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D.E. Maunder (Ed.)

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STAFF IN 1991

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Seismologists urgently requiring unpublished New Zealand data may apply to the Observatory.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

During 1991, the Seismological Observatory was part of the Department of Scientific and Industrial Research (DSIR). On 1 July 1992 the DSIR ceased to exist and the Seismological Observatory is now part of the Institute of Geological & Nuclear Sciences Limited. Observatory procedures have remained unchanged.

D.E. Maunder
Editor

NEW ZEALAND SEISMICITY IN 1991

Shallow earthquakes were dominated by the Hawk's Crag sequence, near Westport, in January and February. Events 91/776 (M_L 6.1) and 91/977 (M_L 6.3) occurred on January 28, within five hours of each other. They were followed by a modest aftershock sequence. Intensities reached MM7 in the Westport district on January 28. Both large events that day were felt as far afield as Wellington and Christchurch. A field survey with portable equipment was mounted, and some precise aftershock locations obtained, but the sequence was short-lived. There was however one event of M_L 6.0 (91/2556) on February 15, and one of M_L 5.1 (91/3088) on February 24.

On November 20 Event 91/11561 occurred (M_L 6.3), and reportedly caused MM6 at Waihi in the western Bay of Plenty, although this report is unconfirmed. The epicentre was well offshore, and intensities at shorter distances were generally less.

Four other shallow earthquakes reached or exceeded M_L 5.0 during the year: 91/10088 on October 31 (M_L 5.0) occurred 30 km east of Ruatoria on the East Coast of the North Island, and caused MM5 there; 91/10883 on November 9 (M_L 5.5) and 91/11561 on November 29 (M_L 5.6) were felt throughout much of Fiordland, but reported intensities did not exceed MM4; 91/11991 on December 12 (M_L 5.2) was 90 km north-east of East Cape and was not felt on land.

There were 20 deep earthquakes exceeding M_L 5.0. The largest was 91/11187 (M_L 6.4) on November 16, which was 264 km deep, 50 km north-west of White Island and was felt at low intensities as far south as Wellington. Event 91/8340 (M_L 6.3) on September 8 was 87 km deep beneath the coast, just west of Marton. It was felt at intensity MM7 in Wanganui, clearly a microzoning effect due to soft soil there because intensities nearer the epicentre did not exceed MM5. Event 91/6893 (M_L 6.2) on July 12 was 70 km deep, 20 km southeast of Turangi. The maximum intensity was MM 5, and it was felt as far south as Christchurch.

Late October saw two events of M_L 6.0: 91/9550 on October 23, 50 km due north of White Island and 217 km deep, and 91/9604 on October 25, 209 km deep beneath Rotorua. They were both felt as far south as Wellington, at low intensities. Event 91/2300 on February 9 (M_L 5.4) was located 111 km deep, just to the north of D'Urville Island in northern Cook Strait. It was felt from Taranaki to Wellington. Event 91/6029 on June 9 (M_L 5.9) was 106 km deep, 30 km south of Patea in South Taranaki. It was felt at intensity MM5 in New Plymouth, north to Auckland and south as far as Greymouth.

An extremely deep earthquake occurred on September 14. Event 91/8508 (M_L 5.4) was 585 km deep, beneath northern Taranaki. Several other events at about this depth are known (e.g. Adams (1963), Adams & Ferris (1976)).

References

Adams, R.D. 1963. Source characteristics of some deep New Zealand earthquakes. *N.Z.J. Geol. Geophys. 6*, 209-220.

Adams, R.D. & Ferris, B.G. 1976. A further earthquake at exceptional depth beneath New Zealand. *N.Z.J. Geol. Geophys. 19*, 269-273.

W.D. Smith.

INSTRUMENTATION IN 1991

The New Zealand digital network was further increased in 1991 with the installation of six new digital stations. These improved the coverage in the South Island and the north of the North Island. The change from visual records, needing to be changed daily, to digital tapes which run for a week has meant that it has been possible to install instruments at seismically quieter sites. In addition to the national network there are 5 regional networks; Rotorua, Taupo, Hawkes Bay, Wellington and Clyde. The Wellington network was expanded, with two new stations to the south and one in the east. Three stations of the Taupo network ceased operating during the year. Most of the analogue stations of the New Zealand network had been decommissioned by 1991. Those left are used to add data to a few poorly determined epicentres and as displays in museums or other public areas.

Continuous recording by WWSSN and SRO seismographs for the registration of teleseisms and the use of pen-recorders at some sites for immediate inspection of large events continued.

Two types of event-recording system have been developed by the Observatory. The older system, SNARE (Seismic Network Automatic Recording Equipment) is a 16-channel system which relies on a combination of spectral analysis of seismometer outputs and coincidence detection to trigger recording by the whole network. EARSS (Automatic Equipment for the Recording of Seismograph Signals) was developed from SNARE as a single station system which can operate unattended for at least a week. Because it is a single station system it relies solely on a frequency-spectrum algorithm for event detection. An improvement on SNARE is the introduction of automatic magnification adjustment ("gain-ranging") to allow faithful recording of large-amplitude wave-forms. A 16-channel version of EARSS is under development and will eventually supersede SNARE. Not included in the current re-equipment programme are instruments owned by organisations other than DSIR. In 1991, organisations cooperating in continuous or ad hoc seismic monitoring were: the Universities of Auckland, Wellington and Otago, and the Electricity Corporation of New Zealand.

CHANGES TO THE NETWORKS IN 1991

Six new digital stations, two in the North Island and four in the South Island were added to the New Zealand network during 1991.

Single component L4-C instruments were installed at Berwen (BWZ) and Ngariki (NRZ) in February. The seismometer at Ngariki is down a 52m borehole. During March, single component stations were installed in the South Island at Erewhon (EWZ) and in the north of the North Island at Omahuta (OUZ). Deep Cove (DCZ), a 3-component station, was installed in the south-west of the South Island in May. This station improved the detection of earthquakes in the Fiordland area. Lastly, a 3-component station at Tuapeka (TUZ) began operating in July. All these stations have either L4-C (single component) or L4-3D (3 component) seismometers and EARSS digital recorders.

The 3 component L4-3D instruments were replaced, in March at Waipu Caves (WCZ) and at Stewart Island (SIZ) in May by single component L4-C seismometers.

The Wellington network was extended to the south and east during the year. Mt Adams (AMW) in the Wairarapa began operating during February. Blackbirch (BBW) and Glenfield (GFW), in Marlborough, were installed in December.

Three stations of the Taupo network were closed during 1991. Hingarae (HITZ), Rangitukua (RATZ) and Tuhingamata (TUTZ) ceased operation in July. The seismometer at Hinemaiaia (HATZ) failed during the latter part of the year and was not replaced.

At Wellington (WEL) a Kinemetrics force-balance accelerometer was installed in late 1990, with digital recording. The WWSSN Benioff seismometers which had been recorded digitally, continued to record in analogue form until May 1992.

During July the polarity of the instruments at Denniston North (DSZ) and Lake Moeraki (LMZ) was reversed.

No records were received from Chatham Islands (CIZ) for the first 4 weeks of January or for most of March, April and May.

Since August records from Dunedin (DNZ), operated by the University of Otago, are no longer being sent to the Observatory.

INDEX OF STATION CODES AND POSITIONS

The growth in numbers of seismograph stations in recent years has been so great 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.

CODE	NAME	LATITUDE d	m	s		LONGITUDE d	m	s		ALT m
					SEISMIC RESEARCH OBSERVATORY					
SNZO	South Karori	41	18	37	S	174	42	17	E	-10
					STANDARD NETWORK					
AUC	Auckland	36	51	36	S	174	46	41	E	79
BCZ	Braida Crags	46	00	24	S	167	50	23	E	120
BSZ	Bushy Park	39	47	55	S	174	55	52	E	150
BWZ	Berwen	44	31	54	S	169	52	59	E	500
CHR	Christchurch	43	31	58	S	172	37	36	E	8
CIZ	Chatham Islands	43	57	18	S	176	33	56	W	45
CNZ	Chateau	39	12	00	S	175	32	51	E	1116
DCZ	Deep Cove	45	28	42	S	167	09	15	E	20
DNZ	Dunedin (U. of Otago)	45	51	59	S	170	30	54	E	15
DRZ	Dome Shelter	39	16	35	S	175	33	49	E	2600
DSZ	Denniston North	41	44	49	S	171	48	09	E	630
EWZ	Erewhon	43	30	42	S	170	51	09	E	650
HBZ	Hicks Bay	37	35	57	S	178	18	05	E	0
KHZ	Kahutara	42	25	05	S	173	32	25	E	70
KUZ	Kuaotunu	36	44	50	S	175	43	12	E	40
LMZ	Lake Moeraki	43	43	06	S	169	16	14	E	10
LTZ	Lake Taylor	42	46	58	S	172	16	08	E	640
MGZ	Maungaku	39	00	07	S	175	32	20	E	806
MNG	Mangahao	40	37	07	S	175	28	55	E	396
MOZ	Mahoenui	38	30	21	S	174	48	11	E	160
MQZ	McQueen's Valley	43	42	28	S	172	39	08	E	60
MSZ	Milford Sound	44	40	14	S	167	55	01	E	38
NEZ	North Egmont	39	16	22	S	174	05	46	E	920
NGZ	Ngauruhoe	39	10	37	S	175	36	04	E	806
NOZ	North Gisborne	38	37	05	S	178	02	12	E	60
NRZ	Ngariki	39	20	15	S	173	55	59	E	250
OBZ	Oban	46	54	18	S	168	06	55	E	26
ODZ	Otahua Downs	45	02	43	S	170	38	40	E	270
OUZ	Omahuta	35	13	17	S	173	35	46	E	40
PATZ	Paeroa	38	22	53	S	176	15	30	E	940

PGZ	Pongaroa	40	37	08	S	176	16	25	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
RAR	Rarotonga	21	12	45	S	159	46	24	W	28
RTY	Rotoiti	41	48	27	S	172	50	35	E	635
RUZ	Raurimu	39	07	37	S	175	20	16	E	450
SBA	Scott Base	77	51	01	S	166	45	22	E	38
SIZ	Stewart Island	46	52	30	S	168	07	59	E	60
TAZ	Tarawera	38	13	59	S	176	30	28	E	1037
THZ	Top House	41	45	50	S	172	54	13	E	760
TMP	Tomahawk Gully	44	18	54	S	170	07	12	E	720
TUZ	Tuapeka	45	57	22	S	169	37	56	E	110
URZ	Urewera	38	15	37	S	177	06	37	E	100
UTU	Utuhina	38	10	39	S	176	11	32	E	410
WCZ	Waipu Caves	35	56	28	S	174	20	40	E	140
WEL	Wellington	41	17	10	S	174	46	06	E	122
WIZ	White Island	37	31	42	S	177	11	21	E	40
WLZ	Whitehall	37	52	12	S	175	35	46	E	190
WVZ	Waitaha Valley	43	04	35	S	170	44	10	E	75

CLYDE NETWORK (Electricorp)

CFC	Cairnmuir Flats	45	11	03	S	169	17	32	E	576
CMCZ	Cairnmuir Mts	45	08	57	S	169	16	30	E	1039
LRCZ	Leaning Rock	45	03	55	S	169	20	46	E	1533
LSCZ	Lilico Spur	45	06	59	S	169	22	09	E	759
MHZ	Mt Horn	45	03	44	S	169	16	46	E	1127
MMCZ	Mount Michael	45	00	13	S	169	07	53	E	1163
MSCZ	Moutere Station	45	05	35	S	169	24	42	E	701
SBCZ	Sonora Basin	45	05	32	S	169	18	40	E	801
TBC	Trig B	45	08	47	S	169	19	49	E	619
TLC	Trig L	45	11	29	S	169	04	17	E	1393

HAWKES BAY NETWORK

HNH	Havelock North	39	39	55	S	176	52	52	E	10
MAHZ	Mahia	39	11	18	S	177	52	51	E	336
MOH	Mohaka	39	07	57	S	177	08	52	E	245
PAHZ	Panekirikiri	38	51	33	S	177	03	15	E	563
TAHZ	Taraponui	39	08	09	S	176	44	25	E	1297
TEHZ	Te Atua	39	59	22	S	176	48	40	E	407
TTH	Taradale Trig	39	32	29	S	176	49	34	E	120
WAHZ	Wakarara	39	41	57	S	176	21	19	E	657
WHH	Whakatau	38	53	04	S	176	29	42	E	921

TAUPO NETWORK

HATZ	Hinemaiaia	38	53	32	S	176	05	31	E	492
HITZ	Hingarae	38	42	31	S	175	45	59	E	458
KETZ	Ketetahi	39	06	02	S	175	39	06	E	1208
OH1	Ohaaki 1	38	32	41	S	176	18	27	E	295
OH2	Ohaaki 2	38	30	42	S	176	18	10	E	300
OH3	Ohaaki 3	38	31	59	S	176	19	34	E	300
OH4	Ohaaki 4	38	32	41	S	176	19	09	E	300
RATZ	Rangitukua	38	52	07	S	175	46	16	E	649
TUTZ	Tuhingamata	38	42	42	S	175	59	28	E	614

WELLINGTON NETWORK

AMW	Mt Adams	41	18	34	S	175	45	39	E	400
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
TCW	Tory Channel	41	12	48	S	174	16	33	E	150
WDW	Wainui Dam	41	16	07	S	174	59	37	E	130
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. Pendulum and galvanometer periods, To and Tg, are given in seconds. Damping when not listed, may be assumed to be critical. Magnifications listed are for the period of maximum response, except for World-Wide Standard Station instruments, where the magnifications are given at the conventional periods of 1.0 and 15 seconds. Response curves for Willmore II, Benioff, Wood-Anderson and Mark Products L4-C seismographs and an EARSS system, are shown at the end of this section. WWSS pen recorders mimic the response of galvanometers with the Tg shown.

	Instrument	Compt.	To	Tg	Damping	Magnification
AUC	AUCKLAND					
	Foundation: Volcanic beds on Tertiary sandstone and mudstone.					
	Willmore II (with Kinemetrics VR-1 pen-recorder).					
		Z	1.0			3 800 at 0.25s
BCZ	BRAIDA CRAGS					
	Foundation: Limestone.					
	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 (from February)					
	Foundation: Greywacke.					
	Mark Products L4-C (with EARSS digital gain-ranging recorder)					
		Z	1.0			
CHR	CHRISTCHURCH					
	Willmore II (with Kinemetrics VR-1 pen-recorder).					
		Z	1.0			
CIZ	CHATHAM ISLANDS					
	Foundation: Clay over basalt.					
	Willmore II (with Kinemetrics VR-1 pen-recorder).					
		Z	1.0			4 440 at 0.20s
CNZ	CHATEAU					
	Foundation: Volcanic ash and Lava.					
	Mark Products L4-C (telemetered to Kinemetrics VR-1 pen-recorder and to EARSS digital recorder).					
		Z	1.0			Variable
DCZ	DEEP COVE (from May)					
	Foundation: Granite.					
	Mark Products L4-3D (with EARSS digital gain-ranging recorder)					
		ZNE	1.0			

	Instrument	Compt.	To	Tg	Damping	Magnification
DNZ	DUNEDIN (University of Otago) Foundation: Basaltic lava flow. Willmore III with Kinemetrics pen-recorder.					
		Z	1.0			Variable
		N	1.0			Variable
		E	1.0			Variable
DRZ	DOME SHELTER (Department of Conservation) Foundation: Recent andesitic ash. Mark Products L4-C (High and low magnifications, telemetered to Kinemetrics VR-1 pen-recorders and high magnification to EARSS digital recorder).					
		Z	1.0			Variable
DSZ	DENNISTON NORTH Foundation: Upper Precambrian greywacke Mark Products L4-C (with EARSS digital gain-ranging recorder)					
		Z	1.0			
EWZ	EREWHON (from March) Foundation: Triassic greywacke. Mark Products L4-C (with EARSS digital gain-ranging recorder)					
		Z	1.0			
HBZ	HICKS BAY Foundation: Consolidated conglomerate. Mark Products L4-C in borehole (with Kinemetrics VR-1 pen-recorder and EARSS digital recorder).					
		Z	1.0			67 500 at 0.10s
KHZ	KAHUTARA Foundation: Jurassic greywacke Mark Products L4-3D (with EARSS digital gain-ranging recorder)					
		ZNE	1.0			
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			
MGZ	MAUNGAKU (Department of Conservation) Foundation: Quaternary andesite. Mark Products L4-C (telemetered to Kinemetrics VR-1 pen-recorder and to EARSS digital recorder).					
		Z	1.0			Variable

	Instrument	Compt.	To	Tg	Damping	Magnification
MNG	MANGAHAO 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. Mark Products L4-3D (with EARSS digital gain-ranging recorder).	ZNE	1.0			
MSZ	MILFORD SOUND Foundation: Gneiss. Mark Products L4-3D (with EARSS digital gain-ranging recorder)	ZNE	1.0			
NEZ	NORTH EGMONT Foundation: Volcanic ash. Mark Products L4-C (with Kinemetrics VR-1 pen-recorder).	Z	1.0			25 100 at 0.10s
NGZ	NGAURUHOE Foundation: Recent volcanic flows. Mark Products L4-C (telemetered to Kinemetrics VR-1 pen-recorder and to EARSS digital recorder).	Z	1.0			Variable
NOZ	NORTH GISBORNE Foundation: Upper Miocene Siltstone. Mark Products L4-C (with EARSS digital gain-ranging recorder).	Z	1.0			
NRZ	NGARIKI (from February) Foundation: Andesite. Mark Products L4-C (with EARSS digital gain-ranging recorder).	Z	1.0			
OBZ	OBAN Foundation: Weathered granite. Mark Products L4-C (with Kinemetrics VR-1 pen-recorder).	Z	1.0			12 000 at 1.0s
ODZ	OTAHUA DOWNS Foundation: Greywacke. Mark Products L4-3D (with EARSS digital gain-ranging recorder).	ZNE	1.0			
OUZ	OMAHUTA (from March) Foundation: Greywacke. Mark Products L4-C (with EARSS digital gain-ranging recorder)	Z	1.0			

	Instrument	Compt.	To	Tg	Damping	Magnification
PATZ	PAEROA					
	Foundation: Ignimbrite					
	Mark Products L4-C (telemetered to EARSS digital recorder)					
		Z	1.0			
PGZ	PONGAROA					
	Foundation: Tertiary Sediments					
	Mark Products L4-C in borehole (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 Kinemetrics VR-1 pen-recorder).					
		Z	1.0			4 800 at 0.25s
RAR	RAROTONGA (World-Wide Standard Station)					
	Foundation: Basalt.					
	Benioff	ZNE	1.0			6 250 at 1.0s
	Signal also recorded by EARSS digital event recorder tuned to trigger on T-waves.					
	Press-Ewing	ZNE	15			375 at 15s
RTY	ROTOITI					
	Foundation: Glacial gravels.					
	Mark Products L4-C (with Kinemetrics VR-1 pen-recorder).					
		Z	1.0			Uncertain
RUZ	RAURIMU					
	Foundation: Limestone.					
	Mark Products L4-3D (with EARSS digital gain-ranging recorder).					
		ZNE	1.0			
SBA	SCOTT BASE (World-Wide Standard Station)					
	Foundation: Frozen basaltic debris resting on lava flows.					
	Benioff	ZNE	1.0			12 500-50 000 at 1.0s according to season
	Press-Ewing	ZNE	15			750 at 15s
SIZ	STEWART ISLAND					
	Foundation: Granite					
	Mark Products L4-3D until May (with EARSS digital gain-ranging recorder).					
		ZNE	1.0			
	Mark Products L4-C from May (with EARSS digital gain-ranging recorder).					
		Z	1.0			

	Instrument	Compt.	To	Tg	Damping	Magnification
TAZ	TARAWERA					
	Foundation: Rhyolite lava.					
	Mark Products L4-C (telemetered to Kinemetrics VR-1 pen-recorder and to EARSS digital recorder).					
		Z	1.0			Variable
THZ	TOPHOUSE					
	Foundation: Permian Greywacke.					
	Willmore II (with EARSS digital gain-ranging recorder).					
		ZNE	1.0			
TMP	TOMAHAWK GULLY					
	Foundation: Mesozoic Greywacke					
	Mark Products L4-C (telemetered to separate Kinemetrics VR-1 pen-recorders).					
		Z	1.0			750 000 at 0.20s
		N	1.0			100 000 at 0.20s
TUZ	TUAPEKA (from July)					
	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			
UTU	UTUHINA					
	Foundation: Ignimbrite.					
	Mark Products L4-C (telemetered to Kinemetrics VR-1 pen-recorder and to EARSS digital recorder).					
		Z	1.0			Variable
WCZ	WAIPU CAVES					
	Foundation: Greywacke.					
	Mark Products L4-3D until March (with EARSS digital gain-ranging recorder).					
		ZNE	1.0			
	Mark Products L4-C from March (with EARSS digital gain-ranging recorder).					
		Z	1.0			
WEL	WELLINGTON (World-Wide Standard Station)					
	Foundation: Greywacke.					
	Benioff	Z	1.0			6 250 at 1.0s
	Press-Ewing	ZNE	15			375 at 15s
	Wood-Anderson	NE	0.80		crit.	1 400 at 0.8s
	Imamura	Z	1		5:1	2
		NE	4		5:1	2
	Kinemetrics force-balance accelerometer (with EARSS digital gain-ranging recorder).					
		ZNE	1.0			
WIZ	WHITE ISLAND					
	Foundation: Recent andesite.					
	Mark Products L4-C (Telemetered to Kinemetrics VR-1 pen-recorder).					
		Z	1.0			Variable

	Instrument	Compt.	To	Tg	Damping	Magnification
WLZ	WHITEHALL					
	Foundation: Jurassic Greywacke.					
	Willmore II	Z	1.0			
	Willmore I	NE	1.0			
	(with EARSS digital gain-ranging recorder).					
WVZ	WAITAHA VALLEY					
	Foundation: Granite.					
	Mark Products L4-3D (with EARSS digital gain-ranging recorder).					
		ZNE	1.0			

SEISMIC RESEARCH OBSERVATORY

This station is sponsored by the United States Geological Survey. A three-component seismometer sealed in a gas-filled capsule is located in a borehole 165 mm in diameter and about 100 m deep, at a quiet site several kilometres from the Observatory. The ground surface there is 88 m above, and the seismometer 10 m below, sea level. Both digital and analogue recordings are made from the three long-period and the vertical component short-period outputs. Paper analogue records are archived by the Observatory, but the digital tape records of detected events are held by the USGS. The recorder is at the observatory site in Kelburn, and the signals are transmitted to it by landline.

