instrumental data summary, and also with the listing of non-instrumental data (if there is any) that appears in a later section.

The letter "R" following a depth indicates that the depth was restricted to some likely value because the data did not provide sufficient constraint for the depth to be determined by calculation. Choice of the depth of restriction is usually made on the basis of the crustal phases observed or the predominant depth of shallow earthquakes in the epicentral area.

(For sub-crustal earthquakes, depth restriction is seldom necessary.) The letter "G" after a depth shows that the depth was restricted on the basis of information that could not be used by the location program, such as macroseismic information, overseas PKP observations etc.

The letter "F" following a magnitude indicates that at least one report of the earthquake being felt has been received by the Observatory.

In the following table, Rsd is as defined on page 31 and NP phases from NS recording stations have been used to determine the origins.

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
076	JAN 03	0700 21.5	41.09S	174.51E	57	5.5F	0.1	36	32
1083	JAN 31	0013 14.1	46.39S	166.18E	12R	5.1	0.4	11	7
1121	FEB 01	1826 5.6	38.26S	176.10E	181	5.0	0.2	37	33
2646	MAR 23	1044 18.2	37.68S	177.13E	151	5.9F	0.2	28	24
2789	MAR 28	2236 28.6	36.01S	179.21E	152	5.5	0.2	23	19
2864	APR 01	0139 34.4	40.82S	172.90E	217	5.1F	0.3	33	26
3332	APR 20	0615 22.3	36.06S	178.10E	211	5.6F	0.1	29	26
3349	APR 20	1904 4.5	32.46S	177.51W	208	7.0F	0.4	22	19
3437	APR 24	2306 53.1	44.13S	168.73E	12R	5.1F	0.1	10	8
3467	APR 25	2018 25.7	45.14S	167.54E	115	5.3F	0.2	15	9
3921	MAY 18	0919 35.7	38.59S	175.48E	264	6.5F	0.3	37	33
3945	MAY 19	0750 28.3	40.42S	173.52E	155	5.2F	0.2	42	33
4142	MAY 24	1546 28.6	47.30S	165.24E	12R	5.2	0.1	11	7
4919	JUN 24	1652 43.0	38.85S	176.01E	98	5.2F	0.2	37	32
5217	JUL 09	0043 46.4	34.82S	177.33E	33R	5.1	0.4	10	7
5382	JUL 15	1452 54.7	35.55S	178.64E	186	5.5	0.2	18	14
5829	AUG 05	0402 28.6	40.48S	173.88E	107	5.3F	0.3	32	29
5832	AUG 05	0502 11.5	44.73S	167.57E	5R	5.2F	0.1	15	10
6166	AUG 18	0116 47.3	37.03S	177.64E	156	6.0F	0.1	20	18
6193	AUG 18	1111 21.6	39.54S	174.38E	226	5.2F	0.2	51	42
6304	AUG 22	0109 35.6	37.67S	176.56E	327	5.2	0.4	28	24
6413	AUG 26	1743 46.3	36.54S	177.03E	12R	5.5F	0.3	14	10
6932	SEP 17	0937 54.6	38.32S	175.99E	170	5.0	0.1	33	29
7244	SEP 30	0713 33.9	36.45S	178.97E	12R	5.0	0.2	25	23
7987	OCT 25	2031 42.5	38.57S	175.92E	161	6.9F	0.2	48	44
8859	DEC 07	0541 26.9	37.97S	177.32E	88	5.2F	0.3	38	30
8960	DEC 10	1448 13.8	46.63S	166.20E	33R	5.2	0.2	10	7
9156	DEC 19	1419 34.4	41.43S	172.91E	99	5.1F	0.2	31	23
9218	DEC 21	1126 49.1	45.59S	166.85E	5R	5.2	0.2	10	6

WELLINGTON AREA SEISMICITY

Because of its close station spacing and the relative ease with which stations can be reached when repairs or adjustments are necessary, the Wellington Network can be relied on to furnish enough data for determination of earthquake origins in its neighbourhood from smaller events than those needed to achieve the same accuracy in other parts of the country. The following list includes all earthquakes of magnitude (M_L) 2.0 or more in the area surrounding Wellington, and includes the earthquakes of magnitude 3.5 or more within the area, which were listed on earlier pages.

The location of earthquakes in the neighbourhood of Wellington is no longer performed separately from the location of regional earthquakes as was done in the past.

The old practice sometimes resulted in earthquakes having two listed origins, one arrived at from use of National Network data and a regional velocity model, and the other from Wellington Network data and a local model. In current practice the local model is merged into the regional model. A map of these epicentres and a cross-section showing their distribution in depth appears in the final section of this Report.

In the following table, Rsd is as defined on page 31 and NP phases from NS recording stations have been used to determine the origins.

The regional velocity model and its boundaries are listed in the table on page 26.

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
005	JAN 01	0150 33.4	41.91S	174.07E	20	2.0	0.1	9	7
008	JAN 01	0406 3.6	40.98S	175.24E	27	2.1	0.1	10	7
011	JAN 01	0519 10.3	41.45S	174.34E	16	2.0	0.1	9	6
025	JAN 01	1537 11.7	40.70S	175.19E	32	2.7	0.2	14	11
026	JAN 01	1559 36.5	41.22S	174.83E	53	2.1	0.1	8	6
028	JAN 01	1900 45.5	41.27S	175.25E	26	2.0	0.1	10	7
042	JAN 02	0403 29.4	40.94S	174.42E	48	2.6	0.1	11	8
056	JAN 02	2030 40.9	40.54S	175.66E	71	2.3	0.1	8	5
066	JAN 03	0149 22.9	40.80S	174.38E	66	4.2F	0.2	36	31
067	JAN 03	0202 20.6	40.72S	174.33E	60	2.6	0.1	9	6
068	JAN 03	0206 25.3	40.71S	174.35E	63	2.0	0.2	6	4
076	JAN 03	0700 21.5	41.09S	174.51E	57	5.5F	0.1	36	32
077	JAN 03	0745 9.2	41.05S	174.52E	52	2.3	0.1	6	5
078	JAN 03	0755 25.4	41.04S	174.55E	53	2.1	0.1	7	6
080	JAN 03	0939 24.3	41.05S	174.53E	53	3.0	0.1	18	14
084	JAN 03	1152 35.5	41.06S	174.53E	53	2.2	0.1	8	6
099	JAN 03	1701 42.4	40.75S	175.05E	36	2.2	0.1	10	7
101	JAN 03	1819 14.9	41.06S	174.52E	55	2.9	0.1	22	17
102	JAN 03	1834 2.7	41.00S	173.61E	53	2.1	0.2	7	5
108	JAN 03	2123 2.8	41.05S	174.52E	52	2.1	0.1	10	5
113	JAN 04	0120 42.2	40.95S	175.14E	26	2.3	0.2	11	9
114	JAN 04	0143 55.7	40.51S	174.47E	82	2.5	0.2	14	9
117	JAN 04	0354 27.9	40.79S	175.05E	30	2.2	0.2	11	9
118	JAN 04	0515 52.6	40.92S	174.71E	55	2.7	0.2	22	16
133	JAN 04	1511 26.3	41.11S	174.39E	67	2.0	0.1	7	5
139	JAN 04	1636 1.1	40.96S	175.51E	20	2.4	0.2	16	10
141	JAN 04	1640 20.1	40.95S	175.53E	25	2.0	0.1	11	8
157	JAN 05	0055 16.6	41.73S	174.28E	13	2.3	0.3	14	11
159	JAN 05	0116 11.5	40.88S	175.53E	27	3.2	0.2	15	11
160	JAN 05	0116 19.1	40.87S	175.61E	32	3.3	0.2	9	7

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
161	JAN 05	0121 49.5	40.91S	175.49E	22	3.1	0.3	23	18
162	JAN 05	0124 49.8	40.88S	175.52E	26	2.7	0.2	12	9
163	JAN 05	0126 11.0	40.88S	175.52E	25	2.9	0.1	13	10
164	JAN 05	0131 5.2	40.90S	175.49E	23	3.0	0.3	15	13
167	JAN 05	0152 59.0	40.88S	175.53E	26	2.7	0.1	11	9
169	JAN 05	0242 11.4	41.05S	174.53E	53	2.3	0.0	8	7
170	JAN 05	0256 23.3	40.87S	175.54E	24	2.0	0.1	9	6
218	JAN 06	0335 58.8	41.26S	175.25E	25	2.2	0.1	13	9
222	JAN 06	0927 11.7	40.89S	175.49E	19	2.9	0.2	20	15
230	JAN 06	1355 25.2	41.56S	174.24E	5R	3.9	0.3	23	19
235	JAN 06	1518 41.6	41.35S	174.56E	49	2.3	0.1	14	9
247	JAN 06	2102 59.5	40.61S	174.34E	83	3.1	0.2	19	14
248	JAN 06	2219 21.7	41.14S	175.00E	27	2.0	0.2	8	6
262	JAN 07	1643 32.5	41.00S	175.38E	28	2.1	0.1	8	6
265	JAN 07	1824 1.7	41.18S	174.00E	52	2.7	0.1	14	10
271	JAN 07	2140 58.2	41.35S	175.22E	25	2.2	0.1	12	9
278	JAN 08	0149 10.8	40.59S	175.05E	5R	2.0	0.2	11	8
279	JAN 08	0213 28.9	40.83S	175.32E	29	2.2	0.2	11	8
283	JAN 08	1004 39.4	40.91S	174.64E	57	2.1	0.1	10	8
285	JAN 08	1124 51.5	40.93S	174.54E	5R	3.1	0.2	27	23
289	JAN 08	1541 54.5	40.60S	174.79E	33R	2.5	0.3	6	4
299	JAN 09	0154 58.0	41.50S	174.20E	16	2.0	0.3	10	7
301	JAN 09	0333 4.0	40.53S	174.47E	71	2.5	0.2	7	4
304	JAN 09	0555 38.3	41.28S	174.30E	28	2.1	0.3	12	9
306	JAN 09	0813 46.9	41.76S	175.05E	30	2.1	0.1	8	6
315	JAN 09	1650 42.4	41.04S	174.51E	51	2.2	0.1	8	5
319	JAN 09	1745 18.7	40.94S	175.10E	29	2.0	0.2	9	7
327	JAN 10	0015 12.6	41.27S	175.25E	26	2.4	0.1	13	9
337	JAN 10	0739 43.2	41.09S	173.57E	98	3.1	0.2	21	16
339	JAN 10	0923 36.8	40.66S	174.91E	32	2.9	0.2	18	13
369	JAN 11	0005 36.7	40.56S	174.58E	5R	2.3	0.4	11	9
370	JAN 11	0045 2.8	40.79S	175.34E	27	2.2	0.2	12	8
377	JAN 11	0318 30.1	41.83S	174.39E	33R	2.4	0.2	12	8
379	JAN 11	0415 36.1	40.97S	174.15E	51	2.5	0.2	14	10
383	JAN 11	0601 52.2	40.52S	173.73E	114	2.7	0.3	17	12
388	JAN 11	1644 9.0	41.14S	175.14E	5	2.6	0.1	15	12
406	JAN 12	0043 16.9	41.15S	175.23E	28	2.3	0.1	9	7
410	JAN 12	0344 52.5	41.65S	173.94E	17	2.1	0.2	10	6
412	JAN 12	0516 25.3	40.70S	174.04E	73	3.5	0.3	37	30
413	JAN 12	0610 44.7	41.16S	175.51E	19	2.6	0.1	9	8
421	JAN 12	0920 0.7	41.09S	174.57E	55	2.0	0.3	8	5
424	JAN 12	1155 40.1	41.73S	174.57E	31	3.2	0.2	25	18
432	JAN 12	1654 40.2	42.00S	173.69E	5R	2.3	0.0	5	3
438	JAN 12	1858 19.4	41.30S	175.19E	22	2.1	0.1	10	8
456	JAN 13	1101 52.7	41.68S	174.22E	10	2.7	0.3	21	17

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
465	JAN 13	2148 40.9	40.79S	173.60E	88	2.8	0.1	13	9
485	JAN 14	1249 31.4	40.64S	175.73E	28	2.3	0.3	10	7
487	JAN 14	1526 17.4	40.69S	174.36E	57	3.1	0.3	30	23
496	JAN 14	2053 41.3	41.22S	175.17E	26	2.1	0.1	13	9
497	JAN 14	2123 17.6	41.48S	174.46E	20	2.2	0.2	14	11
503	JAN 15	0137 36.6	40.60S	175.52E	41	3.6F	0.2	36	31
517	JAN 15	1333 24.6	41.61S	174.79E	27	2.5	0.1	10	6
529	JAN 15	2147 35.2	41.16S	174.41E	38	2.3	0.1	10	8
555	JAN 16	2329 25.4	40.96S	175.16E	25	2.0	0.1	10	7
557	JAN 17	0015 12.8	41.32S	174.60E	33	2.7	0.2	19	15
566	JAN 17	0924 44.9	40.71S	174.04E	86	2.7	0.2	10	6
568	JAN 17	1321 1.9	40.62S	174.54E	48	2.5	0.1	10	7
573	JAN 17	1555 46.4	40.92S	175.19E	26	2.4	0.2	10	8
574	JAN 17	1732 15.4	41.90S	174.00E	14	2.6	0.3	12	8
581	JAN 17	2008 12.6	41.37S	175.01E	27	2.4	0.2	12	9
585	JAN 18	0044 1.6	41.00S	174.16E	78	3.2	0.3	25	18
591	JAN 18	0353 17.3	41.15S	174.67E	35	2.0	0.1	8	7
600	JAN 18	1003 41.0	41.28S	174.31E	39	2.7	0.3	18	14
601	JAN 18	1048 36.2	40.71S	175.33E	29	2.6	0.2	17	13
602	JAN 18	1115 13.7	40.52S	173.72E	115	2.7	0.3	16	12
610	JAN 18	1225 26.0	40.88S	174.88E	62	2.1	0.1	9	6
616	JAN 18	1419 16.9	40.59S	174.57E	5R	2.4	0.3	17	14
621	JAN 18	1754 48.3	40.70S	174.35E	54	2.5	0.3	9	7
625	JAN 18	2048 46.0	41.31S	174.51E	33	2.1	0.2	7	5
632	JAN 18	2350 11.8	40.66S	174.39E	65	2.7	0.3	24	17
635	JAN 19	0421 5.1	40.99S	174.60E	60	2.0	0.1	9	8
643	JAN 19	1008 8.0	40.92S	175.74E	30	2.4	0.2	12	8
655	JAN 19	1425 35.5	41.70S	174.42E	5R	3.5	0.3	24	19
659	JAN 19	1554 55.9	41.71S	174.44E	5R	2.0	0.2	11	9
660	JAN 19	1612 30.0	41.70S	174.41E	5R	3.1	0.2	21	18
664	JAN 19	1859 18.2	41.77S	174.76E	31	2.3	0.1	11	9
672	JAN 20	0115 15.1	41.26S	175.00E	9	2.3	0.2	12	9
673	JAN 20	0136 45.3	41.23S	175.50E	20	2.2	0.2	13	9
674	JAN 20	0151 4.4	41.72S	173.81E	12R	2.5	0.2	16	12
683	JAN 20	0621 20.0	41.12S	174.70E	31	2.3	0.1	13	9
692	JAN 20	1129 8.2	41.78S	174.61E	31	3.6	0.2	26	21
693	JAN 20	1137 50.3	41.72S	174.57E	32	2.1	0.2	10	8
700	JAN 20	1418 6.0	40.83S	176.00E	31	2.2	0.2	9	6
708	JAN 20	1700 4.2	41.04S	174.54E	53	2.5	0.0	8	6
717	JAN 21	0108 13.0	41.69S	174.42E	5R	3.7	0.3	27	21
718	JAN 21	0220 20.0	41.68S	174.42E	5R	2.4	0.2	13	11
719	JAN 21	0245 7.8	41.69S	174.44E	5R	2.3	0.3	12	10
720	JAN 21	0300 13.3	41.69S	174.38E	5R	2.4	0.2	10	8
721	JAN 21	0327 56.0	41.68S	174.41E	5R	2.1	0.2	10	8
732	JAN 21	0937 32.4	41.71S	174.43E	5R	3.1	0.2	24	19

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
736	JAN 21	1046 49.5	41.04S	174.52E	51	2.3	0.1	8	5
740	JAN 21	1457 56.0	40.58S	174.71E	66	3.7	0.2	32	29
741	JAN 21	1522 1.1	40.56S	173.58E	179	3.0	0.3	13	11
755	JAN 22	0113 30.6	41.70S	174.41E	5R	3.4	0.2	26	20
756	JAN 22	0114 22.9	41.69S	174.40E	5R	3.8	0.3	24	20
757	JAN 22	0123 11.6	40.88S	175.96E	32	2.2	0.3	11	8
758	JAN 22	0128 18.8	41.70S	174.41E	5R	3.8	0.2	24	20
759	JAN 22	0139 27.7	41.71S	174.42E	5R	4.0	0.3	26	22
760	JAN 22	0143 26.7	41.68S	174.41E	5R	2.4	0.3	12	10
761	JAN 22	0205 12.2	41.70S	174.43E	5R	4.5F	0.2	25	21
762	JAN 22	0238 51.5	41.69S	174.42E	5R	2.8	0.2	19	16
763	JAN 22	0248 33.0	41.71S	174.43E	5R	3.6	0.3	28	21
765	JAN 22	0257 14.9	41.70S	174.42E	5R	4.0	0.2	25	20
766	JAN 22	0259 43.5	41.68S	174.41E	5R	2.6	0.3	14	12
767	JAN 22	0302 59.3	40.93S	174.45E	56	2.7	0.2	9	7
769	JAN 22	0420 3.4	41.67S	174.42E	5R	2.5	0.3	16	14
770	JAN 22	0456 38.7	41.69S	174.38E	5R	2.2	0.3	12	9
771	JAN 22	0457 40.8	41.71S	174.42E	5R	2.6	0.4	16	14
773	JAN 22	0629 3.3	41.72S	174.42E	5R	2.7	0.3	20	17
774	JAN 22	0653 50.3	41.68S	174.42E	5R	4.0	0.4	22	20
775	JAN 22	0701 51.2	41.71S	174.42E	5R	2.8	0.2	17	14
776	JAN 22	0702 17.1	41.70S	174.38E	5R	2.8	0.3	16	11
777	JAN 22	0704 2.1	41.69S	174.42E	5R	3.2	0.2	24	19
778	JAN 22	0707 22.9	41.69S	174.40E	5R	2.4	0.4	16	14
779	JAN 22	0707 50.0	41.71S	174.40E	5R	2.3	0.2	12	10
780	JAN 22	0710 24.5	41.71S	174.41E	5R	2.7	0.3	18	13
781	JAN 22	0711 43.0	41.70S	174.41E	5R	2.5	0.4	14	12
784	JAN 22	0717 31.5	41.69S	174.42E	5R	3.4	0.2	25	19
785	JAN 22	0719 2.1	41.69S	174.42E	5R	2.8	0.3	18	16
786	JAN 22	0726 1.5	41.68S	174.43E	5R	3.5	0.3	21	19
787	JAN 22	0737 43.8	41.68S	174.42E	5R	3.5	0.2	22	19
788	JAN 22	0745 5.5	41.69S	174.43E	5R	3.1	0.3	20	18
790	JAN 22	0815 34.4	41.71S	174.42E	5R	2.5	0.3	14	12
791	JAN 22	0820 25.2	41.71S	174.41E	5R	2.4	0.2	15	13
792	JAN 22	0937 41.3	41.70S	174.39E	5R	2.6	0.3	15	13
794	JAN 22	1014 28.7	41.73S	174.44E	12	2.0	0.2	10	7
797	JAN 22	1123 51.1	41.71S	174.42E	5R	3.6	0.3	25	19
798	JAN 22	1130 22.0	41.69S	174.39E	5R	3.5	0.3	24	20
808	JAN 22	2021 10.9	41.69S	174.43E	5R	2.2	0.2	12	9
809	JAN 22	2024 22.6	41.33S	174.63E	29	2.0	0.1	9	7
822	JAN 23	0306 37.2	40.64S	175.50E	28	2.8	0.3	16	13
824	JAN 23	0515 12.4	41.70S	174.38E	5R	2.1	0.3	9	7
827	JAN 23	0849 51.8	41.13S	174.83E	30	2.2	0.1	8	5
829	JAN 23	1001 18.1	40.54S	174.49E	27	2.3	0.3	9	8
839	JAN 23	1615 37.4	41.00S	174.72E	59	2.3	0.1	7	5

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
843	JAN 23	2236 37.4	40.65S	174.70E	41	2.2	0.2	7	5
844	JAN 23	2252 12.8	40.77S	175.11E	31	2.2	0.2	11	7
846	JAN 23	2327 56.3	41.71S	174.37E	5R	2.9	0.3	18	16
851	JAN 24	0045 55.7	41.72S	174.39E	5R	2.9	0.3	21	18
858	JAN 24	0927 18.2	41.63S	174.78E	29	2.6	0.2	17	14
862	JAN 24	1515 34.5	41.72S	174.41E	5R	2.2	0.3	11	8
865	JAN 24	1700 23.0	41.69S	174.41E	5R	3.8	0.2	23	19
866	JAN 24	1718 3.5	41.69S	174.40E	5R	2.3	0.3	14	11
867	JAN 24	1801 0.8	41.05S	174.53E	52	2.6	0.1	13	11
874	JAN 25	0320 10.2	41.73S	174.17E	19	2.1	0.2	12	7
877	JAN 25	0601 18.1	41.47S	174.45E	24	3.8F	0.2	22	19
881	JAN 25	0856 56.1	41.45S	174.08E	31	2.2	0.1	13	10
882	JAN 25	1107 38.1	41.59S	173.61E	42	2.5	0.2	10	6
883	JAN 25	1145 43.7	41.73S	174.35E	5R	2.1	0.3	11	9
893	JAN 25	1908 16.2	41.25S	175.19E	27	2.8	0.2	18	13
895	JAN 25	2140 43.2	41.62S	174.78E	29	2.2	0.1	13	10
899	JAN 25	2237 47.4	41.09S	174.64E	33	2.1	0.2	8	5
912	JAN 26	0507 32.6	41.25S	175.18E	23	2.1	0.1	12	8
923	JAN 26	1637 46.1	41.32S	174.68E	19	2.4	0.2	16	13
939	JAN 27	0552 22.7	40.80S	174.83E	5R	2.3	0.1	12	9
946	JAN 27	0947 48.0	40.76S	175.03E	37	2.0	0.1	11	8
949	JAN 27	1129 13.2	40.62S	174.61E	42	2.3	0.2	6	4
958	JAN 27	1731 38.3	41.73S	174.38E	5R	2.4	0.3	13	10
964	JAN 27	2202 46.1	40.98S	175.00E	44	2.2	0.1	9	6
966	JAN 27	2313 40.4	41.07S	174.09E	63	3.7	0.2	29	26
975	JAN 28	0548 37.4	41.33S	174.51E	19	2.1	0.3	10	8
980	JAN 28	0654 25.6	41.72S	174.35E	5R	2.2	0.3	14	11
1003	JAN 28	2024 48.8	41.70S	174.41E	5R	2.1	0.2	10	8
1004	JAN 28	2043 14.3	41.43S	173.74E	58	2.5	0.2	13	8
1005	JAN 28	2057 15.1	41.69S	174.42E	5R	3.7	0.3	21	19
1006	JAN 28	2058 3.7	41.69S	174.42E	5R	2.9	0.1	5	4
1010	JAN 28	2300 56.5	40.96S	175.59E	29	2.1	0.1	10	7
1015	JAN 28	2358 20.8	41.70S	174.43E	5R	2.5	0.2	17	14
1035	JAN 29	1730 18.4	41.14S	173.66E	87	2.5	0.2	15	10
1045	JAN 29	2351 54.9	41.82S	173.85E	5R	2.3	0.2	9	6
1058	JAN 30	0242 23.8	40.60S	174.63E	5R	2.2	0.4	8	6
1059	JAN 30	0303 56.4	40.79S	174.36E	54	3.4	0.3	31	25
1069	JAN 30	0939 49.6	41.71S	174.35E	16	3.1	0.2	19	18
1070	JAN 30	0939 55.4	41.73S	174.37E	5R	3.3	0.2	13	11
1071	JAN 30	0943 3.5	41.73S	174.38E	5R	3.0	0.4	24	19
1073	JAN 30	1113 58.7	40.75S	174.33E	49	2.7	0.4	19	14
1075	JAN 30	1226 43.8	41.38S	174.52E	57	2.5	0.1	14	11
1077	JAN 30	1411 20.0	41.64S	174.33E	5R	2.3	0.3	16	11
1081	JAN 30	2237 50.4	41.12S	173.59E	79	3.1	0.3	25	18
1085	JAN 31	0031 55.3	41.25S	174.42E	37	2.4	0.2	11	9

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
1094	JAN 31	1653 24.2	41.26S	175.18E	23	2.3	0.1	7	5
1099	FEB 01	0612 57.9	41.33S	173.89E	54	2.6	0.2	18	11
1101	FEB 01	0819 39.2	41.31S	174.61E	32	3.0	0.2	20	16
1128	FEB 01	2230 2.7	41.73S	174.26E	18	2.2	0.2	9	5
1138	FEB 02	0428 2.9	40.87S	174.73E	15	2.2	0.1	8	5
1173	FEB 03	0618 18.6	40.83S	174.69E	71	2.2	0.2	7	5
1181	FEB 03	1509 23.7	41.14S	174.50E	37	2.9	0.2	21	17
1187	FEB 03	1737 54.1	41.72S	174.40E	5R	2.3	0.3	15	11
1189	FEB 03	1835 49.6	41.69S	174.37E	5R	2.2	0.3	11	10
1190	FEB 03	1836 52.9	41.70S	174.38E	5R	2.5	0.3	17	15
1193	FEB 03	1918 6.7	41.72S	174.40E	5R	2.5	0.3	15	11
1196	FEB 03	2131 25.0	41.43S	174.44E	59	2.9	0.1	22	17
1207	FEB 04	0559 58.5	41.01S	175.94E	30	2.3	0.2	12	9
1208	FEB 04	0819 0.1	41.07S	175.68E	36	2.4	0.2	12	8
1222	FEB 04	1549 45.2	41.75S	174.46E	56	2.4	0.2	16	13
1226	FEB 04	1926 21.0	40.92S	174.07E	63	2.2	0.2	10	6
1236	FEB 05	0303 27.8	41.16S	175.08E	24	2.2	0.1	11	8
1237	FEB 05	0534 22.8	41.24S	175.05E	23	2.2	0.1	12	9
1240	FEB 05	0707 24.9	41.71S	174.17E	11	2.3	0.3	15	11
1247	FEB 05	1135 21.5	41.61S	175.15E	17	2.1	0.1	7	5
1255	FEB 05	1517 0.5	40.63S	174.55E	5R	2.1	0.1	7	6
1256	FEB 05	1606 50.0	41.26S	175.18E	24	2.3	0.0	12	9
1257	FEB 05	1634 16.0	41.26S	175.18E	24	2.3	0.1	15	11
1263	FEB 05	1857 56.9	41.77S	174.19E	12	2.1	0.2	12	9
1271	FEB 06	0318 16.1	41.37S	175.86E	14	2.1	0.1	8	5
1272	FEB 06	0322 34.9	40.85S	175.12E	36	2.0	0.2	13	10
1274	FEB 06	0438 6.7	41.61S	174.34E	28	2.3	0.3	14	10
1288	FEB 06	1419 30.6	41.12S	174.21E	58	2.2	0.2	7	5
1293	FEB 07	0205 31.1	41.81S	174.36E	23	3.1	0.2	24	18
1294	FEB 07	0251 41.9	41.25S	173.82E	61	2.5	0.1	10	7
1297	FEB 07	0606 40.2	41.33S	174.24E	39	2.8	0.2	20	15
1303	FEB 07	1112 1.4	41.12S	174.63E	57	2.5	0.1	14	11
1305	FEB 07	1339 47.1	40.79S	174.71E	5R	2.6	0.3	12	9
1310	FEB 07	1827 42.8	41.13S	174.01E	56	3.0	0.2	23	19
1311	FEB 07	1847 10.3	40.75S	174.42E	55	2.6	0.1	11	9
1313	FEB 07	1929 13.7	41.75S	173.89E	9	2.9	0.3	20	13
1315	FEB 08	0012 26.9	40.87S	174.72E	13	2.4	0.2	11	9
1316	FEB 08	0016 42.4	41.26S	175.18E	24	3.3	0.2	22	17
1319	FEB 08	0106 35.4	41.75S	173.91E	12R	2.2	0.3	11	7
1338	FEB 08	1153 37.7	41.09S	175.40E	33	2.7	0.2	14	11
1342	FEB 08	1414 3.3	40.61S	173.52E	158	2.8	0.2	11	9
1343	FEB 08	1419 6.0	41.01S	175.14E	32	2.1	0.1	9	7
1356	FEB 08	2308 22.9	40.77S	174.83E	44	2.9	0.2	12	10
1357	FEB 08	2323 40.8	41.60S	175.37E	14	2.2	0.1	13	9
1358	FEB 08	2325 1.9	41.59S	175.36E	14	2.3	0.1	12	9

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
1363	FEB 09	0319 57.1	41.64S	174.33E	33R	2.3	0.2	6	4
1366	FEB 09	0346 58.7	41.41S	174.42E	56	2.3	0.1	9	7
1370	FEB 09	1213 31.8	40.85S	174.77E	48	2.6	0.2	13	10
1371	FEB 09	1241 33.3	41.64S	174.52E	52	2.1	0.1	7	6
1376	FEB 09	1746 1.3	40.95S	174.93E	58	2.9	0.1	14	11
1379	FEB 09	2251 1.1	41.07S	173.76E	65	3.0	0.2	16	12
1389	FEB 10	0436 1.4	40.72S	174.35E	56	2.3	0.2	9	6
1393	FEB 10	0644 56.0	40.55S	173.71E	130	3.7	0.2	31	23
1405	FEB 10	1312 14.0	41.70S	174.47E	34	2.1	0.1	11	7
1407	FEB 10	1642 15.2	41.42S	174.98E	25	2.0	0.1	10	7
1409	FEB 10	1752 20.4	41.76S	173.89E	11	2.1	0.2	11	8
1415	FEB 11	0111 18.7	40.86S	174.41E	45	3.2	0.3	28	22
1416	FEB 11	0308 52.4	41.59S	173.76E	47	2.2	0.2	9	5
1421	FEB 11	0558 58.8	40.58S	174.28E	89	2.9	0.2	13	10
1422	FEB 11	0609 55.5	40.70S	175.47E	27	2.6	0.2	14	11
1431	FEB 11	0932 52.9	41.83S	174.07E	11	2.3	0.2	13	9
1437	FEB 11	1232 47.0	41.27S	175.26E	29	3.0	0.3	19	15
1438	FEB 11	1303 42.8	40.52S	175.41E	33	2.0	0.1	5	5
1441	FEB 11	1448 49.2	40.60S	175.49E	29	2.4	0.2	9	5
1447	FEB 11	1854 33.5	41.32S	175.70E	18	2.0	0.1	9	7
1461	FEB 12	0751 30.3	40.88S	175.62E	23	2.5	0.2	13	11
1480	FEB 12	2119 28.9	40.82S	174.46E	51	3.4	0.3	31	24
1485	FEB 12	2217 53.4	40.55S	174.95E	24	2.6	0.2	17	14
1489	FEB 13	0105 27.1	40.59S	173.58E	151	2.8	0.2	9	8
1492	FEB 13	0238 48.0	40.60S	174.69E	27	2.3	0.2	10	7
1494	FEB 13	0243 32.0	41.06S	175.25E	14	2.5	0.3	14	12
1506	FEB 13	0930 4.4	41.67S	174.18E	10	2.1	0.2	13	10
1509	FEB 13	1051 30.4	41.65S	174.20E	10	2.3	0.2	18	13
1510	FEB 13	1056 29.5	40.67S	175.74E	16	2.6	0.3	17	15
1520	FEB 13	2308 26.5	41.08S	174.05E	49	2.8	0.2	16	14
1530	FEB 14	0309 47.2	41.15S	174.68E	31	2.1	0.1	10	8
1542	FEB 14	1037 24.7	41.18S	174.75E	30	2.4	0.1	13	11
1550	FEB 14	1609 42.1	40.54S	174.18E	64	2.3	0.3	12	7
1555	FEB 14	1953 26.8	41.63S	173.63E	58	2.5	0.2	16	10
1558	FEB 14	2036 31.0	40.61S	174.12E	81	2.4	0.3	8	6
1559	FEB 14	2050 40.9	41.97S	173.93E	5R	3.0	0.3	21	15
1560	FEB 14	2137 9.2	40.78S	175.67E	47	2.8	0.2	15	13
1562	FEB 15	0024 12.8	41.95S	173.91E	12R	2.5	0.2	14	11
1576	FEB 15	1045 38.4	41.95S	173.92E	11	2.6	0.2	18	14
1582	FEB 15	1508 36.7	40.70S	174.03E	71	2.3	0.2	11	8
1583	FEB 15	1510 1.4	41.82S	173.69E	9	2.2	0.3	12	8
1584	FEB 15	1545 3.1	41.18S	175.77E	18	2.0	0.1	9	6
1587	FEB 15	1629 3.0	41.31S	174.23E	41	2.7	0.2	20	14
1592	FEB 15	2049 22.7	40.58S	174.33E	84	2.5	0.1	11	7
1593	FEB 15	2113 36.4	41.68S	174.42E	5R	2.0	0.2	12	10

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
1604	FEB 16	0251 46.8	40.50S	174.74E	29	2.1	0.1	7	5
1607	FEB 16	0631 24.3	40.87S	173.55E	90	2.8	0.2	17	10
1620	FEB 16	1642 9.1	41.64S	175.46E	22	2.2	0.2	11	8
1624	FEB 16	1942 35.2	41.58S	174.16E	5R	2.2	0.3	15	11
1625	FEB 16	2055 5.6	41.06S	174.68E	31	2.3	0.1	11	10
1626	FEB 16	2107 59.6	41.06S	174.68E	31	2.4	0.1	11	10
1628	FEB 16	2148 12.3	41.64S	175.48E	21	2.4	0.2	12	9
1630	FEB 16	2218 49.7	41.14S	174.47E	35	2.3	0.2	11	9
1631	FEB 16	2253 36.5	41.63S	175.46E	22	2.5	0.2	12	9
1635	FEB 17	0233 44.0	41.38S	174.41E	57	2.4	0.1	12	9
1636	FEB 17	0238 23.0	41.53S	174.41E	13	3.0	0.2	23	18
1637	FEB 17	0313 29.3	41.81S	173.52E	42	2.4	0.2	14	10
1645	FEB 17	0615 8.9	41.02S	173.86E	64	2.6	0.3	12	8
1646	FEB 17	0621 6.9	41.53S	174.41E	11	2.8	0.2	22	20
1647	FEB 17	0621 11.8	41.53S	174.40E	9	3.4	0.4	22	16
1648	FEB 17	0829 19.1	41.12S	175.41E	24	2.2	0.1	12	9
1657	FEB 17	1440 48.6	41.60S	174.63E	28	2.1	0.1	10	8
1658	FEB 17	1453 28.3	41.04S	174.79E	58	2.2	0.0	8	5
1667	FEB 17	1917 31.1	41.65S	175.46E	23	2.5	0.3	12	9
1673	FEB 17	2200 59.1	41.98S	173.91E	5R	2.4	0.2	13	10
1674	FEB 17	2223 45.0	41.97S	173.91E	5R	2.4	0.2	13	11
1685	FEB 18	0856 13.8	40.55S	174.16E	66	2.6	0.2	16	12
1689	FEB 18	1140 46.4	41.08S	174.75E	54	2.3	0.1	11	9
1699	FEB 18	1610 39.3	40.55S	174.89E	17	2.0	0.1	7	5
1700	FEB 18	1639 50.7	40.87S	175.36E	27	2.1	0.1	10	8
1701	FEB 18	1649 12.6	41.14S	174.80E	54	2.9	0.2	17	13
1710	FEB 19	0037 53.7	41.66S	173.92E	68	2.7	0.2	16	11
1712	FEB 19	0147 53.4	41.70S	174.47E	5R	2.7	0.2	18	14
1717	FEB 19	0243 18.9	40.62S	174.26E	90	3.7	0.3	32	25
1723	FEB 19	0610 4.7	40.54S	174.74E	31	2.0	0.1	7	6
1734	FEB 19	0959 31.1	41.62S	174.78E	28	2.8	0.2	17	13
1738	FEB 19	1330 39.1	40.74S	174.39E	42	2.3	0.1	9	6
1740	FEB 19	1407 12.8	41.95S	173.97E	15	2.7	0.3	15	11
1741	FEB 19	1407 47.9	41.94S	173.96E	13	2.5	0.2	12	9
1742	FEB 19	1413 27.1	41.93S	173.96E	14	2.4	0.2	12	10
1743	FEB 19	1413 47.4	41.94S	173.97E	13	2.4	0.2	11	9
1744	FEB 19	1414 4.4	41.95S	173.97E	13	2.2	0.2	11	8
1746	FEB 19	1424 39.7	41.72S	173.74E	49	2.8	0.2	18	13
1762	FEB 20	0315 58.2	40.58S	174.37E	32	2.1	0.1	8	5
1764	FEB 20	0330 41.0	41.63S	173.95E	11	3.3	0.2	25	19
1766	FEB 20	0440 23.0	41.64S	173.98E	9	2.4	0.3	17	12
1771	FEB 20	0804 56.4	40.58S	174.81E	31	2.5	0.1	9	6
1772	FEB 20	0807 44.3	41.88S	174.51E	12R	2.1	0.3	9	5
1774	FEB 20	1102 4.2	41.30S	175.00E	31	2.0	0.1	6	3
1790	FEB 21	0340 30.2	41.55S	174.49E	16	2.1	0.1	10	9

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
1798	FEB 21	0818 20.2	41.46S	175.29E	17	2.3	0.1	14	8
1801	FEB 21	0930 27.3	41.78S	174.51E	32	2.1	0.2	10	7
1807	FEB 21	1239 25.2	41.17S	174.76E	30	2.2	0.1	9	8
1809	FEB 21	1251 17.9	41.08S	174.51E	56	2.7	0.2	13	11
1813	FEB 21	1636 34.3	41.54S	174.48E	20	2.2	0.2	10	9
1817	FEB 21	2115 41.9	41.12S	173.83E	54	2.3	0.1	9	7
1818	FEB 21	2118 47.2	41.48S	174.82E	28	2.2	0.1	12	10
1832	FEB 22	1133 30.5	40.93S	174.93E	80	2.5	0.3	9	6
1833	FEB 22	1143 53.4	41.76S	174.15E	17	2.2	0.1	8	6
1848	FEB 22	2159 56.8	40.81S	174.73E	39	3.3	0.3	21	17
1852	FEB 23	0044 53.8	40.94S	174.48E	52	2.5	0.1	11	7
1854	FEB 23	0131 31.8	41.48S	174.46E	19	2.1	0.2	12	10
1855	FEB 23	0220 27.6	40.79S	174.74E	44	2.3	0.1	7	5
1875	FEB 23	2040 21.7	41.02S	174.19E	51	2.2	0.1	8	5
1891	FEB 24	0936 60.0	41.76S	174.48E	29	2.2	0.1	11	8
1895	FEB 24	1638 21.6	41.59S	174.66E	32	2.6	0.1	12	10
1896	FEB 24	1700 22.6	41.05S	174.75E	57	3.1	0.1	15	13
1902	FEB 24	1904 33.3	40.64S	174.30E	44	2.3	0.2	9	7
1905	FEB 24	1958 52.2	40.81S	174.70E	38	2.3	0.2	11	8
1906	FEB 24	2001 11.8	41.12S	174.60E	58	3.0	0.1	17	13
1908	FEB 24	2114 3.9	41.94S	173.78E	42	2.3	0.2	11	7
1916	FEB 25	0448 53.0	41.84S	174.10E	14	2.7	0.3	21	15
1922	FEB 25	0931 31.1	41.49S	174.50E	30	2.2	0.2	12	9
1923	FEB 25	0952 18.5	40.89S	174.69E	59	3.5	0.2	32	26
1926	FEB 25	1323 23.8	41.31S	173.83E	51	2.4	0.2	12	8
1928	FEB 25	1411 18.3	40.77S	173.92E	94	2.3	0.1	8	6
1929	FEB 25	1425 22.2	41.96S	173.93E	5R	2.1	0.2	9	5
1939	FEB 25	2013 30.4	41.34S	173.58E	71	2.5	0.3	11	7
1940	FEB 25	2240 49.0	41.39S	175.10E	28	2.5	0.1	15	11
1946	FEB 26	0156 34.2	41.05S	174.74E	58	2.9	0.1	16	13
1957	FEB 26	1351 10.5	41.63S	174.34E	12R	2.9	0.3	20	15
1962	FEB 26	1749 7.3	41.75S	175.41E	35	4.0	0.2	20	17
1967	FEB 27	0236 40.3	41.76S	174.43E	26	2.8	0.2	19	14
1994	FEB 28	0244 6.0	41.35S	173.79E	56	2.8	0.2	12	9
1995	FEB 28	0247 4.1	40.73S	174.49E	80	2.7	0.1	9	7
1999	FEB 28	0401 17.3	41.60S	174.66E	24	2.2	0.1	11	9
2001	FEB 28	0535 32.2	41.16S	174.54E	36	2.3	0.1	9	8
2004	FEB 28	1022 27.9	41.48S	173.90E	45	2.1	0.1	7	5
2005	FEB 28	1040 36.7	40.85S	174.85E	5R	2.1	0.2	8	5
2006	FEB 28	1209 44.8	41.57S	174.33E	23	2.0	0.1	12	8
2018	MAR 01	0058 7.7	40.81S	175.26E	32	3.5	0.3	25	22
2033	MAR 01	1820 30.4	41.18S	174.32E	41	3.0	0.2	20	16
2035	MAR 01	2003 37.6	40.86S	174.73E	13	3.0	0.3	22	18
2040	MAR 02	0133 55.4	41.99S	174.11E	5R	2.1	0.2	9	6
2048	MAR 02	1149 13.9	41.16S	174.59E	39	2.2	0.0	6	5

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
2049	MAR 02	1151 29.4	40.56S	174.76E	31	2.1	0.1	8	6
2057	MAR 02	1759 14.2	40.99S	174.85E	50	2.8	0.1	19	14
2059	MAR 02	1837 44.1	41.63S	174.63E	30	2.4	0.2	10	8
2061	MAR 02	2125 11.5	41.36S	174.55E	58	2.8	0.2	13	12
2069	MAR 03	0427 40.8	41.71S	174.52E	29	2.1	0.1	11	10
2085	MAR 03	1641 34.0	41.97S	175.21E	30	3.5	0.2	21	17
2088	MAR 03	2242 26.9	41.15S	174.64E	32	2.1	0.1	10	8
2093	MAR 04	0043 50.6	41.36S	174.73E	52	2.3	0.1	12	8
2098	MAR 04	0716 54.7	41.50S	174.76E	32	2.4	0.1	10	8
2104	MAR 04	1053 41.0	40.85S	174.54E	23	2.1	0.2	8	6
2118	MAR 04	1807 59.5	41.18S	174.01E	42	2.5	0.3	10	7
2121	MAR 04	2047 51.9	40.85S	173.67E	131	2.9	0.2	9	6
2122	MAR 04	2328 11.5	41.23S	173.99E	52	2.5	0.2	12	8
2129	MAR 05	0644 49.0	41.14S	174.75E	34	2.4	0.1	10	7
2131	MAR 05	0924 19.1	41.17S	174.75E	31	2.3	0.1	9	7
2135	MAR 05	1600 54.4	41.12S	175.51E	25	2.8	0.1	14	11
2137	MAR 05	1751 51.3	41.92S	174.07E	9	2.8	0.2	17	14
2146	MAR 06	0357 45.4	41.75S	173.90E	11	2.7	0.2	14	10
2153	MAR 06	0622 35.3	41.42S	174.60E	19	2.5	0.2	15	10
2165	MAR 06	1116 56.7	41.17S	174.13E	63	2.0	0.0	5	4
2182	MAR 07	0120 50.3	40.50S	174.45E	27	3.3	0.3	28	24
2187	MAR 07	0609 4.4	41.74S	173.72E	41	3.0	0.3	23	16
2188	MAR 07	0614 25.8	40.98S	175.36E	23	2.3	0.1	9	8
2204	MAR 07	1527 5.0	40.71S	174.23E	68	2.4	0.2	9	6
2219	MAR 08	1001 12.9	41.13S	174.56E	59	2.4	0.2	7	5
2220	MAR 08	1044 1.5	40.66S	174.04E	91	2.8	0.2	14	11
2221	MAR 08	1121 13.3	40.99S	175.62E	25	2.4	0.1	11	9
2223	MAR 08	1421 37.7	41.29S	175.74E	18	2.1	0.1	10	8
2229	MAR 08	2104 8.0	40.93S	174.72E	70	3.1	0.2	17	16
2230	MAR 08	2127 53.3	41.04S	174.67E	32	2.8	0.3	18	16
2231	MAR 08	2133 8.5	41.94S	173.91E	12R	2.7	0.3	18	15
2240	MAR 09	0717 59.4	41.44S	174.20E	19	2.2	0.2	14	10
2251	MAR 09	1753 54.5	41.87S	173.57E	5R	2.1	0.3	11	6
2252	MAR 09	1809 1.4	41.85S	173.58E	14	2.4	0.2	11	7
2253	MAR 09	1854 3.4	40.86S	174.69E	44	2.1	0.1	7	5
2256	MAR 09	2023 37.2	41.76S	174.14E	11	2.2	0.2	12	9
2257	MAR 09	2032 57.6	41.74S	174.12E	11	2.1	0.2	10	8
2265	MAR 09	2357 20.9	41.04S	174.75E	30	2.7	0.1	17	12
2267	MAR 10	0220 23.0	41.37S	174.17E	45	4.6F	0.1	26	21
2270	MAR 10	0317 25.2	41.38S	174.19E	38	2.3	0.2	12	8
2278	MAR 10	0907 46.1	41.10S	175.49E	26	2.1	0.1	9	7
2283	MAR 10	1150 18.9	41.33S	174.59E	30	2.1	0.2	10	8
2285	MAR 10	1343 47.2	40.87S	174.32E	23	3.8	0.1	30	26
2286	MAR 10	1407 4.4	40.87S	174.32E	22	3.0	0.2	20	15
2307	MAR 11	0016 58.3	40.77S	174.16E	62	2.9	0.2	18	13

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
2311	MAR 11	0736 13.8	40.69S	173.73E	109	2.8	0.3	15	11
2315	MAR 11	0936 6.1	40.85S	174.31E	26	2.5	0.3	11	7
2319	MAR 11	1125 35.3	40.67S	173.70E	106	2.3	0.2	11	7
2320	MAR 11	1136 53.3	41.26S	174.87E	26	2.1	0.1	12	9
2346	MAR 12	0704 16.0	41.73S	173.89E	12	2.2	0.3	15	11
2349	MAR 12	0905 42.2	41.04S	174.69E	57	2.1	0.0	7	5
2352	MAR 12	1038 21.9	41.18S	173.68E	66	2.3	0.2	7	5
2353	MAR 12	1118 23.6	41.68S	174.26E	15	2.5	0.2	18	12
2355	MAR 12	1241 31.1	41.13S	174.64E	33	2.2	0.1	11	9
2358	MAR 12	1342 30.6	41.25S	175.18E	24	2.4	0.1	13	9
2361	MAR 12	1432 17.5	41.04S	174.21E	48	2.0	0.0	8	4
2363	MAR 12	1434 3.9	41.03S	174.55E	34	2.3	0.2	11	9
2366	MAR 12	2109 24.4	41.52S	174.40E	15	2.8	0.2	20	17
2371	MAR 13	0218 12.2	41.65S	174.22E	12R	3.0	0.2	21	16
2374	MAR 13	0353 20.4	41.60S	175.06E	27	3.5	0.2	25	21
2381	MAR 13	1053 46.8	40.86S	174.31E	29	2.5	0.2	9	6
2396	MAR 13	2100 29.8	41.76S	174.14E	10	2.3	0.2	10	8
2397	MAR 13	2110 4.7	40.88S	174.72E	9	3.0	0.2	21	17
2402	MAR 14	0400 20.7	40.97S	174.76E	38	2.1	0.0	6	4
2407	MAR 14	1210 14.0	41.28S	175.28E	26	2.2	0.1	14	9
2409	MAR 14	1401 16.3	41.42S	174.63E	29	2.5	0.1	12	9
2410	MAR 14	1406 9.2	40.99S	173.91E	62	3.0	0.3	13	10
2413	MAR 14	1630 22.1	41.45S	174.16E	32	2.3	0.1	7	4
2417	MAR 14	1946 44.0	41.67S	174.25E	8	2.3	0.2	11	7
2418	MAR 14	1948 40.9	41.66S	174.26E	8	2.3	0.2	11	9
2419	MAR 14	2021 59.9	41.15S	173.93E	57	2.8	0.2	17	13
2423	MAR 14	2248 23.3	40.91S	175.17E	31	2.5	0.2	10	8
2432	MAR 15	0804 1.6	40.51S	174.34E	88	2.8	0.2	11	8
2433	MAR 15	0812 29.2	40.65S	175.29E	32	2.4	0.2	9	6
2437	MAR 15	1242 40.4	41.60S	174.24E	11	2.2	0.2	14	10
2454	MAR 16	0806 30.0	41.25S	173.52E	79	2.7	0.2	9	7
2459	MAR 16	2039 14.5	40.52S	174.33E	86	2.6	0.3	12	9
2477	MAR 17	0750 17.5	40.85S	175.72E	28	2.1	0.2	11	8
2479	MAR 17	1511 13.8	40.52S	175.90E	32	2.6	0.2	10	7
2485	MAR 17	1820 42.8	41.31S	174.72E	31	2.0	0.2	11	9
2490	MAR 17	2139 49.3	41.14S	174.02E	56	2.2	0.2	10	7
2496	MAR 18	0316 4.5	40.80S	174.28E	68	3.5	0.2	30	28
2499	MAR 18	0446 41.9	41.23S	175.28E	32	3.0	0.2	16	12
2501	MAR 18	0547 40.6	40.74S	174.20E	63	2.7	0.2	8	7
2503	MAR 18	0818 4.0	41.41S	174.61E	23	2.4	0.2	13	11
2505	MAR 18	0902 24.5	40.97S	175.59E	30	3.0	0.1	18	12
2507	MAR 18	1044 7.9	41.72S	174.30E	12R	2.4	0.3	16	12
2508	MAR 18	1209 5.5	42.00S	174.12E	30	3.2	0.2	26	18
2515	MAR 18	2007 40.5	40.64S	175.05E	43	2.2	0.2	6	4
2520	MAR 19	0459 28.2	41.03S	175.56E	27	2.2	0.1	12	8

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
2523	MAR 19	0642 16.4	40.87S	174.74E	15	2.0	0.0	8	5
2531	MAR 19	1139 6.2	40.58S	174.34E	65	3.1	0.3	24	20
2532	MAR 19	1158 38.6	40.94S	174.97E	62	2.3	0.1	12	9
2536	MAR 19	1424 28.5	40.72S	174.90E	34	2.1	0.1	8	5
2537	MAR 19	1433 45.5	41.63S	174.00E	15	2.1	0.2	10	7
2543	MAR 19	2015 56.0	41.79S	174.62E	12R	2.1	0.2	8	6
2544	MAR 19	2331 31.5	41.17S	174.31E	40	2.9	0.2	19	14
2558	MAR 20	0959 29.7	40.73S	174.69E	34	2.2	0.1	8	5
2560	MAR 20	1003 14.3	40.62S	173.98E	110	2.5	0.1	10	7
2561	MAR 20	1036 50.3	40.90S	175.74E	27	2.3	0.2	13	9
2564	MAR 20	1333 12.3	41.39S	174.50E	30	2.4	0.2	12	8
2570	MAR 20	1710 35.3	41.23S	175.03E	22	2.3	0.1	11	9
2571	MAR 20	1711 6.0	41.47S	173.52E	45	2.0	0.2	8	5
2575	MAR 20	1902 5.2	41.06S	174.81E	31	2.3	0.1	12	9
2580	MAR 20	2352 32.6	40.91S	174.71E	21	2.3	0.2	10	8
2583	MAR 21	0211 46.5	40.81S	174.56E	24	2.4	0.1	9	6
2588	MAR 21	0918 54.3	40.95S	175.01E	41	2.1	0.1	10	7
2602	MAR 21	1817 18.1	40.89S	174.40E	50	2.4	0.1	10	6
2605	MAR 21	2043 11.0	40.86S	174.72E	13	2.5	0.2	10	7
2606	MAR 21	2314 30.9	41.69S	174.49E	49	2.3	0.1	13	10
2607	MAR 22	0303 39.6	41.94S	173.96E	14	2.3	0.2	13	9
2626	MAR 22	1801 33.9	41.76S	174.89E	30	2.8	0.2	16	10
2628	MAR 22	2055 11.6	40.90S	175.86E	31	2.5	0.2	10	8
2632	MAR 22	2345 19.0	41.10S	174.46E	34	2.1	0.1	10	7
2638	MAR 23	0639 13.2	41.12S	175.32E	22	2.3	0.1	14	9
2639	MAR 23	0728 0.9	41.15S	175.12E	10	2.5	0.1	14	10
2643	MAR 23	0924 59.5	40.97S	175.07E	30	2.1	0.1	10	7
2645	MAR 23	1027 7.3	40.92S	175.70E	22	2.3	0.2	10	6
2652	MAR 23	2250 5.7	40.96S	175.63E	23	2.4	0.2	10	7
2654	MAR 24	0054 43.6	40.82S	175.06E	32	2.1	0.1	9	7
2661	MAR 24	1256 5.8	41.11S	175.42E	26	2.0	0.0	9	6
2669	MAR 24	2123 22.9	40.92S	175.74E	29	2.8	0.2	13	10
2678	MAR 25	0554 23.7	40.90S	173.61E	99	2.7	0.1	12	8
2685	MAR 25	1120 38.6	41.40S	174.26E	32	2.4	0.2	17	11
2695	MAR 25	1802 12.6	41.59S	174.33E	26	2.6	0.2	19	14
2697	MAR 25	2127 50.5	41.14S	175.68E	18	2.3	0.2	10	6
2699	MAR 25	2248 51.7	40.87S	174.73E	13	2.3	0.2	11	8
2714	MAR 26	1216 49.2	40.59S	174.89E	25	2.6	0.2	11	9
2715	MAR 26	1249 42.4	41.44S	175.65E	13	2.4	0.2	12	9
2727	MAR 26	2351 58.1	40.87S	174.58E	40	2.5	0.2	12	9
2729	MAR 26	2357 22.7	40.86S	174.63E	41	3.1	0.2	16	13
2730	MAR 27	0030 28.6	40.76S	174.96E	40	2.3	0.2	9	6
2739	MAR 27	0844 35.2	40.67S	175.00E	33	2.1	0.2	8	6
2740	MAR 27	0923 39.4	41.88S	173.76E	12R	2.3	0.3	7	6
2745	MAR 27	1402 4.6	41.02S	174.89E	46	2.1	0.1	11	7

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
2755	MAR 27	1900 20.4	41.50S	174.56E	54	2.3	0.1	10	7
2756	MAR 27	1931 10.6	40.93S	175.70E	31	2.5	0.2	14	10
2760	MAR 27	2256 26.9	40.52S	174.52E	5R	2.1	0.3	9	7
2767	MAR 28	0339 31.1	40.94S	174.50E	41	3.2	0.2	23	16
2768	MAR 28	0443 23.7	41.30S	175.72E	18	2.2	0.1	11	6
2773	MAR 28	0949 35.3	41.23S	175.25E	27	2.4	0.1	12	7
2775	MAR 28	1045 18.1	41.94S	174.09E	12R	2.1	0.2	10	8
2777	MAR 28	1326 3.0	41.00S	174.87E	53	2.1	0.1	10	6
2782	MAR 28	1706 3.7	40.58S	175.78E	50	2.6	0.2	11	7
2787	MAR 28	2044 13.8	41.35S	175.06E	10	2.2	0.1	12	8
2802	MAR 29	1207 30.4	41.58S	173.88E	20	2.3	0.2	14	8
2804	MAR 29	1407 39.3	41.96S	173.92E	10	2.6	0.1	14	10
2806	MAR 29	1512 14.7	41.21S	174.73E	44	2.3	0.1	10	7
2807	MAR 29	1520 57.6	41.39S	174.90E	27	2.1	0.1	11	8
2814	MAR 29	2202 32.7	41.63S	174.78E	29	3.0	0.2	19	14
2818	MAR 30	0040 34.4	41.55S	174.32E	27	2.5	0.2	14	11
2820	MAR 30	0212 12.1	40.62S	175.86E	31	2.7	0.2	10	7
2824	MAR 30	0507 45.3	41.95S	173.91E	12R	2.5	0.1	14	10
2825	MAR 30	0508 11.7	41.96S	173.90E	12R	2.2	0.2	9	7
2826	MAR 30	0526 35.3	40.76S	175.94E	42	2.5	0.0	8	5
2828	MAR 30	0634 13.2	40.51S	174.66E	78	2.6	0.2	12	9
2830	MAR 30	0838 40.9	40.96S	175.14E	28	2.3	0.1	9	7
2832	MAR 30	1152 21.6	40.81S	175.61E	5R	2.6	0.3	15	11
2835	MAR 30	1656 58.9	40.94S	175.00E	33	2.5	0.1	10	8
2838	MAR 30	1816 22.4	41.93S	174.13E	12R	2.3	0.3	11	9
2841	MAR 30	1921 6.3	41.36S	174.78E	36	2.3	0.1	13	9
2842	MAR 30	2055 22.3	41.22S	173.99E	55	3.6	0.2	29	21
2847	MAR 31	0524 9.5	40.51S	173.86E	100	2.9	0.2	10	7
2848	MAR 31	0531 55.9	41.73S	174.03E	30	2.2	0.1	8	5
2853	MAR 31	1003 53.8	41.05S	174.66E	65	2.8	0.1	13	11
2854	MAR 31	1045 17.4	40.82S	174.01E	64	2.2	0.2	10	7
2856	MAR 31	1226 48.8	40.68S	175.50E	43	2.1	0.1	9	5
2869	APR 01	1418 27.1	41.73S	174.47E	23	2.0	0.1	8	4
2878	APR 01	2019 45.9	41.08S	174.24E	56	2.2	0.1	8	5
2887	APR 02	0836 36.8	40.95S	174.71E	55	2.9	0.0	13	10
2888	APR 02	0957 49.4	40.87S	173.99E	69	2.8	0.2	15	9
2894	APR 02	1339 31.1	41.48S	173.76E	62	2.1	0.2	8	5
2897	APR 02	1624 47.6	41.20S	175.05E	17	2.2	0.1	10	8
2901	APR 02	1836 29.1	41.70S	173.76E	41	2.7	0.3	15	11
2902	APR 02	1906 31.5	40.90S	174.72E	12R	2.6	0.2	19	15
2908	APR 02	2317 24.4	41.24S	174.50E	37	2.4	0.1	9	6
2909	APR 02	2341 4.1	41.06S	173.81E	75	2.6	0.2	7	4
2911	APR 03	0045 1.9	41.14S	174.81E	31	2.0	0.1	8	6
2914	APR 03	0346 45.9	40.87S	175.78E	29	2.5	0.2	16	9
2917	APR 03	1216 47.1	41.28S	174.49E	34	2.0	0.1	8	5