Code	Station	Component	Magnification
SNZO	South Karori	ZNE Z	5 000 at 25s 6 250 at 1.0s
The lithological foundation is Jurassic-Permian Greywacke.			

CLYDE NETWORK

A network of seismometers has been installed near Clyde to collect data on the prevailing level of microseismicity in the area of the dam now being constructed on the Clutha River. The network operated by the Electricity Corporation of New Zealand, is used to monitor any changes in local seismicity associated with the use of the lake for the generation of electricity. The system records all detected seismic events in digital form, on magnetic tape. Tapes are interpreted and retained at the Observatory where they are available for other seismological use. Clyde network stations are linked by radio telemetry to a multi-channel SNARE (Seismic Network Automatic Recording Equipment), which both detects and records seismic events, at Clyde. The seismometers are Mark Products L4-C or L4-3D instruments with a natural period of one second and the lithological foundation at all stations is Schist. Recorded waveforms can be displayed on a monitor screen at any required scale.

Code	Station	Component
CFC	Cairnmuir Flats	Z
CMCZ	Cairnmuir Mountains	ZNE
LRCZ	Leaning Rock	Z
LSCZ	Lilico Spur	Z
MMCZ	Mount Michael	Z
MHZ	Mount Horn	Z
MSCZ	Moutere Station	Z
SBCZ	Sonora Basin	Z
TBC	Trig B (formerly Clyde)	Z
TLC	Trig L	Z

HAWKES BAY NETWORK

The Hawke's Bay network has been installed to monitor seismicity in an area which has not only some potential for hydro-electric power generation, but also a history of severe earthquakes. Havelock North produces high- and low-gain records from a three-component seismometer. The network records on a SNARE System in Havelock North.

Code	Station	Component(s)	Foundation
HNH	Havelock North	ZNE (High gain) ZNE (Low gain)	Greywacke gravel " "
MAHZ	Mahia	Z	Mudstone
MOH	Mohaka	Z	Dune Sand
PAHZ	Panekirikiri	Z	Pumice Tuff
TAHZ	Taraponui	Z	Limestone
TEHZ	Te Atua	Z	Limestone
TTH	Taradale Trig	Z	Calcareous mudstone
WAHZ	Wakarara	Z	Greywacke
WHH	Whakatau	Z	Ignimbrite

TAUPO NETWORK

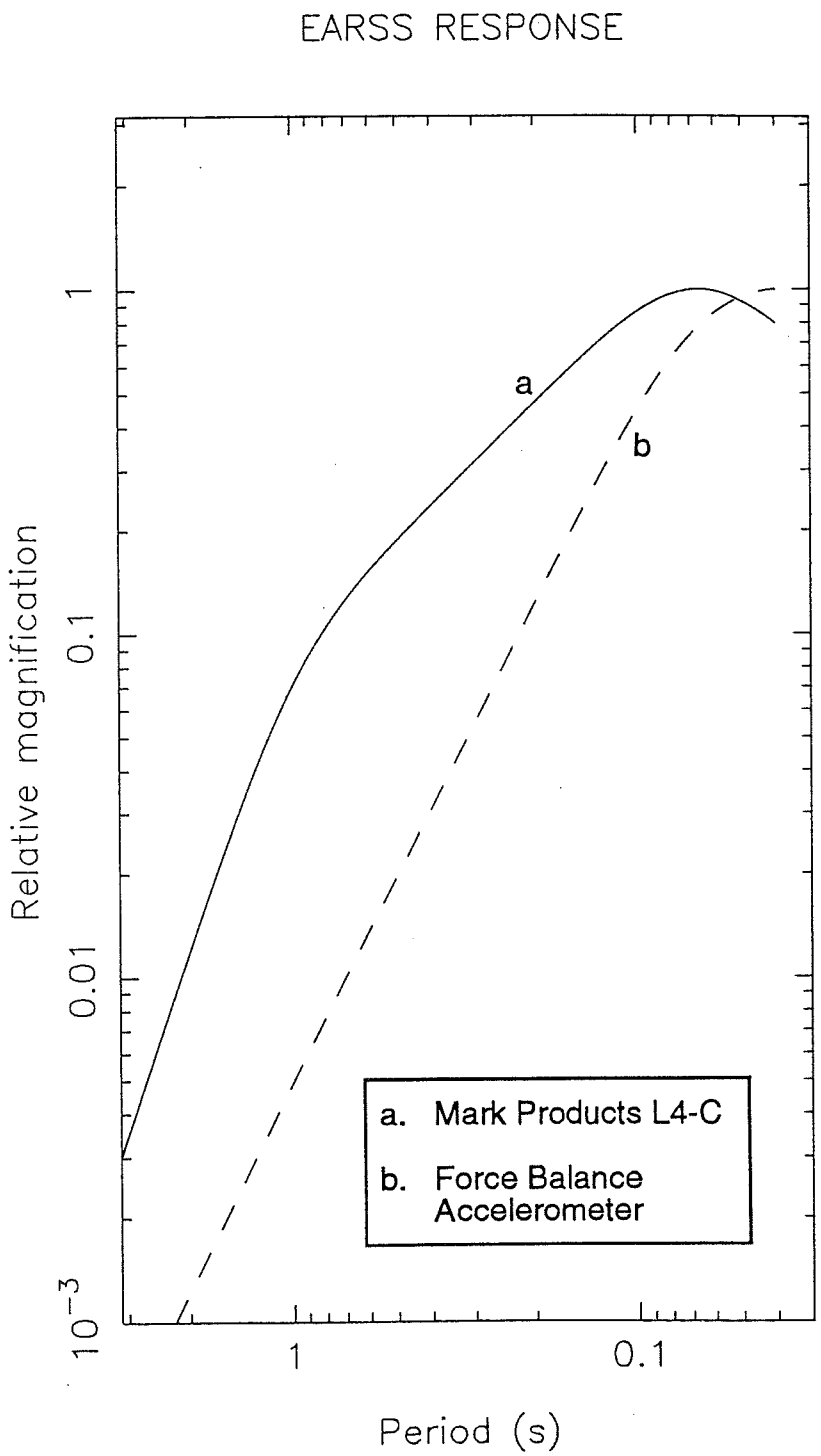
This network is intended to monitor volcanic and geothermal activity in the Taupo Volcanic Region. Although relatively quiet in historic times, (the 1886 Tarawera eruption notwithstanding), the geological record shows that the Region has been the scene of larger-scale activity at a number of times in the more distant past. The network records on a SNARE system at Wairakei. Station codes OH1 - OH4 are not internationally recognised.

Code	Station	Component	Foundation
HATZ	Hinemaiaia	Z	Ignimbrite
HITZ	Hingarae	Z	Ignimbrite
KETZ	Ketatahi	Z	Andesite
OH1	Ohaaki 1	Z	Pumice
OH2	Ohaaki 2	Z	Pumice
OH3	Ohaaki 3	Z	Pumice
OH4	Ohaaki 4	Z	Pumice
RATZ	Rangitukua	Z	Rhyolite
TUTZ	Tuhingamata	Z	Rhyolite

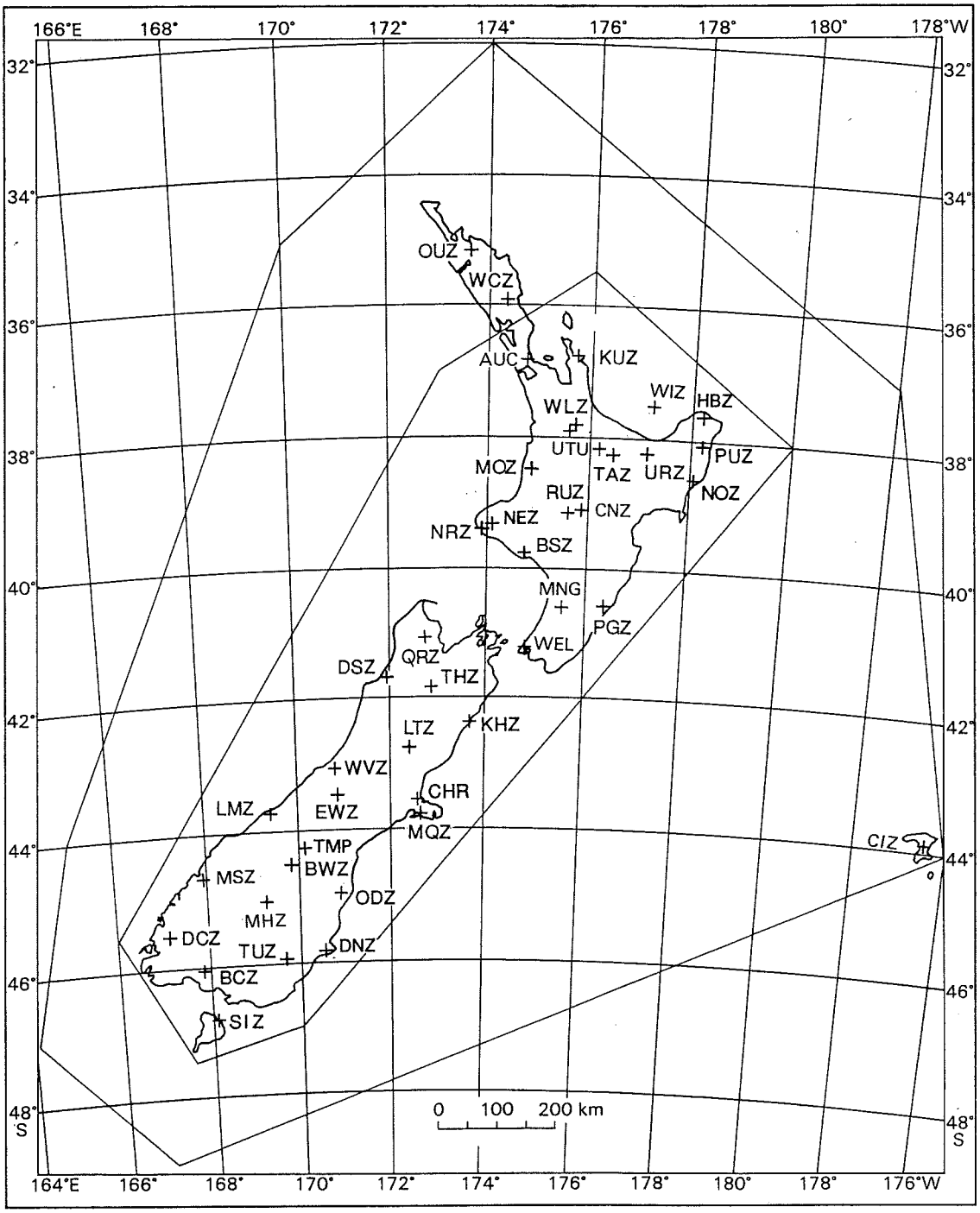
WELLINGTON NETWORK

The stations of the Wellington network are linked by radio or land-line to a common SNARE event-detecting and recording system at the Observatory at Kelburn. The instrument at WEL is a Kinemetrics 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. SNARE records are made on magnetic tape and may be displayed on a monitor screen at any required magnification. The MRW vertical component is also transmitted to a heated stylus recorder. The lithological foundation at most stations is Jurassic-Permian Greywacke. The exceptions are BBW (schist), CCW (Miocene sandstone) and DIW (Granodiorite).

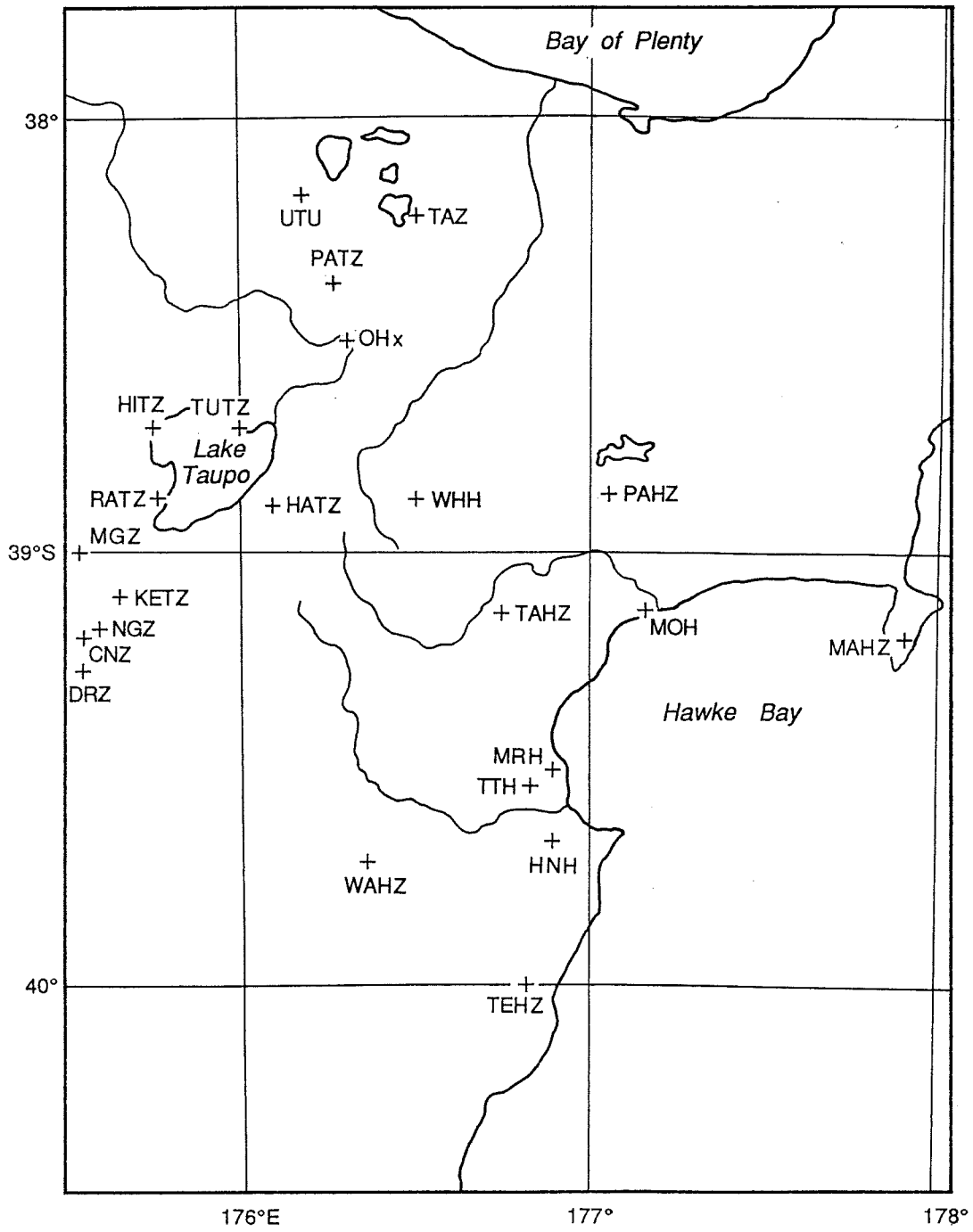
Code	Station	Component(s)
AMW	Mt Adams	Z
BBW	Blackbirch	Z
BHW	Baring Head	Z
BLW	Big Hill	Z
CAW	Cannon Point	Z
CCW	Cape Campbell	Z
DIW	D'Urville Island	Z
GFW	Glenfield	Z
KIW	Kapiti Island	Z
MOW	Moikau	Z
MRW	Makara Radio	ZNE
MTW	Mount Morrison	Z
TCW	Tory Channel	Z
WDW	Wainui Dam	Z
WEL	Wellington	ZNE



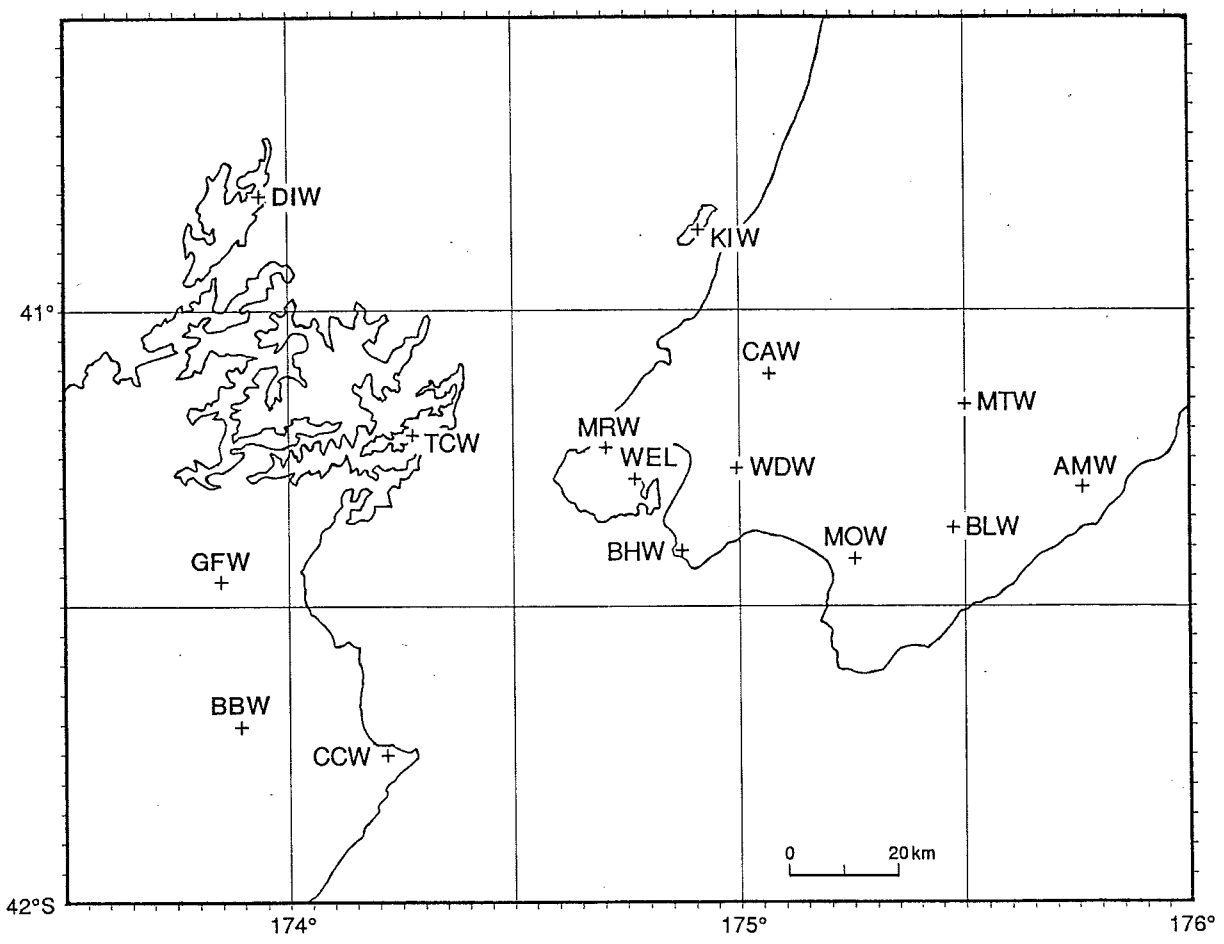
Period response curve of EARSS recorders.



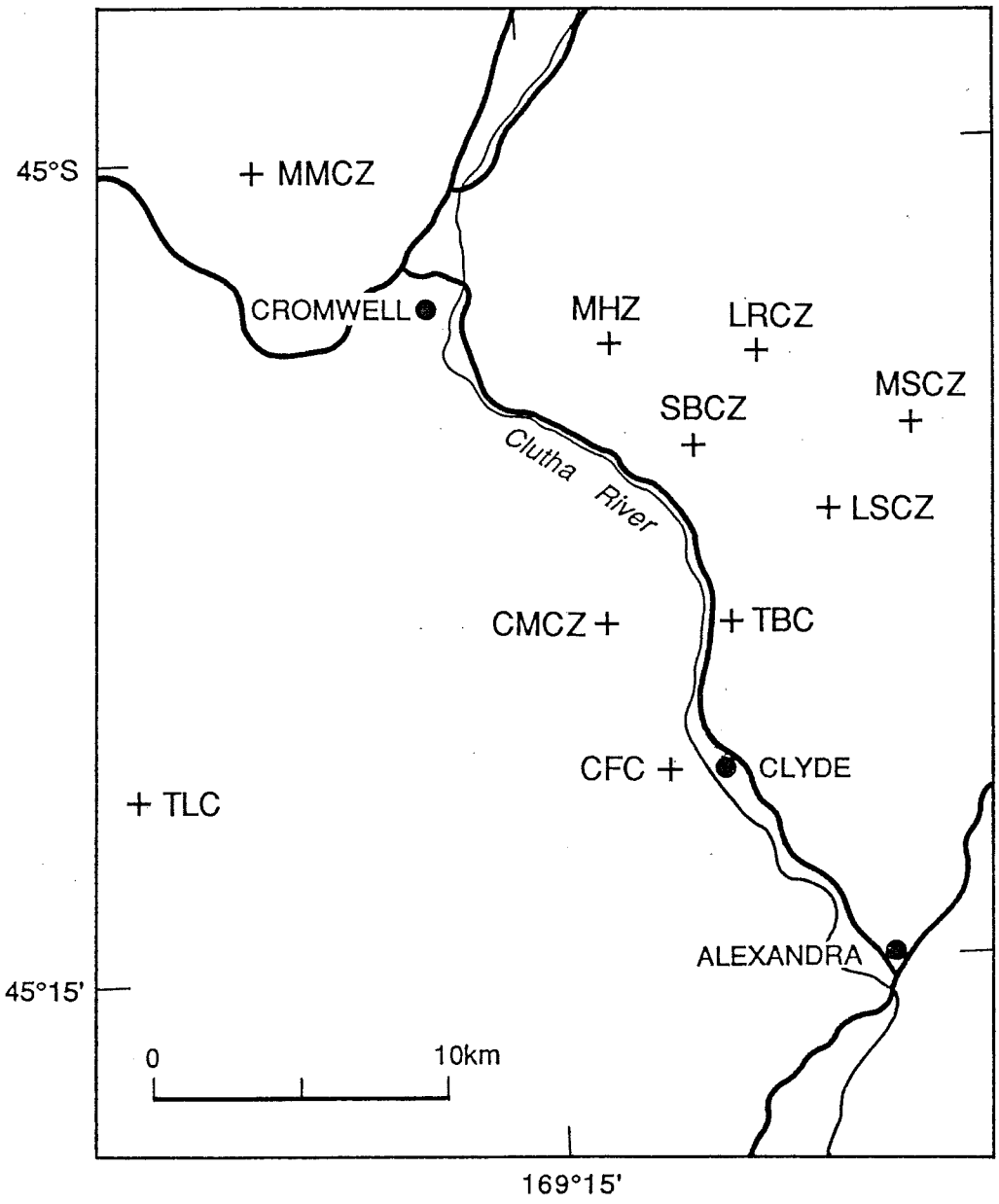
Stations of the National Seismograph Network. Some stations that are too closely spaced to show on this scale are shown instead on the map of the Taupo and Hawke's Bay Networks. The inner and outer polygons define areas where accuracy of epicentre locations is considered reliable, less reliable and inadequate.