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
2921	APR 03	1252 37.5	41.35S	174.67E	31	2.5	0.1	15	10
2933	APR 03	1738 55.5	41.43S	173.79E	55	3.8F	0.2	31	24
2944	APR 04	0040 38.4	41.07S	174.82E	29	2.2	0.1	11	8
2948	APR 04	0227 33.4	40.87S	175.05E	54	2.3	0.1	9	8
2979	APR 05	1020 32.2	41.56S	175.38E	21	2.8	0.3	18	12
2980	APR 05	1041 42.8	41.13S	174.82E	30	2.6	0.1	15	11
2988	APR 05	1816 49.9	41.59S	174.29E	5R	2.4	0.3	16	11
2989	APR 05	1831 45.1	40.90S	174.91E	34	2.1	0.1	8	6
2998	APR 06	0025 49.2	40.83S	173.58E	97	2.9	0.2	10	6
2999	APR 06	0217 37.5	40.84S	175.71E	24	3.3	0.2	20	14
3007	APR 06	1048 6.0	40.59S	174.17E	55	2.2	0.2	11	7
3008	APR 06	1221 60.0	41.66S	174.59E	30	2.2	0.1	9	6
3010	APR 06	1623 22.2	41.65S	174.14E	53	2.6	0.1	11	9
3018	APR 06	2219 36.5	41.99S	174.00E	12R	2.2	0.3	10	7
3022	APR 07	0229 12.5	40.79S	175.06E	33	2.1	0.1	6	5
3036	APR 07	1427 16.8	40.91S	174.73E	51	2.1	0.1	8	5
3046	APR 08	0033 29.7	41.34S	173.57E	91	2.6	0.1	7	5
3056	APR 08	0821 0.2	40.71S	173.94E	76	2.4	0.2	8	6
3068	APR 08	2151 54.8	41.13S	174.80E	25	2.3	0.1	12	8
3071	APR 09	0017 26.9	41.34S	174.74E	51	2.5	0.1	13	10
3072	APR 09	0020 33.5	41.50S	174.54E	28	2.3	0.1	9	7
3080	APR 09	1032 56.6	41.52S	174.80E	48	2.3	0.1	8	7
3081	APR 09	1128 58.0	41.08S	174.94E	29	2.1	0.0	8	6
3084	APR 09	1616 58.1	41.39S	175.01E	24	2.2	0.0	7	5
3086	APR 09	1646 59.1	41.53S	174.44E	46	2.3	0.2	10	6
3089	APR 09	1853 51.9	41.05S	175.37E	29	2.4	0.1	13	8
3092	APR 09	2211 41.2	40.65S	175.45E	28	2.3	0.1	11	7
3097	APR 10	0151 57.0	40.75S	174.58E	34	2.7	0.1	10	7
3099	APR 10	0315 5.1	40.57S	174.81E	29	2.4	0.2	11	8
3100	APR 10	0438 0.8	41.28S	174.92E	39	2.5	0.1	8	6
3113	APR 10	1601 58.8	40.72S	174.45E	77	2.2	0.2	9	7
3118	APR 10	2035 35.0	40.72S	175.07E	33	2.0	0.2	10	7
3120	APR 10	2230 45.7	40.78S	175.23E	57	3.7	0.2	29	23
3125	APR 11	0032 49.2	41.25S	173.79E	60	2.3	0.1	7	4
3127	APR 11	0154 59.7	40.95S	174.90E	31	2.2	0.1	10	8
3131	APR 11	0704 43.4	41.73S	174.25E	24	2.1	0.1	10	7
3143	APR 11	1922 36.3	41.15S	174.75E	63	3.3	0.2	28	18
3144	APR 11	1952 53.6	40.66S	174.54E	43	3.0	0.2	19	13
3146	APR 11	2031 12.8	41.45S	175.30E	16	2.2	0.1	12	8
3153	APR 11	2309 42.8	41.67S	173.99E	10	2.5	0.2	15	10
3161	APR 12	0337 17.5	41.14S	174.48E	58	2.6	0.1	12	8
3162	APR 12	0341 14.6	40.82S	174.67E	49	2.1	0.2	7	5
3164	APR 12	0801 39.7	40.72S	174.90E	34	2.0	0.1	7	6
3180	APR 13	0259 30.4	41.30S	174.82E	26	2.2	0.1	14	11
3194	APR 13	1526 39.4	41.61S	174.79E	30	2.4	0.1	14	9

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
3201	APR 13	2258 19.8	41.38S	173.58E	93	2.6	0.2	13	10
3205	APR 14	0042 13.6	40.72S	174.58E	72	2.6	0.1	13	10
3207	APR 14	0325 28.2	40.94S	175.11E	34	2.4	0.2	12	9
3209	APR 14	0631 37.2	41.26S	174.62E	27	2.1	0.2	10	8
3212	APR 14	0824 59.0	41.22S	175.77E	27	2.5	0.1	11	8
3213	APR 14	0933 11.4	41.14S	174.63E	33	2.5	0.1	14	10
3220	APR 14	1535 51.9	41.38S	173.85E	53	3.0	0.2	17	11
3225	APR 14	2337 53.9	41.11S	173.99E	53	2.9	0.2	15	12
3228	APR 15	0139 14.8	40.62S	174.89E	27	2.3	0.1	8	6
3236	APR 15	1046 58.5	41.23S	173.75E	68	2.4	0.1	10	7
3239	APR 15	1523 38.4	40.52S	174.39E	29	2.4	0.1	9	6
3246	APR 16	0834 22.3	41.83S	174.12E	16	2.7	0.2	14	11
3248	APR 16	1246 23.5	41.29S	174.81E	25	3.2	0.2	21	16
3250	APR 16	1536 6.6	41.50S	173.55E	68	3.5	0.2	28	20
3251	APR 16	1653 20.3	40.73S	173.70E	98	2.7	0.2	11	6
3252	APR 16	1703 49.0	41.24S	175.25E	40	2.1	0.1	9	6
3254	APR 16	1807 29.2	41.54S	174.55E	15	2.2	0.2	12	9
3258	APR 16	2213 37.7	41.81S	174.82E	32	2.5	0.1	13	10
3262	APR 17	0144 35.2	41.00S	175.26E	29	2.2	0.1	12	8
3270	APR 17	1256 2.0	41.67S	174.30E	5R	2.3	0.2	15	11
3276	APR 17	1934 14.9	41.23S	175.29E	25	2.1	0.1	10	6
3300	APR 19	0402 25.5	40.98S	174.17E	49	2.3	0.1	10	7
3302	APR 19	0605 48.5	41.53S	173.64E	93	2.5	0.2	12	8
3304	APR 19	0648 6.5	41.23S	173.86E	54	2.5	0.2	14	8
3309	APR 19	1203 22.3	40.63S	175.89E	23	3.3	0.2	18	16
3323	APR 20	0255 44.3	41.77S	174.34E	30	3.0	0.2	25	17
3339	APR 20	0908 35.5	41.18S	174.76E	31	2.8	0.1	15	12
3356	APR 21	0347 17.3	40.53S	174.78E	23	2.8	0.2	20	16
3359	APR 21	0708 46.1	40.89S	174.63E	61	2.3	0.0	7	5
3360	APR 21	0729 41.3	41.07S	174.09E	46	2.4	0.1	6	4
3366	APR 21	1624 59.7	40.89S	174.75E	59	2.9	0.1	16	12
3378	APR 22	0825 48.1	41.52S	174.42E	57	2.7	0.1	14	10
3379	APR 22	0836 39.0	40.71S	174.46E	76	2.9	0.2	22	19
3388	APR 22	1504 37.7	41.04S	175.46E	30	2.8	0.1	16	11
3389	APR 22	1508 19.7	41.32S	174.36E	33	2.1	0.1	7	5
3391	APR 22	1710 39.1	41.40S	174.90E	18	2.1	0.1	13	10
3392	APR 22	1925 50.1	41.63S	173.63E	48	2.6	0.3	14	9
3400	APR 23	0325 48.2	41.24S	174.51E	57	2.2	0.1	11	10
3406	APR 23	1008 42.1	41.09S	174.56E	37	2.7	0.1	15	12
3407	APR 23	1015 44.8	41.55S	173.59E	96	2.4	0.2	10	8
3417	APR 23	2322 55.0	41.98S	173.93E	5R	2.3	0.1	9	6
3425	APR 24	0706 59.8	41.57S	175.24E	13	2.1	0.2	12	8
3429	APR 24	1143 51.2	41.89S	174.63E	5R	2.1	0.2	11	9
3432	APR 24	1447 46.8	41.75S	173.54E	84	3.6	0.2	31	23
3434	APR 24	1557 40.7	41.11S	174.47E	40	2.3	0.3	9	7

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
3445	APR 25	0142 33.6	41.19S	174.93E	29	2.3	0.1	12	9
3447	APR 25	0400 28.5	41.24S	173.69E	71	2.6	0.2	12	7
3450	APR 25	0559 5.8	41.47S	173.65E	60	3.2	0.3	22	16
3453	APR 25	0845 25.8	41.59S	174.17E	56	2.3	0.1	11	8
3456	APR 25	1315 24.5	41.26S	174.54E	31	2.0	0.1	5	3
3460	APR 25	1615 17.4	41.48S	174.45E	19	2.9	0.2	26	17
3462	APR 25	1808 52.8	40.91S	175.77E	30	2.3	0.2	11	7
3472	APR 25	2223 34.3	41.40S	175.06E	26	2.9	0.1	18	11
3473	APR 25	2228 28.6	40.63S	175.94E	32	2.4	0.2	11	8
3474	APR 25	2229 25.0	41.41S	175.05E	25	2.3	0.1	13	9
3492	APR 26	1824 37.0	41.66S	174.64E	32	3.1	0.2	22	17
3504	APR 27	1402 48.8	41.69S	174.16E	12R	2.1	0.3	9	7
3518	APR 28	0301 47.7	41.21S	173.62E	75	2.5	0.2	10	7
3519	APR 28	0308 56.1	40.83S	175.78E	30	2.1	0.3	11	8
3520	APR 28	0435 40.4	41.11S	174.48E	38	2.1	0.1	9	6
3524	APR 28	0551 28.9	40.63S	175.05E	32	2.7	0.2	15	10
3525	APR 28	0644 56.3	41.78S	174.57E	24	2.3	0.2	14	11
3528	APR 28	1202 42.7	40.54S	173.77E	95	2.6	0.1	11	9
3529	APR 28	1204 51.1	40.74S	175.31E	27	2.3	0.1	14	10
3540	APR 28	2132 1.1	41.06S	175.45E	29	2.3	0.1	11	7
3547	APR 29	0051 57.0	41.25S	174.58E	40	2.2	0.1	9	6
3554	APR 29	0706 13.0	41.79S	174.13E	16	2.1	0.3	15	10
3566	APR 29	2224 24.2	40.58S	173.51E	137	2.9	0.2	12	10
3570	APR 30	0533 55.9	41.80S	175.88E	12R	2.5	0.2	9	6
3605	MAY 02	0236 53.7	41.62S	174.58E	31	2.4	0.2	13	12
3607	MAY 02	0545 56.3	40.85S	174.71E	16	2.3	0.1	8	6
3619	MAY 02	2316 46.3	41.19S	174.61E	57	3.1	0.1	15	11
3621	MAY 02	2347 38.1	41.77S	173.59E	43	3.1	0.3	19	13
3622	MAY 03	0303 13.8	41.50S	174.24E	59	2.5	0.1	7	5
3625	MAY 03	0454 0.6	41.01S	174.65E	33	2.5	0.1	10	8
3627	MAY 03	0731 27.9	41.82S	174.06E	17	2.1	0.2	12	8
3635	MAY 03	1934 28.8	41.71S	173.54E	95	2.8	0.1	8	4
3660	MAY 04	0944 4.3	40.98S	174.47E	69	3.5	0.2	26	18
3667	MAY 04	1829 10.3	41.22S	173.75E	64	2.8	0.2	16	12
3669	MAY 04	1913 37.2	40.55S	174.17E	98	4.0	0.3	40	30
3674	MAY 05	0016 29.8	41.27S	174.96E	25	2.0	0.1	12	9
3682	MAY 05	0309 39.2	40.92S	174.70E	60	2.7	0.2	10	8
3684	MAY 05	0744 39.1	41.33S	173.61E	95	2.4	0.2	11	7
3690	MAY 05	1359 10.6	40.97S	175.45E	23	2.5	0.1	13	9
3691	MAY 05	1403 9.0	40.97S	175.45E	25	2.9	0.2	13	10
3695	MAY 05	2052 57.8	41.54S	174.54E	25	2.4	0.1	11	7
3703	MAY 06	0758 4.2	41.94S	173.97E	12	2.7	0.2	12	8
3708	MAY 06	1327 46.8	41.18S	174.68E	34	2.1	0.1	9	6
3713	MAY 07	0300 16.6	41.33S	174.42E	31	2.3	0.1	7	5
3720	MAY 07	1129 34.1	41.98S	174.16E	12R	2.1	0.2	6	5

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
3721	MAY 07	1156 14.9	40.61S	174.13E	97	2.6	0.1	10	9
3722	MAY 07	1215 41.1	40.90S	175.62E	23	2.1	0.1	8	6
3726	MAY 07	1543 58.7	40.73S	173.61E	200	2.6	0.0	8	5
3742	MAY 08	0635 9.3	40.51S	174.21E	94	2.5	0.1	9	7
3747	MAY 08	1214 50.4	40.59S	174.14E	83	3.4	0.3	37	27
3753	MAY 08	1849 33.0	40.99S	175.36E	23	2.1	0.1	8	6
3758	MAY 09	0233 55.8	40.86S	174.72E	14	2.5	0.1	11	8
3762	MAY 09	0718 6.9	41.15S	173.56E	73	2.9	0.1	14	9
3763	MAY 09	0752 58.0	40.94S	173.82E	63	2.2	0.3	12	8
3771	MAY 09	2232 54.2	42.00S	174.23E	12R	2.5	0.2	13	9
3779	MAY 10	1007 51.6	40.88S	175.37E	24	2.3	0.2	11	8
3781	MAY 10	1046 54.2	41.09S	175.40E	26	3.3	0.2	19	15
3782	MAY 10	1104 35.3	41.09S	175.40E	28	2.9	0.1	17	13
3790	MAY 10	2151 52.6	40.86S	175.83E	30	2.8	0.2	14	10
3796	MAY 11	0551 34.4	41.05S	175.91E	30	2.3	0.1	13	8
3805	MAY 11	1307 15.3	40.85S	175.81E	31	2.3	0.2	12	8
3818	MAY 12	0013 33.3	41.89S	174.88E	33	2.9	0.2	22	14
3819	MAY 12	0046 18.5	41.53S	175.51E	18	2.1	0.1	9	6
3821	MAY 12	0457 12.1	41.58S	174.17E	9	2.7	0.2	16	13
3823	MAY 12	0606 14.0	41.37S	174.69E	27	2.1	0.1	10	7
3828	MAY 12	0853 3.1	40.79S	174.68E	68	3.4	0.2	19	14
3831	MAY 12	1010 3.7	40.79S	174.79E	50	3.9F	0.2	33	29
3837	MAY 12	1408 13.4	40.81S	174.51E	48	2.8	0.1	17	11
3864	MAY 14	0830 33.0	41.12S	174.98E	28	2.6	0.1	14	11
3871	MAY 15	0425 59.3	41.47S	173.80E	58	2.7	0.2	14	9
3873	MAY 15	0454 2.2	41.43S	175.29E	11	2.4	0.1	9	7
3875	MAY 15	1123 31.8	41.53S	173.59E	64	3.1	0.2	16	10
3893	MAY 16	1808 8.2	40.89S	174.69E	37	2.2	0.1	10	6
3894	MAY 16	1824 50.3	41.94S	173.95E	15	3.5	0.3	20	14
3898	MAY 17	0451 12.4	41.54S	175.57E	25	2.9	0.2	14	10
3905	MAY 17	1453 13.1	41.69S	174.98E	30	2.3	0.1	8	7
3906	MAY 17	1458 30.4	41.50S	173.86E	55	2.5	0.2	9	5
3907	MAY 17	1644 15.3	41.69S	174.16E	31	2.9	0.3	24	15
3914	MAY 18	0208 36.3	41.87S	174.58E	12R	2.1	0.1	6	4
3917	MAY 18	0526 15.8	41.34S	173.63E	52	2.7	0.2	8	4
3927	MAY 18	1708 42.6	41.49S	173.88E	45	2.6	0.1	18	13
3931	MAY 18	1904 52.3	41.96S	174.21E	12R	2.4	0.3	14	12
3932	MAY 18	1910 22.4	41.88S	174.20E	12R	2.2	0.2	10	8
3934	MAY 18	2011 17.0	40.60S	174.39E	60	2.7	0.3	14	11
3939	MAY 19	0358 30.1	41.31S	173.59E	49	2.7	0.3	13	8
3940	MAY 19	0536 37.8	40.52S	174.43E	28	2.5	0.3	11	8
3941	MAY 19	0545 49.2	40.97S	175.20E	30	2.4	0.1	13	10
3953	MAY 19	1743 58.6	41.91S	174.27E	37	2.3	0.1	9	7
3955	MAY 19	2022 19.6	40.71S	174.42E	56	3.1	0.3	24	17
3980	MAY 20	1802 7.1	41.57S	174.10E	32	2.4	0.2	16	12

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
3998	MAY 21	0628 30.7	40.97S	174.67E	35	2.4	0.1	15	11
4004	MAY 21	1047 18.1	41.62S	174.65E	32	2.5	0.2	15	10
4011	MAY 21	1250 4.1	41.75S	173.98E	12	2.4	0.3	13	8
4013	MAY 21	1520 21.5	40.60S	174.33E	81	2.3	0.2	9	7
4015	MAY 21	1616 13.3	41.60S	174.26E	5R	2.2	0.2	16	11
4019	MAY 21	1823 54.7	40.73S	174.68E	38	2.6	0.1	12	10
4031	MAY 22	0316 29.3	41.51S	175.16E	21	2.6	0.1	13	9
4037	MAY 22	0522 48.6	41.60S	173.98E	13	3.3	0.3	25	18
4050	MAY 22	1554 0.8	40.96S	174.92E	31	2.3	0.1	11	8
4052	MAY 22	1646 36.5	40.76S	174.59E	64	2.2	0.0	10	7
4053	MAY 22	1710 59.2	41.00S	174.94E	45	2.0	0.1	9	7
4058	MAY 22	1941 22.4	40.65S	174.49E	72	2.7	0.2	11	8
4061	MAY 22	2141 16.3	40.83S	174.57E	22	2.4	0.2	13	10
4062	MAY 22	2205 22.5	41.11S	174.07E	55	2.6	0.2	9	6
4073	MAY 23	0312 25.7	40.60S	174.26E	78	3.8	0.2	26	22
4074	MAY 23	0319 51.9	40.62S	173.57E	159	3.1	0.2	17	12
4076	MAY 23	0409 57.9	40.93S	174.78E	5R	2.1	0.1	9	7
4077	MAY 23	0504 40.9	41.04S	174.65E	32	2.0	0.1	8	5
4078	MAY 23	0543 47.2	41.59S	174.26E	5R	2.2	0.2	12	10
4081	MAY 23	1010 48.6	40.64S	175.47E	30	2.3	0.1	12	9
4085	MAY 23	1402 20.7	40.85S	175.18E	32	2.3	0.1	11	8
4087	MAY 23	1506 12.7	41.29S	175.28E	26	2.2	0.1	12	8
4090	MAY 23	1615 2.9	41.08S	174.03E	54	3.4	0.2	32	23
4092	MAY 23	1629 20.9	41.01S	175.45E	26	3.0	0.1	24	18
4101	MAY 23	1814 57.1	40.59S	174.22E	72	2.7	0.3	15	11
4103	MAY 23	1957 17.5	40.88S	175.61E	25	2.6	0.2	17	12
4105	MAY 23	2119 7.0	40.94S	174.27E	64	3.0	0.2	18	13
4132	MAY 24	1319 52.6	41.13S	175.08E	50	2.1	0.1	11	9
4133	MAY 24	1339 54.1	41.46S	174.67E	55	2.2	0.1	10	9
4149	MAY 24	1800 24.2	40.85S	174.80E	17	2.0	0.1	8	5
4156	MAY 24	2314 49.5	41.49S	174.35E	5R	2.1	0.3	13	9
4166	MAY 25	0615 29.0	41.51S	173.67E	56	2.6	0.1	11	6
4173	MAY 25	1106 35.6	41.27S	175.04E	21	2.4	0.2	15	12
4175	MAY 25	1144 48.2	40.70S	173.84E	80	2.5	0.1	9	6
4176	MAY 25	1210 16.8	40.55S	173.98E	93	2.8	0.2	13	9
4182	MAY 25	2020 37.7	40.68S	175.50E	29	2.3	0.3	12	7
4185	MAY 25	2211 39.9	40.90S	175.64E	26	2.1	0.1	12	8
4186	MAY 25	2237 31.1	40.82S	175.05E	31	3.2	0.3	22	17
4187	MAY 26	0018 36.5	40.84S	174.92E	54	2.3	0.1	8	5
4192	MAY 26	0943 35.4	40.63S	174.45E	52	3.2	0.1	16	12
4196	MAY 26	1633 59.6	40.80S	175.09E	40	2.3	0.1	9	6
4199	MAY 26	2248 38.4	41.78S	173.95E	15	2.7	0.2	9	6
4218	MAY 28	1802 21.5	41.41S	175.06E	26	2.1	0.1	8	6
4219	MAY 28	1905 19.9	41.08S	174.73E	56	2.8	0.2	15	13
4222	MAY 28	1951 31.0	41.05S	174.78E	31	2.2	0.1	10	9

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
4224	MAY 28	2123 5.7	41.93S	174.22E	12R	2.2	0.2	8	5
4257	MAY 29	2235 26.4	41.43S	174.53E	28	2.2	0.2	9	6
4310	MAY 31	0228 35.1	41.46S	174.54E	25	2.2	0.1	8	5
4315	MAY 31	0343 55.2	41.42S	174.53E	28	2.7	0.2	14	10
4318	MAY 31	0739 10.2	40.79S	174.66E	35	3.6F	0.1	29	24
4322	MAY 31	1153 39.4	40.92S	175.10E	29	2.0	0.1	9	6
4324	MAY 31	1547 21.3	41.61S	175.08E	28	2.8	0.1	18	12
4325	MAY 31	1604 22.9	40.99S	174.70E	37	2.4	0.0	14	10
4326	MAY 31	1709 13.7	41.37S	175.09E	27	2.7	0.2	18	14
4328	MAY 31	1932 30.1	41.36S	175.09E	26	2.4	0.1	13	11
4329	MAY 31	2031 43.8	41.42S	174.54E	29	2.8	0.2	17	13
4330	MAY 31	2057 31.5	40.83S	174.57E	23	2.4	0.2	12	8
4334	JUN 01	0355 14.1	41.42S	174.53E	29	2.3	0.1	14	9
4336	JUN 01	0936 22.9	41.36S	175.09E	24	2.2	0.0	8	6
4338	JUN 01	1129 44.1	40.79S	174.31E	56	2.8	0.2	14	9
4340	JUN 01	1200 14.1	41.73S	174.38E	26	2.9	0.2	22	16
4341	JUN 01	1226 36.7	41.72S	174.38E	27	2.7	0.2	17	12
4342	JUN 01	1227 24.5	41.72S	174.38E	28	2.2	0.1	11	8
4348	JUN 01	2140 57.4	41.41S	174.54E	27	2.1	0.1	8	5
4349	JUN 01	2233 14.1	41.73S	174.38E	26	2.5	0.2	17	14
4356	JUN 02	0847 19.1	41.15S	174.01E	71	2.5	0.1	9	6
4360	JUN 02	1341 33.1	40.99S	175.16E	28	2.1	0.1	8	5
4364	JUN 02	1417 23.1	40.86S	174.73E	15	2.0	0.1	8	6
4367	JUN 02	1855 33.0	41.27S	175.24E	28	2.4	0.1	13	10
4380	JUN 03	0217 57.8	40.53S	175.93E	52	3.2	0.2	24	19
4381	JUN 03	0628 42.6	41.67S	174.51E	26	2.1	0.1	9	7
4385	JUN 03	0919 31.9	40.71S	174.60E	42	3.2	0.2	25	18
4395	JUN 03	1516 52.3	41.63S	174.04E	5R	2.2	0.2	10	7
4406	JUN 03	1617 7.5	41.77S	174.16E	11	2.2	0.1	9	7
4427	JUN 04	1529 22.9	41.72S	174.35E	45	2.1	0.2	11	8
4434	JUN 04	2028 2.7	40.52S	174.19E	62	2.5	0.3	10	7
4438	JUN 04	2204 25.8	40.54S	174.46E	30	3.2	0.3	20	15
4455	JUN 05	1422 50.7	40.81S	174.76E	40	2.3	0.1	8	6
4456	JUN 05	1502 2.8	40.65S	174.57E	45	2.2	0.1	11	6
4457	JUN 05	1504 48.1	40.54S	175.15E	31	2.4	0.1	10	7
4464	JUN 05	2211 0.1	41.57S	174.60E	45	2.1	0.1	11	8
4479	JUN 06	1339 36.4	41.12S	174.65E	54	2.5	0.1	12	8
4481	JUN 06	1522 55.4	40.95S	174.44E	47	2.0	0.1	9	6
4489	JUN 06	2254 47.9	40.79S	174.72E	36	2.2	0.1	10	8
4491	JUN 07	0409 4.2	40.69S	174.40E	58	2.4	0.2	10	7
4492	JUN 07	0446 8.9	40.99S	175.16E	28	2.3	0.1	10	7
4495	JUN 07	0538 16.4	41.94S	173.97E	16	2.4	0.2	15	10
4500	JUN 07	0909 41.1	40.78S	174.55E	57	2.8	0.1	11	8
4509	JUN 07	1837 52.0	41.00S	175.64E	27	2.4	0.1	9	6
4511	JUN 08	0050 49.4	40.53S	174.46E	27	2.3	0.2	10	7

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
4513	JUN 08	0119 11.9	41.05S	174.17E	50	2.9	0.2	16	13
4514	JUN 08	0156 36.3	40.96S	173.71E	77	2.5	0.1	8	5
4522	JUN 08	1446 17.4	40.65S	173.55E	167	3.0	0.2	9	8
4533	JUN 09	0655 55.4	41.71S	174.29E	12R	2.0	0.2	9	6
4534	JUN 09	0734 6.2	41.30S	175.28E	26	2.2	0.1	12	8
4541	JUN 09	1204 4.6	40.96S	175.59E	27	2.4	0.1	12	9
4543	JUN 09	1432 23.7	40.74S	173.88E	65	2.5	0.1	8	6
4548	JUN 09	1650 51.8	41.22S	174.56E	57	2.3	0.1	8	6
4550	JUN 09	1801 58.7	40.95S	174.99E	26	3.0	0.2	24	18
4567	JUN 10	1023 23.1	40.87S	174.73E	15	2.1	0.0	7	5
4568	JUN 10	1024 5.4	41.10S	174.05E	62	2.5	0.1	9	6
4581	JUN 11	0303 26.7	41.04S	174.53E	54	2.5	0.0	7	5
4583	JUN 11	0420 25.1	41.10S	175.38E	25	2.1	0.1	8	7
4591	JUN 11	1203 25.8	41.57S	174.45E	10	2.6	0.2	18	14
4595	JUN 11	1405 55.9	41.48S	173.63E	62	2.2	0.1	12	9
4606	JUN 12	0514 54.7	41.03S	175.46E	30	2.3	0.1	12	8
4607	JUN 12	0604 36.3	41.17S	174.66E	46	2.8	0.1	13	10
4608	JUN 12	0747 7.0	40.94S	175.18E	25	2.4	0.1	10	8
4609	JUN 12	1006 59.4	41.41S	174.56E	31	2.9	0.2	18	14
4612	JUN 12	1239 7.6	40.90S	175.73E	30	2.2	0.2	11	9
4614	JUN 12	1405 54.7	41.07S	174.72E	31	2.8	0.2	20	15
4615	JUN 12	1411 35.2	40.87S	175.63E	20	3.2	0.3	25	19
4618	JUN 12	1703 28.7	41.85S	174.06E	11	2.4	0.1	12	9
4621	JUN 12	2351 13.5	40.79S	175.30E	31	2.4	0.2	13	11
4622	JUN 13	0018 2.1	41.62S	173.77E	53	2.2	0.1	9	6
4626	JUN 13	0452 52.1	40.96S	174.83E	62	3.2	0.2	20	16
4629	JUN 13	0515 58.0	40.63S	175.38E	38	2.4	0.1	10	7
4630	JUN 13	0540 15.0	41.67S	174.27E	5R	2.5	0.2	15	12
4642	JUN 13	1343 12.1	41.39S	173.74E	95	2.3	0.1	7	5
4645	JUN 13	1514 2.2	40.50S	174.49E	81	2.7	0.2	12	9
4648	JUN 13	1931 12.3	41.40S	173.65E	69	3.3	0.2	25	18
4649	JUN 13	2031 16.5	40.94S	175.15E	32	2.2	0.1	11	7
4660	JUN 14	1000 42.6	41.25S	174.23E	40	2.3	0.1	5	4
4661	JUN 14	1057 35.3	41.35S	175.14E	26	2.2	0.0	10	7
4662	JUN 14	1103 10.2	41.35S	175.14E	26	2.2	0.1	10	7
4664	JUN 14	1440 52.2	41.59S	174.42E	18	2.4	0.2	14	12
4671	JUN 15	0216 56.7	41.03S	173.95E	55	2.7	0.3	15	11
4672	JUN 15	0414 14.8	41.10S	174.27E	41	2.7	0.2	14	10
4677	JUN 15	0619 33.0	41.41S	175.01E	25	2.8	0.1	17	12
4681	JUN 15	1023 22.7	40.51S	173.58E	162	3.0	0.2	9	6
4685	JUN 15	1705 16.7	40.66S	175.48E	29	2.9	0.1	15	11
4690	JUN 15	2147 13.2	41.59S	174.43E	19	2.4	0.1	15	12
4696	JUN 16	0839 27.8	41.29S	175.12E	28	2.3	0.1	13	9
4697	JUN 16	0928 13.1	41.66S	174.40E	5R	2.0	0.1	11	9
4704	JUN 17	0027 55.0	40.51S	174.72E	26	2.8	0.3	13	10

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
4705	JUN 17	0126 42.2	41.80S	173.60E	67	3.1	0.2	20	14
4714	JUN 17	1203 58.6	41.79S	173.60E	65	2.3	0.1	11	7
4715	JUN 17	1215 16.1	41.11S	174.93E	30	2.1	0.1	12	8
4720	JUN 17	1550 46.2	41.28S	173.99E	61	2.3	0.1	8	5
4724	JUN 17	2050 16.3	40.63S	174.94E	33	3.0	0.2	13	10
4726	JUN 18	0022 51.1	40.53S	174.73E	25	3.0	0.2	21	17
4732	JUN 18	0410 52.9	41.75S	174.54E	31	2.4	0.2	14	11
4733	JUN 18	0514 43.9	40.55S	174.66E	5R	2.3	0.2	9	7
4744	JUN 18	1751 41.2	40.63S	175.95E	28	2.9	0.2	17	12
4747	JUN 18	2210 30.2	40.59S	173.72E	115	3.0	0.2	17	13
4750	JUN 18	2345 7.0	41.34S	175.12E	27	2.9	0.2	18	13
4753	JUN 19	0020 0.8	41.82S	174.14E	5R	2.2	0.3	13	10
4756	JUN 19	0210 26.8	41.86S	174.09E	16	2.5	0.4	14	11
4757	JUN 19	0419 48.2	40.56S	174.68E	29	2.2	0.1	9	7
4763	JUN 19	0903 50.3	41.46S	174.52E	23	2.1	0.2	9	6
4767	JUN 19	1548 29.5	41.19S	174.53E	35	2.9	0.2	17	14
4768	JUN 19	1718 48.7	41.12S	174.13E	49	3.0	0.2	20	17
4775	JUN 19	2108 44.7	41.14S	174.82E	30	2.1	0.1	6	4
4781	JUN 20	0058 22.2	41.80S	174.16E	5R	3.8F	0.5	24	18
4782	JUN 20	0105 48.9	41.81S	174.12E	12R	3.2F	0.4	22	17
4783	JUN 20	0108 58.4	41.88S	174.12E	5R	2.2	0.2	11	8
4784	JUN 20	0109 23.7	41.84S	174.15E	5R	2.7	0.3	16	13
4785	JUN 20	0121 2.6	41.84S	174.13E	5R	2.7	0.4	17	14
4788	JUN 20	0342 7.3	41.83S	174.14E	5R	3.4F	0.4	18	16
4795	JUN 20	0728 5.4	41.59S	174.58E	50	2.2	0.1	11	9
4800	JUN 20	1058 20.1	40.91S	175.30E	31	2.1	0.1	9	6
4803	JUN 20	1355 41.6	40.77S	174.52E	22	3.2	0.1	31	26
4810	JUN 20	2018 42.7	41.82S	174.10E	5R	2.5	0.2	13	9
4811	JUN 20	2040 4.3	41.69S	174.23E	5R	2.8	0.3	22	17
4814	JUN 21	0051 57.2	41.53S	174.05E	13	2.1	0.4	10	9
4816	JUN 21	0122 14.1	41.55S	174.05E	14	2.4	0.1	10	7
4817	JUN 21	0414 44.5	41.52S	174.05E	13	2.9	0.3	20	16
4818	JUN 21	0423 0.4	41.53S	174.04E	15	2.3	0.3	13	10
4819	JUN 21	0428 6.2	41.53S	174.04E	15	2.7	0.3	19	15
4822	JUN 21	0520 35.6	41.11S	174.67E	49	3.0	0.1	18	16
4824	JUN 21	0654 18.3	40.78S	174.56E	74	3.0	0.2	18	16
4825	JUN 21	0712 50.8	41.24S	174.67E	33	3.4F	0.2	24	21
4835	JUN 21	1356 17.8	41.28S	173.69E	84	2.9	0.2	21	15
4848	JUN 22	0020 24.5	40.81S	174.44E	28	2.2	0.2	11	7
4849	JUN 22	0247 56.9	41.76S	173.64E	84	2.3	0.1	6	4
4860	JUN 22	1159 18.8	40.88S	174.73E	11	2.5	0.2	14	11
4865	JUN 22	1455 55.1	41.58S	173.92E	18	2.3	0.2	11	9
4867	JUN 22	1714 43.4	40.86S	174.72E	15	2.3	0.1	8	6
4869	JUN 22	1759 7.1	40.68S	173.83E	74	2.8	0.2	14	12
4874	JUN 23	0035 48.1	41.29S	175.29E	26	2.4	0.1	11	8

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
4876	JUN 23	0247 0.1	40.57S	174.35E	85	2.5	0.2	13	9
4882	JUN 23	0833 52.0	41.27S	175.22E	25	2.1	0.1	9	8
4886	JUN 23	1100 4.1	40.55S	173.92E	110	3.1	0.1	20	16
4893	JUN 23	1742 54.3	41.30S	175.17E	25	2.8	0.1	18	13
4910	JUN 24	1155 23.1	41.68S	174.96E	31	2.5	0.2	12	9
4916	JUN 24	1250 52.6	40.57S	174.12E	86	2.4	0.3	10	8
4928	JUN 25	0227 31.1	40.57S	175.91E	52	2.7	0.2	7	6
4931	JUN 25	0355 39.2	41.30S	174.04E	51	2.8	0.1	11	8
4934	JUN 25	1017 51.5	40.55S	173.92E	87	3.2	0.1	25	18
4937	JUN 25	1147 54.6	40.76S	175.84E	31	2.3	0.2	10	7
4938	JUN 25	1328 16.5	40.51S	175.95E	50	2.5	0.2	13	9
4939	JUN 25	1454 42.8	41.59S	174.14E	17	2.2	0.3	13	9
4940	JUN 25	1605 16.6	41.72S	174.37E	27	2.1	0.1	11	7
4945	JUN 25	2203 3.7	41.29S	174.83E	25	2.3	0.2	14	10
4946	JUN 25	2216 56.2	41.65S	173.92E	71	2.7	0.1	9	6
4947	JUN 25	2342 10.0	40.58S	174.66E	78	3.1	0.2	19	15
4948	JUN 26	0024 16.2	40.51S	174.40E	27	2.6	0.3	8	6
4950	JUN 26	0152 4.3	40.56S	174.34E	51	2.8	0.3	11	9
4954	JUN 26	0746 36.2	41.69S	173.84E	40	2.4	0.1	11	7
4963	JUN 26	1718 2.7	41.00S	175.36E	24	2.3	0.2	13	8
4974	JUN 27	0259 37.0	40.70S	174.32E	49	2.3	0.1	10	7
4978	JUN 27	0631 29.9	41.71S	174.13E	32	2.6	0.1	19	12
4990	JUN 27	1418 11.8	40.70S	174.29E	52	2.1	0.2	7	5
4992	JUN 27	1733 26.1	40.84S	175.90E	31	2.4	0.3	11	8
5013	JUN 28	1256 14.6	41.57S	174.23E	16	2.3	0.2	17	12
5014	JUN 28	1335 38.3	41.58S	174.24E	15	2.2	0.1	10	7
5015	JUN 28	1336 25.8	41.58S	174.23E	18	2.1	0.1	7	6
5022	JUN 28	1801 9.7	41.35S	174.49E	34	2.9	0.3	17	13
5031	JUN 29	0745 46.3	41.60S	173.73E	51	2.7	0.2	12	10
5034	JUN 29	1035 0.4	40.57S	175.97E	33R	2.6	0.3	7	5
5041	JUN 29	1626 57.0	41.59S	174.67E	29	2.4	0.2	13	11
5042	JUN 29	1757 8.6	40.74S	174.35E	56	2.4	0.1	7	5
5051	JUN 30	0330 42.4	40.96S	173.91E	84	2.6	0.2	10	8
5052	JUN 30	0354 35.3	41.48S	174.61E	17	2.0	0.2	11	9
5055	JUN 30	0916 56.3	41.04S	174.73E	31	2.4	0.0	16	11
5059	JUN 30	1249 25.0	40.95S	174.50E	57	2.9	0.1	13	10
5075	JUL 01	0631 19.1	41.08S	174.75E	29	2.3	0.1	11	8
5085	JUL 01	2128 11.7	41.19S	174.64E	33	2.8	0.2	14	11
5087	JUL 01	2250 49.0	41.78S	173.66E	63	2.7	0.1	12	9
5093	JUL 02	2203 25.3	41.63S	174.00E	14	2.0	0.2	10	8
5097	JUL 03	0203 0.3	41.14S	174.53E	54	2.4	0.0	7	6
5099	JUL 03	1024 8.6	41.62S	174.09E	5R	2.6	0.3	14	12
5101	JUL 03	1406 60.0	40.99S	174.85E	52	2.4	0.1	8	7
5118	JUL 04	1007 41.4	40.73S	175.01E	19	2.4	0.2	10	8
5121	JUL 04	1307 57.0	41.66S	173.54E	111	3.1	0.2	8	5

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
5127	JUL 04	1645 13.7	40.70S	173.61E	5R	2.3	0.2	9	5
5133	JUL 05	0543 11.0	40.51S	173.79E	121	2.7	0.2	11	7
5139	JUL 05	1106 54.7	41.72S	174.38E	28	2.6	0.2	17	13
5158	JUL 06	0442 50.9	41.31S	173.54E	95	2.9	0.3	16	11
5165	JUL 06	1343 37.7	40.57S	175.02E	34	2.4	0.3	12	8
5168	JUL 06	1438 48.3	40.98S	175.32E	23	2.2	0.2	11	9
5169	JUL 06	1528 21.0	41.32S	173.99E	52	3.0	0.2	21	15
5176	JUL 06	2155 6.9	40.52S	173.64E	223	3.1	0.3	11	9
5178	JUL 07	0052 20.3	41.11S	174.80E	33	2.1	0.1	10	8
5188	JUL 07	1356 48.2	40.52S	175.16E	5R	4.4F	0.4	43	35
5190	JUL 07	1407 59.4	40.57S	175.27E	5R	2.5	0.2	6	4
5194	JUL 07	1451 7.7	40.52S	175.17E	5R	3.2	0.4	22	17
5205	JUL 08	0830 7.1	41.34S	175.85E	22	2.1	0.1	8	5
5211	JUL 08	1757 5.8	40.56S	174.12E	60	2.1	0.2	9	7
5212	JUL 08	1829 11.5	40.91S	174.74E	66	4.7F	0.2	33	27
5214	JUL 08	2250 14.0	40.99S	174.05E	59	2.7	0.1	12	7
5215	JUL 08	2315 46.6	40.83S	174.74E	67	2.6	0.1	10	7
5220	JUL 09	0150 59.7	41.05S	174.89E	27	2.5	0.1	10	8
5221	JUL 09	0151 6.1	41.05S	174.88E	28	2.4	0.1	7	6
5225	JUL 09	0821 0.6	40.91S	173.88E	11	2.1	0.2	8	5
5237	JUL 09	2005 38.7	40.53S	175.68E	29	3.0	0.3	18	13
5241	JUL 09	2352 43.5	41.25S	173.98E	55	2.6	0.1	11	8
5244	JUL 10	0215 35.0	41.42S	175.01E	26	2.1	0.1	12	8
5245	JUL 10	0218 0.9	41.33S	174.11E	44	2.7	0.2	16	12
5246	JUL 10	0235 46.4	41.20S	174.16E	50	2.6	0.1	10	7
5253	JUL 10	0631 27.0	40.77S	175.24E	29	3.0	0.2	13	10
5255	JUL 10	0715 35.9	41.72S	174.50E	26	2.2	0.1	11	7
5256	JUL 10	0718 39.0	41.64S	174.27E	5R	2.2	0.2	15	11
5259	JUL 10	1018 57.9	41.06S	174.91E	28	2.6	0.1	13	10
5268	JUL 10	1953 19.6	41.68S	174.18E	5R	2.1	0.2	12	9
5269	JUL 10	1958 5.5	41.66S	174.18E	5R	2.4	0.3	15	11
5271	JUL 10	2239 11.3	41.72S	174.15E	16	2.0	0.2	12	7
5277	JUL 11	0035 29.4	40.90S	175.50E	33	2.1	0.2	7	5
5287	JUL 11	1139 46.0	41.19S	173.67E	85	2.3	0.1	8	7
5292	JUL 11	1548 49.6	41.05S	174.85E	54	2.1	0.1	8	7
5297	JUL 11	2012 39.7	41.09S	173.96E	60	2.6	0.2	8	6
5314	JUL 13	0042 11.1	41.15S	175.38E	23	2.1	0.1	10	8
5315	JUL 13	0132 37.2	41.37S	174.66E	31	2.8	0.2	16	14
5318	JUL 13	0935 27.7	41.36S	175.71E	22	2.6	0.2	12	10
5320	JUL 13	1249 25.2	41.57S	174.25E	8	2.5	0.3	17	13
5323	JUL 13	1705 25.3	41.74S	174.17E	12R	2.5	0.4	16	13
5324	JUL 13	1711 55.0	41.72S	174.15E	12R	2.4	0.4	12	10
5325	JUL 13	1809 31.4	40.92S	175.33E	23	2.0	0.2	8	6
5326	JUL 13	1844 4.3	41.34S	175.76E	21	2.3	0.2	10	6
5335	JUL 14	0105 19.5	41.70S	173.97E	15	2.6	0.2	15	11

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
5338	JUL 14	0251 52.4	41.71S	173.98E	13	2.8	0.3	15	9
5340	JUL 14	0506 22.0	40.82S	175.57E	33R	2.9	0.3	6	4
5346	JUL 14	0900 1.1	41.04S	175.31E	27	2.5	0.2	11	7
5349	JUL 14	1351 15.4	40.77S	175.49E	33	2.2	0.1	8	6
5351	JUL 14	1513 52.5	40.62S	174.21E	88	2.6	0.1	9	7
5356	JUL 14	1741 59.9	41.14S	174.16E	53	3.7	0.2	26	22
5357	JUL 14	1905 3.7	41.40S	174.94E	26	2.0	0.0	8	6
5364	JUL 14	2219 11.4	40.93S	174.96E	34	2.4	0.1	10	7
5367	JUL 14	2322 43.2	41.17S	174.76E	30	2.2	0.1	10	7
5371	JUL 15	0604 32.3	40.55S	174.69E	44	2.7	0.1	11	9
5383	JUL 15	1620 40.9	41.31S	174.96E	25	2.0	0.0	9	7
5388	JUL 15	2031 26.0	40.94S	174.97E	34	3.2	0.1	19	14
5389	JUL 15	2059 48.6	40.94S	174.97E	32	3.1	0.1	20	15
5391	JUL 15	2251 31.1	41.52S	174.17E	33	2.9	0.3	16	12
5394	JUL 15	2341 11.9	40.94S	174.96E	32	2.4	0.1	10	8
5396	JUL 16	0246 36.3	41.34S	174.80E	28	2.2	0.1	14	10
5398	JUL 16	0652 41.0	40.98S	175.29E	29	3.0	0.2	15	11
5399	JUL 16	0804 31.9	40.80S	174.99E	34	2.3	0.1	9	7
5401	JUL 16	1031 39.4	41.55S	174.36E	5R	2.1	0.3	10	7
5402	JUL 16	1214 16.6	41.42S	174.52E	5R	3.2	0.3	23	18
5403	JUL 16	1342 22.5	41.30S	174.21E	39	3.0	0.2	16	14
5404	JUL 16	1509 27.8	40.82S	174.49E	14	2.2	0.2	8	6
5411	JUL 17	0714 25.7	41.23S	173.98E	60	2.2	0.1	9	6
5414	JUL 17	1127 28.4	41.23S	174.45E	60	2.3	0.1	11	9
5417	JUL 17	1230 24.9	41.30S	175.01E	28	2.4	0.1	11	10
5418	JUL 17	1441 21.1	41.44S	175.11E	12R	2.1	0.2	9	8
5420	JUL 17	1751 27.0	41.30S	175.01E	27	2.2	0.1	9	8
5424	JUL 17	2136 23.7	41.53S	174.81E	30	2.2	0.1	9	6
5431	JUL 18	0725 37.5	40.66S	174.59E	44	2.2	0.0	8	5
5437	JUL 18	1158 38.8	41.98S	174.08E	14	4.7F	0.4	25	22
5438	JUL 18	1209 37.5	41.89S	173.55E	73	2.2	0.2	7	5
5439	JUL 18	1232 53.3	41.96S	174.03E	11	2.5	0.2	14	10
5441	JUL 18	1654 16.9	41.29S	174.96E	27	2.8	0.1	17	12
5450	JUL 19	0213 31.9	41.05S	174.54E	37	2.7	0.1	14	13
5456	JUL 19	1435 55.7	41.46S	173.91E	44	2.0	0.2	7	5
5460	JUL 19	1927 45.0	41.94S	174.34E	20	2.7	0.2	15	12
5468	JUL 20	0950 13.1	41.28S	174.62E	32	2.1	0.0	8	5
5473	JUL 20	1343 43.6	41.47S	174.93E	27	2.1	0.1	10	8
5479	JUL 20	2320 0.7	41.93S	174.14E	38	2.2	0.1	9	6
5483	JUL 21	0442 38.9	41.13S	174.15E	47	2.7	0.2	15	11
5484	JUL 21	0639 53.6	40.84S	174.78E	16	2.3	0.1	9	7
5489	JUL 21	0922 47.3	41.95S	174.03E	14	2.7	0.3	13	10
5506	JUL 22	0353 35.8	41.97S	174.04E	18	3.2	0.3	23	18
5507	JUL 22	0454 57.1	41.95S	174.03E	16	2.1	0.3	10	7
5508	JUL 22	0455 15.8	41.93S	173.94E	14	2.2	0.4	8	6

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
5511	JUL 22	0539 39.6	41.44S	173.55E	87	3.1	0.2	25	18
5512	JUL 22	0655 25.1	40.83S	174.60E	44	4.2F	0.2	37	31
5513	JUL 22	0710 0.6	41.95S	174.02E	19	2.6	0.3	16	12
5514	JUL 22	0847 1.8	41.95S	174.02E	17	2.1	0.4	10	8
5517	JUL 22	0943 22.2	41.94S	174.02E	17	2.0	0.3	9	7
5521	JUL 22	1324 26.5	41.95S	174.04E	13	2.1	0.2	12	9
5525	JUL 22	1609 41.5	41.96S	174.03E	18	3.4	0.4	24	18
5526	JUL 22	1639 15.0	41.95S	174.04E	12R	2.3	0.2	13	10
5529	JUL 22	1801 5.9	41.97S	174.02E	18	3.5	0.4	24	19
5532	JUL 22	2133 33.6	41.44S	174.14E	37	2.6	0.2	13	9
5538	JUL 23	0048 17.9	40.75S	174.53E	45	2.2	0.1	8	5
5539	JUL 23	0112 39.2	40.60S	174.14E	84	3.2	0.2	22	17
5540	JUL 23	0125 10.2	40.95S	175.07E	29	2.4	0.1	9	7
5543	JUL 23	0509 48.9	40.81S	175.68E	23	2.1	0.2	11	8
5547	JUL 23	0848 37.2	41.96S	174.03E	12R	2.2	0.3	13	9
5548	JUL 23	0916 55.3	41.08S	174.71E	55	3.0	0.1	15	11
5549	JUL 23	1052 6.0	41.96S	174.02E	12R	3.0	0.5	21	16
5551	JUL 23	1202 52.7	41.73S	174.59E	27	2.2	0.2	11	9
5552	JUL 23	1344 17.8	40.80S	174.60E	46	3.0	0.2	12	11
5558	JUL 23	2019 10.6	41.13S	174.23E	59	3.6	0.2	35	27
5560	JUL 23	2211 26.9	41.96S	174.01E	23	3.1	0.4	23	19
5561	JUL 23	2355 8.2	41.95S	173.99E	12R	2.2	0.2	12	9
5564	JUL 24	0127 17.7	41.96S	174.00E	17	3.5	0.3	25	19
5565	JUL 24	0128 52.9	41.96S	174.00E	14	2.6	0.2	17	12
5570	JUL 24	0636 18.3	40.55S	175.01E	31	2.7	0.2	14	11
5571	JUL 24	0710 13.5	40.72S	175.01E	45	2.3	0.1	7	5
5577	JUL 24	1121 52.6	41.55S	173.62E	90	2.6	0.1	11	7
5582	JUL 24	1559 21.1	41.03S	174.54E	35	2.6	0.1	15	11
5593	JUL 25	0152 56.0	40.55S	174.77E	34	2.1	0.2	8	5
5596	JUL 25	0524 4.6	41.25S	175.26E	29	3.4	0.2	25	18
5597	JUL 25	0538 36.7	41.24S	175.25E	24	2.3	0.1	13	9
5598	JUL 25	0554 17.3	41.24S	175.25E	26	2.0	0.1	10	7
5603	JUL 25	0910 41.1	41.96S	174.01E	16	2.7	0.3	19	14
5608	JUL 25	1314 8.2	41.18S	173.70E	86	2.7	0.2	7	5
5611	JUL 25	1549 36.3	40.68S	174.28E	58	2.8	0.3	14	10
5613	JUL 25	2126 26.6	40.72S	175.36E	59	2.1	0.1	9	7
5615	JUL 25	2326 44.3	41.94S	173.99E	16	2.9	0.3	18	13
5617	JUL 26	0018 51.4	41.97S	174.04E	16	3.0	0.3	22	16
5623	JUL 26	0814 49.1	40.75S	174.54E	46	2.2	0.1	7	4
5624	JUL 26	0817 12.8	41.26S	175.25E	24	2.9	0.1	19	12
5636	JUL 26	2054 2.8	40.67S	174.34E	63	3.0	0.3	16	11
5637	JUL 26	2105 48.5	40.85S	175.57E	21	2.3	0.2	12	9
5642	JUL 27	0237 3.3	40.77S	174.40E	51	2.3	0.1	7	5
5660	JUL 28	0351 5.9	40.69S	173.70E	113	3.1	0.3	15	11
5665	JUL 28	0811 24.8	40.80S	174.89E	66	2.2	0.1	6	4

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
5675	JUL 28	1535 13.5	41.59S	174.06E	35	3.3	0.2	25	19
5684	JUL 28	2110 4.0	41.24S	174.53E	48	2.0	0.1	5	3
5686	JUL 28	2311 18.6	41.17S	174.00E	49	2.8	0.3	15	10
5691	JUL 29	0255 43.0	40.85S	175.80E	31	2.7	0.3	15	9
5707	JUL 29	2239 15.7	41.14S	174.04E	61	3.5	0.2	33	26
5714	JUL 30	0921 58.0	41.05S	174.52E	52	2.9	0.1	11	9
5715	JUL 30	1320 37.9	41.17S	174.75E	32	2.2	0.1	7	5
5741	JUL 31	1106 4.4	41.05S	175.27E	26	2.5	0.1	13	9
5742	JUL 31	1144 0.8	40.61S	174.35E	53	2.3	0.1	9	6
5743	JUL 31	1342 20.2	41.38S	173.80E	53	2.8	0.3	15	11
5746	JUL 31	2024 40.0	41.31S	175.18E	31	3.0	0.2	15	12
5749	AUG 01	0123 18.3	40.54S	174.80E	29	2.8F	0.2	12	10
5750	AUG 01	0350 50.7	41.46S	174.99E	25	3.2	0.2	20	15
5758	AUG 01	1456 8.9	40.54S	174.59E	24	2.1	0.1	8	6
5763	AUG 01	1942 41.8	41.25S	174.64E	33	2.3	0.1	14	10
5764	AUG 01	2126 26.7	40.58S	174.78E	29	2.1	0.1	9	7
5765	AUG 01	2149 40.7	41.42S	175.01E	25	2.2	0.1	10	6
5768	AUG 02	0049 46.8	40.88S	174.62E	35	2.4	0.2	13	10
5772	AUG 02	0605 1.2	40.78S	174.93E	36	2.4	0.2	10	7
5779	AUG 02	2218 5.6	41.32S	174.91E	27	2.1	0.1	10	8
5780	AUG 02	2247 55.1	41.67S	174.17E	12	2.6	0.2	14	10
5782	AUG 03	0022 3.1	41.67S	174.37E	12R	2.1	0.3	11	9
5790	AUG 03	1008 30.7	41.95S	174.00E	20	2.1	0.3	14	9
5791	AUG 03	1200 46.3	41.42S	175.00E	24	2.1	0.0	9	6
5803	AUG 04	0039 13.8	40.91S	175.75E	33	2.0	0.3	9	7
5806	AUG 04	0403 14.5	40.52S	175.16E	12R	2.8	0.3	13	11
5809	AUG 04	0738 37.2	41.41S	174.68E	19	2.0	0.2	14	10
5817	AUG 04	1150 9.1	41.11S	174.68E	57	2.1	0.0	10	9
5821	AUG 04	1258 33.6	41.55S	174.86E	19	2.2	0.1	12	10
5824	AUG 04	1423 53.3	40.93S	175.00E	33	2.2	0.1	11	8
5827	AUG 04	2224 9.1	41.01S	175.31E	26	2.0	0.3	8	5
5828	AUG 05	0335 10.1	40.74S	174.56E	23	2.7	0.1	11	8
5840	AUG 05	1013 20.9	41.62S	174.43E	6	2.3	0.2	16	13
5853	AUG 06	0204 2.0	41.08S	174.20E	46	2.7	0.1	9	7
5855	AUG 06	0306 55.1	41.11S	174.51E	56	3.0	0.2	16	15
5858	AUG 06	0503 59.9	40.63S	173.72E	139	3.0	0.2	14	11
5859	AUG 06	0558 30.4	40.81S	175.02E	48	2.2	0.2	8	7
5861	AUG 06	1115 41.8	41.02S	174.91E	49	2.3	0.1	7	6
5863	AUG 06	1309 6.7	40.95S	174.62E	51	2.7	0.1	12	10
5868	AUG 06	1832 51.7	41.26S	174.75E	28	2.0	0.1	9	7
5874	AUG 07	0404 24.9	41.66S	174.95E	25	2.7	0.2	13	8
5875	AUG 07	0534 12.7	41.55S	174.61E	30	2.6	0.2	14	11
5877	AUG 07	1019 56.8	40.95S	174.95E	42	2.3	0.1	8	4
5881	AUG 07	1415 0.4	40.74S	174.87E	5R	2.4	0.2	10	8
5883	AUG 07	1445 11.9	40.86S	174.72E	51	2.0	0.1	6	4