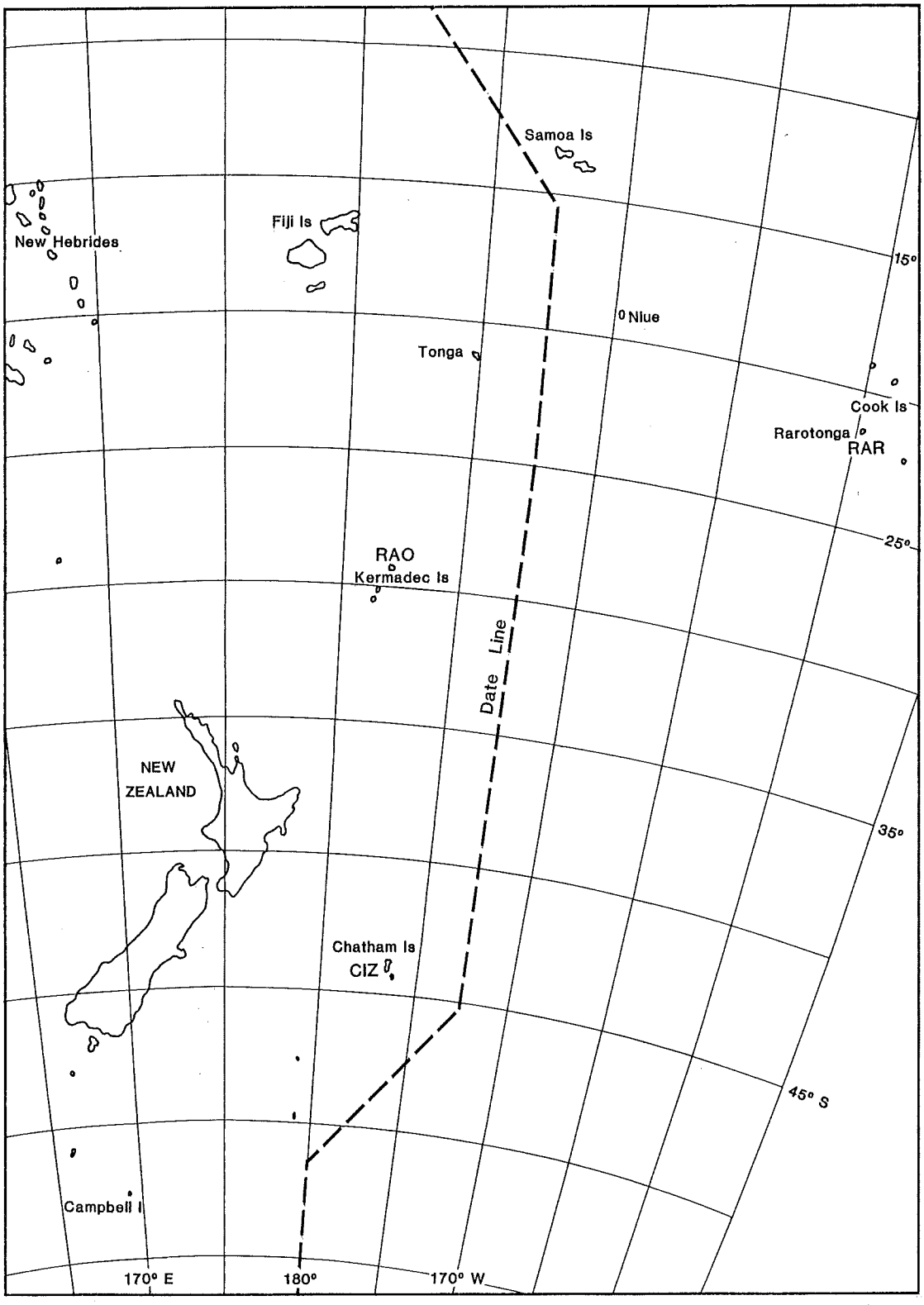
Stations of the Taupo and Hawke's Bay Networks. Other stations lying within the boundaries of the map are also shown. OH1-OH4 are clustered close to the position shown by OHx.



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



The Clyde Network monitors seismic activity around the Clyde Dam.



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 basically 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.

SNARE and EARSS instruments are also equipped with high stability clocks and radio receivers tuned to pick up Time Service signals. A software routine establishes a clock drift rate and applies a correcting signal calculated to bring the clock smoothly into synchronism with the time signals (which are usually received hourly). The difference between internally kept time and Time Service times is recorded and a correction applied by CUSP interactive display software to the phase onset times chosen by analysts. Corrected arrival times are expressed to a precision of one hundredth of a second, usually with an accuracy of a few hundredths, but errors of almost a tenth of a second have occasionally been detected.

Stations of the World-Wide Standard Seismograph Network have the timing arrangements usual at such stations. At other stations beyond New Zealand, time signals originating 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 1991 Daylight Time was in effect until 02h NZST on March 18th, and from 02h NZST on October 7th 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 and Campbell Islands. Times kept elsewhere in the South Pacific are set by the governments of the respective countries. Those used in places which sometimes report 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 22, 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)	Vp (km/s)	Vs (km/s)	CORNERS OF REGION Lat.	Long.
				(in clockwise order)	
New Zealand Standard	0.0	5.5	3.3		
	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		
	45.0	8.77	4.86		
Taupo	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
	65.0	7.94	4.51	34.6 S	178.5 E
	96.4	8.08	4.52		
Clyde	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

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

where A is an amplitude recorded at an epicentral distance R, A_o 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 32), 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, α = 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), Braida Crags (BCZ), 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 α = 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 31 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 BCZ, 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 1Hz seismometers or, in the case of WEL, a Kinemetrics force-balance accelerometer (see Map, page 32). 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.

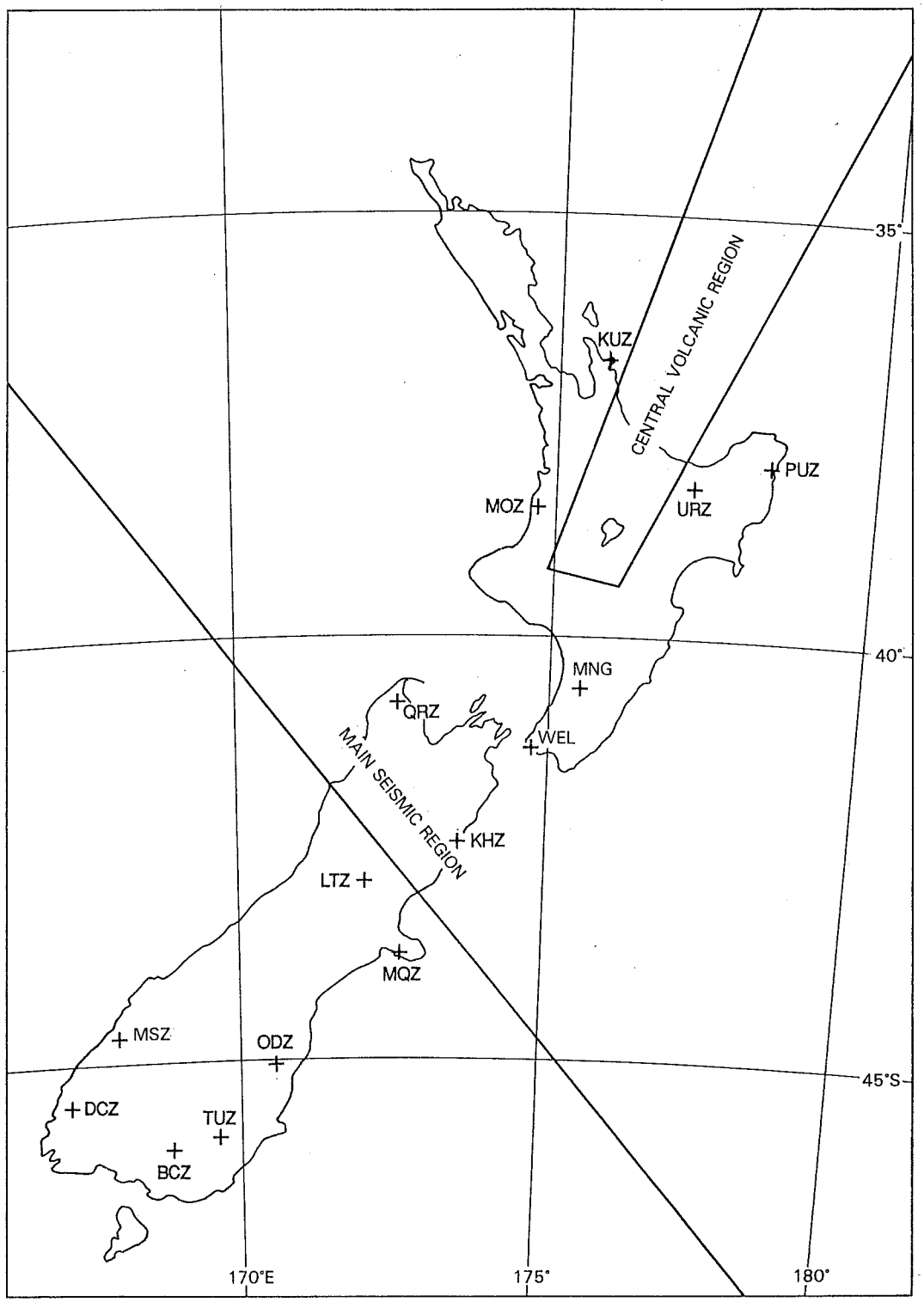
Maximum amplitudes are also picked off vertical traces for both telemetered and non-telemetered stations. This is necessary to obtain readings for small events. For very small events, traces are high-pass filtered to enable an amplitude to be picked. Magnitudes are unable to be calculated for only a 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≤33 km)	Correction (H>33 km)
BCZ	E	Fiordland only		+0.36
BCZ	E	All shallow	+0.18	
DCZ	H	Fiordland only		+0.59
DCZ	H	All shallow	+0.60	
KHZ	H		+0.43	+0.33
KUZ	H		+0.36	
LTZ	H		+0.59	
MNG	H		+0.51	+0.45
MOZ	H		+0.36	
MQZ	H		+0.46	
MSZ	H	Fiordland only		+0.21
MSZ	H	All shallow	+0.35	
ODZ	H		+0.45	
PUZ	H		+0.29	+0.57
QRZ	H		+0.35	
TUZ	H		+0.31	
URZ	H		+0.35	+0.67
WEL	P, Q		+0.30	+0.30
WEL	N		0.00	0.00
WEL	E		+0.09	+0.09

H refers to horizontal seismometers, either N/S or E/W.
P, Q refer to the Wood-Anderson seismograph operated at WEL at a gain of 1400. 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, an indication of how well the adopted origin reconciles the available data with the earth models used by the location program. Formally,

$$\text{Rsd} = \left[\sum_{i=1}^{n} \{(w_i\, r_i\, /\, 100)^2 / (n\text{-}m)\} \right]^{1/2}$$

where r_i is the ith 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^{o} from Wellington.

91/9
JAN 01 1031 41.2s 38.84S 176.10E 84km M=3.6
0.2 0.01 0.01 2
Rsd 0.2s 32ph/25stn Dmin 6km Az.gap 68°
Corr. -0.299 23M/20stn Msd 0.2 3↑ 5↓

91/12
JAN 01 1116 56.4s 38.29S 176.30E 154km M=3.5
0.4 0.08 0.21 8
Rsd 0.2s 12ph/9stn Dmin 71km Az.gap 239°
Corr. -0.953 6M/6stn Msd 0.4 1↑ 1↓

91/24
JAN 02 0309 36.9s 37.51S 177.66E 96km M=3.7
0.4 0.03 0.02 4
Rsd 0.2s 8ph/4stn Dmin 58km Az.gap 250°
Corr. -0.582 6M/4stn Msd 0.1 2↑ 2↓

91/34
JAN 02 1915 15.2s 35.73S 178.37E 71km M=4.3
0.4 0.02 0.03 6
Rsd 0.1s 9ph/8stn Dmin 208km Az.gap 277°
Corr. 0.680 8M/4stn Msd 0.2

91/36
JAN 02 2102 04.1s 38.12S 176.42E 142km M=4.2
0.3 0.02 0.01 2
Rsd 0.2s 35ph/28stn Dmin 15km Az.gap 93°
Corr. -0.192 30M/24stn Msd 0.3 1↑ 1↓

91/46
JAN 03 0347 01.5s 44.77S 167.41E 64km M=3.5
0.1 0.03 0.03 12
Rsd 0.0s 15ph/11stn Dmin 139km Az.gap 239°
Corr. -0.965 14M/14stn Msd 0.2 1↑ 7↓

91/48
JAN 03 0539 32.7s 36.59S 177.74E 33km M=3.6
0.7 0.04 0.04 R
Rsd 0.2s 6ph/4stn Dmin 123km Az.gap 303°
Corr. 0.275 4M/3stn Msd 0.2

91/69
JAN 03 2126 44.2s 40.42S 176.53E 39km M=3.9
0.1 0.01 0.02 3
Rsd 0.2s 33ph/27stn Dmin 31km Az.gap 193°
Corr. -0.563 23M/20stn Msd 0.2 4↑ 7↓

91/70
JAN 03 2305 43.7s 39.10S 175.41E 137km M=3.8
0.3 0.01 0.02 3
Rsd 0.1s 22ph/19stn Dmin 7km Az.gap 178°
Corr. 0.100 20M/20stn Msd 0.2 1↑

91/79
JAN 04 0613 48.4s 45.30S 167.17E 12km M=4.1
0.3 0.01 0.03 R
Rsd 0.1s 18ph/12stn Dmin 95km Az.gap 245°
Corr. -0.445 14M/11stn Msd 0.2 1↓

91/92
JAN 04 2239 51.4s 39.91S 173.89E 128km M=3.8
0.3 0.01 0.01 3
Rsd 0.2s 32ph/19stn Dmin 90km Az.gap 187°
Corr. -0.404 16M/14stn Msd 0.2 3↑ 1↓

91/94
JAN 04 2347 01.3s 38.34S 176.07E 209km M=3.6
0.3 0.02 0.04 4
Rsd 0.1s 14ph/12stn Dmin 67km Az.gap 107°
Corr. -0.879 12M/12stn Msd 0.2

91/101
JAN 05 0601 29.1s 39.99S 173.78E 24km M=3.8
0.2 0.01 0.01 2
Rsd 0.2s 31ph/22stn Dmin 84km Az.gap 151°
Corr. -0.365 8M/3stn Msd 0.3 1↓

91/117
JAN 05 1920 18.2s 34.54S 178.79W 33km M=4.4
0.8 0.04 0.09 R
Rsd 0.2s 11ph/9stn Dmin 429km Az.gap 329°
Corr. -0.204 11M/9stn Msd 0.2

91/144
JAN 07 1005 08.1s 38.64S 178.64E 21km M=3.7
0.3 0.01 0.02 2
Rsd 0.1s 13ph/9stn Dmin 53km Az.gap 237°
Corr. -0.383 21M/19stn Msd 0.2 1↑

91/146
JAN 07 1345 23.6s 41.08S 174.47E 36km M=2.2
0.1 0.01 0.01 1
Rsd 0.1s 10ph/8stn Dmin 22km Az.gap 189°
Corr. 0.029 6M/6stn Msd 0.1 1↓
Felt Kelburn (68) MM4.

91/163
JAN 08 0402 17.1s 36.82S 177.57E 163km M=4.1
0.3 0.02 0.02 4
Rsd 0.2s 13ph/8stn Dmin 108km Az.gap 231°
Corr. 0.680 22M/21stn Msd 0.2 2↑ 2↓

91/168
JAN 08 0934 12.6s 36.75S 177.09E 188km M=3.9
0.2 0.03 0.02 3
Rsd 0.1s 10ph/6stn Dmin 143km Az.gap 281°
Corr. -0.496 16M/15stn Msd 0.2

91/177
JAN 08 1829 09.9s 42.79S 172.37E 22km M=4.2
0.1 0.01 0.02 1
Rsd 0.1s 14ph/11stn Dmin 9km Az.gap 101°
Corr. -0.060 14M/7stn Msd 0.2 1↑ 1↓

91/181
JAN 08 2107 36.6s 38.65S 175.38E 180km M=4.8
0.3 0.02 0.02 2
Rsd 0.2s 37ph/24stn Dmin 53km Az.gap 55°
Corr. 0.180 12M/5stn Msd 0.2 6↑ 9↓

91/189
JAN 09 0510 55.1s 39.81S 173.93E 131km M=3.7
0.3 0.01 0.02 3
Rsd 0.2s 33ph/21stn Dmin 86km Az.gap 162°
Corr. -0.359 16M/14stn Msd 0.2 1↓

91/192
JAN 09 0714 07.8s 38.56S 175.71E 225km M=3.8
0.2 0.01 0.03 2
Rsd 0.1s 16ph/14stn Dmin 69km Az.gap 290°
Corr. -0.570 10M/10stn Msd 0.2

91/203
JAN 09 1355 18.3s 37.23S 177.13E 162km M=4.2
0.4 0.03 0.02 3
Rsd 0.2s 25ph/16stn Dmin 111km Az.gap 173°
Corr. 0.590 28M/23stn Msd 0.1 1↑

91/205
JAN 09 1513 03.8s 36.86S 176.80E 255km M=3.6
0.7 0.07 0.11 9
Rsd 0.3s 9ph/4stn Dmin 157km Az.gap 302°
Corr. -0.809 4M/4stn Msd 0.3

91/206
JAN 09 1532 50.0s 43.03S 172.09E 6km M=4.4
0.1 0.00 0.00 1
Rsd 0.1s 22ph/12stn Dmin 31km Az.gap 83°
Corr. -0.126 10M/5stn Msd 0.1 2↑ 1↓
Felt Rangiora (102) MM4, Christchurch (110).

91/207
JAN 09 1550 14.9s 41.05S 174.71E 60km M=3.9
0.1 0.01 0.01 1
Rsd 0.2s 35ph/25stn Dmin 20km Az.gap 64°
Corr. -0.225 14M/9stn Msd 0.2 2↑ 8↓
Felt Wellington (68) MM4.

91/219
JAN 09 2134 06.6s 37.25S 177.68E 12km M=4.0
0.1 0.01 0.01 R
Rsd 0.1s 22ph/13stn Dmin 53km Az.gap 190°
Corr. 0.355 40M/34stn Msd 0.2 1↑

91/223
JAN 10 0043 45.4s 38.82S 175.48E 209km M=4.1
0.4 0.03 0.03 3
Rsd 0.2s 22ph/14stn Dmin 26km Az.gap 127°
Corr. 0.075 18M/16stn Msd 0.3 7↑ 1↓

91/249
JAN 10 2152 32.6s 40.14S 174.88E 65km M=3.5
0.1 0.00 0.01 3
Rsd 0.2s 34ph/22stn Dmin 38km Az.gap 77°
Corr. -0.150 17M/15stn Msd 0.2 1↓

91/268
JAN 11 1645 02.8s 40.78S 176.33E 22km M=4.5
0.3 0.01 0.01 3
Rsd 0.2s 35ph/30stn Dmin 19km Az.gap 185°
Corr. -0.547 14M/7stn Msd 0.3 5↑ 9↓
Felt Dannevirke (63) to Shannon (65), max MM4.

91/270
JAN 11 1848 32.7s 38.35S 175.97E 152km M=3.5
0.3 0.03 0.03 2
Rsd 0.2s 14ph/9stn Dmin 81km Az.gap 217°
Corr. -0.781 16M/15stn Msd 0.2 1↑ 2↓

91/278
JAN 12 0049 05.5s 45.12S 167.58E 99km M=3.7
0.2 0.01 0.02 2
Rsd 0.1s 19ph/11stn Dmin 100km Az.gap 235°
Corr. -0.895 11M/11stn Msd 0.1 1↓

91/280
JAN 12 0244 16.3s 38.89S 175.32E 204km M=4.0
0.6 0.03 0.03 4
Rsd 0.3s 24ph/15stn Dmin 27km Az.gap 109°
Corr. -0.216 17M/17stn Msd 0.2 3↑ 1↓

91/284
JAN 12 0503 49.3s 36.76S 176.98E 271km M=3.8
0.2 0.01 0.02 1
Rsd 0.0s 12ph/11stn Dmin 113km Az.gap 246°
Corr. 0.527 9M/9stn Msd 0.2

91/286
JAN 12 0806 50.7s 39.50S 174.34E 247km M=3.7
0.7 0.03 0.08 7
Rsd 0.2s 20ph/16stn Dmin 61km Az.gap 199°
Corr. -0.555 10M/10stn Msd 0.2

91/293
JAN 12 1609 44.6s 37.20S 177.53E 121km M=3.5
0.3 0.02 0.02 4
Rsd 0.2s 10ph/6stn Dmin 82km Az.gap 197°
Corr. 0.266 9M/8stn Msd 0.3 1↓

91/298
JAN 12 2044 49.0s 36.52S 177.39E 12km M=4.0
0.2 0.01 0.01 R
Rsd 0.1s 13ph/7stn Dmin 113km Az.gap 246°
Corr. 0.594 8M/7stn Msd 0.2

91/306
JAN 13 0856 52.7s 45.41S 167.26E 100km M=4.2
0.2 0.01 0.03 2
Rsd 0.1s 24ph/14stn Dmin 80km Az.gap 242°
Corr. -0.891 14M/11stn Msd 0.2 1↑ 8↓

91/308
JAN 13 1049 39.1s 37.37S 176.84E 164km M=3.7
0.3 0.02 0.02 3
Rsd 0.1s 17ph/13stn Dmin 100km Az.gap 158°
Corr. 0.598 21M/21stn Msd 0.2

91/309
JAN 13 1110 44.3s 41.43S 172.78E 106km M=3.8
0.3 0.01 0.02 2
Rsd 0.3s 33ph/20stn Dmin 38km Az.gap 97°
Corr. -0.060 15M/14stn Msd 0.2 3↑ 7↓

91/316
JAN 13 1608 26.6s 34.76S 179.76E 302km M=3.9
0.2 0.03 0.05 4
Rsd 0.0s 11ph/7stn Dmin 341km Az.gap 349°
Corr. -0.707 7M/7stn Msd 0.3

91/321
JAN 13 1945 48.7s 41.60S 174.76E 25km M=2.0
0.2 0.01 0.01 1
Rsd 0.1s 9ph/7stn Dmin 23km Az.gap 264°
Corr. 0.283 6M/6stn Msd 0.2
Felt Raumati (65).