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
5886	AUG 07	2011 7.0	41.42S	175.00E	24	2.8	0.1	14	11
5890	AUG 07	2151 24.2	41.24S	175.21E	25	2.2	0.0	11	8
5892	AUG 07	2237 46.6	41.30S	174.12E	44	2.7	0.2	13	10
5894	AUG 08	0025 26.1	41.42S	175.00E	25	2.5	0.1	13	8
5895	AUG 08	0025 36.7	41.42S	175.01E	24	2.2	0.0	5	3
5896	AUG 08	0054 46.1	40.62S	174.89E	33	2.8	0.2	13	10
5899	AUG 08	0432 59.7	41.24S	175.20E	24	2.5	0.1	15	9
5902	AUG 08	0625 50.1	41.65S	173.99E	17	2.0	0.1	10	6
5907	AUG 08	1037 28.1	40.52S	175.26E	30	2.5	0.2	11	7
5924	AUG 08	2145 5.4	40.90S	174.97E	46	2.0	0.1	8	5
5949	AUG 09	1155 46.9	41.94S	174.02E	12R	2.1	0.3	16	10
5954	AUG 09	1456 17.2	41.15S	173.97E	49	2.8	0.3	19	13
5959	AUG 09	1753 45.4	40.81S	175.53E	5R	2.3	0.3	15	10
5972	AUG 10	0151 0.5	40.64S	174.57E	12R	2.2	0.3	10	8
5974	AUG 10	0531 21.7	41.60S	173.53E	67	3.1	0.2	17	13
5984	AUG 10	1246 5.2	41.14S	174.19E	46	2.5	0.2	12	9
5992	AUG 10	2347 17.7	41.04S	174.53E	38	2.2	0.0	9	8
5994	AUG 11	0354 24.6	41.60S	173.99E	37	2.5	0.2	13	10
6004	AUG 11	1553 42.8	40.51S	174.54E	93	3.0	0.2	11	8
6014	AUG 12	0345 2.3	41.25S	175.19E	19	2.0	0.1	10	8
6026	AUG 12	0934 36.1	41.12S	175.20E	28	2.0	0.1	11	7
6031	AUG 12	1146 36.3	41.13S	173.56E	85	2.2	0.2	10	6
6032	AUG 12	1153 39.7	41.71S	174.53E	25	2.1	0.1	8	6
6045	AUG 13	0402 56.0	41.28S	174.04E	57	2.1	0.1	7	4
6051	AUG 13	0935 45.3	40.97S	175.57E	24	2.0	0.1	12	7
6052	AUG 13	1249 50.1	41.82S	174.54E	29	2.5	0.3	19	14
6054	AUG 13	2036 42.0	41.13S	174.04E	52	2.4	0.3	13	9
6055	AUG 13	2206 18.2	40.66S	174.90E	23	2.3	0.2	9	7
6057	AUG 13	2330 31.1	40.79S	174.71E	46	3.2	0.2	24	18
6059	AUG 14	0007 35.3	41.59S	174.66E	28	2.1	0.1	15	9
6065	AUG 14	0805 26.7	41.75S	173.83E	5R	2.0	0.2	9	6
6072	AUG 14	1419 16.2	40.51S	174.42E	20	2.7	0.3	21	14
6074	AUG 14	1442 21.3	40.84S	174.88E	32	2.2	0.2	11	9
6084	AUG 15	0733 32.2	41.12S	175.24E	24	2.1	0.1	13	9
6090	AUG 15	1139 48.0	40.59S	174.14E	85	3.1	0.2	20	14
6092	AUG 15	1346 48.2	41.17S	175.04E	6	2.0	0.1	9	6
6097	AUG 15	1859 3.7	41.37S	175.45E	24	2.7	0.1	15	10
6116	AUG 16	1320 56.7	40.91S	175.94E	43	2.1	0.1	10	8
6119	AUG 16	1500 22.6	40.99S	174.30E	68	2.7	0.2	12	9
6146	AUG 17	1529 20.2	40.65S	175.78E	58	2.0	0.2	6	5
6163	AUG 18	0023 11.8	41.35S	174.98E	28	2.4	0.1	10	9
6206	AUG 18	1758 21.2	41.28S	174.82E	23	2.7	0.1	16	12
6236	AUG 19	2106 6.1	41.37S	174.53E	17	2.9	0.2	17	12
6243	AUG 20	1043 42.8	40.88S	175.76E	30	2.5	0.2	12	8
6245	AUG 20	1130 32.9	41.29S	174.98E	22	2.0	0.1	8	5

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
6246	AUG 20	1140 45.5	41.29S	174.98E	22	2.3	0.1	11	7
6248	AUG 20	1802 32.0	41.42S	175.00E	25	4.5F	0.1	39	30
6249	AUG 20	1805 49.8	41.41S	175.02E	25	2.1	0.1	9	5
6250	AUG 20	1805 58.4	41.42S	174.99E	23	2.1	0.1	8	6
6251	AUG 20	1807 51.3	41.41S	175.01E	25	2.8	0.1	17	12
6253	AUG 20	1818 55.1	41.23S	175.02E	26	2.2	0.3	10	8
6254	AUG 20	1822 15.9	41.42S	175.01E	25	2.3	0.1	13	9
6256	AUG 20	1833 24.7	41.42S	175.01E	23	2.0	0.0	8	5
6257	AUG 20	1845 39.0	41.41S	175.02E	23	2.1	0.1	10	6
6262	AUG 20	1933 54.9	41.46S	174.98E	21	2.3	0.4	10	6
6263	AUG 20	1942 53.9	41.43S	175.01E	24	2.2	0.2	9	6
6264	AUG 20	1953 2.4	41.42S	175.01E	24	2.4	0.1	12	7
6265	AUG 20	2028 52.4	41.42S	175.01E	24	2.2	0.1	8	5
6268	AUG 20	2130 41.1	41.41S	175.02E	24	2.6	0.1	13	9
6269	AUG 20	2130 56.2	41.41S	175.02E	25	2.4	0.0	10	6
6270	AUG 20	2248 56.0	41.43S	174.99E	25	2.2	0.2	11	10
6273	AUG 21	0103 29.3	41.36S	173.56E	122	2.7	0.1	9	8
6292	AUG 21	1251 7.6	41.41S	175.02E	24	2.5	0.1	14	9
6297	AUG 21	1741 8.1	41.41S	175.01E	24	2.1	0.1	9	6
6300	AUG 21	1838 4.4	40.90S	175.30E	29	2.2	0.1	9	8
6302	AUG 21	2139 34.1	41.42S	175.01E	25	2.5	0.1	11	10
6303	AUG 21	2343 47.9	40.74S	174.63E	39	3.2	0.2	17	13
6307	AUG 22	0424 6.0	40.57S	175.36E	30	2.2	0.2	13	8
6311	AUG 22	0700 21.3	40.72S	173.61E	99	2.8	0.3	12	8
6313	AUG 22	0754 4.6	40.93S	174.09E	41	2.3	0.2	8	5
6319	AUG 22	1428 4.5	41.18S	175.74E	19	2.2	0.1	9	6
6321	AUG 22	1614 48.7	41.39S	173.71E	93	2.5	0.1	10	6
6323	AUG 22	1821 7.4	40.95S	174.57E	58	2.2	0.0	7	5
6324	AUG 22	1910 34.4	41.42S	175.02E	25	2.2	0.2	14	9
6340	AUG 23	1239 23.9	41.50S	174.07E	40	2.1	0.1	6	4
6343	AUG 23	1448 44.6	41.92S	173.54E	55	3.1	0.3	19	13
6345	AUG 23	1909 59.5	40.57S	174.98E	12R	2.6	0.2	15	10
6349	AUG 23	2127 37.9	41.41S	175.01E	22	2.0	0.1	13	9
6352	AUG 24	0140 53.0	40.97S	174.12E	78	2.6	0.2	10	5
6357	AUG 24	0805 7.7	40.66S	174.29E	84	2.5	0.1	8	6
6358	AUG 24	0915 47.7	41.42S	175.01E	23	2.2	0.1	9	6
6361	AUG 24	1111 3.0	40.97S	174.51E	63	3.0	0.1	11	7
6365	AUG 24	1303 36.7	41.43S	175.00E	24	2.0	0.1	10	6
6368	AUG 24	1413 3.4	40.59S	174.55E	5R	2.2	0.2	10	8
6373	AUG 24	1817 22.4	40.74S	174.37E	51	2.2	0.1	10	7
6376	AUG 24	2337 13.9	41.08S	175.48E	28	2.0	0.1	12	8
6379	AUG 25	0218 47.5	41.42S	175.01E	25	2.1	0.0	9	7
6397	AUG 25	2058 1.8	40.82S	175.07E	32	2.8	0.1	10	8
6400	AUG 26	0058 9.3	41.54S	174.05E	14	2.2	0.2	11	8
6405	AUG 26	0732 5.0	40.84S	175.63E	28	2.1	0.5	8	7

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
6410	AUG 26	1449 7.5	41.87S	174.14E	5R	2.6	0.3	14	12
6416	AUG 27	0537 40.1	41.77S	174.76E	30	2.0	0.2	12	11
6424	AUG 27	0826 6.7	41.55S	174.05E	13	2.3	0.2	14	10
6444	AUG 27	2140 57.7	40.79S	175.86E	27	2.4	0.2	11	8
6463	AUG 28	1314 11.9	40.82S	175.70E	25	2.3	0.2	12	8
6469	AUG 29	0100 38.7	40.90S	174.76E	43	2.1	0.2	12	9
6476	AUG 29	0502 12.9	41.84S	173.51E	54	3.3	0.2	30	19
6484	AUG 29	0932 9.8	41.00S	174.11E	56	3.0	0.2	20	16
6489	AUG 29	1314 32.6	41.71S	174.12E	31	2.7	0.3	18	14
6491	AUG 29	1530 30.7	40.61S	174.96E	33	2.2	0.1	9	7
6492	AUG 29	1658 30.5	41.41S	175.01E	23	2.5	0.1	12	10
6502	AUG 30	0609 27.5	41.41S	175.02E	24	2.0	0.1	9	7
6505	AUG 30	0817 37.0	41.19S	174.00E	55	3.3	0.2	19	17
6508	AUG 30	1311 51.5	41.78S	174.37E	19	2.2	0.1	10	6
6511	AUG 30	1604 14.4	41.05S	175.31E	25	2.4	0.1	11	8
6513	AUG 30	1934 22.1	41.11S	174.31E	59	2.9	0.1	15	13
6519	AUG 31	0121 11.1	41.41S	175.01E	23	2.3	0.1	11	7
6521	AUG 31	0201 48.1	40.60S	174.07E	96	3.2	0.4	15	13
6523	AUG 31	0425 2.0	41.42S	175.02E	25	2.9	0.1	14	11
6524	AUG 31	0525 31.5	41.04S	175.32E	25	2.8	0.1	12	9
6526	AUG 31	0745 23.5	41.10S	175.36E	23	2.0	0.1	9	6
6527	AUG 31	0813 47.3	41.40S	174.37E	56	2.2	0.1	8	6
6529	AUG 31	0913 10.6	41.67S	174.94E	28	2.1	0.2	9	6
6530	AUG 31	0915 3.7	40.54S	174.61E	49	2.5	0.1	8	5
6532	AUG 31	1015 58.0	40.81S	174.64E	39	2.1	0.2	8	6
6544	AUG 31	2111 47.6	41.47S	174.57E	15	2.5	0.3	15	11
6565	SEP 01	1942 40.8	41.41S	175.02E	25	2.2	0.1	8	7
6570	SEP 02	0705 25.5	40.66S	174.85E	25	2.5	0.1	11	9
6572	SEP 02	0946 43.6	41.05S	174.86E	48	2.5	0.1	13	11
6573	SEP 02	0947 58.9	41.02S	175.06E	30	2.2	0.1	9	7
6580	SEP 02	1837 15.8	41.43S	175.00E	25	2.6	0.1	17	12
6584	SEP 02	2346 53.7	40.86S	175.01E	40	2.0	0.2	8	6
6587	SEP 03	0254 42.6	41.89S	174.60E	31	2.2	0.1	8	5
6589	SEP 03	0333 18.2	40.94S	175.39E	26	2.7	0.3	14	10
6592	SEP 03	0633 44.8	40.97S	175.36E	25	2.0	0.2	10	7
6606	SEP 03	1816 37.8	40.66S	174.86E	33	2.3	0.2	11	7
6608	SEP 03	2039 8.2	40.56S	174.52E	5R	2.9	0.2	17	14
6610	SEP 03	2304 39.6	40.93S	175.44E	26	2.3	0.1	9	8
6612	SEP 04	0019 34.3	40.53S	174.54E	5R	2.6	0.2	14	11
6616	SEP 04	0211 45.6	41.47S	174.53E	20	2.2	0.2	12	9
6620	SEP 04	0431 33.4	40.51S	174.60E	12R	2.2	0.2	12	8
6625	SEP 04	0911 41.6	41.17S	175.73E	14	2.6	0.1	12	8
6627	SEP 04	1000 18.0	40.94S	175.48E	26	2.2	0.2	12	7
6628	SEP 04	1013 35.7	41.21S	175.19E	10	2.5	0.1	15	11
6634	SEP 04	1515 36.0	40.69S	174.35E	56	2.7	0.3	15	10

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
6637	SEP 04	1640 6.9	41.81S	174.24E	9	2.6	0.2	18	12
6638	SEP 04	1929 9.7	41.54S	174.46E	49	2.1	0.1	10	6
6643	SEP 04	2320 54.0	41.06S	174.21E	57	2.6	0.1	10	7
6645	SEP 05	0112 33.9	41.39S	175.02E	21	2.3	0.2	13	10
6648	SEP 05	0154 5.4	41.28S	175.21E	24	2.0	0.2	8	5
6656	SEP 05	0425 47.7	40.57S	175.66E	27	2.8	0.2	15	10
6666	SEP 05	1430 13.4	40.96S	174.49E	64	2.5	0.0	9	7
6674	SEP 05	2033 12.5	41.17S	174.76E	30	2.4	0.1	11	9
6675	SEP 05	2048 39.5	41.60S	174.79E	26	2.0	0.1	9	5
6677	SEP 05	2154 23.5	40.53S	174.55E	5R	2.7	0.2	14	11
6678	SEP 05	2344 14.9	41.06S	174.22E	58	2.7	0.1	12	7
6679	SEP 06	0232 8.7	40.73S	174.52E	60	2.3	0.1	7	5
6688	SEP 06	1400 25.4	41.58S	174.24E	11	3.1	0.2	21	16
6689	SEP 06	1443 56.6	40.74S	174.50E	70	2.5	0.1	11	7
6691	SEP 06	1553 40.2	40.79S	175.51E	27	2.2	0.1	9	6
6697	SEP 06	1834 57.8	40.81S	174.74E	5R	2.0	0.2	5	4
6708	SEP 07	0918 8.9	41.54S	174.16E	31	2.3	0.2	16	9
6709	SEP 07	0920 46.9	41.38S	173.80E	58	2.3	0.2	11	8
6711	SEP 07	0945 32.5	41.41S	175.00E	25	2.2	0.1	12	9
6714	SEP 07	1203 48.5	41.41S	175.02E	25	2.4	0.1	15	10
6715	SEP 07	1254 0.4	41.29S	175.30E	27	2.5	0.1	14	9
6716	SEP 07	1453 3.7	40.99S	175.46E	29	2.1	0.1	9	6
6719	SEP 07	1631 57.7	40.55S	174.85E	83	2.5	0.2	10	7
6725	SEP 08	0044 45.3	40.66S	175.51E	30	2.3	0.2	11	8
6728	SEP 08	0658 26.8	41.10S	174.66E	61	2.8	0.1	12	9
6737	SEP 08	1832 46.2	41.29S	175.81E	25	2.3	0.2	8	7
6739	SEP 09	0106 12.9	41.78S	174.52E	32	2.8	0.1	11	10
6749	SEP 09	0705 29.4	40.81S	173.51E	87	2.9	0.3	14	9
6752	SEP 09	0906 28.1	41.58S	174.17E	12R	2.6	0.2	11	9
6755	SEP 09	1105 50.3	41.77S	174.28E	9	2.5	0.2	13	11
6758	SEP 09	1413 4.2	40.80S	174.74E	37	2.2	0.1	8	6
6759	SEP 09	1525 4.8	41.15S	173.86E	56	3.1	0.4	18	14
6767	SEP 09	2022 30.9	41.67S	174.31E	7	2.4	0.2	12	9
6769	SEP 09	2101 14.4	40.94S	174.56E	70	3.3	0.3	25	23
6772	SEP 10	0602 2.3	40.79S	174.74E	36	2.3	0.2	11	8
6775	SEP 10	0734 44.2	40.93S	175.52E	24	3.0	0.3	17	14
6776	SEP 10	0802 37.9	40.57S	174.73E	25	2.5	0.2	12	9
6777	SEP 10	0942 52.3	41.71S	174.32E	12R	4.4F	0.3	23	20
6783	SEP 10	2229 50.4	41.94S	174.04E	12R	2.5	0.3	11	10
6786	SEP 11	0155 48.1	41.00S	174.77E	32	2.5	0.1	13	10
6788	SEP 11	0442 20.5	40.92S	175.66E	25	2.2	0.2	12	9
6789	SEP 11	0625 38.0	40.96S	175.48E	28	2.4	0.1	11	10
6806	SEP 11	1517 44.4	41.73S	174.07E	30	2.6	0.3	21	13
6809	SEP 11	1658 46.2	40.93S	175.09E	31	2.4	0.1	12	9
6830	SEP 12	0954 49.6	41.88S	175.23E	32	2.6	0.1	11	8

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
6831	SEP 12	1037 26.4	40.98S	173.77E	88	2.2	0.3	8	5
6835	SEP 12	1857 22.1	40.84S	174.70E	38	2.4	0.1	10	7
6837	SEP 12	2156 2.6	41.18S	174.86E	30	2.3	0.1	11	8
6840	SEP 13	0145 29.1	40.93S	174.69E	13	2.6	0.1	16	12
6841	SEP 13	0155 39.1	41.04S	175.93E	30	2.3	0.2	8	7
6845	SEP 13	0647 49.8	41.05S	174.17E	68	2.9	0.2	17	12
6849	SEP 13	0859 4.7	40.91S	175.71E	27	2.3	0.2	12	9
6851	SEP 13	1245 27.1	41.09S	174.66E	32	2.6	0.1	16	11
6852	SEP 13	1339 15.3	41.93S	174.25E	12R	2.1	0.2	8	5
6853	SEP 13	1536 10.9	41.48S	174.67E	55	2.6	0.1	11	10
6860	SEP 13	2318 16.4	40.93S	175.79E	31	2.3	0.2	13	9
6866	SEP 14	0307 14.6	40.64S	174.67E	32	2.0	0.2	9	7
6867	SEP 14	0406 22.0	40.96S	175.69E	34	2.2	0.2	10	7
6874	SEP 14	1014 40.8	41.30S	173.56E	70	2.7	0.2	12	7
6892	SEP 15	1437 16.0	40.76S	175.68E	27	3.0	0.2	19	13
6900	SEP 16	0226 28.3	40.76S	173.70E	78	2.6	0.2	11	7
6902	SEP 16	0444 36.0	41.51S	174.53E	14	2.0	0.2	10	8
6911	SEP 16	1256 39.3	41.14S	174.48E	40	2.0	0.0	10	7
6914	SEP 16	1942 34.7	41.07S	174.74E	30	2.0	0.1	11	7
6944	SEP 17	1906 42.1	40.84S	174.67E	64	2.7	0.1	15	11
6953	SEP 18	0650 12.9	41.30S	175.28E	31	3.1	0.1	21	12
6990	SEP 19	0635 25.4	41.27S	175.35E	29	2.8	0.1	13	10
6991	SEP 19	0637 22.8	41.70S	174.17E	14	2.3	0.3	13	9
6992	SEP 19	0831 25.0	41.02S	174.72E	32	2.3	0.2	12	8
6993	SEP 19	0916 56.4	40.64S	174.98E	5R	2.5	0.2	15	11
6995	SEP 19	1445 5.7	40.62S	175.71E	16	2.9	0.2	15	10
6997	SEP 19	1525 32.6	40.54S	174.82E	27	2.6	0.2	13	10
6998	SEP 19	2032 45.1	40.60S	175.47E	29	2.3	0.1	8	6
6999	SEP 19	2102 24.2	41.59S	174.15E	19	2.2	0.1	9	6
7002	SEP 20	0223 58.0	41.35S	174.66E	31	2.2	0.2	9	8
7004	SEP 20	0858 52.4	40.63S	174.09E	70	3.1	0.3	14	12
7009	SEP 20	1708 24.5	41.53S	174.19E	58	2.8	0.1	11	9
7010	SEP 20	2117 22.5	40.57S	174.29E	58	2.5	0.2	8	6
7011	SEP 20	2148 37.7	41.91S	174.70E	26	3.4	0.3	17	14
7012	SEP 21	0015 24.6	40.95S	174.01E	36	3.6F	0.2	26	23
7013	SEP 21	0055 26.0	40.94S	174.01E	39	2.8	0.3	11	9
7019	SEP 21	0901 33.4	41.42S	175.02E	24	2.1	0.1	9	8
7022	SEP 21	1352 51.4	40.74S	174.85E	42	4.2F	0.2	41	34
7023	SEP 21	1407 44.9	40.70S	174.81E	34	2.4	0.2	13	9
7024	SEP 21	1420 11.7	41.02S	174.80E	57	2.3	0.1	11	7
7028	SEP 21	1616 59.2	40.70S	174.82E	37	2.3	0.2	9	7
7029	SEP 21	1648 35.8	41.96S	174.05E	17	2.8	0.4	19	14
7033	SEP 22	0013 49.0	41.70S	174.52E	30	2.2	0.2	12	6
7034	SEP 22	0022 42.2	41.23S	174.40E	34	3.0	0.3	18	14
7036	SEP 22	0258 29.5	41.59S	173.69E	47	2.7	0.2	15	10

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
7040	SEP 22	0611 42.2	40.88S	174.91E	64	3.2	0.2	19	15
7043	SEP 22	0809 59.3	40.86S	175.25E	27	2.0	0.2	9	7
7045	SEP 22	1215 44.2	40.70S	174.82E	37	2.7	0.1	16	12
7047	SEP 22	1401 28.4	41.55S	174.07E	11	2.3	0.2	12	9
7050	SEP 22	1657 10.2	40.90S	174.49E	65	2.5	0.1	9	7
7057	SEP 23	0235 27.4	40.93S	173.78E	70	2.2	0.1	8	5
7058	SEP 23	0255 48.9	41.00S	174.69E	57	2.4	0.1	10	6
7060	SEP 23	0358 52.6	40.71S	174.45E	67	2.5	0.1	13	9
7081	SEP 23	2006 29.3	41.04S	174.64E	58	2.5	0.1	17	10
7082	SEP 23	2030 51.3	40.83S	174.71E	5R	2.9	0.3	15	11
7084	SEP 23	2118 35.0	40.69S	174.75E	18	2.5	0.1	13	9
7093	SEP 24	0730 18.4	41.68S	173.92E	40	2.8	0.2	18	12
7106	SEP 24	1918 40.1	41.26S	174.94E	20	2.2	0.1	13	9
7111	SEP 25	0010 6.5	41.42S	175.01E	25	2.2	0.2	13	9
7126	SEP 25	1627 19.9	40.96S	175.15E	27	2.7	0.2	18	11
7128	SEP 25	1722 59.9	40.91S	175.79E	28	2.3	0.2	13	9
7137	SEP 25	2249 6.2	41.70S	174.07E	36	2.3	0.2	9	8
7138	SEP 26	0232 52.5	41.72S	174.28E	5R	2.3	0.3	12	9
7146	SEP 26	0616 7.9	41.01S	174.53E	38	2.3	0.1	12	9
7147	SEP 26	0706 55.8	41.55S	173.88E	22	2.5	0.2	11	8
7148	SEP 26	0719 23.9	41.55S	173.91E	17	2.3	0.2	9	6
7159	SEP 26	1632 22.2	41.29S	174.18E	41	2.9	0.2	16	12
7169	SEP 27	0531 55.7	41.74S	174.22E	12R	2.4	0.4	9	7
7172	SEP 27	1106 25.3	40.59S	174.83E	29	2.7	0.1	8	6
7174	SEP 27	1115 35.2	41.25S	175.37E	17	2.5	0.1	9	6
7178	SEP 27	1250 5.3	40.68S	175.87E	29	3.1	0.3	14	10
7186	SEP 27	2249 13.2	41.31S	174.72E	29	2.5	0.1	14	12
7194	SEP 28	0133 34.3	40.59S	174.59E	31	2.4	0.2	11	8
7201	SEP 28	0818 13.6	40.64S	175.32E	29	2.8F	0.2	16	13
7204	SEP 28	0949 47.1	41.01S	174.81E	46	2.5	0.1	10	8
7208	SEP 28	1418 40.5	41.91S	173.69E	52	2.4	0.2	9	7
7226	SEP 29	0649 37.2	41.23S	174.56E	18	2.2	0.2	14	8
7242	SEP 30	0315 34.3	41.61S	174.36E	5R	2.2	0.2	10	6
7250	SEP 30	0942 0.4	40.60S	174.07E	92	3.0	0.2	17	12
7259	SEP 30	1315 53.2	41.67S	174.59E	29	2.0	0.1	9	7
7266	SEP 30	1922 42.6	41.71S	174.00E	15	3.0	0.2	16	14
7287	OCT 01	1144 31.5	40.83S	175.74E	30	2.4	0.2	9	8
7288	OCT 01	1155 25.6	41.17S	175.63E	15	2.3	0.1	10	7
7290	OCT 01	1236 19.8	40.91S	175.75E	30	2.1	0.1	11	9
7314	OCT 02	1344 1.5	40.53S	174.65E	28	2.7	0.2	17	13
7316	OCT 02	1556 15.9	40.75S	174.01E	96	3.1	0.2	16	10
7317	OCT 02	1625 50.5	41.70S	174.51E	29	2.6	0.1	13	10
7324	OCT 02	2338 57.2	40.54S	174.63E	79	2.4	0.1	9	6
7325	OCT 02	2350 54.6	41.01S	174.62E	55	3.4	0.2	29	25
7347	OCT 03	1515 5.7	41.43S	175.03E	13	2.2	0.1	10	7