91/322
JAN 13 1957 40.1s 41.59S 174.75E 26km M=1.9
0.1 0.00 0.00 0
Rsd 0.0s 7ph/5stn Dmin 40km Az.gap 287°
Corr. -0.207 4M/4stn Msd 0.1
Felt Raumati (65).

91/324
JAN 13 2110 52.3s 39.08S 175.43E 111km M=3.7
0.2 0.01 0.02 2
Rsd 0.2s 29ph/22stn Dmin 9km Az.gap 100°
Corr. 0.137 25M/23stn Msd 0.2 1↑ 1↓

91/338
JAN 14 0914 32.5s 44.86S 167.37E 33km M=3.6
0.3 0.01 0.02 R
Rsd 0.1s 16ph/11stn Dmin 132km Az.gap 240°
Corr. -0.773 11M/11stn Msd 0.3 1↓

91/344
JAN 14 1437 32.8s 38.52S 175.39E 217km M=3.8
1.0 0.04 0.04 9
Rsd 0.2s 17ph/12stn Dmin 74km Az.gap 151°
Corr. -0.142 22M/21stn Msd 0.2

91/346
JAN 14 1454 41.4s 40.21S 173.61E 161km M=3.5
0.3 0.03 0.02 3
Rsd 0.2s 24ph/15stn Dmin 71km Az.gap 179°
Corr. 0.024 10M/10stn Msd 0.4 4↑ 1↓

91/355
JAN 14 2217 31.9s 38.71S 175.73E 113km M=4.1
0.3 0.01 0.01 3
Rsd 0.2s 33ph/26stn Dmin 4km Az.gap 68°
Corr. -0.072 27M/24stn Msd 0.2 1↓

91/362
JAN 15 0234 57.9s 39.08S 175.10E 234km M=3.6
0.6 0.04 0.08 7
Rsd 0.3s 17ph/13stn Dmin 81km Az.gap 195°
Corr. -0.605 9M/9stn Msd 0.2 1↑

91/366
JAN 15 0524 03.7s 38.76S 175.86E 144km M=3.5
0.2 0.01 0.02 2
Rsd 0.1s 16ph/11stn Dmin 51km Az.gap 192°
Corr. -0.820 19M/18stn Msd 0.2 1↑

91/373
JAN 15 1045 31.5s 40.41S 174.47E 13km M=3.5
0.1 0.01 0.01 2
Rsd 0.2s 31ph/24stn Dmin 63km Az.gap 92°
Corr. -0.208 32M/30stn Msd 0.2 1↑ 1↓

91/377
JAN 15 1236 17.4s 38.43S 175.88E 182km M=3.6
0.6 0.07 0.07 5
Rsd 0.2s 14ph/9stn Dmin 86km Az.gap 226°
Corr. -0.914 13M/13stn Msd 0.2

91/378
JAN 15 1236 59.9s 38.81S 175.96E 121km M=4.1
0.3 0.01 0.02 3
Rsd 0.2s 35ph/25stn Dmin 14km Az.gap 46°
Corr. -0.273 28M/24stn Msd 0.2 2↑ 4↓

91/383
JAN 15 1542 16.9s 38.03S 175.86E 265km M=4.1
0.6 0.03 0.05 5
Rsd 0.2s 14ph/10stn Dmin 29km Az.gap 97°
Corr. 0.097 22M/20stn Msd 0.3

91/395
JAN 16 0402 14.3s 37.99S 176.09E 191km M=4.2
0.4 0.02 0.03 4
Rsd 0.3s 22ph/15stn Dmin 46km Az.gap 92°
Corr. 0.178 29M/23stn Msd 0.1 1↑

91/400
JAN 16 1022 12.4s 43.99S 179.07E 33km M=3.9
0.5 0.09 0.12 R
Rsd 0.1s 11ph/7stn Dmin 415km Az.gap 352°
Corr. 0.887 4M/4stn Msd 0.1

91/408
JAN 16 2153 04.7s 38.45S 176.14E 136km M=4.6
0.4 0.01 0.01 3
Rsd 0.2s 42ph/31stn Dmin 18km Az.gap 56°
Corr. -0.054 8M/4stn Msd 0.2 5↑ 2↓

91/423
JAN 17 1712 54.4s 38.57S 175.61E 195km M=4.8
0.4 0.02 0.03 4
Rsd 0.2s 44ph/32stn Dmin 21km Az.gap 84°
Corr. 0.154 11M/5stn Msd 0.2 16↑ 8↓

91/437
JAN 18 0357 08.9s 40.36S 173.47E 196km M=4.2
0.3 0.02 0.02 2
Rsd 0.2s 34ph/21stn Dmin 62km Az.gap 153°
Corr. -0.350 18M/16stn Msd 0.2 6↑ 4↓

91/448
JAN 18 1354 00.4s 40.30S 173.45E 200km M=3.7
0.4 0.03 0.02 3
Rsd 0.2s 31ph/20stn Dmin 69km Az.gap 179°
Corr. -0.107 15M/13stn Msd 0.2 3↑ 1↓

91/453
JAN 18 2009 01.1s 38.48S 178.33E 31km M=3.4
0.2 0.01 0.03 2
Rsd 0.2s 12ph/8stn Dmin 30km Az.gap 208°
Corr. -0.307 20M/16stn Msd 0.2 2↑ 1↓
Felt Pakarae Stn (45) MM4.

91/457
JAN 18 2150 54.3s 38.74S 175.78E 133km M=3.6
0.8 0.04 0.04 7
Rsd 0.2s 16ph/10stn Dmin 51km Az.gap 192°
Corr. -0.809 16M/15stn Msd 0.2 5↑ 1↓

91/470
JAN 19 1133 08.3s 39.64S 174.10E 199km M=4.1
0.4 0.01 0.03 4
Rsd 0.3s 33ph/22stn Dmin 73km Az.gap 159°
Corr. -0.352 24M/22stn Msd 0.2 2↑ 3↓

91/479
JAN 19 1908 40.6s 38.61S 176.17E 105km M=3.9
0.2 0.01 0.01 2
Rsd 0.2s 35ph/25stn Dmin 15km Az.gap 53°
Corr. -0.072 24M/23stn Msd 0.2 7↑ 2↓

91/488
JAN 19 2356 28.4s 37.36S 177.65E 42km M=5.0
0.4 0.02 0.03 3
Rsd 0.3s 31ph/23stn Dmin 45km Az.gap 184°
Corr. 0.730 11M/5stn Msd 0.2 2↑ 3↓
Felt Ruatuna Rd (35) MM4, Opotiki (35). Depth uncertain.

91/496
JAN 20 0439 28.5s 38.97S 177.26E 30km M=3.5
0.1 0.01 0.01 1
Rsd 0.2s 24ph/22stn Dmin 20km Az.gap 91°
Corr. -0.113 29M/27stn Msd 0.2 2↑ 2↓

91/501
JAN 20 0720 29.5s 38.37S 175.97E 165km M=4.5
0.5 0.02 0.02 4
Rsd 0.3s 41ph/32stn Dmin 29km Az.gap 69°
Corr. 0.001 8M/4stn Msd 0.2 12↑ 1↓

91/503
JAN 20 0748 52.6s 36.06S 178.51E 225km M=3.7
0.6 0.07 0.10 7
Rsd 0.2s 10ph/6stn Dmin 172km Az.gap 335°
Corr. -0.777 11M/11stn Msd 0.2

91/518
JAN 20 1607 14.1s 42.46S 172.07E 13km M=4.1
0.1 0.01 0.01 3
Rsd 0.2s 22ph/13stn Dmin 40km Az.gap 107°
Corr. 0.197 16M/8stn Msd 0.2 3↑ 3↓

91/519
JAN 20 1748 18.0s 37.33S 177.95E 33km M=3.8
0.4 0.03 0.02 R
Rsd 0.2s 11ph/7stn Dmin 44km Az.gap 207°
Corr. -0.104 22M/18stn Msd 0.3 1↓

91/549
JAN 21 1611 23.2s 38.51S 175.78E 153km M=3.5
0.7 0.06 0.06 5
Rsd 0.1s 12ph/9stn Dmin 75km Az.gap 211°
Corr. -0.945 15M/15stn Msd 0.3 1↑ 2↓

91/555
JAN 21 2047 12.3s 36.93S 177.59E 134km M=3.6
0.1 0.01 0.01 1
Rsd 0.0s 5ph/3stn Dmin 98km Az.gap 304°
Corr. -0.436 3M/3stn Msd 0.2 1↑

91/570
JAN 22 0608 06.6s 36.38S 178.03E 153km M=3.7
0.4 0.04 0.04 5
Rsd 0.1s 11ph/5stn Dmin 137km Az.gap 320°
Corr. -0.262 6M/6stn Msd 0.2

91/583
JAN 22 1239 37.7s 38.20S 175.94E 181km M=3.9
0.7 0.03 0.03 6
Rsd 0.3s 17ph/13stn Dmin 48km Az.gap 112°
Corr. -0.318 26M/24stn Msd 0.2 1↑

91/584
JAN 22 1245 31.7s 38.30S 177.70E 67km M=3.5
0.2 0.01 0.01 2
Rsd 0.1s 18ph/15stn Dmin 46km Az.gap 119°
Corr. -0.340 25M/21stn Msd 0.2 2↑ 1↓

91/603
JAN 22 2151 54.5s 39.25S 176.33E 70km M=3.7
0.2 0.01 0.01 3
Rsd 0.3s 37ph/32stn Dmin 37km Az.gap 48°
Corr. 0.092 27M/23stn Msd 0.2 4↑ 4↓

91/613
JAN 23 0609 40.3s 39.02S 176.08E 84km M=3.8
0.3 0.01 0.02 4
Rsd 0.3s 29ph/20stn Dmin 39km Az.gap 54°
Corr. -0.053 29M/25stn Msd 0.2 1↑ 1↓

91/615
JAN 23 0653 31.9s 38.48S 175.22E 223km M=3.6
0.4 0.04 0.07 5
Rsd 0.3s 20ph/14stn Dmin 148km Az.gap 221°
Corr. -0.875 11M/11stn Msd 0.3

91/619
JAN 23 0810 49.2s 38.12S 176.13E 172km M=4.5
0.5 0.03 0.02 4
Rsd 0.3s 33ph/25stn Dmin 50km Az.gap 88°
Corr. 0.087 9M/5stn Msd 0.3 4↑ 2↓

91/625
JAN 23 1056 59.2s 37.23S 176.89E 244km M=3.5
0.1 0.01 0.02 1
Rsd 0.1s 16ph/11stn Dmin 116km Az.gap 266°
Corr. -0.691 9M/9stn Msd 0.3

91/626
JAN 23 1126 18.9s 39.03S 175.13E 194km M=3.9
0.6 0.02 0.05 5
Rsd 0.2s 20ph/18stn Dmin 21km Az.gap 197°
Corr. -0.006 23M/21stn Msd 0.2 1↑

91/633
JAN 23 1623 05.7s 35.78S 178.25E 202km M=4.2
0.8 0.05 0.05 7
Rsd 0.2s 11ph/9stn Dmin 202km Az.gap 295°
Corr. 0.750 14M/14stn Msd 0.1

91/637
JAN 23 2108 40.0s 36.18S 177.78E 187km M=4.0
0.4 0.05 0.06 7
Rsd 0.2s 6ph/4stn Dmin 164km Az.gap 330°
Corr. -0.381 4M/4stn Msd 0.1

91/653
JAN 24 1254 19.0s 38.49S 176.40E 92km M=3.6
0.3 0.01 0.01 4
Rsd 0.2s 24ph/18stn Dmin 30km Az.gap 46°
Corr. 0.140 22M/20stn Msd 0.2 1↓

91/657
JAN 24 1714 53.0s 40.73S 175.38E 33km M=3.7
0.1 0.01 0.01 1
Rsd 0.1s 23ph/20stn Dmin 15km Az.gap 87°
Corr. -0.096 20M/16stn Msd 0.2 3↑ 2↓

91/658
JAN 24 1931 37.8s 40.74S 175.44E 35km M=3.5
0.1 0.01 0.01 1
Rsd 0.2s 27ph/21stn Dmin 14km Az.gap 93°
Corr. -0.125 16M/13stn Msd 0.2 3↑ 2↓
Felt Otaki (65), Upper Hutt (69).

91/671
JAN 25 0222 06.0s 37.97S 176.32E 177km M=3.8
0.5 0.05 0.06 3
Rsd 0.2s 10ph/8stn Dmin 77km Az.gap 224°
Corr. -0.852 20M/19stn Msd 0.1

91/674
JAN 25 0508 37.3s 40.14S 173.83E 5km M=3.7
0.2 0.01 0.02 R
Rsd 0.2s 29ph/23stn Dmin 74km Az.gap 150°
Corr. -0.239 31M/25stn Msd 0.3

91/675
JAN 25 0619 23.1s 38.24S 176.27E 180km M=3.5
0.3 0.01 0.04 2
Rsd 0.1s 10ph/6stn Dmin 10km Az.gap 136°
Corr. -0.582 11M/11stn Msd 0.1 1↓

91/677
JAN 25 0821 29.5s 38.92S 175.06E 208km M=4.5
0.4 0.02 0.03 3
Rsd 0.3s 47ph/35stn Dmin 33km Az.gap 109°
Corr. 0.063 9M/4stn Msd 0.2 14↑ 4↓

91/683
JAN 25 1322 42.5s 35.67S 178.24E 210km M=3.8
0.3 0.05 0.05 6
Rsd 0.1s 8ph/4stn Dmin 214km Az.gap 333°
Corr. -0.594 3M/3stn Msd 0.1

91/685
JAN 25 1437 18.6s 38.39S 176.26E 124km M=3.8
0.4 0.02 0.02 4
Rsd 0.2s 13ph/10stn Dmin 76km Az.gap 109°
Corr. -0.363 10M/10stn Msd 0.2 1↓

91/697
JAN 26 0013 30.8s 38.44S 175.88E 155km M=3.5
1.0 0.05 0.05 8
Rsd 0.3s 11ph/9stn Dmin 72km Az.gap 228°
Corr. -0.578 19M/19stn Msd 0.2 1↑

91/701
JAN 26 0206 28.3s 38.52S 175.46E 170km M=3.8
0.3 0.03 0.02 3
Rsd 0.1s 14ph/9stn Dmin 68km Az.gap 230°
Corr. -0.629 21M/21stn Msd 0.3 1↑

91/707
JAN 26 0528 10.3s 37.17S 177.00E 253km M=5.0
0.4 0.03 0.03 2
Rsd 0.2s 29ph/23stn Dmin 122km Az.gap 174°
Corr. 0.633 9M/4stn Msd 0.1 12↑ 3↓

91/720
JAN 26 0949 27.3s 38.69S 175.46E 223km M=4.1
0.6 0.03 0.04 5
Rsd 0.2s 20ph/11stn Dmin 50km Az.gap 79°
Corr. -0.209 18M/16stn Msd 0.3 13↑ 2↓

91/726
JAN 26 1158 08.0s 38.53S 175.92E 164km M=3.6
0.7 0.07 0.06 5
Rsd 0.2s 15ph/10stn Dmin 76km Az.gap 207°
Corr. -0.922 17M/17stn Msd 0.2 1↑ 1↓

91/728
JAN 26 1456 13.1s 36.94S 176.56E 316km M=3.8
0.7 0.07 0.13 6
Rsd 0.3s 9ph/6stn Dmin 154km Az.gap 273°
Corr. -0.906 4M/4stn Msd 0.7

91/734
JAN 26 1901 09.5s 45.17S 169.16E 8km M=3.4
0.1 0.01 0.01 1
Rsd 0.2s 18ph/12stn Dmin 9km Az.gap 172°
Corr. 0.445 14M/10stn Msd 0.3 5↑ 1↓
Felt Cromwell district, max MM4 at Ripponvale (133).

91/763
JAN 27 2332 48.1s 38.62S 175.96E 145km M=4.0
0.2 0.01 0.01 2
Rsd 0.1s 16ph/10stn Dmin 69km Az.gap 99°
Corr. -0.095 18M/16stn Msd 0.3 3↑ 1↓

91/765
JAN 28 0110 56.5s 37.24S 177.48E 206km M=3.5
0.4 0.05 0.07 3
Rsd 0.1s 6ph/3stn Dmin 82km Az.gap 275°
Corr. -0.922 2M/2stn Msd 0.2

91/768
JAN 28 0240 35.5s 40.02S 173.72E 211km M=4.6
0.3 0.01 0.02 3
Rsd 0.2s 42ph/30stn Dmin 88km Az.gap 161°
Corr. -0.313 28M/22stn Msd 0.2 5↑ 4↓

91/769
JAN 28 0552 49.7s 39.46S 175.31E 87km M=3.8
0.2 0.01 0.02 2
Rsd 0.2s 39ph/28stn Dmin 30km Az.gap 101°
Corr. -0.508 22M/20stn Msd 0.2 1↑

91/776
JAN 28 1258 46.6s 41.89S 171.61E 0km M=6.1
0.3 0.01 0.01 2
Rsd 0.1s 20ph/12stn Dmin 22km Az.gap 158°
Corr. -0.461 23M/12stn Msd 0.3 18↑ 10↓
Felt central N.Z., max MM7 at Westport (79).

91/777
JAN 28 1301 42.1s 41.89S 171.61E 8km M=3.7
0.0 R R R
Rsd 0.0s 2ph/1stn Dmin 23km Az.gap 360°
Corr. 0.000 1M/1stn Msd 0.0 1↓

91/792
JAN 28 1309 49.9s 41.88S 171.60E 10km M=4.5
0.4 0.01 0.03 2
Rsd 0.1s 17ph/9stn Dmin 23km Az.gap 187°
Corr. 0.264 10M/6stn Msd 1.0 1↓
Felt Westport (79).

91/838
JAN 28 1353 04.9s 41.90S 171.60E 8km M=3.8
0.1 R R R
Rsd 0.2s 14ph/7stn Dmin 24km Az.gap 201°
Corr. 0.000 27M/21stn Msd 0.2 1↓
Felt Westport (79).

91/848
JAN 28 1401 19.1s 41.90S 171.63E 12km M=4.0
0.4 0.01 0.03 3
Rsd 0.2s 14ph/8stn Dmin 23km Az.gap 183°
Corr. -0.432 10M/5stn Msd 0.2 1↓
Felt Westport (79).

91/855
JAN 28 1409 54.5s 41.90S 171.68E 10km M=3.1
0.2 0.01 0.02 2
Rsd 0.2s 14ph/7stn Dmin 20km Az.gap 232°
Corr. -0.357 7M/7stn Msd 0.2 1↓
Felt Westport (79) MM5.

91/857
JAN 28 1411 56.0s 41.88S 171.71E 11km M=3.2
0.3 0.01 0.03 2
Rsd 0.2s 13ph/7stn Dmin 17km Az.gap 193°
Corr. 0.067 7M/6stn Msd 0.2 1↓
Felt Westport (79).

91/892
JAN 28 1501 04.6s 41.86S 171.67E 11km M=3.3
0.3 0.01 0.03 2
Rsd 0.2s 14ph/7stn Dmin 17km Az.gap 199°
Corr. -0.486 18M/15stn Msd 0.2 1↑ 1↓
Felt Westport (79).

91/924
JAN 28 1546 46.9s 41.88S 171.70E 9km M=2.1
0.2 0.00 0.03 1
Rsd 0.1s 8ph/3stn Dmin 17km Az.gap 234°
Corr. -0.120 1M/1stn Msd 0.0
Felt Westport (79).

91/977
JAN 28 1800 54.5s 41.90S 171.73E 17km M=6.3
0.1 0.00 0.01 1
Rsd 0.1s 19ph/12stn Dmin 19km Az.gap 155°
Corr. -0.118 20M/11stn Msd 0.2 2↑3↓
Felt central N.Z., max MM6 at Westport (79).

91/980
JAN 28 1803 06.3s 41.90S 171.70E 17km M=4.0
0.1 R R R
Rsd 0.4s 8ph/5stn Dmin 19km Az.gap 228°
Corr. 0.000 1M/1stn Msd 0.0

91/983
JAN 28 1804 20.2s 41.90S 171.75E 12km M=4.6
0.2 0.01 0.02 2
Rsd 0.2s 15ph/6stn Dmin 18km Az.gap 149°
Corr. -0.154 13M/7stn Msd 0.3 1↓
Felt Westport (79).

91/984
JAN 28 1805 37.4s 41.90S 171.81E 8km M=3.7
0.1 0.01 0.02 2
Rsd 0.1s 11ph/5stn Dmin 17km Az.gap 197°
Corr. -0.459 10M/5stn Msd 1.2

91/1019
JAN 28 1813 47.1s 41.90S 171.77E 12km M=4.0
0.2 0.01 0.02 2
Rsd 0.1s 17ph/10stn Dmin 17km Az.gap 146°
Corr. 0.008 8M/5stn Msd 0.2
Felt Westport (79).

91/1024
JAN 28 1816 04.5s 41.90S 171.73E 17km M=3.5
0.3 R R R
Rsd 0.5s 3ph/2stn Dmin 18km Az.gap 350°
Corr. 0.000 3M/2stn Msd 1.0

91/1046
JAN 28 1827 12.3s 41.89S 171.79E 12km M=3.5
0.1 0.00 0.01 1
Rsd 0.1s 17ph/8stn Dmin 16km Az.gap 169°
Corr. -0.164 18M/16stn Msd 0.2 1↓
Felt Westport (79).

91/1113
JAN 28 1910 37.0s 41.93S 171.81E 14km M=3.4
0.1 0.00 0.01 3
Rsd 0.1s 9ph/4stn Dmin 21km Az.gap 200°
Corr. 0.019 10M/6stn Msd 0.2 1↓
Felt Westport (79).

91/1126
JAN 28 1921 00.8s 41.92S 171.75E 12km M=3.4
0.2 0.01 0.02 2
Rsd 0.2s 13ph/5stn Dmin 20km Az.gap 179°
Corr. 0.291 9M/5stn Msd 0.2 1↓
Felt Westport (79).

91/1152
JAN 28 1949 36.7s 41.93S 171.78E 15km M=4.1
0.1 0.01 0.01 1
Rsd 0.1s 21ph/11stn Dmin 20km Az.gap 159°
Corr. -0.056 9M/5stn Msd 0.2 1↑3↓

91/1212
JAN 28 2050 04.1s 41.89S 171.84E 13km M=3.5
0.2 0.01 0.02 2
Rsd 0.2s 17ph/7stn Dmin 16km Az.gap 186°
Corr. 0.291 9M/9stn Msd 0.2 1↓

91/1214
JAN 28 2054 00.2s 41.89S 171.79E 12km M=3.7
0.2 0.01 0.02 3
Rsd 0.2s 11ph/8stn Dmin 16km Az.gap 158°
Corr. -0.063 24M/20stn Msd 0.3 2↑2↓

91/1237
JAN 28 2137 36.5s 41.92S 171.75E 15km M=4.0
0.2 0.01 0.01 2
Rsd 0.2s 20ph/11stn Dmin 20km Az.gap 160°
Corr. -0.026 8M/5stn Msd 0.2 1↓
Felt Westport (79) MM5.

91/1273
JAN 28 2225 19.2s 41.86S 171.66E 9km M=3.6
0.6 0.01 0.05 3
Rsd 0.3s 7ph/6stn Dmin 17km Az.gap 239°
Corr. -0.192 17M/15stn Msd 0.2 1↑3↓

91/1504
JAN 29 1146 06.1s 41.88S 171.65E 9km M=3.6
0.2 0.01 0.01 2
Rsd 0.2s 17ph/12stn Dmin 20km Az.gap 183°
Corr. -0.471 24M/20stn Msd 0.2 2↑2↓

91/1542
JAN 29 1410 24.5s 41.86S 171.64E 11km M=4.5
0.3 0.01 0.02 2
Rsd 0.2s 11ph/7stn Dmin 18km Az.gap 184°
Corr. -0.398 16M/8stn Msd 0.2 2↑3↓
Felt Westport (79) MM4.

91/1601
JAN 29 1848 55.3s 41.88S 171.65E 9km M=3.9
0.2 0.01 0.02 1
Rsd 0.1s 17ph/11stn Dmin 19km Az.gap 184°
Corr. -0.320 29M/22stn Msd 0.2 3↑3↓
Felt Westport (79) MM4.

91/1628
JAN 29 2119 39.1s 41.89S 171.68E 10km M=3.7
0.2 0.01 0.02 1
Rsd 0.2s 21ph/13stn Dmin 18km Az.gap 181°
Corr. -0.424 32M/27stn Msd 0.2 2↑ 4↓

91/1653
JAN 30 0110 42.0s 42.31S 173.98E 14km M=3.5
0.2 0.01 0.01 2
Rsd 0.2s 30ph/20stn Dmin 38km Az.gap 163°
Corr. -0.664 22M/19stn Msd 0.2 1↑ 4↓
Felt Christchurch (110).

91/1659
JAN 30 0214 10.2s 36.81S 178.05E 156km M=4.0
0.8 0.05 0.04 6
Rsd 0.2s 12ph/9stn Dmin 90km Az.gap 285°
Corr. 0.245 13M/12stn Msd 0.1

91/1679
JAN 30 0613 33.1s 42.87S 171.50E 5km M=4.0
0.7 0.01 0.03 7
Rsd 0.4s 14ph/13stn Dmin 63km Az.gap 109°
Corr. 0.154 8M/4stn Msd 0.2 4↑ 1↓
Felt Arthur's Pass (93) MM4.

91/1722
JAN 30 1755 00.2s 38.52S 176.09E 155km M=3.7
0.7 0.03 0.04 6
Rsd 0.2s 12ph/9stn Dmin 84km Az.gap 105°
Corr. -0.311 15M/15stn Msd 0.3 1↑

91/1727
JAN 30 1909 24.8s 38.48S 176.36E 114km M=4.5
0.3 0.01 0.01 3
Rsd 0.3s 39ph/28stn Dmin 8km Az.gap 78°
Corr. -0.141 8M/4stn Msd 0.1 5↑ 6↓

91/1752
JAN 31 0644 11.6s 39.05S 176.28E 56km M=3.7
0.2 0.01 0.01 3
Rsd 0.2s 33ph/26stn Dmin 24km Az.gap 36°
Corr. -0.064 16M/12stn Msd 0.2 1↓

91/1786
JAN 31 1709 28.6s 46.17S 165.94E 33km M=4.2
1.3 0.05 0.13 R
Rsd 0.4s 15ph/12stn Dmin 148km Az.gap 288°
Corr. 0.459 18M/13stn Msd 0.1 1↓

91/1790
JAN 31 1801 27.4s 41.92S 171.78E 13km M=3.5
0.1 0.01 0.01 1
Rsd 0.2s 18ph/13stn Dmin 9km Az.gap 46°
Corr. -0.201 8M/4stn Msd 0.1 5↑ 5↓
Felt Westport (79) MM3.

91/1791
JAN 31 1819 35.6s 38.51S 175.78E 195km M=3.8
0.3 0.01 0.08 3
Rsd 0.1s 16ph/12stn Dmin 58km Az.gap 321°
Corr. 0.243 10M/10stn Msd 0.3 1↑

91/1802
JAN 31 2108 47.7s 38.87S 175.34E 138km M=4.1
0.5 0.02 0.03 4
Rsd 0.3s 27ph/21stn Dmin 29km Az.gap 84°
Corr. -0.233 25M/21stn Msd 0.2 5↑ 6↓

91/1806
JAN 31 2205 19.1s 45.15S 167.34E 60km M=3.6
0.2 0.00 0.02 3
Rsd 0.1s 14ph/11stn Dmin 70km Az.gap 238°
Corr. -0.715 15M/13stn Msd 0.2 1↑ 1↓

91/1835
FEB 01 0653 21.8s 36.90S 177.78E 171km M=3.6
0.8 0.08 0.12 7
Rsd 0.2s 7ph/4stn Dmin 90km Az.gap 304°
Corr. -0.863 4M/4stn Msd 0.1

91/1859
FEB 01 1950 27.5s 44.66S 168.12E 84km M=3.6
0.4 0.02 0.02 3
Rsd 0.2s 24ph/14stn Dmin 16km Az.gap 138°
Corr. -0.389 16M/14stn Msd 0.2 1↑ 9↓

91/1877
FEB 02 0429 44.5s 37.18S 176.57E 229km M=4.1
0.3 0.06 0.04 4
Rsd 0.1s 10ph/7stn Dmin 129km Az.gap 249°
Corr. -0.578 22M/20stn Msd 0.1 1↑

91/1914
FEB 02 1506 01.4s 40.43S 176.40E 34km M=3.8
0.1 0.01 0.01 1
Rsd 0.1s 31ph/29stn Dmin 23km Az.gap 172°
Corr. -0.527 22M/20stn Msd 0.3 6↑ 3↓

91/1927
FEB 02 1807 09.7s 35.34S 179.86E 182km M=4.2
0.5 0.06 0.06 15
Rsd 0.1s 11ph/6stn Dmin 286km Az.gap 317°
Corr. 0.832 15M/15stn Msd 0.2

91/1952
FEB 03 0051 40.5s 36.85S 177.41E 220km M=3.9
0.5 0.07 0.07 5
Rsd 0.2s 10ph/5stn Dmin 155km Az.gap 303°
Corr. -0.438 11M/11stn Msd 0.2

91/2034
FEB 04 0846 20.8s 44.21S 168.59E 12km M=3.5
0.2 0.01 0.02 R
Rsd 0.3s 18ph/13stn Dmin 74km Az.gap 179°
Corr. -0.428 15M/11stn Msd 0.2 6↑ 1↓

91/2063
FEB 04 2123 11.6s 37.45S 176.86E 252km M=3.6
0.4 0.06 0.05 3
Rsd 0.1s 13ph/8stn Dmin 92km Az.gap 273°
Corr. -0.488 8M/8stn Msd 0.1

91/2067
FEB 04 2241 38.7s 37.93S 176.26E 184km M=3.7
1.0 0.07 0.08 6
Rsd 0.3s 10ph/9stn Dmin 40km Az.gap 265°
Corr. -0.488 11M/9stn Msd 0.2 1↑

91/2068
FEB 04 2252 35.1s 38.08S 176.44E 147km M=4.1
0.7 0.04 0.02 5
Rsd 0.3s 25ph/21stn Dmin 18km Az.gap 146°
Corr. -0.106 23M/20stn Msd 0.3 6↑ 2↓

91/2130
FEB 06 0453 34.7s 41.86S 171.68E 10km M=3.3
0.3 0.01 0.03 2
Rsd 0.2s 16ph/7stn Dmin 16km Az.gap 199°
Corr. -0.434 9M/8stn Msd 0.2 1↑
Felt Westport (79) MM4.

91/2182
FEB 07 0609 12.0s 36.45S 177.09E 33km M=4.1
0.5 0.04 0.02 R
Rsd 0.3s 9ph/5stn Dmin 127km Az.gap 246°
Corr. 0.293 8M/6stn Msd 0.4

91/2184
FEB 07 0731 10.0s 36.50S 177.70E 159km M=4.0
0.8 0.04 0.04 8
Rsd 0.3s 16ph/14stn Dmin 134km Az.gap 236°
Corr. 0.621 23M/22stn Msd 0.1

91/2188
FEB 07 0857 03.8s 39.15S 178.50E 23km M=4.2
0.6 0.02 0.05 3
Rsd 0.3s 19ph/14stn Dmin 71km Az.gap 228°
Corr. -0.238 44M/38stn Msd 0.2 1↓

91/2189
FEB 07 0915 47.7s 35.39S 178.98E 232km M=3.7
0.7 0.22 0.10 35
Rsd 0.1s 5ph/3stn Dmin 253km Az.gap 345°
Corr. -0.279 3M/3stn Msd 0.2

91/2226
FEB 07 2122 33.2s 40.78S 175.48E 32km M=4.0
0.1 0.01 0.01 1
Rsd 0.2s 32ph/25stn Dmin 18km Az.gap 103°
Corr. -0.455 10M/4stn Msd 0.3 5↑ 6↓
Felt Wanganui to Wellington, max MM4 at Levin (65).

91/2260
FEB 08 1232 05.1s 38.55S 176.24E 154km M=3.6
0.6 0.04 0.04 5
Rsd 0.2s 15ph/11stn Dmin 83km Az.gap 190°
Corr. -0.766 12M/12stn Msd 0.3

91/2267
FEB 08 1709 56.6s 45.23S 166.83E 5km M=4.2
0.3 0.01 0.02 R
Rsd 0.1s 18ph/13stn Dmin 105km Az.gap 254°
Corr. -0.492 20M/15stn Msd 0.2 1↑ 9↓

91/2278
FEB 09 0148 42.8s 38.03S 177.87E 65km M=3.7
0.1 0.01 0.01 2
Rsd 0.1s 19ph/12stn Dmin 35km Az.gap 93°
Corr. -0.309 22M/18stn Msd 0.2 2↑ 2↓

91/2288
FEB 09 0759 14.0s 39.23S 174.73E 214km M=4.5
0.5 0.02 0.04 4
Rsd 0.3s 42ph/33stn Dmin 54km Az.gap 152°
Corr. -0.342 30M/24stn Msd 0.3 11↑ 5↓

91/2290
FEB 09 0811 08.3s 39.77S 174.38E 166km M=3.6
0.4 0.01 0.04 4
Rsd 0.3s 25ph/19stn Dmin 48km Az.gap 177°
Corr. -0.434 15M/13stn Msd 0.2 3↑ 1↓

91/2295
FEB 09 1019 35.0s 44.82S 167.58E 5km M=3.6
0.2 0.01 0.02 R
Rsd 0.1s 23ph/16stn Dmin 31km Az.gap 233°
Corr. -0.797 21M/19stn Msd 0.2 1↑ 3↓

91/2300
FEB 09 1511 24.2s 40.60S 173.93E 111km M=5.4
0.3 0.01 0.01 4
Rsd 0.2s 42ph/31stn Dmin 23km Az.gap 107°
Corr. -0.037 10M/5stn Msd 0.3 14↑ 8↓
Felt Taranaki to Wellington, maximum intensity MM4.

91/2301
FEB 09 1609 46.8s 37.81S 176.50E 278km M=3.6
0.3 0.04 0.05 3
Rsd 0.1s 18ph/14stn Dmin 73km Az.gap 237°
Corr. -0.711 13M/13stn Msd 0.3

91/2306
FEB 09 1800 43.1s 37.15S 177.15E 158km M=3.7
0.2 0.02 0.02 2
Rsd 0.1s 10ph/6stn Dmin 114km Az.gap 268°
Corr. -0.320 17M/17stn Msd 0.2 1↓

91/2310
FEB 09 1925 03.3s 35.24S 178.73E 178km M=4.4
0.7 0.07 0.07 17
Rsd 0.3s 14ph/10stn Dmin 265km Az.gap 289°
Corr. 0.773 17M/15stn Msd 0.3

91/2325
FEB 10 0335 10.0s 41.23S 172.73E 176km M=4.1
0.3 0.02 0.02 2
Rsd 0.3s 36ph/20stn Dmin 48km Az.gap 106°
Corr. -0.277 21M/16stn Msd 0.2 7↑ 3↓

91/2328
FEB 10 0454 08.6s 38.24S 176.09E 159km M=3.6
0.7 0.03 0.03 6
Rsd 0.2s 20ph/15stn Dmin 36km Az.gap 118°
Corr. -0.336 22M/20stn Msd 0.2

91/2344
FEB 10 1219 19.0s 45.12S 167.42E 92km M=3.8
0.2 0.01 0.02 2
Rsd 0.1s 18ph/14stn Dmin 63km Az.gap 233°
Corr. -0.422 19M/15stn Msd 0.1 5↑ 8↓

91/2348
FEB 10 1256 22.0s 40.98S 174.12E 78km M=3.0
0.2 0.01 0.01 2
Rsd 0.2s 18ph/13stn Dmin 26km Az.gap 76°
Corr. -0.049 15M/13stn Msd 0.2 1↑ 1↓
Felt Kelburn (68).

91/2353
FEB 10 1546 47.8s 39.11S 175.35E 201km M=3.6
0.6 0.03 0.05 5
Rsd 0.2s 19ph/14stn Dmin 2km Az.gap 187°
Corr. -0.334 20M/20stn Msd 0.2 1↑

91/2361
FEB 10 1827 21.8s 41.86S 171.67E 10km M=3.0
0.3 0.01 0.03 1
Rsd 0.2s 15ph/7stn Dmin 17km Az.gap 234°
Corr. 0.060 7M/7stn Msd 0.2 1↓
Felt Westport (79) MM3.

91/2371
FEB 10 2328 56.9s 41.57S 174.37E 9km M=3.7
0.2 0.01 0.01 2
Rsd 0.3s 21ph/19stn Dmin 24km Az.gap 135°
Corr. -0.447 11M/5stn Msd 0.2 5↑ 6↓

91/2381
FEB 11 0620 21.3s 42.28S 174.10E 17km M=3.7
0.2 0.01 0.01 2
Rsd 0.2s 31ph/21stn Dmin 49km Az.gap 167°
Corr. -0.652 9M/5stn Msd 0.1 6↑ 4↓

91/2411
FEB 11 2043 22.9s 37.13S 177.39E 181km M=4.6
0.6 0.08 0.03 7
Rsd 0.2s 12ph/8stn Dmin 96km Az.gap 241°
Corr. 0.011 19M/14stn Msd 0.3 1↑ 3↓

91/2415
FEB 11 2253 14.2s 44.76S 167.35E 5km M=4.8
0.4 0.03 0.03 R
Rsd 0.1s 18ph/16stn Dmin 46km Az.gap 240°
Corr. -0.891 15M/8stn Msd 0.1 1↑ 13↓

91/2451
FEB 12 1426 19.9s 38.67S 176.66E 56km M=3.7
0.2 0.01 0.01 2
Rsd 0.2s 33ph/28stn Dmin 27km Az.gap 56°
Corr. 0.041 26M/22stn Msd 0.2 2↑ 3↓

91/2484
FEB 13 0934 50.9s 36.31S 177.49E 189km M=3.8
0.3 0.04 0.03 5
Rsd 0.1s 6ph/4stn Dmin 161km Az.gap 324°
Corr. 0.082 4M/4stn Msd 0.3 1↓

91/2490
FEB 13 1231 06.8s 37.78S 176.38E 177km M=3.8
0.3 0.02 0.01 2
Rsd 0.1s 16ph/12stn Dmin 70km Az.gap 183°
Corr. 0.195 20M/19stn Msd 0.1 1↑

91/2535
FEB 14 1611 35.5s 37.48S 177.10E 139km M=3.6
0.3 0.03 0.02 3
Rsd 0.1s 7ph/4stn Dmin 87km Az.gap 278°
Corr. -0.531 4M/4stn Msd 0.2 1↑

91/2541
FEB 14 1904 25.0s 38.24S 176.34E 153km M=4.4
0.3 0.02 0.01 3
Rsd 0.2s 28ph/22stn Dmin 15km Az.gap 86°
Corr. -0.022 9M/5stn Msd 0.2 17↑ 6↓

91/2556
FEB 15 1048 10.7s 42.04S 171.59E 7km M=6.0
0.2 0.00 0.01 2
Rsd 0.1s 18ph/11stn Dmin 37km Az.gap 155°
Corr. 0.018 24M/12stn Msd 0.2 12↑ 7↓
Felt Westland, maximum intensity MM5 at Westport (79).

91/2570
FEB 15 1100 48.8s 42.03S 171.59E 13km M=4.1
0.3 0.01 0.02 3
Rsd 0.1s 13ph/8stn Dmin 36km Az.gap 182°
Corr. 0.090 12M/6stn Msd 0.2 1↑ 2↓
Felt Westport (79) MM5.

91/2582
FEB 15 1112 54.7s 42.02S 171.60E 14km M=3.6
0.2 0.01 0.02 2
Rsd 0.1s 14ph/6stn Dmin 35km Az.gap 196°
Corr. 0.055 16M/16stn Msd 0.2 1↑
Felt Carters Beach (79) MM4.

91/2635
FEB 15 1216 14.2s 38.36S 176.21E 145km M=4.0
0.4 0.01 0.02 4
Rsd 0.2s 21ph/16stn Dmin 64km Az.gap 87°
Corr. -0.106 27M/24stn Msd 0.3 2↑ 2↓

91/2649
FEB 15 1236 12.9s 42.05S 171.55E 9km M=3.1
0.5 0.01 0.05 4
Rsd 0.3s 11ph/6stn Dmin 40km Az.gap 237°
Corr. -0.163 4M/4stn Msd 0.1
Felt Westport (79) MM4.

91/2650
FEB 15 1237 31.3s 42.03S 171.62E 7km M=2.3
0.2 0.00 0.02 1
Rsd 0.1s 7ph/4stn Dmin 34km Az.gap 238°
Corr. -0.160 4M/4stn Msd 0.1
Felt Westport (79) MM4.

91/2659
FEB 15 1301 35.3s 42.04S 171.53E 12km M=4.1
0.6 0.01 0.04 4
Rsd 0.3s 18ph/8stn Dmin 40km Az.gap 184°
Corr. 0.034 11M/5stn Msd 0.2 1↓
Felt Westport (79).

91/2660
FEB 15 1306 30.5s 42.03S 171.62E 6km M=2.0
0.5 0.01 0.06 R
Rsd 0.2s 5ph/3stn Dmin 35km Az.gap 239°
Corr. 0.133 1M/1stn Msd 0.0 1↓
Felt Westport (79).

91/2667
FEB 15 1328 13.6s 42.03S 171.58E 6km M=1.6
0.4 R R R
Rsd 0.5s 2ph/1stn Dmin 36km Az.gap 360°
Corr. 0.000 1M/1stn Msd 0.0
Felt Westport (79). Two events interlocked.

91/2668
FEB 15 1336 26.9s 42.05S 171.56E 12km M=4.6
0.2 0.00 0.01 2
Rsd 0.1s 18ph/11stn Dmin 39km Az.gap 167°
Corr. -0.017 18M/9stn Msd 0.2 3↑ 1↓
Felt Paroa (92) MM4, Westport (79).

91/2669
FEB 15 1337 38.5s 42.05S 171.59E 8km M=4.2
0.2 0.01 0.02 3
Rsd 0.2s 15ph/6stn Dmin 38km Az.gap 195°
Corr. -0.375 10M/5stn Msd 0.2 1↓
Felt Westport (79).

91/2672
FEB 15 1345 36.7s 42.02S 171.62E 11km M=2.8
0.2 0.01 0.02 2
Rsd 0.1s 11ph/5stn Dmin 34km Az.gap 239°
Corr. -0.291 6M/6stn Msd 0.1
Felt Carters Beach (79) MM 4.

91/2673
FEB 15 1353 28.8s 42.03S 171.58E 6km M=1.2
0.0 R R R
Rsd 0.0s 2ph/1stn Dmin 36km Az.gap 360°
Corr. 0.000 1M/1stn Msd 0.0
Felt Carters Beach (79).

91/2693
FEB 15 1530 52.2s 42.03S 171.65E 7km M=3.0
0.3 0.01 0.03 3
Rsd 0.2s 13ph/6stn Dmin 34km Az.gap 226°
Corr. 0.098 4M/4stn Msd 0.1 1↓
Felt Westport (79).

91/2707
FEB 15 1758 30.4s 41.25S 172.79E 180km M=3.6
0.3 0.01 0.02 2
Rsd 0.2s 29ph/18stn Dmin 51km Az.gap 99°
Corr. -0.102 12M/12stn Msd 0.4 1↑

91/2771
FEB 16 0459 01.5s 35.62S 179.11E 281km M=3.8
0.2 0.05 0.07 1
Rsd 0.0s 10ph/8stn Dmin 231km Az.gap 347°
Corr. -0.953 6M/6stn Msd 0.2

91/2801
FEB 16 1627 28.1s 37.50S 177.18E 142km M=3.7
0.5 0.04 0.03 5
Rsd 0.3s 8ph/5stn Dmin 85km Az.gap 204°
Corr. -0.230 4M/4stn Msd 0.1 1↑

91/2827
FEB 16 2341 15.8s 45.75S 166.70E 45km M=4.3
0.2 0.01 0.04 12
Rsd 0.1s 19ph/13stn Dmin 93km Az.gap 260°
Corr. 0.005 20M/13stn Msd 0.2 2↓

91/2831
FEB 17 0226 40.2s 38.85S 174.95E 206km M=3.7
0.4 0.06 0.04 7
Rsd 0.2s 18ph/15stn Dmin 202km Az.gap 304°
Corr. 0.213 14M/12stn Msd 0.1

91/2832
FEB 17 0304 20.9s 38.55S 175.76E 190km M=3.8
0.9 0.02 0.03 8
Rsd 0.2s 26ph/21stn Dmin 74km Az.gap 136°
Corr. -0.379 20M/18stn Msd 0.2

91/2838
FEB 17 0536 21.3s 36.34S 177.75E 267km M=4.2
0.8 0.08 0.12 6
Rsd 0.3s 10ph/7stn Dmin 148km Az.gap 308°
Corr. -0.785 7M/5stn Msd 0.1

91/2882
FEB 18 0535 33.9s 41.88S 171.71E 13km M=3.8
0.3 0.01 0.02 2
Rsd 0.2s 18ph/7stn Dmin 17km Az.gap 194°
Corr. 0.132 19M/15stn Msd 0.3 1↑ 1↓
Felt Westport (79) MM4.