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
7348	OCT 03	1633 21.0	40.71S	174.45E	73	2.6	0.1	11	7
7354	OCT 03	2248 43.7	41.26S	175.34E	28	2.4	0.1	12	9
7361	OCT 04	0053 44.7	40.67S	174.54E	77	2.9	0.1	18	13
7372	OCT 04	1037 55.8	41.09S	174.59E	32	3.4F	0.2	22	18
7373	OCT 04	1046 15.7	41.40S	174.07E	21	2.5	0.2	10	7
7374	OCT 04	1104 1.6	41.14S	174.82E	28	2.5	0.2	11	10
7379	OCT 04	1621 41.1	40.68S	174.36E	47	2.5	0.1	10	7
7393	OCT 05	0710 0.7	41.26S	174.56E	56	2.3	0.1	7	5
7402	OCT 05	0914 36.9	41.72S	174.53E	48	2.4	0.2	19	12
7415	OCT 05	1350 2.1	41.30S	174.89E	22	2.3	0.1	19	11
7417	OCT 05	1357 36.9	41.30S	174.89E	22	2.6	0.1	19	10
7422	OCT 05	1549 1.7	41.77S	173.81E	60	2.2	0.2	6	4
7432	OCT 05	2005 35.1	41.42S	173.74E	55	2.7	0.2	9	6
7497	OCT 06	1216 42.6	40.96S	174.49E	37	2.4	0.1	14	9
7510	OCT 06	1519 18.5	41.74S	174.35E	30	3.5	0.3	26	19
7520	OCT 06	1828 13.0	40.65S	174.42E	56	2.8	0.2	13	9
7523	OCT 06	1851 58.6	41.51S	174.72E	48	2.0	0.2	7	5
7531	OCT 06	2247 43.1	41.05S	174.84E	40	2.7	0.1	12	10
7549	OCT 07	1628 4.3	41.59S	174.64E	24	2.1	0.1	13	11
7550	OCT 07	1652 8.0	41.10S	174.15E	49	2.5	0.1	9	6
7557	OCT 08	0005 1.9	40.93S	175.75E	30	3.7	0.3	18	15
7562	OCT 08	0116 1.0	40.93S	174.97E	38	2.2	0.1	9	7
7568	OCT 08	0249 49.5	41.34S	174.82E	29	2.7	0.2	14	12
7570	OCT 08	0535 23.3	41.66S	174.04E	5R	2.0	0.1	6	5
7574	OCT 08	0854 55.9	41.16S	174.12E	53	2.1	0.1	9	6
7586	OCT 08	1454 59.3	40.80S	173.69E	220	2.9	0.1	7	6
7593	OCT 08	2125 6.3	40.88S	174.60E	49	3.9	0.2	40	32
7594	OCT 08	2159 42.5	40.84S	174.60E	43	2.8	0.2	18	14
7598	OCT 09	0059 26.5	41.32S	173.50E	77	2.7	0.2	11	8
7608	OCT 09	0854 59.7	40.62S	174.58E	40	2.9	0.2	19	15
7612	OCT 09	1020 55.7	41.21S	174.46E	37	2.2	0.2	13	10
7619	OCT 09	1308 34.6	40.74S	173.67E	137	2.7	0.2	9	7
7642	OCT 10	0758 43.6	40.54S	173.55E	145	3.8	0.2	38	31
7644	OCT 10	0843 1.8	41.96S	173.68E	43	2.3	0.1	6	4
7646	OCT 10	0956 33.8	41.49S	175.56E	21	2.0	0.2	8	6
7649	OCT 10	1106 22.4	40.61S	174.35E	47	2.3	0.2	10	7
7652	OCT 10	1344 53.2	41.43S	174.32E	34	2.0	0.1	8	5
7656	OCT 10	1642 56.5	41.39S	174.94E	37	2.3	0.2	13	9
7660	OCT 10	2054 9.0	41.12S	174.84E	29	3.5	0.2	16	13
7664	OCT 11	0135 20.9	40.94S	174.53E	42	2.2	0.1	9	5
7666	OCT 11	0236 56.6	40.96S	174.56E	37	2.5	0.1	12	8
7673	OCT 11	0518 15.6	41.12S	174.85E	30	3.6F	0.3	23	18
7676	OCT 11	0740 21.2	41.60S	174.65E	30	2.4	0.1	10	8
7687	OCT 12	1129 23.4	41.61S	174.44E	18	2.7	0.2	20	15
7691	OCT 12	1609 50.5	40.66S	175.73E	28	2.7	0.2	10	7

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
7694	OCT 12	2204 7.3	41.68S	174.54E	30	2.4	0.2	12	9
7700	OCT 13	0325 19.1	41.05S	175.50E	29	2.2	0.1	9	7
7704	OCT 13	1003 26.7	40.82S	175.61E	12R	2.7	0.2	10	7
7709	OCT 13	1623 49.6	41.97S	174.41E	31	3.2	0.2	19	13
7710	OCT 13	1851 19.1	41.24S	175.31E	23	2.1	0.1	11	6
7716	OCT 14	0754 23.5	40.91S	175.68E	30	2.5	0.1	10	7
7718	OCT 14	1213 27.9	40.71S	174.85E	34	2.1	0.2	9	6
7738	OCT 15	0823 36.9	40.98S	174.83E	57	3.2	0.1	19	14
7739	OCT 15	1021 44.8	40.88S	174.74E	13	2.5	0.1	12	8
7744	OCT 15	1618 47.3	41.04S	173.63E	134	2.8	0.1	10	8
7747	OCT 15	1736 37.6	41.24S	175.18E	25	2.8	0.1	16	9
7748	OCT 15	1858 20.6	40.88S	174.96E	35	2.1	0.1	9	5
7761	OCT 16	1010 42.5	41.05S	174.52E	54	3.0	0.1	14	9
7764	OCT 16	1350 56.0	41.00S	175.14E	28	2.1	0.2	10	7
7772	OCT 17	0325 33.2	40.72S	175.98E	22	2.7	0.3	10	8
7773	OCT 17	0406 1.9	41.77S	174.17E	35	2.3	0.1	7	5
7777	OCT 17	0733 56.5	41.70S	174.23E	12R	2.4	0.2	14	11
7778	OCT 17	0750 49.5	41.70S	174.20E	13	2.6	0.2	14	10
7782	OCT 17	0943 46.1	41.22S	174.51E	36	2.2	0.1	7	6
7785	OCT 17	1002 21.7	41.21S	174.58E	34	2.8	0.1	10	8
7787	OCT 17	1133 58.7	40.91S	174.48E	58	3.3	0.2	22	19
7788	OCT 17	1246 37.8	41.05S	174.57E	48	2.6	0.1	11	9
7790	OCT 17	1441 9.5	41.27S	175.23E	24	2.0	0.1	9	6
7791	OCT 17	1504 8.2	40.84S	174.56E	53	2.2	0.0	8	6
7794	OCT 17	1850 25.6	41.78S	174.53E	32	3.0	0.2	18	14
7802	OCT 17	2158 49.8	41.31S	173.80E	55	2.3	0.1	7	4
7803	OCT 17	2221 29.6	41.04S	174.60E	36	2.8	0.1	14	12
7810	OCT 18	0339 26.4	40.56S	173.97E	12R	2.9	0.2	15	11
7811	OCT 18	0501 55.0	40.61S	174.20E	5R	2.5	0.3	10	7
7812	OCT 18	0632 28.8	40.58S	173.99E	5R	2.6	0.2	11	8
7813	OCT 18	0642 55.4	40.59S	173.97E	12R	2.4	0.2	9	7
7815	OCT 18	0756 53.5	40.88S	174.71E	10	2.8	0.2	15	12
7816	OCT 18	0810 1.9	40.57S	173.96E	12R	3.1	0.2	19	16
7819	OCT 18	1234 6.7	41.63S	173.96E	12R	2.1	0.2	8	5
7820	OCT 18	1331 59.1	41.13S	174.70E	33	2.3	0.1	10	7
7821	OCT 18	1630 29.3	40.88S	174.87E	45	3.1	0.1	14	11
7824	OCT 18	1733 25.7	41.07S	174.19E	47	2.6	0.2	8	6
7832	OCT 19	0153 36.6	40.63S	174.56E	44	2.4	0.1	9	6
7847	OCT 19	1935 21.6	41.12S	174.84E	29	2.0	0.0	10	6
7849	OCT 19	2053 25.8	41.26S	173.54E	89	2.8	0.2	11	8
7855	OCT 19	2325 39.0	41.58S	174.68E	31	2.6	0.2	8	6
7856	OCT 20	0227 39.9	41.70S	174.27E	5R	2.4	0.2	10	7
7862	OCT 20	0444 18.3	41.59S	173.66E	43	3.2	0.3	20	15
7866	OCT 20	1918 8.2	40.76S	174.26E	59	2.7	0.2	9	7
7869	OCT 20	2240 1.0	40.56S	174.85E	32	2.0	0.2	6	5

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
7884	OCT 21	2325 10.8	41.00S	175.57E	29	2.7	0.1	11	9
7889	OCT 22	0621 43.5	41.21S	175.76E	19	2.5	0.1	10	8
7895	OCT 22	1151 9.8	40.72S	175.39E	31	2.6	0.2	11	9
7900	OCT 22	1931 3.8	41.56S	174.41E	21	2.0	0.1	10	7
7907	OCT 23	0025 36.8	41.86S	173.71E	42	2.7	0.1	6	3
7908	OCT 23	0242 51.2	41.44S	175.00E	27	2.4	0.2	7	6
7921	OCT 23	1948 41.8	41.76S	174.15E	9	3.2	0.3	24	17
7923	OCT 23	2245 40.4	40.74S	174.93E	35	2.6	0.1	11	8
7931	OCT 24	0610 17.2	41.40S	175.01E	24	2.0	0.1	9	6
7936	OCT 24	0934 13.3	41.26S	175.25E	27	2.5	0.1	13	9
7938	OCT 24	0947 44.2	41.18S	174.60E	54	2.2	0.1	8	5
7939	OCT 24	1021 49.7	40.61S	174.00E	78	2.6	0.2	9	6
7943	OCT 24	1145 55.1	41.21S	173.68E	60	2.3	0.1	7	4
7951	OCT 24	1614 41.1	40.60S	175.87E	31	2.4	0.3	8	7
7956	OCT 24	1935 7.4	40.88S	175.33E	28	2.2	0.1	9	7
7958	OCT 24	2008 14.5	40.57S	173.89E	92	2.5	0.1	9	6
7959	OCT 24	2137 35.9	40.57S	173.99E	12R	3.4	0.2	35	29
7960	OCT 24	2144 43.5	40.56S	174.00E	5R	3.0	0.2	16	12
7964	OCT 25	0150 30.0	41.12S	174.82E	29	2.3	0.2	9	7
7968	OCT 25	0405 32.1	41.72S	174.20E	13	2.3	0.2	11	7
7976	OCT 25	1242 1.2	40.75S	174.29E	57	2.4	0.2	10	7
7977	OCT 25	1248 2.3	41.09S	174.55E	36	2.4	0.2	9	7
8000	OCT 26	0244 23.1	40.87S	174.72E	13	2.5	0.1	10	7
8002	OCT 26	0333 16.7	40.69S	174.13E	82	2.5	0.2	11	7
8013	OCT 26	1417 27.8	41.64S	174.57E	35	2.6	0.2	13	9
8014	OCT 26	1641 37.8	41.06S	173.76E	67	2.5	0.1	8	5
8015	OCT 26	1756 20.7	41.07S	173.79E	169	2.6	0.1	7	5
8023	OCT 26	2340 19.4	41.68S	174.32E	5R	2.9	0.3	16	12
8024	OCT 27	0435 13.9	41.70S	174.47E	31	2.4	0.2	7	6
8026	OCT 27	0810 20.5	41.56S	174.11E	12	2.4	0.1	8	6
8027	OCT 27	0916 58.2	40.89S	174.19E	12R	2.1	0.2	6	4
8032	OCT 27	1533 11.0	41.73S	175.34E	5R	2.2	0.2	7	6
8040	OCT 27	2320 38.2	40.86S	174.73E	63	2.4	0.1	6	4
8042	OCT 28	0137 21.2	40.74S	174.84E	15	2.0	0.1	6	4
8051	OCT 28	0924 44.7	41.48S	173.75E	49	2.6	0.2	14	9
8061	OCT 28	1908 19.4	41.26S	175.24E	26	2.3	0.1	13	9
8066	OCT 28	2255 53.9	40.82S	175.61E	19	2.4	0.2	11	9
8077	OCT 29	0626 51.2	41.47S	174.99E	24	2.1	0.1	9	6
8081	OCT 29	1310 38.4	40.90S	175.99E	31	3.0	0.2	10	8
8085	OCT 29	1608 56.8	41.29S	175.20E	22	2.1	0.1	14	8
8089	OCT 29	2158 23.4	40.60S	175.88E	28	2.1	0.3	7	6
8090	OCT 29	2303 40.2	41.36S	174.99E	27	2.2	0.2	16	9
8092	OCT 30	0245 4.5	41.04S	174.83E	50	3.0	0.1	19	12
8094	OCT 30	0358 4.5	40.99S	174.61E	54	2.2	0.1	7	5
8102	OCT 30	1746 2.6	41.74S	174.55E	12R	2.4	0.2	8	6

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
8103	OCT 30	1748 46.9	41.03S	174.61E	39	3.9F	0.2	27	22
8105	OCT 30	2017 57.2	41.42S	174.45E	15	2.6	0.3	12	9
8106	OCT 30	2028 28.1	41.19S	174.83E	22	2.0	0.1	9	6
8110	OCT 30	2110 23.0	40.72S	175.34E	30	2.7	0.1	17	11
8113	OCT 30	2348 21.1	40.99S	174.59E	36	2.5	0.2	13	10
8114	OCT 30	2354 56.4	41.64S	174.28E	7	2.9	0.3	22	14
8116	OCT 31	0122 37.9	41.73S	173.99E	13	2.7	0.2	10	7
8119	OCT 31	0340 44.8	41.30S	173.77E	53	2.8	0.3	15	11
8121	OCT 31	0644 50.1	40.97S	174.57E	36	2.1	0.1	12	8
8139	NOV 01	0707 42.0	40.87S	174.49E	70	2.9	0.1	10	8
8145	NOV 01	0924 39.2	41.50S	174.17E	38	3.5	0.3	19	17
8149	NOV 01	1459 29.0	41.12S	174.06E	51	2.7	0.2	12	10
8152	NOV 01	1930 20.9	41.12S	174.00E	58	3.0	0.3	15	13
8158	NOV 01	2252 59.3	41.31S	175.01E	24	2.1	0.2	8	6
8160	NOV 02	0103 58.6	41.45S	174.99E	41	2.2	0.1	9	7
8163	NOV 02	0500 18.3	41.67S	174.04E	12R	2.2	0.3	10	7
8167	NOV 02	1014 49.6	41.09S	174.24E	53	2.2	0.2	7	5
8172	NOV 02	2055 56.7	40.52S	174.50E	40	2.5	0.2	10	8
8173	NOV 02	2315 32.8	40.86S	174.72E	15	2.3	0.1	8	5
8176	NOV 03	0042 30.8	41.09S	174.67E	53	3.1	0.1	15	11
8177	NOV 03	0101 20.7	40.75S	175.23E	28	2.9	0.2	16	12
8181	NOV 03	0258 11.4	41.05S	173.90E	59	2.9	0.3	11	8
8205	NOV 03	1158 21.4	40.80S	175.31E	34	2.1	0.2	11	6
8209	NOV 03	1417 42.5	40.77S	174.35E	51	2.2	0.2	7	5
8211	NOV 03	1526 8.2	40.84S	175.27E	29	2.0	0.2	9	7
8215	NOV 03	2001 28.8	40.62S	175.12E	5R	2.3	0.2	8	6
8216	NOV 03	2221 17.5	40.52S	173.67E	103	3.1	0.2	20	14
8217	NOV 04	0237 52.1	40.94S	175.50E	18	2.0	0.2	10	8
8218	NOV 04	0257 16.4	40.90S	174.88E	17	3.7F	0.3	32	27
8223	NOV 04	1249 55.9	41.49S	173.81E	60	2.6	0.1	8	6
8224	NOV 04	1330 19.2	41.40S	174.95E	26	2.1	0.1	11	7
8225	NOV 04	1450 55.0	40.82S	174.48E	21	2.0	0.1	7	4
8244	NOV 05	1436 14.8	40.86S	174.74E	16	2.3	0.2	9	7
8256	NOV 06	0235 48.1	41.08S	174.30E	66	2.8	0.1	13	10
8260	NOV 06	1129 18.0	40.71S	174.31E	61	3.2	0.2	22	17
8262	NOV 06	1300 24.5	40.70S	175.01E	36	2.0	0.1	8	6
8265	NOV 06	1547 51.5	41.72S	174.52E	28	2.4	0.2	13	10
8267	NOV 06	1652 51.1	41.41S	175.01E	23	2.0	0.1	11	8
8269	NOV 06	1711 59.8	41.73S	173.70E	52	2.8	0.1	9	6
8275	NOV 06	1838 5.6	41.71S	174.47E	51	2.7	0.2	17	13
8276	NOV 06	2154 10.9	40.72S	175.59E	31	2.4	0.3	11	8
8278	NOV 06	2315 53.9	40.87S	175.87E	32	2.7	0.2	10	8
8281	NOV 07	0110 20.0	41.20S	175.75E	32	2.1	0.1	9	6
8282	NOV 07	0111 32.0	41.05S	175.31E	24	2.3	0.1	14	9
8302	NOV 07	2159 51.2	40.77S	174.65E	38	2.0	0.2	7	5

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
8313	NOV 08	1112 8.2	40.63S	174.18E	60	2.7	0.3	12	8
8314	NOV 08	1439 53.8	41.15S	173.99E	57	2.4	0.2	9	6
8315	NOV 08	1510 57.9	40.54S	174.13E	80	2.5	0.1	9	6
8321	NOV 09	0740 5.0	41.25S	175.18E	23	2.2	0.1	14	9
8328	NOV 09	2159 7.2	40.62S	175.91E	33R	2.7	0.4	11	8
8332	NOV 10	1826 12.6	41.41S	175.01E	25	2.8	0.2	19	13
8336	NOV 10	2344 42.0	41.42S	175.00E	25	2.1	0.1	11	9
8343	NOV 11	0645 48.2	40.84S	174.78E	40	2.3	0.1	9	7
8346	NOV 11	0835 7.5	40.91S	175.77E	30	2.0	0.1	9	6
8348	NOV 11	0850 37.0	41.73S	174.89E	33	2.4	0.2	9	8
8354	NOV 11	1446 59.7	41.48S	173.61E	5R	2.9	0.3	15	12
8356	NOV 11	1459 55.5	40.86S	174.75E	14	2.7	0.3	16	10
8375	NOV 12	1351 21.8	41.03S	174.48E	62	2.9	0.1	9	6
8378	NOV 12	1541 7.9	40.60S	175.83E	31	2.4	0.2	8	5
8380	NOV 12	1804 51.8	41.41S	175.00E	24	2.1	0.1	12	8
8386	NOV 13	1054 29.3	40.99S	174.58E	37	2.2	0.1	12	9
8393	NOV 13	1638 21.3	40.86S	175.49E	24	2.4	0.1	12	7
8395	NOV 13	1849 52.5	40.87S	174.73E	12	3.0	0.3	18	12
8396	NOV 13	1913 23.8	40.66S	173.85E	120	2.9	0.2	13	10
8398	NOV 13	2158 17.7	40.81S	173.78E	80	2.6	0.1	10	7
8399	NOV 13	2304 39.7	40.58S	174.12E	77	2.6	0.1	13	8
8401	NOV 14	0042 29.6	41.84S	174.12E	14	2.2	0.2	12	10
8403	NOV 14	0120 0.1	40.82S	174.60E	67	2.3	0.1	14	8
8404	NOV 14	0301 45.8	41.13S	174.64E	31	2.0	0.1	18	10
8405	NOV 14	0337 51.4	41.05S	174.91E	35	2.3	0.1	15	9
8412	NOV 14	0739 43.9	40.60S	173.94E	81	2.7	0.1	12	9
8414	NOV 14	0943 33.9	41.05S	174.52E	51	2.1	0.0	9	6
8420	NOV 14	1457 23.1	41.16S	173.59E	83	2.6	0.2	10	6
8423	NOV 14	1749 27.2	41.04S	174.10E	60	3.3	0.3	24	19
8424	NOV 14	1755 19.4	40.85S	174.60E	53	2.6	0.1	11	7
8428	NOV 14	2326 8.8	41.20S	173.56E	101	2.7	0.2	11	8
8445	NOV 15	1929 51.4	41.06S	174.72E	54	2.6	0.2	13	9
8449	NOV 15	2216 12.2	41.13S	174.45E	65	2.5	0.1	9	7
8452	NOV 16	0141 37.8	41.28S	174.82E	24	2.7	0.1	18	13
8453	NOV 16	0237 57.5	41.22S	175.19E	26	2.1	0.0	11	9
8463	NOV 16	1003 54.0	41.30S	174.96E	25	2.3	0.1	11	8
8467	NOV 17	0038 8.2	41.21S	175.36E	44	2.6	0.1	12	8
8470	NOV 17	0108 32.0	41.11S	174.76E	33	2.1	0.0	9	8
8473	NOV 17	0631 11.8	41.01S	174.44E	42	3.1	0.2	28	23
8474	NOV 17	0740 47.5	41.07S	174.94E	28	2.0	0.1	8	7
8478	NOV 17	1029 8.7	40.96S	175.64E	24	2.2	0.1	11	8
8480	NOV 17	1118 38.4	40.92S	175.11E	28	3.1	0.3	21	16
8482	NOV 17	1237 20.4	41.08S	174.38E	58	3.7	0.1	34	27
8483	NOV 17	1303 20.2	41.63S	173.91E	14	2.5	0.3	16	14
8492	NOV 18	0258 31.3	41.29S	175.28E	27	2.4	0.1	11	9

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
8493	NOV 18	0306 46.0	40.52S	174.60E	59	2.9	0.2	15	12
8495	NOV 18	0430 28.2	41.66S	174.23E	14	2.2	0.2	9	6
8504	NOV 18	1712 39.6	40.66S	174.32E	58	2.5	0.2	10	6
8510	NOV 19	0132 50.9	40.90S	174.84E	44	3.1	0.2	21	17
8511	NOV 19	0202 40.7	40.58S	174.69E	28	2.2	0.2	10	8
8513	NOV 19	0337 41.1	41.03S	174.63E	54	2.2	0.0	7	5
8521	NOV 19	1324 3.1	40.60S	174.36E	21	2.3	0.1	9	7
8522	NOV 19	1335 21.7	40.61S	174.36E	9	2.1	0.1	10	7
8528	NOV 19	1819 0.4	41.45S	174.49E	20	2.2	0.2	10	8
8532	NOV 19	2213 46.1	41.03S	175.23E	25	2.0	0.1	9	7
8546	NOV 20	0944 7.3	40.87S	174.75E	14	2.1	0.1	7	5
8552	NOV 20	1957 43.7	41.57S	173.81E	54	2.7	0.3	17	12
8553	NOV 20	2005 18.4	41.28S	174.98E	22	2.3	0.1	8	5
8567	NOV 21	1235 6.7	41.02S	175.51E	20	3.6	0.2	28	21
8569	NOV 21	1417 43.2	40.87S	174.75E	12R	3.4	0.2	29	23
8573	NOV 21	1700 20.7	41.34S	175.70E	18	2.5	0.1	12	9
8578	NOV 21	2151 21.6	40.57S	174.96E	29	2.4	0.2	10	7
8580	NOV 21	2350 22.9	40.86S	175.12E	35	2.5	0.1	10	7
8581	NOV 22	0031 6.6	41.61S	173.54E	74	3.1	0.2	19	12
8585	NOV 22	0606 9.9	40.87S	174.74E	15	2.5	0.1	7	5
8587	NOV 22	0746 50.5	41.87S	174.29E	15	2.2	0.1	7	5
8601	NOV 22	2247 14.2	40.94S	175.54E	23	2.6	0.2	11	9
8603	NOV 22	2323 49.0	41.42S	175.01E	24	2.4	0.1	13	9
8629	NOV 24	0422 7.5	40.91S	175.99E	32	2.0	0.1	7	5
8644	NOV 24	2252 37.3	41.16S	174.15E	48	3.0	0.2	18	12
8648	NOV 25	0147 4.8	41.11S	174.48E	35	2.1	0.1	9	6
8655	NOV 25	1857 40.2	40.55S	174.47E	54	3.0	0.3	21	15
8663	NOV 26	0344 10.9	40.97S	174.10E	57	2.2	0.2	8	7
8664	NOV 26	0426 4.8	41.76S	174.13E	12	2.4	0.2	13	11
8668	NOV 26	0745 11.3	41.19S	174.54E	35	2.1	0.1	11	7
8680	NOV 26	2258 54.0	41.51S	173.70E	53	2.6	0.2	13	9
8683	NOV 27	0225 4.9	41.06S	175.39E	28	2.3	0.1	12	8
8685	NOV 27	0351 48.6	41.27S	175.34E	16	2.2	0.1	10	8
8693	NOV 27	1103 48.8	40.80S	174.45E	67	2.5	0.1	8	5
8701	NOV 28	0046 26.6	41.17S	175.66E	24	2.6	0.1	12	9
8702	NOV 28	0459 33.5	41.38S	174.85E	43	2.1	0.1	7	5
8711	NOV 28	2036 58.1	41.11S	174.60E	34	2.5	0.2	13	8
8716	NOV 29	1359 36.3	40.85S	175.79E	34	2.4	0.1	9	6
8717	NOV 29	1622 17.3	41.41S	175.01E	23	2.0	0.1	10	6
8720	NOV 29	1753 16.1	40.86S	174.76E	49	2.7	0.1	11	8
8730	NOV 30	1526 22.9	40.88S	175.21E	24	2.2	0.2	10	8
8731	NOV 30	1722 6.5	41.56S	174.61E	26	2.2	0.1	8	7
8757	DEC 02	0023 44.1	40.57S	174.54E	57	2.0	0.0	6	4
8766	DEC 02	1254 9.1	41.74S	174.60E	23	2.1	0.1	11	7
8771	DEC 03	0042 53.9	41.36S	174.17E	41	2.2	0.1	9	7

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
8775	DEC 03	0419 24.4	40.72S	174.16E	65	2.5	0.2	8	6
8778	DEC 03	0452 41.4	41.40S	174.98E	23	2.0	0.1	10	7
8781	DEC 03	0836 53.2	40.72S	175.54E	27	2.2	0.1	9	7
8787	DEC 03	2245 9.8	41.41S	175.01E	25	2.1	0.0	10	8
8788	DEC 03	2300 23.4	41.41S	174.82E	15	2.4	0.1	13	10
8790	DEC 04	0327 5.7	41.26S	174.60E	32	2.4	0.2	14	12
8795	DEC 04	1331 40.8	41.26S	174.59E	31	2.1	0.2	9	7
8811	DEC 05	0655 35.9	41.12S	174.64E	32	3.2	0.2	23	19
8824	DEC 05	1526 58.5	41.26S	175.14E	26	2.6	0.1	15	11
8826	DEC 05	1634 18.5	40.55S	174.96E	33	2.4	0.1	11	8
8831	DEC 05	1945 37.3	41.37S	175.36E	29	2.3	0.1	11	8
8832	DEC 06	0007 0.0	41.43S	174.56E	20	2.3	0.2	13	10
8838	DEC 06	0627 37.4	41.28S	175.24E	28	2.0	0.1	9	7
8844	DEC 06	1234 54.2	41.72S	174.52E	31	2.4	0.1	14	10
8847	DEC 06	1454 56.7	41.73S	174.53E	28	2.4	0.2	15	12
8848	DEC 06	1544 28.5	40.71S	174.05E	70	2.6	0.1	11	8
8852	DEC 06	1802 38.5	40.91S	174.90E	49	3.1	0.1	17	13
8853	DEC 06	2026 48.1	41.44S	175.66E	25	2.0	0.1	9	6
8855	DEC 07	0039 50.1	41.09S	175.83E	33	2.4	0.2	13	8
8860	DEC 07	0601 10.1	40.88S	174.74E	16	2.3	0.1	7	4
8863	DEC 07	0818 26.5	40.74S	174.38E	56	3.1	0.3	23	17
8869	DEC 07	1144 49.8	40.73S	175.73E	32	2.3	0.2	8	5
8880	DEC 07	2238 37.0	41.59S	174.11E	5R	2.5	0.2	13	9
8883	DEC 08	0510 8.7	40.90S	175.24E	33	2.4	0.2	11	7
8884	DEC 08	0606 15.5	41.16S	175.64E	24	2.4	0.2	12	8
8885	DEC 08	0659 15.1	41.79S	174.43E	31	3.1	0.2	24	17
8894	DEC 08	1332 57.7	41.05S	174.81E	28	2.6	0.1	15	12
8896	DEC 08	1530 49.4	40.98S	174.55E	57	2.3	0.1	8	6
8907	DEC 09	0212 28.9	41.72S	173.89E	13	3.2	0.2	19	15
8917	DEC 09	0757 49.2	41.04S	174.69E	31	2.5	0.2	16	13
8918	DEC 09	0914 14.7	40.87S	174.49E	70	2.1	0.1	8	7
8927	DEC 09	1355 36.6	41.35S	173.53E	77	2.5	0.3	17	13
8937	DEC 09	2041 11.7	40.82S	173.71E	31	2.3	0.1	6	5
8941	DEC 09	2146 31.4	41.14S	174.04E	52	2.8	0.2	17	13
8949	DEC 10	0650 56.6	41.64S	174.33E	5R	2.1	0.2	12	9
8951	DEC 10	0850 40.5	40.50S	173.94E	91	3.5	0.3	31	27
8956	DEC 10	1325 2.3	41.06S	175.98E	32	2.6	0.1	10	7
8962	DEC 10	1504 56.0	40.96S	175.49E	17	2.2	0.2	13	9
8966	DEC 10	1659 52.0	41.42S	174.18E	19	2.0	0.2	11	7
8972	DEC 10	2222 15.7	41.31S	174.54E	39	2.8	0.2	16	12
8974	DEC 10	2248 4.6	40.84S	175.31E	27	2.4	0.2	11	9
8984	DEC 11	0824 36.2	41.00S	175.60E	29	2.8	0.1	15	11
8985	DEC 11	0957 15.9	40.93S	173.76E	82	2.9	0.3	16	12
8989	DEC 11	1508 19.2	41.18S	174.76E	30	2.5	0.2	15	12
8993	DEC 11	2101 38.8	40.96S	175.64E	20	3.0	0.2	13	10