91/2887
FEB 18 0622 05.3s 35.96S 178.58E 131km M=3.8
0.2 0.04 0.04 9
Rsd 0.1s 7ph/3stn Dmin 184km Az.gap 340°
Corr. -0.672 3M/3stn Msd 0.1

91/2911
FEB 18 2047 44.0s 38.49S 176.06E 130km M=3.8
1.2 0.03 0.03 12
Rsd 0.3s 11ph/10stn Dmin 58km Az.gap 120°
Corr. 0.230 16M/15stn Msd 0.3 1↑ 1↓

91/2915
FEB 18 2159 59.4s 39.00S 175.17E 278km M=3.9
0.2 0.02 0.03 2
Rsd 0.1s 18ph/13stn Dmin 92km Az.gap 305°
Corr. -0.114 10M/9stn Msd 0.2

91/2922
FEB 19 0623 39.1s 37.46S 179.37E 14km M=3.6
0.3 0.01 0.03 2
Rsd 0.1s 10ph/6stn Dmin 95km Az.gap 299°
Corr. -0.236 10M/6stn Msd 0.2

91/2927
FEB 19 0812 24.1s 37.21S 176.77E 235km M=3.5
0.5 0.06 0.06 5
Rsd 0.2s 10ph/7stn Dmin 121km Az.gap 267°
Corr. -0.455 3M/3stn Msd 0.2

91/2931
FEB 19 1004 54.5s 38.38S 175.90E 160km M=3.5
1.0 0.06 0.06 8
Rsd 0.3s 8ph/6stn Dmin 77km Az.gap 233°
Corr. -0.490 4M/4stn Msd 0.2

91/2942
FEB 19 2119 28.2s 40.50S 174.85E 57km M=3.7
0.2 0.01 0.02 4
Rsd 0.3s 33ph/24stn Dmin 41km Az.gap 75°
Corr. -0.271 19M/14stn Msd 0.2 4↑ 3↓

91/2961
FEB 20 1447 23.3s 37.18S 176.73E 217km M=3.5
0.3 0.03 0.04 2
Rsd 0.1s 8ph/7stn Dmin 125km Az.gap 305°
Corr. -0.715 7M/7stn Msd 0.2

91/2968
FEB 20 2316 41.4s 37.55S 179.92E 33km M=3.7
0.6 0.04 0.06 R
Rsd 0.3s 9ph/5stn Dmin 143km Az.gap 298°
Corr. -0.297 15M/13stn Msd 0.2

91/2970
FEB 20 2323 59.3s 41.63S 175.40E 22km M=3.6
0.3 0.02 0.01 1
Rsd 0.2s 26ph/16stn Dmin 26km Az.gap 190°
Corr. -0.523 22M/17stn Msd 0.2 3↑ 4↓

91/2972
FEB 20 2327 42.9s 41.65S 175.41E 22km M=3.6
0.2 0.01 0.01 1
Rsd 0.2s 23ph/17stn Dmin 28km Az.gap 191°
Corr. -0.516 23M/18stn Msd 0.2 4↑ 5↓

91/2989
FEB 21 0536 05.8s 46.05S 170.48E 33km M=4.1
0.4 0.03 0.04 R
Rsd 0.2s 17ph/15stn Dmin 112km Az.gap 208°
Corr. -0.711 16M/13stn Msd 0.3 1↑ 9↓
Felt Green Island (144) MM3.

91/3001
FEB 21 0934 06.4s 38.18S 176.11E 149km M=3.7
0.6 0.03 0.03 5
Rsd 0.3s 17ph/13stn Dmin 56km Az.gap 125°
Corr. -0.012 22M/21stn Msd 0.3

91/3016
FEB 21 1920 04.9s 39.98S 175.29E 12km M=3.8
0.1 0.00 0.01 R
Rsd 0.3s 37ph/28stn Dmin 37km Az.gap 55°
Corr. -0.281 34M/31stn Msd 0.2 6↑ 4↓
Felt Wanganui district, max MM4 at Wanganui (57).

91/3050
FEB 22 1606 41.0s 37.89S 176.50E 172km M=3.9
0.5 0.02 0.03 4
Rsd 0.3s 22ph/16stn Dmin 38km Az.gap 108°
Corr. 0.054 22M/21stn Msd 0.2 3↑ 1↓

91/3053
FEB 22 1926 06.2s 40.40S 173.99E 84km M=3.5
0.2 0.01 0.01 3
Rsd 0.2s 37ph/22stn Dmin 45km Az.gap 108°
Corr. 0.076 17M/14stn Msd 0.2 3↑ 2↓

91/3055
FEB 22 1950 31.9s 39.78S 174.35E 164km M=3.7
0.5 0.02 0.04 4
Rsd 0.3s 24ph/17stn Dmin 50km Az.gap 178°
Corr. -0.188 15M/13stn Msd 0.2 1↑ 1↓

91/3068
FEB 23 0957 11.1s 37.75S 176.89E 144km M=3.8
0.3 0.02 0.02 2
Rsd 0.2s 17ph/13stn Dmin 60km Az.gap 126°
Corr. 0.219 21M/18stn Msd 0.2 1↑

91/3076
FEB 23 1413 29.4s 40.78S 174.70E 50km M=3.7
0.1 0.01 0.01 3
Rsd 0.2s 23ph/20stn Dmin 20km Az.gap 102°
Corr. -0.141 14M/9stn Msd 0.2 7↑ 4↓
Felt Wellington (68) MM3.

91/3078
FEB 23 1719 28.1s 38.26S 177.56E 16km M=3.6
0.1 0.01 0.01 3
Rsd 0.3s 16ph/14stn Dmin 39km Az.gap 119°
Corr. -0.117 26M/22stn Msd 0.2 4↑ 2↓
Felt Ruatuna Rd (35) MM4.

91/3079
FEB 23 1835 54.5s 38.20S 176.17E 144km M=4.0
0.3 0.02 0.02 3
Rsd 0.3s 19ph/16stn Dmin 30km Az.gap 85°
Corr. -0.073 25M/23stn Msd 0.3 8↑ 1↓

91/3081
FEB 23 1855 29.4s 38.63S 175.16E 208km M=3.6
0.4 0.03 0.04 6
Rsd 0.3s 20ph/15stn Dmin 176km Az.gap 215°
Corr. -0.691 21M/19stn Msd 0.3

91/3084
FEB 23 2022 50.1s 37.31S 177.38E 130km M=3.6
0.3 0.02 0.02 3
Rsd 0.1s 9ph/5stn Dmin 88km Az.gap 255°
Corr. -0.512 5M/4stn Msd 0.1 1↑

91/3088
FEB 24 0050 34.9s 42.05S 171.57E 12km M=5.1
0.1 0.01 0.01 R
Rsd 0.1s 18ph/9stn Dmin 38km Az.gap 166°
Corr. -0.422 23M/11stn Msd 0.2 4↑ 2↓
Felt Westland, maximum intensity MM5 at Westport (79). Depth unstable.

91/3089
FEB 24 0052 37.3s 42.06S 171.60E 11km M=3.9
0.5 0.01 0.02 5
Rsd 0.3s 15ph/7stn Dmin 38km Az.gap 174°
Corr. -0.443 8M/5stn Msd 0.2 1↓
Felt Westport (79).

91/3090
FEB 24 0055 43.9s 42.06S 171.61E 5km M=4.3
0.2 0.01 0.01 2
Rsd 0.1s 9ph/5stn Dmin 38km Az.gap 172°
Corr. -0.095 4M/2stn Msd 1.6

91/3097
FEB 24 0249 48.8s 37.76S 176.63E 209km M=3.6
0.4 0.04 0.04 3
Rsd 0.1s 9ph/6stn Dmin 70km Az.gap 261°
Corr. -0.480 5M/4stn Msd 0.3

91/3101
FEB 24 0529 45.9s 42.05S 171.59E 9km M=3.5
0.3 0.01 0.01 3
Rsd 0.2s 18ph/8stn Dmin 38km Az.gap 175°
Corr. -0.512 23M/19stn Msd 0.2 1↑ 2↓
Felt Westport (79) MM4.

91/3109
FEB 24 1244 07.4s 38.28S 175.81E 181km M=4.4
0.4 0.02 0.03 4
Rsd 0.3s 28ph/22stn Dmin 48km Az.gap 114°
Corr. 0.101 28M/23stn Msd 0.2 6↑ 2↓

91/3112
FEB 24 1418 09.0s 38.02S 176.37E 148km M=3.9
0.3 0.01 0.02 3
Rsd 0.3s 21ph/17stn Dmin 24km Az.gap 97°
Corr. 0.012 21M/20stn Msd 0.2 3↑ 1↓

91/3115
FEB 24 1724 08.9s 35.81S 179.13W 116km M=4.5
0.3 0.16 0.14 18
Rsd 0.1s 9ph/4stn Dmin 303km Az.gap 351°
Corr. -0.973 6M/4stn Msd 0.3

91/3117
FEB 24 1900 43.5s 35.65S 179.23W 33km M=4.4
0.7 0.04 0.07 R
Rsd 0.3s 9ph/7stn Dmin 309km Az.gap 323°
Corr. -0.107 9M/7stn Msd 0.2

91/3132
FEB 25 0518 31.6s 45.66S 166.92E 19km M=4.1
0.4 0.01 0.03 2
Rsd 0.2s 11ph/6stn Dmin 81km Az.gap 249°
Corr. -0.003 24M/19stn Msd 0.2 1↓

91/3137
FEB 25 0834 05.4s 38.22S 176.17E 160km M=3.8
0.5 0.03 0.03 4
Rsd 0.3s 15ph/13stn Dmin 64km Az.gap 122°
Corr. -0.229 23M/20stn Msd 0.1 1↑

91/3152
FEB 25 1616 47.6s 46.13S 167.12E 16km M=3.8
0.2 0.01 0.02 2
Rsd 0.1s 21ph/14stn Dmin 58km Az.gap 242°
Corr. -0.512 18M/15stn Msd 0.2 1↑ 3↓

91/3153
FEB 25 1637 05.5s 38.54S 178.70E 29km M=3.6
0.4 0.01 0.03 3
Rsd 0.2s 13ph/10stn Dmin 59km Az.gap 239°
Corr. -0.428 28M/25stn Msd 0.3 3↑ 1↓

91/3169
FEB 26 0647 35.2s 45.00S 167.57E 87km M=4.1
0.3 0.02 0.02 2
Rsd 0.1s 23ph/17stn Dmin 46km Az.gap 228°
Corr. -0.029 24M/19stn Msd 0.2 3↑ 11↓

91/3171
FEB 26 1240 33.2s 37.85S 175.90E 202km M=3.6
0.3 0.03 0.04 2
Rsd 0.1s 14ph/11stn Dmin 116km Az.gap 274°
Corr. -0.703 7M/7stn Msd 0.2

91/3180
FEB 26 1924 14.6s 39.70S 174.34E 157km M=4.0
0.3 0.01 0.02 3
Rsd 0.2s 25ph/21stn Dmin 52km Az.gap 147°
Corr. -0.277 18M/16stn Msd 0.3 13↑ 3↓

91/3181
FEB 26 2016 11.3s 40.27S 173.47E 174km M=3.8
0.3 0.02 0.02 3
Rsd 0.3s 27ph/19stn Dmin 70km Az.gap 159°
Corr. -0.126 16M/14stn Msd 0.2 5↑ 3↓

91/3182
FEB 26 2103 14.3s 40.98S 172.94E 220km M=3.6
0.3 0.02 0.02 2
Rsd 0.2s 23ph/15stn Dmin 39km Az.gap 142°
Corr. 0.021 10M/10stn Msd 0.1 1↑

91/3184
FEB 26 2355 49.5s 38.52S 175.84E 158km M=3.6
1.0 0.05 0.04 7
Rsd 0.3s 14ph/12stn Dmin 70km Az.gap 223°
Corr. -0.660 20M/18stn Msd 0.1 5↑ 1↓

91/3193
FEB 27 0734 47.2s 42.14S 172.69E 57km M=4.0
0.2 0.01 0.01 2
Rsd 0.2s 25ph/16stn Dmin 39km Az.gap 92°
Corr. -0.073 8M/3stn Msd 0.1 3↑ 2↓

91/3210
FEB 27 1850 48.6s 46.56S 165.68E 33km M=4.1
0.5 0.02 0.05 R
Rsd 0.1s 17ph/14stn Dmin 177km Az.gap 300°
Corr. -0.145 20M/17stn Msd 0.2 1↓
Unstable solution.

91/3216
FEB 28 0020 53.2s 37.22S 176.87E 191km M=3.6
0.4 0.05 0.05 5
Rsd 0.2s 8ph/4stn Dmin 118km Az.gap 263°
Corr. -0.260 12M/10stn Msd 0.3

91/3219
FEB 28 0143 53.8s 38.44S 174.48E 20km M=3.5
0.2 0.01 0.02 2
Rsd 0.2s 16ph/11stn Dmin 29km Az.gap 145°
Corr. -0.629 20M/18stn Msd 0.2 2↑ 3↓

91/3223
FEB 28 0650 57.8s 37.88S 176.37E 165km M=3.6
0.6 0.05 0.05 3
Rsd 0.2s 11ph/10stn Dmin 77km Az.gap 235°
Corr. -0.641 9M/9stn Msd 0.2

91/3226
FEB 28 1026 15.9s 42.04S 171.56E 10km M=4.1
0.4 0.01 0.01 4
Rsd 0.2s 14ph/8stn Dmin 39km Az.gap 167°
Corr. -0.398 9M/5stn Msd 0.2 3↑ 2↓
Felt Westport (79) MM4.

91/3268
MAR 02 0235 08.9s 45.24S 167.43E 100km M=4.5
0.4 0.01 0.03 3
Rsd 0.1s 26ph/17stn Dmin 74km Az.gap 227°
Corr. -0.123 17M/12stn Msd 0.2 11↑ 2↓

91/3272
MAR 02 0453 40.2s 46.25S 166.19E 5km M=3.7
0.3 0.01 0.03 R
Rsd 0.1s 16ph/12stn Dmin 130km Az.gap 303°
Corr. 0.075 17M/14stn Msd 0.1 1↓

91/3278
MAR 02 0630 35.0s 37.87S 176.55E 165km M=4.0
0.4 0.02 0.02 3
Rsd 0.3s 24ph/20stn Dmin 41km Az.gap 111°
Corr. 0.075 25M/22stn Msd 0.2 2↑ 1↓

91/3283
MAR 02 1030 42.5s 34.76S 178.28E 279km M=4.1
0.6 0.07 0.09 4
Rsd 0.1s 13ph/12stn Dmin 315km Az.gap 337°
Corr. -0.816 13M/13stn Msd 0.1

91/3287
MAR 02 1254 47.2s 37.95S 176.13E 192km M=3.5
0.9 0.06 0.07 6
Rsd 0.4s 8ph/6stn Dmin 93km Az.gap 264°
Corr. -0.598 11M/9stn Msd 0.3 1↑

91/3297
MAR 02 2038 39.1s 37.89S 176.20E 156km M=3.8
0.4 0.05 0.04 3
Rsd 0.2s 10ph/7stn Dmin 90km Az.gap 230°
Corr. -0.797 13M/13stn Msd 0.3

91/3301
MAR 02 2239 15.3s 39.77S 174.45E 106km M=3.5
0.3 0.01 0.02 4
Rsd 0.3s 32ph/21stn Dmin 41km Az.gap 83°
Corr. -0.133 15M/14stn Msd 0.3 4↑ 1↓

91/3306
MAR 03 0656 13.4s 41.54S 174.22E 5km M=3.9
0.1 0.01 0.01 R
Rsd 0.3s 22ph/19stn Dmin 24km Az.gap 98°
Corr. -0.334 12M/5stn Msd 0.2 6↑ 4↓
Heard at Seddon (84).

91/3313
MAR 03 1248 31.2s 35.92S 178.07E 196km M=3.9
0.2 0.02 0.02 3
Rsd 0.1s 8ph/4stn Dmin 187km Az.gap 328°
Corr. -0.563 8M/8stn Msd 0.3 1↓

91/3342
MAR 04 0641 34.5s 38.08S 178.47E 45km M=3.9
0.2 0.01 0.02 1
Rsd 0.1s 15ph/11stn Dmin 19km Az.gap 228°
Corr. 0.029 27M/22stn Msd 0.2 1↑ 3↓

91/3348
MAR 04 1251 06.5s 35.22S 178.01E 33km M=4.0
0.3 0.02 0.04 R
Rsd 0.1s 8ph/3stn Dmin 317km Az.gap 343°
Corr. -0.146 2M/2stn Msd 0.0

91/3351
MAR 04 1917 54.5s 39.32S 174.41E 18km M=4.2
0.1 0.01 0.01 1
Rsd 0.2s 33ph/24stn Dmin 28km Az.gap 100°
Corr. -0.350 10M/4stn Msd 0.2 4↑ 1↓
Felt Uruti (38), New Plymouth (47) MM3.

91/3353
MAR 04 2035 40.0s 36.82S 179.38E 12km M=3.6
0.2 0.01 0.03 R
Rsd 0.1s 10ph/6stn Dmin 129km Az.gap 300°
Corr. -0.230 6M/6stn Msd 0.2

91/3356
MAR 05 0233 33.5s 38.14S 176.02E 162km M=3.6
0.2 0.01 0.02 2
Rsd 0.1s 9ph/7stn Dmin 97km Az.gap 252°
Corr. -0.551 10M/10stn Msd 0.2

91/3365
MAR 05 1101 04.1s 35.87S 178.20E 186km M=3.7
0.2 0.03 0.02 4
Rsd 0.1s 11ph/5stn Dmin 192km Az.gap 331°
Corr. 0.042 5M/5stn Msd 0.1

91/3366
MAR 05 1626 14.9s 38.09S 176.49E 127km M=3.7
0.5 0.02 0.02 4
Rsd 0.3s 18ph/14stn Dmin 15km Az.gap 145°
Corr. 0.146 20M/18stn Msd 0.2 1↑

91/3381
MAR 06 0355 28.5s 41.99S 173.04E 13km M=4.6
0.2 0.01 0.02 4
Rsd 0.3s 26ph/18stn Dmin 27km Az.gap 70°
Corr. 0.299 16M/7stn Msd 0.2 6↑ 2↓

91/3385
MAR 06 0658 45.3s 35.31S 179.69E 301km M=4.0
0.4 0.10 0.15 7
Rsd 0.1s 9ph/5stn Dmin 283km Az.gap 348°
Corr. -0.746 4M/4stn Msd 0.3

91/3394
MAR 06 1333 05.9s 37.53S 178.39E 44km M=3.8
0.2 0.01 0.02 1
Rsd 0.1s 12ph/7stn Dmin 11km Az.gap 291°
Corr. 0.182 21M/17stn Msd 0.3 1↑

91/3400
MAR 07 0004 57.6s 36.76S 177.02E 283km M=3.8
0.4 0.03 0.08 5
Rsd 0.1s 10ph/7stn Dmin 166km Az.gap 299°
Corr. -0.953 8M/8stn Msd 0.3 1↑ 1↓

91/3404
MAR 07 0331 10.2s 37.03S 177.38E 163km M=4.6
0.3 0.03 0.02 3
Rsd 0.1s 12ph/10stn Dmin 103km Az.gap 249°
Corr. -0.020 8M/4stn Msd 0.2 1↑ 1↓

91/3420
MAR 07 2103 54.0s 38.50S 175.41E 243km M=4.4
0.6 0.05 0.04 4
Rsd 0.3s 20ph/16stn Dmin 53km Az.gap 104°
Corr. 0.021 25M/23stn Msd 0.2 7↑ 5↓

91/3436
MAR 08 1057 20.1s 37.11S 177.45E 150km M=4.0
0.3 0.03 0.02 4
Rsd 0.2s 11ph/7stn Dmin 93km Az.gap 244°
Corr. -0.239 20M/20stn Msd 0.1 2↑ 1↓

91/3446
MAR 08 1620 13.3s 45.14S 167.54E 117km M=3.9
0.3 0.01 0.03 2
Rsd 0.1s 24ph/16stn Dmin 60km Az.gap 223°
Corr. -0.114 21M/19stn Msd 0.3 2↑ 6↓

91/3477
MAR 09 1310 54.9s 45.11S 167.47E 94km M=3.6
0.3 0.01 0.02 2
Rsd 0.2s 19ph/13stn Dmin 61km Az.gap 232°
Corr. -0.268 16M/14stn Msd 0.2 1↑ 6↓

91/3478
MAR 09 1705 33.9s 43.00S 171.55E 5km M=2.6
0.1 0.01 0.00 R
Rsd 0.1s 7ph/3stn Dmin 63km Az.gap 196°
Corr. -0.734 3M/3stn Msd 0.3 1↓
Felt Arthur's Pass (93) MM4.