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
8995	DEC 11	2113 11.6	40.96S	175.67E	23	2.7	0.2	13	10
8996	DEC 11	2333 59.4	41.36S	175.56E	15	2.0	0.1	11	7
9002	DEC 12	0758 8.5	40.95S	175.37E	17	2.5	0.2	12	9
9012	DEC 13	1240 23.1	40.99S	175.22E	30	2.2	0.1	12	8
9018	DEC 13	1659 42.0	41.15S	175.07E	5R	2.0	0.2	12	8
9022	DEC 13	2025 51.3	40.78S	174.09E	67	2.6	0.3	14	10
9027	DEC 14	0316 44.7	40.79S	174.50E	72	3.2	0.2	22	17
9029	DEC 14	0336 22.5	40.56S	175.04E	5R	2.2	0.1	7	4
9041	DEC 14	1338 40.8	40.96S	174.97E	29	2.9	0.1	14	11
9044	DEC 14	1601 0.3	41.83S	174.02E	38	2.6	0.3	17	12
9061	DEC 15	1312 53.9	41.61S	173.95E	13	2.3	0.3	9	6
9062	DEC 15	1444 59.5	40.96S	174.40E	48	2.5	0.1	11	9
9065	DEC 15	1633 40.4	40.89S	175.13E	33	2.2	0.1	11	9
9074	DEC 16	0141 11.1	41.57S	174.57E	32	2.4	0.1	10	9
9078	DEC 16	0901 47.9	41.67S	174.08E	33R	2.3	0.2	9	6
9083	DEC 16	1045 16.1	40.60S	175.45E	30	2.2	0.2	10	7
9109	DEC 17	0925 27.4	41.52S	173.75E	44	2.4	0.2	8	6
9110	DEC 17	1118 57.4	41.77S	174.28E	14	2.4	0.3	11	9
9111	DEC 17	1120 25.1	41.12S	173.97E	54	3.0	0.2	16	12
9123	DEC 17	2044 30.8	41.02S	174.77E	31	2.3	0.1	12	9
9130	DEC 18	1139 35.3	41.67S	174.29E	12R	3.3	0.3	22	17
9142	DEC 19	0115 11.9	41.24S	174.64E	34	2.0	0.1	8	7
9143	DEC 19	0129 17.1	40.54S	174.84E	29	2.4	0.2	10	7
9146	DEC 19	0337 50.9	40.54S	174.69E	29	2.5	0.2	14	11
9157	DEC 19	1425 9.7	40.69S	173.91E	84	2.6	0.1	10	7
9159	DEC 19	1614 38.7	41.43S	174.64E	25	2.2	0.2	11	9
9172	DEC 20	0052 45.2	41.04S	175.32E	15	2.4	0.1	11	7
9207	DEC 21	0429 27.8	40.63S	175.08E	12R	2.9	0.3	19	15
9216	DEC 21	1056 39.2	41.42S	173.73E	59	2.5	0.2	8	6
9228	DEC 21	1723 53.3	41.89S	173.54E	41	2.4	0.2	12	10
9233	DEC 21	2316 9.1	40.73S	174.67E	42	2.1	0.1	7	5
9234	DEC 22	0019 15.2	40.53S	174.32E	84	2.5	0.1	9	7
9239	DEC 22	0253 25.8	40.59S	175.66E	28	2.7	0.2	14	11
9240	DEC 22	0337 41.6	40.76S	174.29E	64	3.1	0.2	18	13
9246	DEC 22	1043 49.2	40.77S	174.77E	38	2.7	0.2	14	10
9247	DEC 22	1123 16.0	41.51S	175.60E	29	2.2	0.1	9	6
9252	DEC 22	1911 27.1	40.90S	175.47E	29	2.1	0.1	10	7
9259	DEC 23	0037 36.2	41.07S	173.86E	52	2.4	0.3	10	6
9260	DEC 23	0114 21.8	41.60S	174.66E	28	2.1	0.1	9	5
9263	DEC 23	0433 42.2	40.90S	175.45E	21	3.1	0.3	20	16
9274	DEC 23	0946 32.3	40.98S	174.89E	29	2.0	0.1	9	6
9286	DEC 23	1745 21.9	41.10S	175.78E	30	3.0	0.2	12	8
9294	DEC 24	0102 28.0	41.34S	174.83E	29	2.4	0.1	13	10
9297	DEC 24	0332 49.3	41.76S	174.39E	49	2.7	0.2	17	13
9306	DEC 24	1319 39.1	40.85S	175.16E	32	2.7	0.2	15	11

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
9316	DEC 25	0351 44.6	40.90S	175.68E	29	2.1	0.1	8	7
9319	DEC 25	0733 11.2	41.38S	174.39E	61	2.8	0.1	19	14
9329	DEC 25	1300 11.2	41.75S	174.13E	5R	2.4	0.5	10	6
9334	DEC 25	2048 6.7	40.83S	175.21E	34	2.3	0.2	13	8
9335	DEC 25	2048 20.4	41.54S	174.46E	21	2.8	0.3	20	16
9345	DEC 26	0445 7.3	41.30S	175.12E	24	2.0	0.2	11	6
9353	DEC 26	1433 5.2	41.28S	175.20E	28	2.1	0.1	12	8
9371	DEC 27	0456 34.8	41.15S	174.61E	33	2.5	0.1	12	11
9377	DEC 27	1159 30.4	41.63S	174.59E	32	2.5	0.1	10	9
9385	DEC 27	1709 7.7	40.63S	175.06E	12R	3.2	0.3	24	21
9388	DEC 27	2159 41.6	41.82S	174.06E	12R	2.2	0.1	10	7
9408	DEC 28	1339 10.5	41.36S	175.80E	19	2.2	0.1	9	6
9411	DEC 28	1539 27.4	40.58S	174.74E	26	2.0	0.1	8	6
9413	DEC 28	1819 37.9	41.46S	173.99E	42	3.5	0.1	23	21
9415	DEC 28	1947 37.7	40.87S	175.65E	27	2.2	0.2	10	8
9417	DEC 28	2256 24.1	41.25S	173.59E	67	2.5	0.3	11	7
9421	DEC 29	0045 59.3	41.33S	174.29E	38	2.5	0.1	9	5
9427	DEC 29	0814 18.0	41.55S	174.61E	29	2.5	0.2	15	13
9428	DEC 29	0907 54.4	41.66S	174.29E	5R	2.8	0.3	19	17
9452	DEC 29	2326 25.4	41.35S	174.44E	58	2.7	0.1	15	13
9453	DEC 30	0020 47.3	40.55S	173.82E	96	2.8	0.2	16	11
9459	DEC 30	0554 57.1	40.55S	175.31E	43	3.6	0.2	37	31
9475	DEC 30	1538 10.7	41.76S	174.57E	30	2.7	0.2	14	13
9492	DEC 30	2127 28.6	40.88S	175.32E	29	2.6	0.2	14	12
9494	DEC 30	2253 28.5	41.73S	174.56E	29	2.4	0.1	10	9
9495	DEC 30	2301 13.0	41.65S	174.55E	48	2.3	0.1	12	11
9515	DEC 31	1342 33.5	41.45S	174.45E	9	2.7	0.3	15	13

NON-INSTRUMENTAL DATA

THE FELT REPORTING SYSTEM

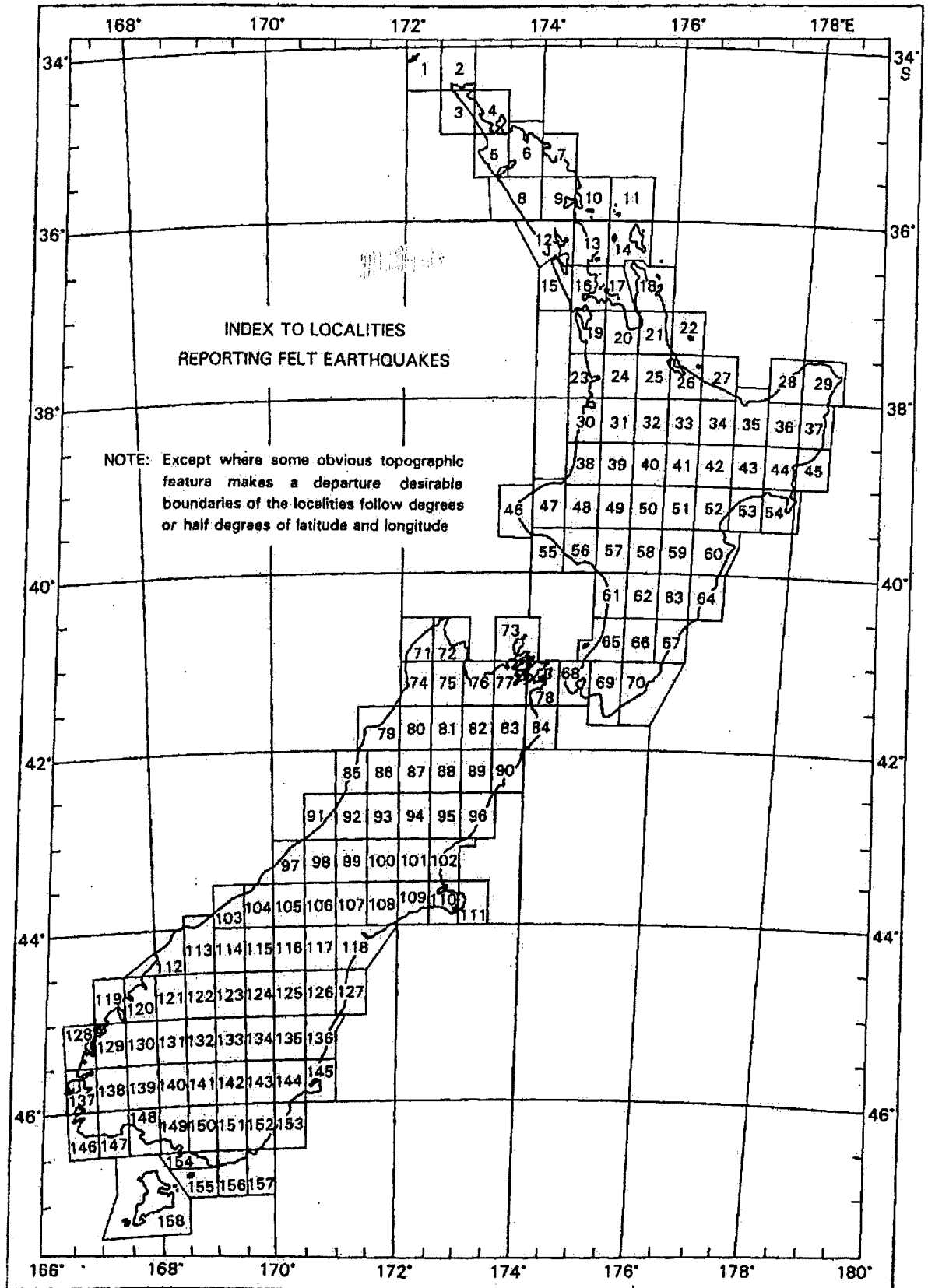
The Observatory has recruited a network of about 600 volunteer observers spread throughout the country, who use a standard form to describe the effects of any earthquake they feel. The Observatory also collects casual reports from newspapers, meteorological observers, postmasters and members of the local public. For large earthquakes, or ones with features of special interest, questionnaires are issued and assessed.

Several difficulties arise in assessing the distribution of felt intensity. The population of the country is very unevenly spread, and the observers' personal circumstances may prevent them from feeling a shock that has been noticed by others. These problems also affect lists of earthquakes felt in particular localities. It may reasonably be assumed that a strong earthquake reported from one township was felt in another nearby, even though the Observatory has received no report. However, an index of this kind must summarise data and not deductions, so the following scheme is used.

The land area of New Zealand has been divided into 'localities', mostly bounded by half-degree lines of latitude and longitude, but varied as necessary to avoid splitting

obvious geographic or structural units (see map opposite). Each locality has a number and a name, usually that of the principal population centre within it. The names are listed overleaf. In most localities there are at least two well-separated reporters, but there are still some sparsely populated parts of the country without observers, notably in Southland. Felt information is summarised in information lines following the instrumental data in the main list of earthquakes. Modified Mercalli intensities quoted there have been assessed by the Observatory from replies to standard questionnaires. Assessments based on less formal descriptions of intensity are included in the following list, in which the localities which have reported shocks during the year are presented in alphabetical order, each followed by the reference numbers of the shocks felt and their respective maximum reported intensities within that locality. By comparing the reports from neighbouring localities, it is possible to form a truer estimate of the incidence of the felt effects than would be possible from a simple list of places reporting each shock.

A further list records reports received from places in the south-west Pacific.



Standard Reporting Localities.

STANDARD REPORTING LOCALITIES

1	Three Kings	41	Taupo	81	Glenhope	121	Glenorchy
2	Te Reinga	42	Te Whaiti	82	Wairau	122	Arrowtown
3	Ninety Mile Beach	43	Tuai	83	Awatere	123	Wanaka
4	Doubtless Bay	44	Whakapunaki	84	Cape Campbell	124	St Bathans
5	Kaitaia	45	Gisborne	85	Greymouth	125	Kurow
6	Kaikohe	46	Cape Egmont	86	Reefton	126	Duntroon
7	Bay of Islands	47	New Plymouth	87	Maruia	127	Waimate
8	Dargaville	48	Whangamomona	88	Hanmer	128	Secretary Is.
9	Whangarei	49	Ohakune	89	Clarence	129	Doubtful Sound
10	Bream Head	50	Chateau	90	Kaikoura	130	Te Anau
11	Moko Hinau	51	Kaweka	91	Hokitika	131	Livingstone Mts
12	Kaipara	52	Napier	92	Kumara	132	Kingston
13	Warkworth	53	Wairoa	93	Arthur's Pass	133	Alexandra
14	Barrier Islands	54	Mahia	94	Lake Sumner	134	Poolburn
15	Helensville	55	Hawera	95	Culverden	135	Ranfurly
16	Auckland	56	Waverley	96	Cheviot	136	Oamaru
17	Waiheke	57	Wanganui	97	Franz Josef	137	Resolution Island
18	Coromandel	58	Taihape	98	Hari Hari	138	Pillans Pass
19	Pukekohe	59	Ruahine	99	Whitcombe Pass	139	Monowai
20	Mercer	60	Hastings	100	Lake Coleridge	140	Mossburn
21	Thames	61	Bulls	101	Oxford	141	Waikaia
22	Mayor Is.	62	Palmerston North	102	Rangiora	142	Roxburgh
23	Raglan	63	Dannevirke	103	Haast	143	Lawrence
24	Hamilton	64	Porangahau	104	Bruce Bay	144	Outram
25	Matamata	65	Otaki	105	Mount Cook	145	Dunedin
26	Tauranga	66	Masterton	106	Tekapo	146	Puysegur Point
27	Whakatane	67	Castlepoint	107	Mount Somers	147	Poteretere
28	Te Kaha	68	Wellington	108	Ashburton	148	Tuatapere
29	East Cape	69	Featherston	109	Rakaia	149	Invercargill
30	Kawhia	70	Martinborough	110	Christchurch	150	Gore
31	Te Kuiti	71	Mount Stevens	111	Akaroa	151	Clinton
32	Tokoroa	72	Takaka	112	Big Bay	152	Balclutha
33	Rotorua	73	D'Urville Island	113	Jackson's Bay	153	Waihola
34	Murupara	74	Karamea	114	Makarora	154	Bluff
35	Opotiki	75	Motueka	115	Lake Ohau	155	Ruapuke
36	Motu	76	Nelson	116	Pukaki	156	Tahakopa
37	Tolaga Bay	77	Blenheim	117	Fairlie	157	Owaka
38	Mokau	78	Picton	118	Timaru	158	Stewart Is.
39	Taumarunui	79	Westport	119	George Sound	159	Chatham Islands
40	Tokaanu	80	Murchison	120	Milford		

52	Napier	472 6588	(4*), (4*),	2495 7940	(4*), (4),	2646 7987	(5), (4),	3349 (4),	3878 (4),	6166 (4),			
53	Wairoa	3349	(4*).										
55	Hawera	7987	(4*).										
57	Wanganui	66	(4*),	76	(4),	7987	(4),	8271	(4*).				
58	Taihape	3921	(4),	7940	(4),	7987	(4),						
59	Ruahine	5212	(4*).										
60	Hastings	623 7940	(4*), (5),	668 7987	(4*), (5),	2646	(4),	3921	(4),	6166 (4), 6588 (4*),			
61	Bulls	66 4919 7022	(3), (4), (4),	76 5188 7987	(4), (4), (4),	1312 5212 8271	(4), (4), (4),	2864 5749 8919	(3), (4*), (4),	3435 5829 9000	(4), (4), (3),	3921 6193 (4), (4),	
62	Palmerston North	76 5829	(2*), (4),	503 6001	(4*), (4*),	1713 7987	(4), (5),	1716 8271	(3), (4),	3921 (4),	5188 (4*),		
63	Dannevirke	3123	(4),	3150	(4*),	3659	(4*),	3921	(4),	6876 (4),	7987 (5*),		
65	Otaki	66 4919 7022	(4), (4), (4),	76 5188 7201	(5), (4), (4),	1713 5212 7987	(3), (4), (4),	2688 5512 8103	(4*), (4*), (4),	3831 5829 8218	(4), (4), (4*),	3921 6193 8919	(4), (4), (4),
67	Castlepoint	76	(4).										
68	Wellington	66 3349 4929 6248 8919	(4), (4*), (3), (4), (4*),	76 3831 5188 7022 9156	(5), (3), (4), (4*), (4*),	877 3921 5212 7372	(4), (5), (4*), (4*),	2267 4318 5512 7673	(4), (3), (4), (4),	2646 4825 5829 7987	(4*), (3), (4*), (5),	2864 4919 6193 8218	(3), (4), (4*), (4*),
69	Featherston	76	(4),	3921	(3),	6166	(4*),	7987	(4).				
72	Takaka	7281	(4*),	7282	(4*),	7987	(4).						
73	D'Urville Is.	76	(4).										
75	Motueka	6923	(3).										
76	Nelson	76 9156	(5), (4*),	3921	(3),	3945	(4*),	5188	(4*),	7012 (4*),	7987 (4),		
77	Blenheim	76 7987	(4), (5).	761	(4*),	2267	(4),	2933	(4),	3921 (4),	6777 (4*),		
78	Picton	76	(4),	2267	(4),	2933	(4*),	3921	(4),	7987 (4).			
79	Westport	2801	(4),	6392	(4),	9156	(4*).						
80	Murchison	8609	(4*).										
84	Cape Campbell	76	(4*),	4781	(4*),	4782	(4*),	4788	(4*),	5437 (3),	6777 (4).		
91	Hokitika	7881	(4*).										
92	Kumara	7881	(4),	7987	(4).								
99	Whitcombe Pass	8619	(4).										

103 Haast	3437	(4).							
104 Bruce Bay	4158	(4),	4827	(4).					
105 Mount Cook	6221	(4).							
110 Christchurch	313	(4),	3085	(4*),	3945	(4),	5066	(4),	6880 (4), 7987 (4).
112 Big Bay	8257	(4*),	8272	(4*),	8299	(4*).			
113 Jackson's Bay	4827	(4),	5980	(4),	5982	(4).			
115 Lake Ohau	3437	(4),	4000	(6),	4129	(4*),	4146	(4*).	
116 Pukaki	4000	(5*),	4129	(5*).					
120 Milford	7795	(4*).							
121 Glenorchy	3437	(4),	4827	(4),	5832	(4).			
122 Arrowtown	3437	(4).							
123 Wanaka	3437	(4),	4827	(4).					
124 St Bathans	4000	(6),	4129	(4*),	4146	(4*).			
125 Kurow	4000	(4*),	4129	(4*).					
132 Kingston	3437	(4*),	8472	(4*).					
133 Alexandra	4000	(4),	7987	(4*).					
134 Poolburn	7310	(4).							
136 Oamaru	4129	(4*).							
138 Pillans Pass	3467	(4).							
144 Outram	6824	(4*).							
159 Chatham Islands	7756	(4).							

FELT REPORTS FROM OUTSIDE NEW ZEALAND

The Observatory sometimes receives reports of earthquakes felt on islands of the south-west Pacific and other places beyond the limits of its systematic reporting

network. Where Modified Mercalli scale intensities in the list below are shown in quotes, they have been estimated by the reporters, not the Observatory.

DATE	TIME	INTENSITY	PLACE
Jan 20	17h 50m	MM4	Raoul Island
Feb 10	08h 33m	MM4	Raoul Island
Feb 26	13h 30m	MM4	Raoul Island
Apr 15	15h 20m	MM3	Raoul Island
Apr 19	19h 04m	MM4	Raoul Island
Apr 20	19h 04m	'felt'	Raoul Island
Apr 21	11h 08m	MM4	Raoul Island
May 04	13h 43m	MM4	Raoul Island
Jun 22	11h 52m	MM4	Raoul Island
Jul 08	11h 04m	MM4	Raoul Island
Jul 08	11h 04m	'felt'	Raoul Island
Jul 16	02h 55m	MM4	Raoul Island
Jul 16	16h 46m	'felt'	Raoul Island
Jul 19	02h 00m	MM5	Raoul Island
Jul 19	02h 17m	'felt'	Raoul Island
Jul 28	00h 17m	'felt'	Raoul Island
Jul 28	10h 08m	'felt'	Raoul Island
Aug 01	08h 41m	MM4	Raoul Island
Aug 01	10h 00m	MM4	Raoul Island
Aug 22	23h 00m	MM4	Raoul Island
Aug 26	12h 00m	MM4	Raoul Island
Aug 27	09h 20m	MM4	Raoul Island
Aug 28	00h 15m	MM4	Raoul Island
Aug 28	09h 55m	MM5	Raoul Island
Dec 18	03h 50m	MM4	Raoul Island
Dec 28	19h 15m	MM4	Raoul Island

PUBLICATIONS BY STAFF MEMBERS

The following papers by members of the Seismological Observatory staff were published in 1999:

Audoine, E.; Savage, M.; Gledhill, K. Upper mantle and crustal anisotropy in the Taupo Volcanic Zone, N.Z. In: *New Zealand Geophysical Society Symposium 1999 : Natural Hazards and Climate Change : Victoria University of Wellington : abstracts*: p. [25].

Audoine, E.; Savage, M.K.; Gledhill, K.R. Mantle and crustal deformation from seismic anisotropy in Taupo Volcanic Zone, New Zealand. *Eos. 80(46:supplement)*: F1136.

Doser, D.I.; Webb, T.H.; Maunder, D.E. Source parameters of large historical (1918-1962) earthquakes, South Island, New Zealand. *Geophysical journal international. 139(3)*: p. 769-794.

We present the results of body waveform modelling studies for 17 earthquakes occurring in the South Island, New Zealand region between 1918 and 1962, including the 1929 $M=7.8$ Buller earthquake, the largest earthquake to have occurred in the South Island this century. These studies confirm the concept of slip partitioning in the northern South Island between strike-slip faulting in southwestern Marlborough and reverse and strike-slip faulting in the Buller region, but indicate that the zone of reverse faulting is quite localized. In the central South Island, all historical earthquakes appear to be associated with strike-slip faulting, although recent (post-1991) reverse faulting events suggest that slip partitioning also occurs within this region. The difference between historical and recent seismicity in the central South Island may also reflect stress readjustment occurring in response to the 1717 AD rupture along the Alpine Fault. Within the Fiordland region (southwestern South Island) none of the historical earthquakes appears to have occurred along the Australian/Pacific plate interface, but rather they are associated with complex deformation of the subducting plate as well as with deformation of the upper (Pacific) plate. Two earthquakes in the Puysegur Bank region south of the South Island suggest that strike-slip deformation east of the Puysegur Trench is playing a major role in the tectonics of the region.

Downes, G.; Dowrick, D.; Smith, E.; Berryman, K. The 1934 Pahiatua earthquake sequence : analysis of observational and instrumental data. *Bulletin of the New Zealand Society for Earthquake Engineering. 32(4)*: p. 221-245.

Descriptive accounts and analysis of local seismograms establish that the epicentre of the 1934 March 5 $M_s7.6$ earthquake, known as the Pahiatua earthquake, was nearer to Pongaroa than to Pahiatua. Conspicuous and severe damage (MM8) in the business centre of Pahiatua in the

northern Wairarapa led early seismologists to name the earthquake after the town, but it has now been found that the highest intensities (MM9) occurred about 40 km to the east and southeast of Pahiatua, between Pongaroa and Bideford. Damage and intensity summaries and a new isoseismal map, derived from extensive newspaper reports and from 1934 Dominion Observatory "felt reports", replace previous descriptions and isoseismal maps. A stable solution for the epicentre of the main shock has been obtained by analysing phase arrivals read from surviving seismograms of the rather small and poorly equipped 1934 New Zealand network of twelve stations (two privately owned). Neither contemporary sources nor recent inquiries directed to old residents yield historical evidence of a surface fault rupture. Nevertheless, the strike-slip mechanism at 20km depth determined by preliminary teleseismic body wave modelling of Dosser and Webb suggests that rupture could have extended to the surface. Recent investigation of two of the freshest-looking, active faults that lie within the MM9 isoseismal by Schermer and others indicates that one of them could have ruptured in the 1934 Pahiatua earthquake.

Downes, G.L.; Grapes, R. The 1855 Wairarapa, New Zealand, earthquake: historical data. *Institute of Geological & Nuclear Sciences science report; 99/16*: 267 p.

This compilation contains transcriptions of written historical material relating to the effects of the 1855 $M8.1-8.2$ Wairarapa earthquake, New Zealand's largest historical earthquake, and its aftershocks. It is the first time that such a compilation has been produced for a New Zealand earthquake. This compilation is so designed that it can readily be made into a searchable computer database, so that extracts relating to any particular aspect of the earthquake and/or from any particular location can be separated out simply and quickly. Many of the extracts are annotated to provide some insight about the author, the reliability of the account, or about important details contained within the extract. Full references, and where appropriate, cross-references are given. All the extracts are keyworded with location, effects and reliability keywords. Not included in this compilation are accounts of the 1855 earthquake that have appeared in the popular press unless the source material on which the accounts were based obviously differs from that which is included here.

Downes, G.L.; Grapes, R. The 1855 Wairarapa earthquake: a definitive account. In: *Newsletter/Geological Society of New Zealand. 119*: p. 3-6.

The earthquake on the evening of 23 January 1855 shook the whole of New Zealand, and had a felt magnitude of MMIX, possibly MMX, the largest so far recorded in New Zealand. The earthquake was associated with widespread uplift, and surface rupture occurred on what is now recognised as the Wairarapa Fault. Despite its importance,

a definitive scientific account has never been written. Recently Rodney Grapes and Gaye Downes completed a comprehensive description and analysis, which has been published as an issue of the Bulletin of the New Zealand Society for Earthquake Engineering (vol. 30, no. 4, December 1997). This paper won the 1998 Otto Glogau Award from the NZSEE for the best paper published in NZ earthquake engineering in the last three years.

Eberhart-Phillips, D.; Chadwick, M.P.; Reyners, M.E. Imaging three-dimensional velocity and attenuation in the Northeast Hikurangi subduction zone, New Zealand. In: *New Zealand Geophysical Society Symposium 1999: Natural Hazards and Climate Change: Victoria University of Wellington: abstracts:* p. [44].

Eberhart-Phillips, D.; Reyners, M. Fiordland three-dimensional seismic velocity structure. In: *New Zealand Geophysical Society Symposium 1999: Natural Hazards and Climate Change: Victoria University of Wellington: abstracts:* p. [34].

Eberhart-Phillips, D.; Reyners, M.E. Plate interface properties in the northeast Hikurangi subduction zone, New Zealand, from converted seismic waves. *Geophysical research letters.* 26(16): p. 2565-2568.

Arrival time inversion of local earthquakes in the northeast Hikurangi subduction zone has indicated high V_p/V_s at the plate interface, but the thickness of the anomalous zone is poorly constrained by the P and S travel-times. We investigate this plate interface zone further by modelling S to P converted phases, using synthetic seismograms for upgoing rays of earthquakes in the subducting plate mantle. The modelling indicates a low velocity layer at the plate interface, which is generally 1-2 km thick, and has V_p of 5.0-5.35 km/s and V_p/V_s of 2. This is consistent with a subducting sediment channel with near-lithostatic fluid. The low rigidity indicates a weak zone, which will have a strong influence on the distribution of deformation. The modelling approach shows promise in defining rheological parameters at the plate interface, and mapping their variation across the seismogenic zone of the subduction thrust.

Klosko, E.R.; Wu, F.T.; Anderson, H.J.; Eberhart-Phillips, D.; McEvelly, T.V.; Audoine, E.; Savage, M.K.; Gledhill, K.R. Upper mantle anisotropy in the New Zealand region. *Geophysical research letters.* 26(10): p. 1497-1500.

Shear-wave splitting parameters of fast polarization direction (Φ) and delay time (δt) are determined using data from the Southern Alps Passive Seismic Experiment (SAPSE), on the South Island of New Zealand and in the surrounding region. Our results clearly show that Φ are subparallel to trends of the Alpine and Marlborough Faults, and to the Pacific-Australian plate boundary. The δt values range from 0.6-2.2 s with an average value of 1.6 s: the largest values are from the central South Island.

The main source of observed shear-wave splitting is an anisotropic region between 40-400 km. The width of the zone is approximately 200 km. We attribute the coincidence of surface structural trends with the measured Φ , and the large δt values, to significant shear deformation in a 200 km thick zone along the plate boundary extending from the surface to deep within the upper mantle.

Kozuch, M.J.; Chadwick, M.P. Azimuthal and regional variations of coda waves in New Zealand. *Bulletin of the New Zealand Society for Earthquake Engineering.* 32(3): p. 170-179.

We present the results of using seismic waveform data to show that the elliptical nature of isoseismal distributions in New Zealand is related to regional structural trends. The data also suggest that there are regional and azimuthal variations in the attenuation of coda waves, which may need to be considered in ground motion attenuation relations. We stacked over 20,000 waveforms from the New Zealand seismograph network. The data were filtered, normalized and stacked. Noisy or clipped records were down-weighted or removed. We also treated dense networks as a single station and generated a single stack for these networks. Stacks of shallow earthquake sources are presented by region and azimuth. Variations in coda length throughout New Zealand suggest regions of high scattering. Strong, azimuthal dependence in the coda is observed for non-volcanic zone stations. NE-SW waveform stacks, which follow the strike of the subduction zone, contain significantly longer codas than those with NW-SE raypaths. Long coda trains are also observed in the volcanic and geothermal zones yet there is little or no apparent azimuthal variation. These coda are particularly strong throughout the records which explains the difficulty analysts have had in picking S waves.

Marson-Pidgeon, K.; Savage, M.K.; Gledhill, K.R.; Stuart, G. Seismic anisotropy beneath the lower half of the North Island, New Zealand. *Journal of geophysical research. Solid earth.* 104(B9): p. 20277-20286.

Teleseismic ScS and SKS events recorded on nine broadband seismograph stations have been used to investigate anisotropy beneath the lower half of the North Island, New Zealand. This area lies above the Hikurangi subduction zone, and the array provides ray paths which sample the mantle both above and below the slab. Shear wave splitting measurements give similar fast polarizations and delay times at each station. The average SKS fast polarization is approximately NE-SW, subparallel to the strike of subduction and the major geological features, with an average SKS delay time of 1.6 ± 0.1 s. This lack of variation in splitting parameters suggests that similar fast polarizations are found in both the mantle wedge and the subslab mantle. The anisotropy in the lithospheric portion of the mantle wedge is most likely caused by the preferred orientation of olivine due to the shear deformation associated with oblique convergence. Any anisotropy in the slab is probably due to fossil mineral alignment. Anisotropy in the asthenosphere is most likely

caused by the preferred orientation of olivine due to asthenospheric flow. The similar NE-SW fast polarizations found in the asthenosphere both above and below the slab suggest that the mantle flow is in a trench-parallel direction in both regions.

McGinty, P.; Reyners, M.E.; Robinson, R. Stress directions in the shallow part of the Hikurangi subduction zone, New Zealand, from the inversion of earthquake first motions. In: *Penrose Conference : subduction to strike-slip transitions on plate boundaries*. [S.L.] : [s.n.], 1999. 2 p.

Maunder, D.E. (ed). New Zealand seismological report 1997. *Institute of Geological and Nuclear Sciences science report*. 99/20: 167p.

This report contains summaries of origin times, epicentres, focal depths and magnitudes of earthquakes that occurred in the New Zealand region during 1997. It also contains a brief account of the principal earthquakes of 1997, details of the instruments used to record earthquakes, descriptions of Observatory practices and abstracts of papers by Observatory staff.

Molnar, P.; Anderson, H.J.; Audoine, E.; Eberhart-Phillips, D.; Gledhill, K.R.; Klosko, E.R.; McEvilly, T.V.; Okaya, D.; Stern, T.; Wu, F.T. Continuous deformation versus faulting through the continental lithosphere of New Zealand. *Science*. 286(5439): p. 516-519.

Seismic anisotropy and P-wave delays in New Zealand imply widespread deformation in the underlying mantle, not slip on a narrow fault zone, which is characteristic of plate boundaries in oceanic regions. Large magnitudes of shear-wave splitting and orientations of fast polarization parallel to the Alpine fault show that pervasive simple shear of the mantle lithosphere has accommodated the cumulative strike-slip plate motion. Variations in P-wave residuals across the Southern Alps rule out underthrusting of one slab of mantle lithosphere beneath another but permit continuous deformation of lithosphere shortened by about 100 kilometers since 6 to 7 million years ago.

Pancha, A.; Taber, J. Weak motion attenuation of peak ground acceleration in the North Island, New Zealand. *Bulletin of the New Zealand Society for Earthquake Engineering*. 32(3): p. 125-145.

Attenuation relations using weak ground motion recordings have been determined using data from the New Zealand National Seismograph Network and several temporary seismograph deployments. Models have been developed for earthquake sources in four regions: the eastern North Island deep and shallow regions and the central North Island (CNI) deep and shallow regions. Deep events were those with hypocenters below 33 km. Regression coefficients have been determined using the attenuation models of Joyner and Boore (1981) and Molas

and Yamazaki (1995). The anelastic attenuation rates in the eastern North Island expressions are comparable to that of Joyner and Boore (1981), suggesting that weak motion attenuation can be used to estimate variations in strong motion attenuation. However, the absolute level of the strong-motion attenuation curves greatly differs from those of the weak-motion. The anelastic attenuation rate for the shallow CNI is of the order of two to three times that observed for the eastern North Island. The lowest attenuation rate was found for events within the deep CNI, whose ray paths did not cross the shallow central North Island region. This is consistent with a low rate of attenuation in the subducting Pacific plate. Azimuthal dependence of PGA is evident within each of the regions. Within the eastern North Island, the attenuation rate is lowest in the direction of 35-55 degrees from north, which is roughly along the strike of the subducting Pacific plate. A similar azimuthal dependence was also noted within the deep CNI region, while a slightly different minimum direction (5 degrees) was determined for the shallow CNI region.

Reyners, M.E. The coupled zone of the plate interface at the Hikurangi subduction zone, New Zealand, and its relationship to structure in both the subducted and overlying plates. In: *Penrose Conference : subduction to strike-slip transitions on plate boundaries*. [S.L.] : [s.n.], 1999. 2 p.

Reyners, M.E. Quantifying the hazard of large subduction thrust earthquakes in Hawke's Bay. In: *New Zealand Geophysical Society Symposium 1999: Natural Hazards and Climate Change : Victoria University of Wellington : abstracts*: p. [28].

Reyners, M.E.; Eberhart-Phillips, D.; Stuart, G. A. A three-dimensional image of shallow subduction : crustal structure of the Raukumara Peninsula, New Zealand. *Geophysical journal international*. 137(3): p. 873-890.

Earthquake arrival time data from a 36-station deployment of portable seismographs on the Raukumara Peninsula have been used to determine the 3-D V_p and V_p/V_s structure of this region of shallow subduction. A series of inversions have been performed, starting with an inversion for 1-D structure, then 2-D, and finally 3-D. This procedure ensures a smooth regional model in places of low resolution. The subducted plate is imaged as a northwest-dipping feature, with V_p consistently greater than 8.5 km s^{-1} in the uppermost mantle of the plate. Structure in the overlying plate changes significantly along strike. In the northeast, there is an extensive low-velocity zone in the lower crust underlying the most rapidly rising part of the Raukumara Range. It is bounded on its arcward side by an upward of high velocity. A viable explanation for the low-velocity zone is that it represents an accumulation of under-plated subducted sediment, while serpentinization of the uppermost mantle may be responsible for the adjacent high-velocity region. The low-velocity zone decreases and the adjacent high-velocity region is less extensive in the southwest. This change is

interpreted to be related to a change in the thickness of the crust of the overlying plate. In the northeast the crust is thinner, and subducted sediment ponds against relatively strong uppermost mantle, while in the southwest the crust is thicker, and the relatively weak lower crust allows sediment subduction to greater depths. A narrow zone of high V_p/V_s parallels the shallow part of the plate interface. This suggests elevated fluid pressures, with the distribution of earthquakes about this zone further suggesting that these pressures may be close to lithostatic. The plate interface at 20 km depth beneath the Raukumara Peninsula may thus be a closed system for fluid flow, similar to that seen at much shallower depths in other subduction decollements.

Reyners, M.E.; McGinty, P.J. Shallow subduction tectonics in the Raukumara Peninsula, New Zealand, as illuminated by earthquake focal mechanisms. *Journal of geophysical research.. Solid earth.* 104(B2): p. 3025-3034.

The Raukumara Peninsula affords an excellent opportunity to study the subduction process, as subduction of the buoyant Hikurangi Plateau on the Pacific plate has resulted in exposure of the forearc above the shallow part of the subduction thrust. Here we report on the focal mechanisms of 117 earthquakes of M_L 2.4-4.9 and shallower than 80 km, recorded during a 5-month deployment of 36 portable seismographs on the peninsula. Mechanisms have been constrained using both first motion polarity data and amplitudes of seismogram envelopes. Downdip tensional strain predominates in the subducted plate, with T axes of events in both the upper and lower planes of the dipping seismic zone generally paralleling the local dip of the

zone. Trenchward extensional strain is seen in the uppermost part of the overlying Australian plate, in line with geodetic and geological results. This can be related to extension and gravity sliding of surficial rocks due to uplift of the Raukumara range resulting from underplating of subducted sediment. There is a marked change in earthquake mechanisms along strike in the lower part of the overlying plate and at the plate interface. A concentration of low-angle thrust events at the plate interface in the northeastern half of the peninsula suggests that the plate interface is less coupled there than to the southwest. This along-strike change in plate coupling corresponds closely to a change in the crustal structure of the overlying plate and also to a change in tectonic rotation domain determined paleomagnetically.

Stirling, M.W.; Webb, T.H.; Rhoades, D.L.; Berryman, K.R.; Somerville, P.G. Scaling relations for New Zealand earthquakes 2 : integration of worldwide historical data and New Zealand seismological data. In: *New Zealand Geophysical Society Symposium 1999: Natural Hazards and Climate Change : Victoria University of Wellington : abstracts:* p. [29].

Webb, T.H.; Somerville, P.G.; Doser, D.I.; Rhoades, D.L.; Pancha, A. Scaling relations for New Zealand earthquakes 1 : seismological data. In: *New Zealand Geophysical Society Symposium 1999 : Natural Hazards and Climate Change : Victoria University of Wellington : abstracts:* p. [28].

OBSERVATORY SERVICES

PUBLICATIONS

The New Zealand seismological reports are a continuing series of E-bulletins published in the science report series from the Institute of Geological and Nuclear Sciences. They contain summaries of the data used for each origin determination, lists of origins, felt intensity data, and brief accounts of the principal earthquakes of the year. They also provide details of the instruments used to record earthquakes and descriptions of Observatory practices.

Copies of this material may be purchased from:

Publications Sales
Institute of Geological and Nuclear Sciences
PO Box 30-368
Lower Hutt
New Zealand.

EARTHQUAKE CATALOGUE

The Observatory has a master file of some tens of thousands of earthquake origins and associated information stored on magnetic tape. From this, lists of earthquakes within particular geographical areas of New Zealand, or in categories defined in other ways, can be made available to researchers. Full details have been published elsewhere (W.D. Smith, 1976: A Computer File of New Zealand Earthquakes. *Bulletin of the New Zealand National Society for Earthquake Engineering*, 9(2): p.136-13; *New Zealand journal of geology and geophysics*, 19(3): p.393-394). Criteria that may be specified are dates, magnitudes, focal depths, intensities and regions bounded in a number of

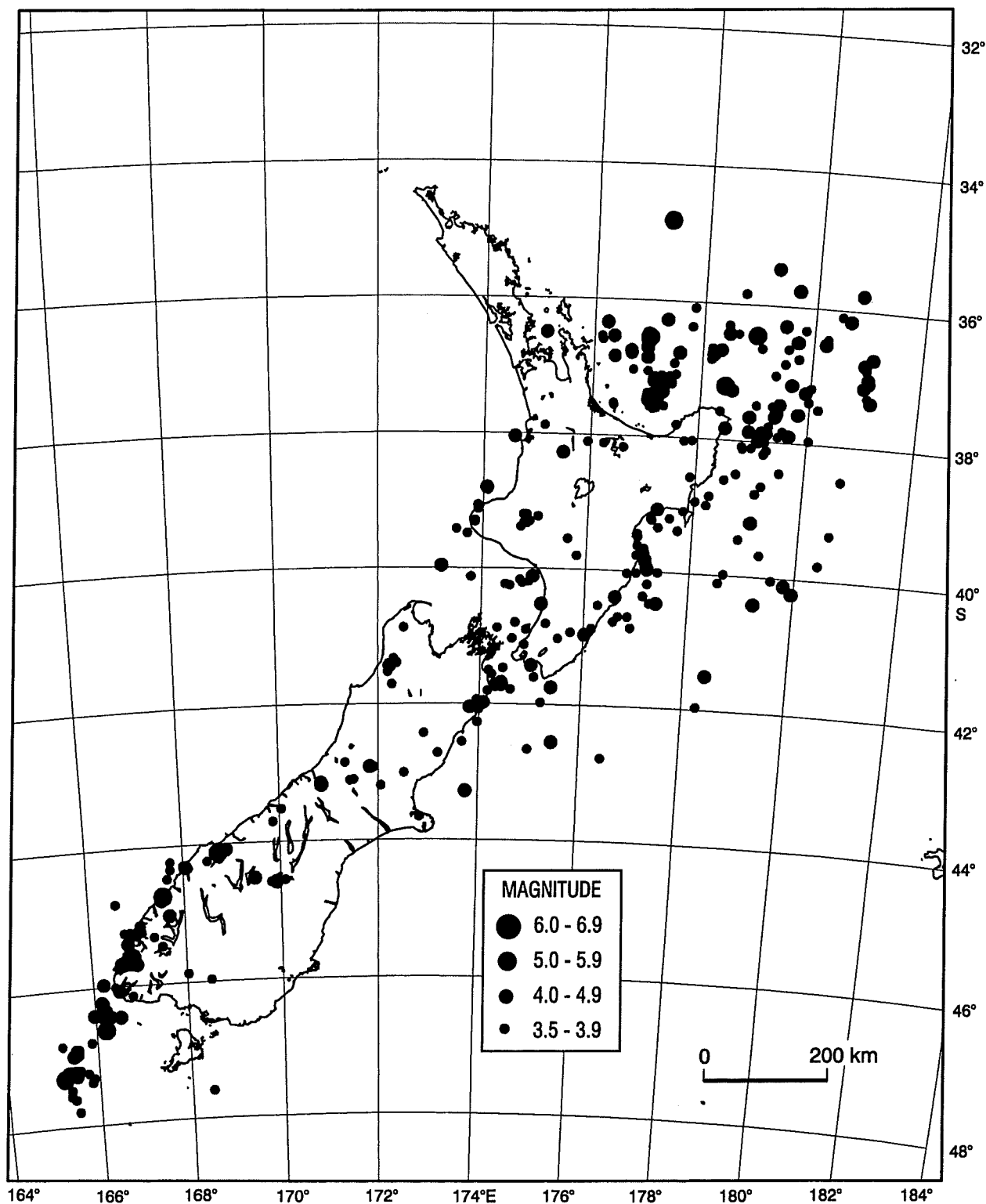
different ways. It is also possible to search for earthquakes likely to have produced intensities above a specified minimum at a particular place and to list reports of intensities above a given minimum intensities that have originated in a chosen reporting locality. Because of the dangers inherent in the use of incompletely assessed data, it is recommended that users should discuss their search criteria with the Observatory.

Waveforms of earthquakes recorded by digital seismographs are also archived and accessible for further processing by CUSP or other compatible software.

EPICENTRE MAPS 1999

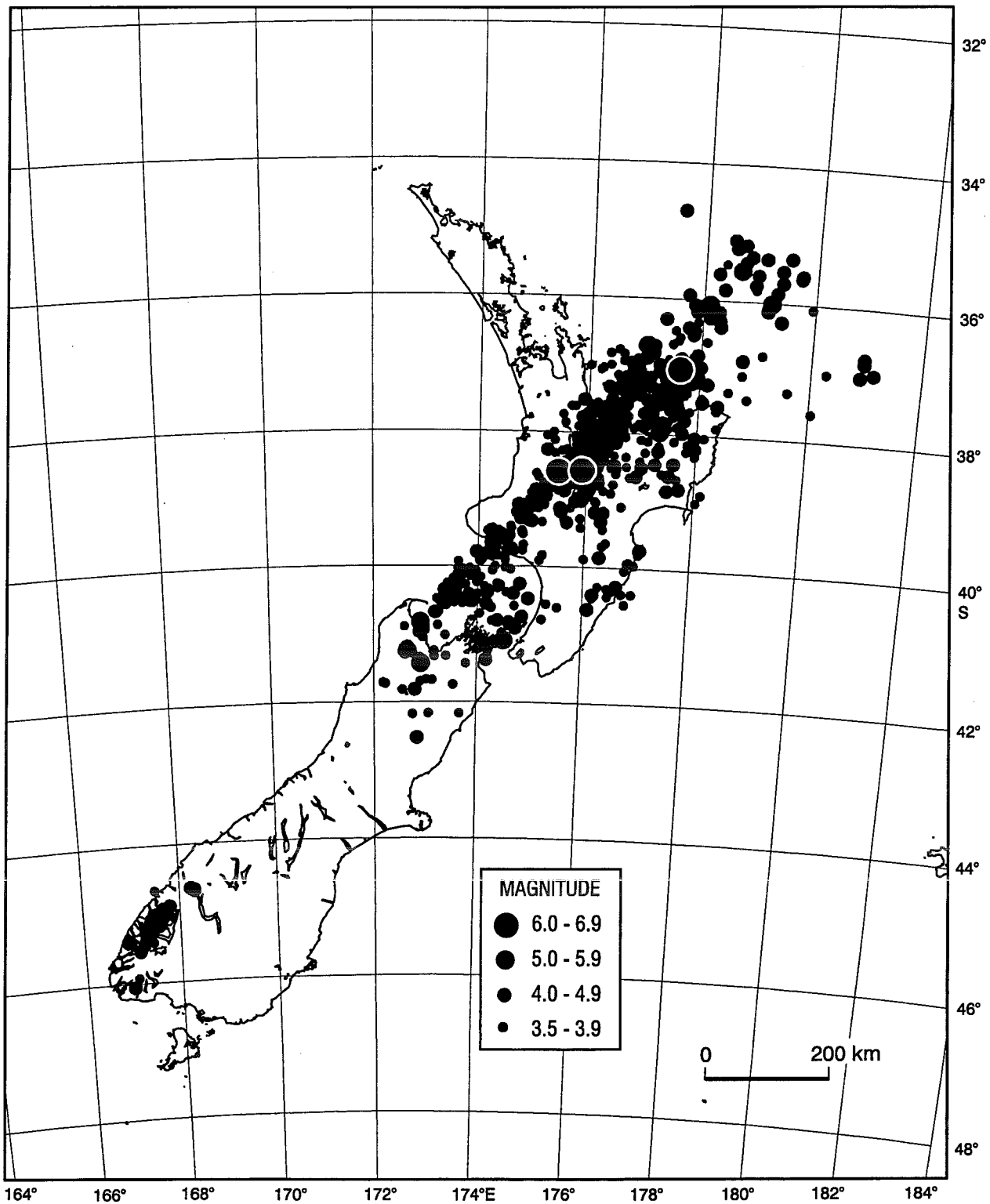
	Page
Regional Shallow Earthquakes	153
Regional Deep Earthquakes	154
Wellington Area Epicentres	155
Wellington Hypocentre Depths	156

REGIONAL SHALLOW EARTHQUAKES



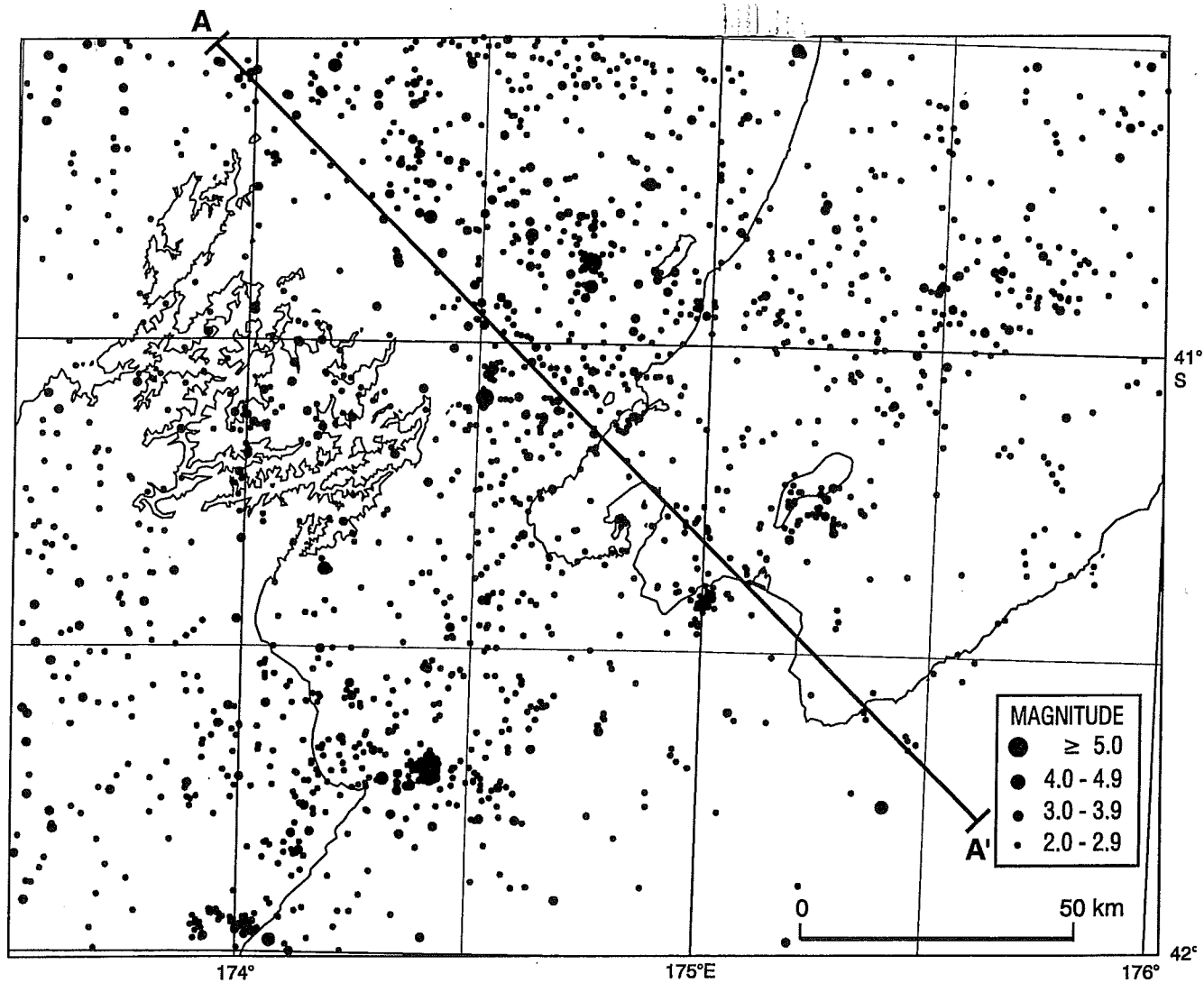
Epicentres of all earthquakes of $M_L \geq 3.5$ with focal depths less than 40 km. When several shocks have the same epicentre, the largest is shown.

REGIONAL DEEP EARTHQUAKES



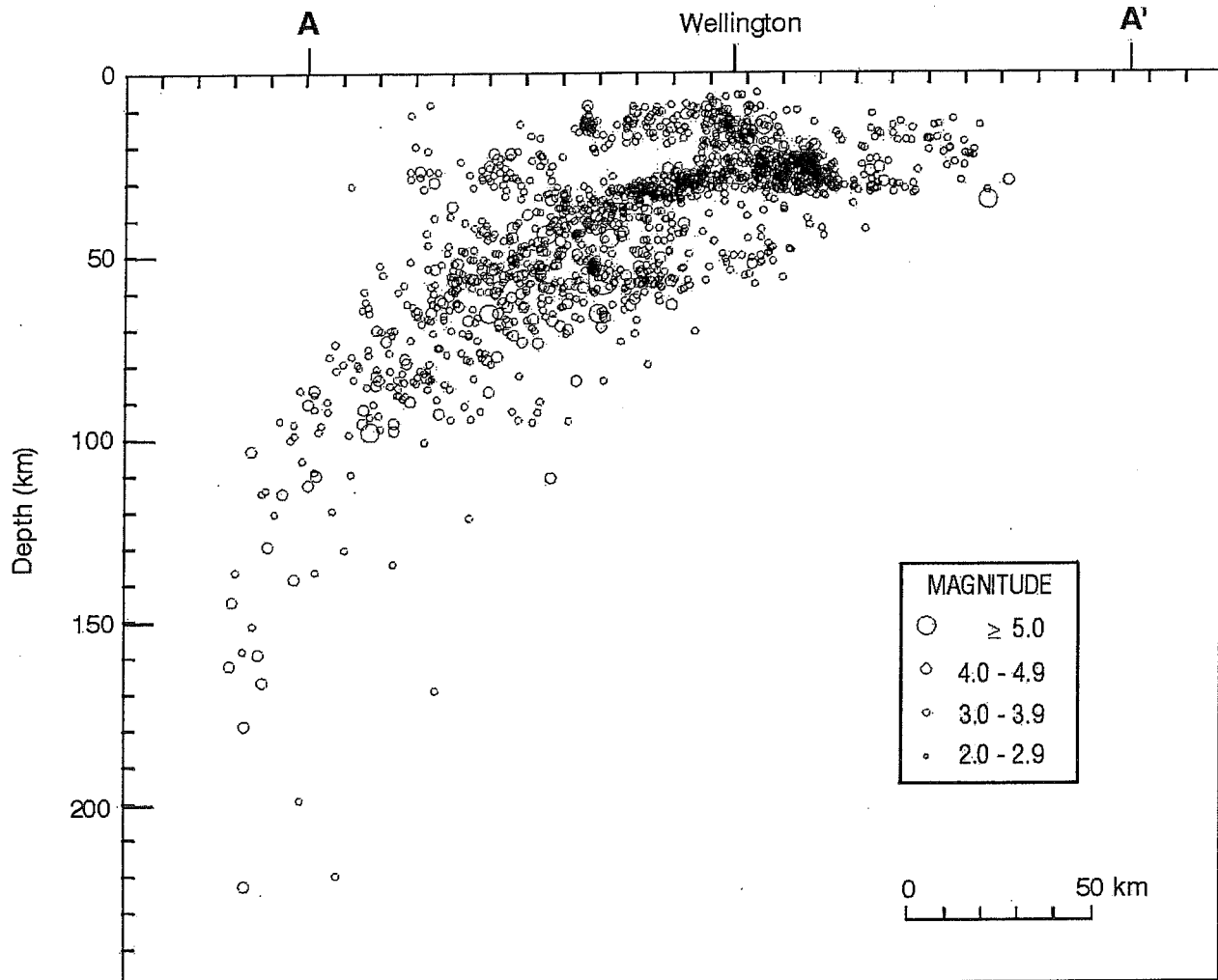
Epicentres of all earthquakes of $M_L \geq 3.5$ with focal depths of 40 km or more. When several shocks have the same epicentre, the largest is shown.

WELLINGTON AREA EPICENTRES



Epicentres of all earthquakes of $M_L \geq 2.0$ in the Wellington area. The distribution of these earthquakes in depth is shown on the next page, where the hypocentres have been projected onto a vertical plane passing through the line A-A'.

WELLINGTON HYPOCENTRE DEPTHS



In this diagram, the hypocentres of all shocks mapped on the previous page have been projected onto a vertical plane passing through the line A-A', which is roughly normal to the Pacific/Australian plate boundary.