91/3480
MAR 09 1742 37.4s 38.36S 176.10E 146km M=3.6
0.9 0.05 0.06 6
Rsd 0.3s 12ph/8stn Dmin 68km Az.gap 227°
Corr. -0.598 18M/16stn Msd 0.2 1↑ 2↓

91/3489
MAR 10 0004 29.8s 36.73S 176.94E 1km M=4.1
0.1 0.01 0.01 1
Rsd 0.1s 11ph/5stn Dmin 109km Az.gap 233°
Corr. 0.613 10M/5stn Msd 0.2 1↑

91/3490
MAR 10 0104 31.0s 36.54S 177.14E 5km M=4.2
0.9 0.07 0.04 R
Rsd 0.5s 9ph/6stn Dmin 129km Az.gap 239°
Corr. 0.656 12M/10stn Msd 0.3

91/3495
MAR 10 0738 50.5s 36.68S 176.90E 5km M=3.8
1.0 0.06 0.05 R
Rsd 0.4s 7ph/3stn Dmin 106km Az.gap 268°
Corr. 0.855 4M/2stn Msd 0.2

91/3531
MAR 11 1600 47.0s 38.15S 175.93E 194km M=3.7
0.7 0.06 0.08 5
Rsd 0.3s 12ph/7stn Dmin 104km Az.gap 211°
Corr. -0.887 6M/6stn Msd 0.2 1↑ 2↓

91/3542
MAR 12 0323 24.8s 38.63S 178.86E 33km M=3.7
0.7 0.03 0.06 R
Rsd 0.4s 10ph/7stn Dmin 72km Az.gap 244°
Corr. -0.471 24M/24stn Msd 0.2 1↑

91/3545
MAR 12 0507 45.3s 35.57S 177.96E 274km M=3.7
0.3 0.02 0.04 3
Rsd 0.1s 11ph/9stn Dmin 308km Az.gap 336°
Corr. -0.859 7M/7stn Msd 0.1

91/3547
MAR 12 0824 23.5s 37.54S 176.71E 162km M=3.6
0.3 0.04 0.03 3
Rsd 0.2s 14ph/10stn Dmin 88km Az.gap 239°
Corr. -0.676 17M/17stn Msd 0.1

91/3553
MAR 12 1054 46.2s 37.80S 176.89E 146km M=4.1
0.3 0.02 0.01 3
Rsd 0.3s 30ph/20stn Dmin 55km Az.gap 123°
Corr. 0.100 24M/21stn Msd 0.2 3↑ 2↓

91/3556
MAR 12 1254 01.0s 45.80S 166.39E 5km M=3.6
0.7 0.02 0.06 R
Rsd 0.3s 11ph/5stn Dmin 115km Az.gap 271°
Corr. 0.439 9M/6stn Msd 0.1

91/3559
MAR 12 1536 34.1s 37.26S 177.27E 143km M=4.2
0.3 0.02 0.02 3
Rsd 0.2s 20ph/15stn Dmin 98km Az.gap 181°
Corr. 0.322 26M/22stn Msd 0.2 2↑ 4↓

91/3561
MAR 12 1653 21.4s 45.08S 167.61E 122km M=3.8
0.3 0.01 0.04 2
Rsd 0.1s 13ph/6stn Dmin 51km Az.gap 218°
Corr. -0.498 9M/7stn Msd 0.3 1↑

91/3578
MAR 13 1212 03.2s 37.06S 177.59E 141km M=3.6
0.4 0.06 0.03 7
Rsd 0.2s 9ph/5stn Dmin 87km Az.gap 252°
Corr. 0.275 4M/4stn Msd 0.2

91/3580
MAR 13 1248 29.5s 40.32S 175.94E 41km M=4.1
0.0 0.00 0.01 2
Rsd 0.1s 38ph/34stn Dmin 44km Az.gap 76°
Corr. -0.482 8M/3stn Msd 0.1 5↑ 1↓
Felt Moawhango (58), Palmerston North (62), Dannevirke (63) MM4

91/3596
MAR 14 0127 28.8s 38.08S 175.90E 169km M=4.1
0.7 0.05 0.04 5
Rsd 0.2s 19ph/15stn Dmin 103km Az.gap 213°
Corr. -0.578 27M/23stn Msd 0.2 1↑

91/3597
MAR 14 0134 52.4s 38.23S 175.83E 187km M=3.8
0.8 0.06 0.06 7
Rsd 0.2s 11ph/8stn Dmin 107km Az.gap 210°
Corr. -0.773 22M/21stn Msd 0.2

91/3606
MAR 14 1001 49.2s 41.51S 173.59E 64km M=3.7
0.2 0.01 0.01 3
Rsd 0.2s 29ph/20stn Dmin 59km Az.gap 68°
Corr. -0.318 17M/12stn Msd 0.2 3↑ 7↓

91/3612
MAR 14 1748 46.0s 35.92S 177.95E 185km M=3.9
0.3 0.04 0.04 6
Rsd 0.1s 9ph/5stn Dmin 189km Az.gap 326°
Corr. -0.118 6M/6stn Msd 0.2

91/3615
MAR 14 2136 20.9s 45.04S 167.41E 89km M=3.7
0.3 0.01 0.03 2
Rsd 0.2s 16ph/11stn Dmin 57km Az.gap 238°
Corr. -0.348 9M/6stn Msd 0.2 1↓

91/3617
MAR 14 2312 49.9s 36.42S 177.70E 183km M=4.2
0.2 0.03 0.03 4
Rsd 0.1s 11ph/6stn Dmin 141km Az.gap 310°
Corr. -0.520 11M/11stn Msd 0.3

91/3666
MAR 16 1928 31.4s 38.64S 175.37E 234km M=4.8
0.4 0.02 0.03 3
Rsd 0.2s 36ph/28stn Dmin 35km Az.gap 57°
Corr. -0.039 12M/5stn Msd 0.1 1↑

91/3670
MAR 16 2144 59.0s 38.23S 176.04E 143km M=3.6
0.6 0.04 0.04 4
Rsd 0.3s 16ph/12stn Dmin 83km Az.gap 220°
Corr. -0.668 19M/19stn Msd 0.2

91/3674
MAR 17 0355 57.6s 38.53S 176.39E 174km M=3.5
0.3 0.02 0.02 3
Rsd 0.1s 19ph/13stn Dmin 99km Az.gap 210°
Corr. -0.828 9M/9stn Msd 0.4 1↑

91/3685
MAR 17 1352 56.6s 41.21S 174.60E 45km M=3.6
0.1 0.01 0.01 1
Rsd 0.1s 23ph/21stn Dmin 10km Az.gap 74°
Corr. -0.033 11M/8stn Msd 0.2 9↑ 4↓
Felt Wellington area (68), maximum intensity MM4.

91/3702
MAR 18 0656 41.8s 39.66S 174.44E 221km M=3.6
0.5 0.02 0.05 5
Rsd 0.2s 18ph/16stn Dmin 45km Az.gap 191°
Corr. -0.340 13M/13stn Msd 0.2 1↑

91/3703
MAR 18 0714 47.8s 39.08S 175.21E 222km M=3.8
0.4 0.02 0.06 4
Rsd 0.1s 21ph/15stn Dmin 32km Az.gap 193°
Corr. -0.313 22M/20stn Msd 0.2 1↑

91/3719
MAR 18 1508 30.1s 35.67S 177.88E 245km M=4.1
0.2 0.04 0.03 5
Rsd 0.1s 9ph/5stn Dmin 217km Az.gap 319°
Corr. -0.217 15M/15stn Msd 0.2

91/3747
MAR 19 2130 42.1s 38.78S 175.36E 189km M=3.8
0.9 0.04 0.04 8
Rsd 0.4s 17ph/13stn Dmin 39km Az.gap 128°
Corr. -0.316 19M/17stn Msd 0.2 4↑ 1↓

91/3773
MAR 21 0343 16.7s 43.23S 172.10E 14km M=3.7
0.1 0.00 0.01 2
Rsd 0.1s 14ph/9stn Dmin 52km Az.gap 87°
Corr. 0.211 37M/30stn Msd 0.2 1↑ 2↓

91/3782
MAR 21 1307 15.9s 35.43S 179.52E 257km M=4.0
0.7 0.07 0.08 7
Rsd 0.2s 9ph/6stn Dmin 314km Az.gap 329°
Corr. -0.007 9M/9stn Msd 0.2

91/3787
MAR 21 1907 40.2s 38.09S 176.59E 107km M=3.7
0.5 0.03 0.02 5
Rsd 0.3s 18ph/15stn Dmin 17km Az.gap 197°
Corr. -0.279 21M/19stn Msd 0.2 1↑ 2↓

91/3796
MAR 22 0217 29.8s 37.44S 176.10E 270km M=3.6
0.2 0.02 0.03 1
Rsd 0.1s 14ph/10stn Dmin 127km Az.gap 282°
Corr. -0.824 7M/7stn Msd 0.2

91/3799
MAR 22 0318 12.7s 35.83S 179.11E 191km M=4.3
1.3 0.09 0.14 13
Rsd 0.4s 9ph/7stn Dmin 210km Az.gap 290°
Corr. 0.793 8M/5stn Msd 0.2

91/3801
MAR 22 0413 16.2s 44.60S 170.05E 4km M=3.7
0.1 0.00 0.01 2
Rsd 0.2s 26ph/18stn Dmin 15km Az.gap 95°
Corr. -0.079 16M/12stn Msd 0.2 6↑ 2↓

91/3818
MAR 22 1508 02.4s 37.38S 177.47E 150km M=4.3
0.9 0.11 0.08 R
Rsd 0.4s 14ph/12stn Dmin 78km Az.gap 245°
Corr. -0.196 29M/23stn Msd 0.2 1↓

91/3843
MAR 23 0811 16.0s 41.75S 172.80E 88km M=3.7
0.2 0.01 0.01 3
Rsd 0.2s 37ph/20stn Dmin 7km Az.gap 77°
Corr. -0.159 12M/12stn Msd 0.2 3↑ 1↓

91/3850
MAR 23 1322 36.8s 41.71S 174.00E 34km M=3.8
0.1 0.01 0.01 2
Rsd 0.3s 23ph/19stn Dmin 19km Az.gap 102°
Corr. -0.520 8M/3stn Msd 0.1 3↑ 12↓

91/3853
MAR 23 1410 09.3s 38.14S 176.23E 5km
0.2 0.02 0.01 R
Rsd 0.0s 4ph/2stn Dmin 5km Az.gap 255°
Corr. -0.973 0M/0stn Msd 0.0 1↓
Felt Owhata (33) MM4, Rotorua (33).

91/3878
MAR 24 1430 29.2s 36.68S 177.18E 179km M=3.7
1.3 0.16 0.12 14
Rsd 0.4s 13ph/9stn Dmin 175km Az.gap 303°
Corr. -0.590 16M/16stn Msd 0.2

91/3889
MAR 24 1719 39.8s 38.11S 178.50E 23km M=3.5
0.8 0.03 0.07 2
Rsd 0.3s 8ph/6stn Dmin 21km Az.gap 295°
Corr. 0.602 13M/9stn Msd 0.2 1↓

91/3897
MAR 24 2138 31.2s 38.27S 176.26E 148km M=3.7
0.6 0.05 0.06 3
Rsd 0.2s 14ph/8stn Dmin 74km Az.gap 217°
Corr. -0.867 13M/13stn Msd 0.3 1↑

91/3903
MAR 25 0233 18.3s 37.54S 176.99E 143km M=3.6
0.4 0.04 0.02 3
Rsd 0.2s 11ph/7stn Dmin 80km Az.gap 269°
Corr. -0.455 16M/16stn Msd 0.2 1↑

91/3910
MAR 25 1043 42.0s 39.06S 175.00E 204km M=4.1
0.5 0.02 0.04 3
Rsd 0.2s 32ph/25stn Dmin 30km Az.gap 199°
Corr. -0.531 23M/21stn Msd 0.3 6↑ 1↓

91/3921
MAR 25 1652 38.2s 38.33S 175.34E 2km M=3.6
0.5 0.03 0.03 R
Rsd 0.2s 15ph/10stn Dmin 88km Az.gap 252°
Corr. -0.848 6M/6stn Msd 0.3 1↑

91/3941
MAR 26 1109 53.7s 37.04S 177.53E 141km M=3.8
0.2 0.02 0.02 3
Rsd 0.1s 10ph/5stn Dmin 92km Az.gap 289°
Corr. -0.490 7M/5stn Msd 0.2

91/3949
MAR 26 1909 00.3s 38.64S 176.35E 92km M=3.6
0.4 0.02 0.02 3
Rsd 0.2s 20ph/14stn Dmin 30km Az.gap 179°
Corr. -0.742 20M/18stn Msd 0.2 1↓

91/3950
MAR 26 1909 21.3s 37.36S 176.34E 259km M=4.2
0.2 0.04 0.04 2
Rsd 0.1s 16ph/12stn Dmin 121km Az.gap 240°
Corr. -0.641 20M/18stn Msd 0.2

91/3956
MAR 26 2356 47.6s 36.95S 179.71E 70km M=4.2
0.5 0.05 0.04 13
Rsd 0.1s 14ph/10stn Dmin 145km Az.gap 285°
Corr. -0.109 24M/20stn Msd 0.2 1↓

91/3957
MAR 27 0109 34.9s 37.64S 176.33E 204km M=3.7
0.8 0.08 0.07 6
Rsd 0.2s 12ph/7stn Dmin 97km Az.gap 256°
Corr. -0.566 11M/10stn Msd 0.1

91/3961
MAR 27 0609 35.5s 38.51S 176.36E 133km M=3.6
0.3 0.02 0.02 3
Rsd 0.2s 16ph/9stn Dmin 71km Az.gap 104°
Corr. -0.375 14M/12stn Msd 0.2 2↑ 1↓

91/3965
MAR 27 1202 36.0s 40.95S 172.90E 236km M=3.7
0.3 0.02 0.02 2
Rsd 0.2s 29ph/19stn Dmin 34km Az.gap 115°
Corr. -0.096 13M/13stn Msd 0.2 1↑

91/3968
MAR 27 1749 29.0s 41.57S 173.44E 77km M=3.8
0.3 0.01 0.01 5
Rsd 0.2s 27ph/23stn Dmin 49km Az.gap 67°
Corr. -0.139 19M/14stn Msd 0.2 1↓

91/3982
MAR 28 0354 19.5s 44.98S 167.61E 119km M=3.9
0.3 0.01 0.02 2
Rsd 0.2s 24ph/15stn Dmin 42km Az.gap 224°
Corr. -0.226 19M/16stn Msd 0.1 1↑

91/3990
MAR 28 0712 01.7s 45.68S 166.65E 81km M=5.1
0.2 0.01 0.03 2
Rsd 0.0s 16ph/13stn Dmin 99km Az.gap 248°
Corr. -0.535 13M/7stn Msd 0.2 3↑ 15↓
Felt Otatara (149) MM4, Cromwell (133).

91/4014
MAR 28 2326 07.2s 37.70S 178.54E 65km M=4.5
0.2 0.01 0.02 1
Rsd 0.1s 13ph/9stn Dmin 24km Az.gap 260°
Corr. -0.112 30M/24stn Msd 0.3 1↑ 3↓

91/4016
MAR 29 0029 20.5s 37.13S 177.44E 135km M=3.6
0.2 0.03 0.02 3
Rsd 0.2s 11ph/7stn Dmin 92km Az.gap 241°
Corr. -0.338 11M/10stn Msd 0.1 1↑

91/4018
MAR 29 0346 18.9s 37.36S 176.90E 222km M=4.5
0.3 0.03 0.02 2
Rsd 0.2s 23ph/18stn Dmin 102km Az.gap 155°
Corr. -0.249 28M/23stn Msd 0.2 6↑ 3↓

91/4026
MAR 29 0921 59.5s 38.41S 175.93E 149km M=3.7
0.5 0.03 0.02 4
Rsd 0.2s 18ph/14stn Dmin 72km Az.gap 214°
Corr. -0.672 24M/22stn Msd 0.2 4↑ 1↓

91/4039
MAR 30 0152 41.5s 40.10S 176.81E 62km M=3.8
0.2 0.01 0.02 2
Rsd 0.2s 48ph/38stn Dmin 12km Az.gap 180°
Corr. -0.582 26M/24stn Msd 0.2 3↑ 4↓

91/4042
MAR 30 0506 17.0s 40.44S 173.96E 103km M=3.6
0.3 0.01 0.01 3
Rsd 0.3s 39ph/24stn Dmin 40km Az.gap 109°
Corr. -0.001 16M/14stn Msd 0.3 1↑

91/4051
MAR 30 1201 53.0s 38.30S 176.11E 129km M=3.5
0.7 0.04 0.02 5
Rsd 0.2s 13ph/10stn Dmin 88km Az.gap 213°
Corr. -0.617 19M/19stn Msd 0.1 1↑

91/4058
MAR 30 1454 12.4s 35.41S 179.18E 276km M=3.8
0.5 0.08 0.12 4
Rsd 0.2s 10ph/6stn Dmin 256km Az.gap 343°
Corr. -0.813 5M/5stn Msd 0.3

91/4075
MAR 30 2355 24.9s 41.08S 174.82E 57km M=3.7
0.1 0.01 0.01 2
Rsd 0.2s 26ph/23stn Dmin 19km Az.gap 46°
Corr. -0.206 13M/8stn Msd 0.2 3↑ 2↓
Felt Wellington area (68) MM3.

91/4079
MAR 31 0306 06.4s 36.74S 177.57E 176km M=4.8
0.6 0.06 0.04 8
Rsd 0.2s 15ph/13stn Dmin 115km Az.gap 220°
Corr. -0.439 8M/4stn Msd 0.2 1↓

91/4081
MAR 31 0425 25.0s 36.79S 177.69E 137km M=3.9
0.4 0.03 0.04 3
Rsd 0.1s 13ph/11stn Dmin 105km Az.gap 291°
Corr. -0.703 20M/19stn Msd 0.1

91/4083
MAR 31 0513 59.3s 38.26S 176.02E 161km M=3.9
0.5 0.03 0.02 4
Rsd 0.2s 19ph/15stn Dmin 81km Az.gap 176°
Corr. -0.434 26M/24stn Msd 0.2 1↑

91/4086
MAR 31 0702 24.5s 39.32S 175.46E 123km M=3.7
0.3 0.01 0.03 3
Rsd 0.2s 28ph/21stn Dmin 16km Az.gap 102°
Corr. -0.641 16M/16stn Msd 0.3 4↑ 1↓

91/4090
MAR 31 0951 42.7s 38.60S 175.99E 6km M=2.4
0.1 0.00 0.00 1
Rsd 0.1s 12ph/9stn Dmin 9km Az.gap 164°
Corr. -0.484 2M/2stn Msd N.D.
Felt Waihora Rd (40) MM4.

91/4094
MAR 31 1018 58.4s 35.21S 178.19E 293km M=3.9
0.4 0.07 0.20 5
Rsd 0.1s 10ph/9stn Dmin 352km Az.gap 350°
Corr. -0.938 7M/7stn Msd 0.2

91/4099
MAR 31 1315 06.6s 45.08S 166.97E 1km M=3.7
0.1 0.00 0.01 1
Rsd 0.0s 21ph/15stn Dmin 87km Az.gap 237°
Corr. -0.539 23M/20stn Msd 0.2 7↑ 1↓
Unstable solution.

91/4108
MAR 31 2232 47.6s 38.04S 176.33E 142km M=3.6
0.4 0.04 0.03 2
Rsd 0.2s 11ph/9stn Dmin 72km Az.gap 220°
Corr. -0.641 18M/18stn Msd 0.2 1↑

91/4118
APR 01 0925 57.9s 38.39S 176.17E 130km M=3.7
0.5 0.02 0.02 5
Rsd 0.3s 21ph/17stn Dmin 50km Az.gap 107°
Corr. -0.291 24M/23stn Msd 0.3 1↑

91/4130
APR 02 0130 12.0s 35.03S 178.30E 276km M=4.0
0.7 0.07 0.20 8
Rsd 0.2s 11ph/9stn Dmin 338km Az.gap 335°
Corr. -0.547 10M/10stn Msd 0.2

91/4133
APR 02 0426 37.2s 37.10S 177.50E 137km M=3.6
0.3 0.03 0.02 4
Rsd 0.2s 9ph/5stn Dmin 90km Az.gap 245°
Corr. -0.134 10M/10stn Msd 0.2 1↑

91/4140
APR 02 1133 10.7s 40.30S 173.47E 168km M=3.6
0.4 0.02 0.02 3
Rsd 0.2s 27ph/20stn Dmin 68km Az.gap 148°
Corr. -0.008 18M/16stn Msd 0.2 3↑ 2↓

91/4157
APR 03 0047 48.7s 36.64S 177.43E 190km M=3.7
0.5 0.05 0.05 6
Rsd 0.2s 9ph/5stn Dmin 131km Az.gap 297°
Corr. -0.393 6M/6stn Msd 0.3 1↑

91/4169
APR 03 1150 49.5s 37.14S 177.46E 144km M=4.0
0.4 0.04 0.02 5
Rsd 0.2s 11ph/6stn Dmin 90km Az.gap 242°
Corr. -0.111 7M/5stn Msd 0.3 1↑

91/4170
APR 03 1221 35.6s 37.77S 179.03E 22km M=3.9
0.3 0.01 0.03 1
Rsd 0.1s 10ph/7stn Dmin 67km Az.gap 277°
Corr. -0.498 28M/24stn Msd 0.2 1↑

91/4175
APR 03 1655 05.1s 37.00S 177.09E 217km M=4.2
0.3 0.05 0.03 4
Rsd 0.1s 12ph/8stn Dmin 126km Az.gap 249°
Corr. -0.177 21M/20stn Msd 0.2 1↓

91/4190
APR 04 1512 32.8s 39.24S 174.96E 233km M=3.6
0.2 0.02 0.03 2
Rsd 0.1s 15ph/13stn Dmin 62km Az.gap 295°
Corr. 0.186 10M/10stn Msd 0.2 1↑

91/4202
APR 05 0436 12.1s 39.02S 176.17E 92km M=3.8
0.3 0.01 0.01 4
Rsd 0.3s 37ph/26stn Dmin 31km Az.gap 39°
Corr. -0.023 26M/22stn Msd 0.3 2↑ 2↓

91/4211
APR 05 1255 58.4s 38.28S 175.95E 153km M=3.7
0.5 0.03 0.04 4
Rsd 0.2s 11ph/9stn Dmin 83km Az.gap 242°
Corr. -0.465 17M/17stn Msd 0.3 1↑

91/4231
APR 06 0748 26.6s 34.20S 179.12E 232km M=4.1
0.7 0.18 0.11 39
Rsd 0.1s 8ph/4stn Dmin 384km Az.gap 343°
Corr. -0.594 6M/6stn Msd 0.3

91/4247
APR 06 1739 27.6s 36.80S 177.65E 166km M=4.4
0.6 0.04 0.04 7
Rsd 0.2s 14ph/9stn Dmin 106km Az.gap 220°
Corr. -0.305 27M/23stn Msd 0.2 1↑

91/4253
APR 06 2220 50.4s 45.00S 167.54E 103km M=4.1
0.4 0.02 0.03 3
Rsd 0.2s 28ph/19stn Dmin 47km Az.gap 231°
Corr. -0.426 22M/17stn Msd 0.1 2↑

91/4255
APR 07 0109 40.9s 41.58S 172.28E 5km M=3.7
0.1 0.01 0.01 R
Rsd 0.2s 28ph/17stn Dmin 44km Az.gap 129°
Corr. -0.062 23M/20stn Msd 0.2 1↓

91/4260
APR 07 0727 19.5s 38.51S 178.83E 29km M=3.6
0.2 0.01 0.02 2
Rsd 0.1s 13ph/9stn Dmin 70km Az.gap 247°
Corr. 0.400 22M/19stn Msd 0.2 1↑

91/4263
APR 07 0830 31.3s 38.51S 175.53E 268km M=3.7
0.4 0.05 0.10 5
Rsd 0.2s 16ph/10stn Dmin 141km Az.gap 215°
Corr. -0.934 9M/9stn Msd 0.2

91/4273
APR 07 1832 27.8s 38.20S 175.74E 141km M=3.6
0.6 0.04 0.06 5
Rsd 0.1s 10ph/7stn Dmin 101km Az.gap 246°
Corr. -0.750 17M/16stn Msd 0.2

91/4275
APR 08 0026 53.0s 37.14S 177.43E 191km M=3.6
1.2 0.12 0.11 7
Rsd 0.5s 10ph/7stn Dmin 126km Az.gap 298°
Corr. -0.582 7M/7stn Msd 0.2

91/4289
APR 08 1223 52.2s 40.12S 174.92E 16km M=3.9
0.1 0.01 0.01 3
Rsd 0.3s 33ph/25stn Dmin 36km Az.gap 67°
Corr. -0.178 27M/21stn Msd 0.3 4↑ 1↓

91/4290
APR 08 1434 13.4s 45.00S 167.55E 92km M=3.7
0.3 0.01 0.02 2
Rsd 0.2s 22ph/15stn Dmin 47km Az.gap 229°
Corr. -0.422 17M/15stn Msd 0.2 1↓

91/4292
APR 08 1610 19.4s 44.35S 168.15E 5km M=3.5
0.2 0.01 0.02 R
Rsd 0.3s 18ph/14stn Dmin 40km Az.gap 197°
Corr. -0.617 19M/17stn Msd 0.2 1↑ 6↓

91/4296
APR 08 2002 20.2s 38.69S 175.86E 174km M=3.7
0.8 0.23 0.33 31
Rsd 0.3s 12ph/9stn Dmin 216km Az.gap 228°
Corr. -0.992 9M/9stn Msd 0.2

91/4301
APR 08 2357 42.9s 38.12S 176.30E 160km M=4.1
0.5 0.03 0.02 4
Rsd 0.2s 16ph/11stn Dmin 68km Az.gap 138°
Corr. -0.193 20M/16stn Msd 0.3 1↑ 1↓

91/4304
APR 09 0244 53.9s 39.22S 174.78E 214km M=3.7
1.2 0.05 0.11 12
Rsd 0.5s 19ph/13stn Dmin 49km Az.gap 195°
Corr. -0.508 12M/11stn Msd 0.2

91/4308
APR 09 0433 28.8s 40.42S 176.82E 30km M=3.7
0.3 0.02 0.04 3
Rsd 0.3s 21ph/17stn Dmin 48km Az.gap 223°
Corr. -0.715 24M/22stn Msd 0.2 1↑ 1↓

91/4315
APR 09 0848 40.5s 41.62S 174.30E 4km M=3.5
0.2 0.01 0.01 3
Rsd 0.3s 19ph/15stn Dmin 16km Az.gap 131°
Corr. -0.602 8M/4stn Msd 0.2 1↑ 2↓

91/4321
APR 09 1138 33.0s 35.95S 178.54E 229km M=4.1
0.7 0.09 0.07 13
Rsd 0.2s 11ph/5stn Dmin 185km Az.gap 316°
Corr. -0.424 8M/8stn Msd 0.1

91/4322
APR 09 1416 02.4s 37.80S 176.96E 149km M=4.1
0.5 0.04 0.02 3
Rsd 0.3s 19ph/14stn Dmin 53km Az.gap 129°
Corr. 0.213 24M/21stn Msd 0.3 2↑ 1↓

91/4363
APR 10 0647 59.5s 45.27S 167.33E 109km M=4.1
0.2 0.01 0.02 2
Rsd 0.1s 20ph/17stn Dmin 81km Az.gap 233°
Corr. -0.375 21M/19stn Msd 0.2 2↑ 8↓

91/4368
APR 10 1302 50.6s 36.07S 178.18E 197km M=4.4
0.4 0.04 0.04 6
Rsd 0.1s 12ph/8stn Dmin 170km Az.gap 308°
Corr. -0.242 19M/15stn Msd 0.2

91/4378
APR 11 0101 14.0s 39.14S 175.94E 203km M=3.5
0.4 0.03 0.06 3
Rsd 0.1s 13ph/8stn Dmin 30km Az.gap 148°
Corr. -0.910 5M/5stn Msd 0.2

91/4379
APR 11 0142 30.3s 38.42S 175.31E 126km M=3.5
0.7 0.12 0.30 36
Rsd 0.4s 14ph/10stn Dmin 158km Az.gap 246°
Corr. -0.969 8M/8stn Msd 0.3
Depth uncertain.

91/4396
APR 11 2342 37.7s 37.62S 177.16E 140km M=3.8
0.2 0.02 0.01 2
Rsd 0.1s 13ph/7stn Dmin 71km Az.gap 143°
Corr. -0.120 14M/11stn Msd 0.2 1↑

91/4399
APR 12 0133 36.6s 35.36S 178.81E 225km M=4.2
0.8 0.27 0.14 39
Rsd 0.3s 6ph/4stn Dmin 253km Az.gap 344°
Corr. 0.147 4M/4stn Msd 0.1

91/4408
APR 12 0743 31.9s 39.64S 174.23E 193km M=4.4
0.3 0.01 0.02 3
Rsd 0.2s 41ph/31stn Dmin 42km Az.gap 96°
Corr. -0.207 26M/22stn Msd 0.2 12↑ 7↓

91/4418
APR 12 1348 16.3s 37.27S 176.91E 217km M=4.3
0.4 0.05 0.03 4
Rsd 0.2s 20ph/16stn Dmin 112km Az.gap 165°
Corr. 0.125 25M/23stn Msd 0.2 1↓

91/4429
APR 13 0039 28.8s 36.36S 177.20E 243km M=4.2
0.3 0.04 0.05 4
Rsd 0.2s 13ph/9stn Dmin 169km Az.gap 287°
Corr. -0.645 19M/19stn Msd 0.2 1↓

91/4437
APR 13 0904 11.8s 39.24S 175.01E 224km M=3.5
0.3 0.01 0.04 3
Rsd 0.2s 22ph/15stn Dmin 31km Az.gap 153°
Corr. 0.083 14M/12stn Msd 0.3 1↑

91/4439
APR 13 1034 27.4s 37.12S 177.21E 203km M=4.4
0.3 0.04 0.02 3
Rsd 0.2s 16ph/12stn Dmin 110km Az.gap 183°
Corr. -0.123 24M/22stn Msd 0.2 5↑ 1↓

91/4442
APR 13 1427 03.3s 37.99S 176.14E 178km M=4.7
0.5 0.03 0.02 4
Rsd 0.2s 29ph/24stn Dmin 21km Az.gap 114°
Corr. 0.163 12M/5stn Msd 0.2 2↑ 2↓

91/4479
APR 14 2152 16.4s 42.26S 172.75E 14km M=3.8
0.2 0.01 0.01 2
Rsd 0.2s 24ph/16stn Dmin 50km Az.gap 77°
Corr. -0.120 34M/27stn Msd 0.2 4↑ 1↓

91/4485
APR 15 0349 16.2s 38.41S 176.24E 140km M=3.5
0.2 0.02 0.02 1
Rsd 0.1s 15ph/11stn Dmin 78km Az.gap 216°
Corr. -0.902 12M/12stn Msd 0.3 1↑

91/4504
APR 15 2225 49.0s 39.99S 176.79E 26km M=4.7
0.1 0.01 0.01 1
Rsd 0.1s 37ph/31stn Dmin 2km Az.gap 137°
Corr. -0.361 16M/8stn Msd 0.2 9↑ 7↓
Felt Hawkes Bay, max. int. MM4 at Mt Vernon (60).

91/4506
APR 15 2321 17.1s 38.50S 175.96E 180km M=3.6
0.4 0.02 0.06 4
Rsd 0.1s 11ph/10stn Dmin 81km Az.gap 316°
Corr. 0.059 6M/6stn Msd 0.3 1↑

91/4508
APR 16 0046 41.5s 39.04S 175.43E 159km M=3.6
0.5 0.02 0.05 4
Rsd 0.2s 18ph/14stn Dmin 21km Az.gap 284°
Corr. -0.012 10M/10stn Msd 0.2 1↑

91/4516
APR 16 1107 42.8s 38.41S 175.72E 160km M=3.7
0.9 0.03 0.04 8
Rsd 0.3s 18ph/13stn Dmin 61km Az.gap 146°
Corr. -0.182 21M/19stn Msd 0.2

91/4529
APR 16 2200 27.3s 39.74S 173.94E 194km M=3.5
0.4 0.02 0.02 4
Rsd 0.2s 20ph/13stn Dmin 118km Az.gap 203°
Corr. -0.441 12M/11stn Msd 0.1 1↓

91/4586
APR 18 1555 20.5s 37.58S 175.56E 12km M=3.8
0.5 0.04 0.02 R
Rsd 0.2s 10ph/7stn Dmin 111km Az.gap 265°
Corr. -0.648 10M/8stn Msd 0.3

91/4590
APR 18 2206 08.1s 38.21S 176.36E 141km M=3.6
0.4 0.02 0.02 3
Rsd 0.2s 17ph/13stn Dmin 66km Az.gap 130°
Corr. -0.262 19M/19stn Msd 0.1 1↑

91/4602
APR 19 0657 20.4s 41.92S 171.64E 9km M=3.8
0.3 0.01 0.02 2
Rsd 0.2s 18ph/11stn Dmin 24km Az.gap 169°
Corr. -0.490 41M/34stn Msd 0.2 1↓
Felt Westport (79).

91/4604
APR 19 0818 52.4s 39.41S 175.05E 132km M=3.7
0.2 0.01 0.03 3
Rsd 0.1s 22ph/18stn Dmin 40km Az.gap 115°
Corr. -0.069 12M/10stn Msd 0.3 4↑ 3↓

91/4646
APR 21 0924 24.3s 45.06S 167.47E 122km M=3.7
0.3 0.01 0.02 2
Rsd 0.2s 22ph/16stn Dmin 56km Az.gap 234°
Corr. -0.229 18M/16stn Msd 0.2 5↑ 1↓

91/4653
APR 21 1513 18.5s 45.01S 167.49E 65km M=3.5
0.4 0.01 0.03 3
Rsd 0.1s 23ph/16stn Dmin 51km Az.gap 235°
Corr. -0.340 20M/18stn Msd 0.2 5↑ 1↓

91/4661
APR 21 1915 00.4s 44.58S 168.20E 83km M=3.6
0.3 0.01 0.02 3
Rsd 0.2s 28ph/19stn Dmin 25km Az.gap 156°
Corr. 0.301 17M/15stn Msd 0.1 1↑ 8↓

91/4673
APR 22 0548 15.7s 40.14S 174.42E 83km M=3.8
0.2 0.00 0.01 3
Rsd 0.1s 34ph/25stn Dmin 58km Az.gap 91°
Corr. -0.048 25M/20stn Msd 0.2 1↓

91/4688
APR 22 1929 33.2s 37.24S 177.03E 195km M=3.6
0.9 0.08 0.10 7
Rsd 0.4s 11ph/8stn Dmin 113km Az.gap 262°
Corr. -0.656 8M/8stn Msd 0.2 1↑

91/4715
APR 24 0031 50.6s 38.27S 176.56E 136km M=4.2
0.2 0.01 0.01 2
Rsd 0.1s 26ph/19stn Dmin 6km Az.gap 115°
Corr. -0.245 28M/24stn Msd 0.2 1↑

91/4725
APR 24 1438 36.4s 38.35S 176.05E 180km M=3.7
0.7 0.05 0.06 7
Rsd 0.3s 14ph/11stn Dmin 71km Az.gap 212°
Corr. -0.816 19M/19stn Msd 0.2 1↑

91/4728
APR 24 1626 56.9s 40.53S 174.42E 85km M=3.7
0.2 0.01 0.01 3
Rsd 0.2s 32ph/20stn Dmin 52km Az.gap 129°
Corr. -0.155 17M/14stn Msd 0.2 7↑ 2↓

91/4734
APR 24 2020 24.0s 38.78S 175.89E 146km M=3.7
0.4 0.02 0.02 3
Rsd 0.1s 11ph/6stn Dmin 62km Az.gap 191°
Corr. -0.723 13M/12stn Msd 0.2 2↑ 1↓

91/4739
APR 25 0038 16.4s 39.66S 174.04E 182km M=4.1
0.5 0.02 0.03 6
Rsd 0.2s 24ph/17stn Dmin 78km Az.gap 196°
Corr. -0.395 20M/17stn Msd 0.2 6↑ 2↓

91/4746
APR 25 1138 41.8s 37.02S 177.61E 196km M=3.6
1.0 0.11 0.10 7
Rsd 0.4s 11ph/7stn Dmin 130km Az.gap 294°
Corr. -0.508 6M/6stn Msd 0.2

91/4754
APR 25 2030 57.5s 40.65S 176.54E 21km M=3.8
0.2 0.01 0.01 1
Rsd 0.1s 20ph/18stn Dmin 23km Az.gap 210°
Corr. -0.006 30M/28stn Msd 0.2 3↑ 2↓

91/4770
APR 26 1057 52.1s 35.28S 178.97E 223km M=3.9
0.4 0.11 0.09 18
Rsd 0.1s 8ph/4stn Dmin 264km Az.gap 340°
Corr. 0.334 7M/7stn Msd 0.3

91/4773
APR 26 1326 17.2s 37.89S 176.57E 135km M=3.9
0.4 0.03 0.02 4
Rsd 0.3s 15ph/10stn Dmin 63km Az.gap 167°
Corr. -0.241 25M/22stn Msd 0.1 1↑

91/4780
APR 26 1736 06.4s 39.04S 175.46E 221km M=3.6
0.4 0.03 0.05 3
Rsd 0.2s 22ph/16stn Dmin 19km Az.gap 187°
Corr. -0.773 14M/14stn Msd 0.2 1↑

91/4787
APR 26 2342 38.0s 38.05S 176.49E 142km M=4.1
0.2 0.02 0.01 2
Rsd 0.2s 22ph/13stn Dmin 20km Az.gap 113°
Corr. -0.342 30M/24stn Msd 0.2 1↑ 2↓

91/4805
APR 27 1148 42.3s 42.04S 171.59E 12km M=3.2
0.1 0.00 0.01 2
Rsd 0.1s 15ph/10stn Dmin 37km Az.gap 163°
Corr. -0.395 18M/16stn Msd 0.2 1↓
Felt Westport (79).

91/4822
APR 28 0205 22.6s 38.49S 175.11E 226km M=4.0
0.3 0.02 0.03 3
Rsd 0.1s 21ph/14stn Dmin 128km Az.gap 222°
Corr. -0.824 20M/18stn Msd 0.2 1↓

91/4827
APR 28 0620 23.1s 39.02S 174.78E 194km M=3.6
0.5 0.03 0.05 7
Rsd 0.2s 19ph/12stn Dmin 87km Az.gap 205°
Corr. -0.852 14M/12stn Msd 0.2

91/4863
APR 29 1149 38.0s 39.14S 174.95E 185km M=4.0
0.3 0.01 0.04 2
Rsd 0.1s 28ph/18stn Dmin 34km Az.gap 155°
Corr. -0.279 17M/15stn Msd 0.2

91/4871
APR 30 0307 00.5s 39.60S 174.27E 210km M=3.9
0.5 0.03 0.05 5
Rsd 0.2s 26ph/18stn Dmin 61km Az.gap 164°
Corr. -0.326 22M/20stn Msd 0.2 1↑

91/4877
APR 30 0838 32.2s 39.99S 175.24E 33km M=3.5
0.1 0.01 0.02 R
Rsd 0.3s 32ph/23stn Dmin 34km Az.gap 88°
Corr. -0.113 30M/27stn Msd 0.2 1↑
Felt Wanganui (57) MM3.

91/4878
APR 30 1200 14.8s 35.56S 179.01E 255km M=4.2
0.5 0.08 0.12 8
Rsd 0.1s 11ph/6stn Dmin 235km Az.gap 341°
Corr. -0.645 15M/13stn Msd 0.2

91/4880
APR 30 1245 41.4s 40.27S 173.49E 159km M=4.3
0.3 0.01 0.01 3
Rsd 0.2s 37ph/28stn Dmin 69km Az.gap 147°
Corr. -0.175 27M/23stn Msd 0.2 5↑ 2↓

91/4888
APR 30 1915 07.2s 37.64S 177.21E 130km M=3.9
0.4 0.04 0.02 4
Rsd 0.3s 11ph/7stn Dmin 70km Az.gap 189°
Corr. -0.079 18M/14stn Msd 0.2 1↓

91/4896
MAY 01 0240 39.6s 39.29S 174.95E 226km M=3.7
0.3 0.02 0.02 3
Rsd 0.1s 16ph/13stn Dmin 57km Az.gap 189°
Corr. -0.523 11M/11stn Msd 0.1 1↑

91/4897
MAY 01 0354 24.7s 38.85S 177.59E 26km M=3.5
0.4 0.02 0.02 3
Rsd 0.2s 12ph/7stn Dmin 47km Az.gap 152°
Corr. -0.299 27M/22stn Msd 0.3 1↑

91/4904
MAY 01 1119 22.4s 44.08S 168.59E 32km M=3.5
0.2 0.02 0.02 3
Rsd 0.2s 16ph/13stn Dmin 68km Az.gap 195°
Corr. -0.680 19M/16stn Msd 0.2 6↑ 1↓

91/4905
MAY 01 1139 02.2s 41.93S 171.74E 12km M=4.3
0.2 0.01 0.02 3
Rsd 0.2s 25ph/14stn Dmin 21km Az.gap 150°
Corr. -0.264 16M/7stn Msd 0.1 1↓
Felt Westport (79) MM4, Greymouth (85).

91/4928
MAY 02 0430 25.0s 36.28S 177.26E 250km M=4.2
0.2 0.03 0.03 3
Rsd 0.1s 10ph/6stn Dmin 173km Az.gap 290°
Corr. -0.469 22M/22stn Msd 0.2

91/4939
MAY 02 1200 41.2s 38.72S 175.66E 135km M=4.5
0.3 0.01 0.02 3
Rsd 0.2s 31ph/21stn Dmin 9km Az.gap 70°
Corr. -0.049 12M/5stn Msd 0.2 4↑ 4↓

91/4946
MAY 02 1637 47.0s 39.17S 174.92E 199km M=3.7
0.2 0.01 0.02 1
Rsd 0.1s 23ph/17stn Dmin 55km Az.gap 196°
Corr. -0.268 15M/15stn Msd 0.2 1↑

91/4947
MAY 02 1638 30.2s 38.73S 176.06E 137km M=3.6
0.4 0.03 0.03 3
Rsd 0.1s 10ph/6stn Dmin 69km Az.gap 201°
Corr. -0.883 10M/10stn Msd 0.3

91/4959
MAY 03 0617 50.5s 38.46S 175.88E 182km M=4.1
0.4 0.03 0.04 3
Rsd 0.2s 21ph/12stn Dmin 70km Az.gap 113°
Corr. -0.430 23M/22stn Msd 0.3 1↑

91/4961
MAY 03 0944 16.8s 44.58S 168.24E 82km M=4.1
0.3 0.01 0.02 3
Rsd 0.2s 28ph/19stn Dmin 28km Az.gap 152°
Corr. -0.194 24M/19stn Msd 0.2 5↑ 1↓

91/4965
MAY 03 1105 10.9s 38.70S 175.78E 150km M=4.9
0.4 0.02 0.02 3
Rsd 0.2s 36ph/22stn Dmin 1km Az.gap 72°
Corr. -0.048 12M/5stn Msd 0.2 15↑ 10↓

91/4966
MAY 03 1119 27.7s 36.67S 177.66E 162km M=3.9
0.5 0.06 0.05 5
Rsd 0.2s 11ph/6stn Dmin 118km Az.gap 298°
Corr. -0.586 15M/15stn Msd 0.3 1↓

91/4981
MAY 03 2111 56.5s 38.72S 175.36E 258km M=4.3
0.4 0.04 0.04 3
Rsd 0.3s 20ph/11stn Dmin 45km Az.gap 136°
Corr. -0.076 20M/17stn Msd 0.2 1↑

91/5014
MAY 04 1913 52.5s 38.19S 176.44E 57km M=3.6
0.3 0.02 0.02 4
Rsd 0.2s 13ph/8stn Dmin 59km Az.gap 224°
Corr. -0.707 18M/16stn Msd 0.3 1↓

91/5018
MAY 05 0033 55.4s 35.85S 178.80E 265km M=4.0
0.2 0.04 0.06 3
Rsd 0.1s 10ph/5stn Dmin 199km Az.gap 342°
Corr. -0.816 5M/5stn Msd 0.3

91/5020
MAY 05 0140 18.1s 38.01S 179.73E 5km M=3.6
0.4 0.03 0.03 R
Rsd 0.2s 10ph/6stn Dmin 130km Az.gap 292°
Corr. -0.039 13M/12stn Msd 0.3

91/5031
MAY 05 1002 16.1s 37.61S 176.13E 187km M=3.8
0.3 0.07 0.03 3
Rsd 0.1s 8ph/4stn Dmin 112km Az.gap 257°
Corr. -0.242 20M/20stn Msd 0.1 1↑

91/5040
MAY 05 1139 20.6s 40.58S 175.67E 36km M=4.3
0.1 0.01 0.01 2
Rsd 0.2s 34ph/28stn Dmin 17km Az.gap 80°
Corr. -0.520 25M/20stn Msd 0.3 5↑ 2↓
Felt Kimbolton (62) to Raumati (65), max MM4.

91/5050
MAY 06 0206 19.4s 45.06S 167.45E 120km M=3.8
0.3 0.01 0.02 2
Rsd 0.1s 23ph/16stn Dmin 57km Az.gap 237°
Corr. -0.416 19M/17stn Msd 0.2 2↑ 1↓

91/5051
MAY 06 0209 18.4s 38.48S 176.08E 199km M=3.6
0.3 0.03 0.03 4
Rsd 0.1s 17ph/14stn Dmin 137km Az.gap 315°
Corr. -0.494 11M/11stn Msd 0.6 1↑

91/5057
MAY 06 0639 03.3s 38.63S 178.61E 46km M=4.1
0.4 0.02 0.05 6
Rsd 0.1s 10ph/7stn Dmin 50km Az.gap 231°
Corr. -0.781 29M/23stn Msd 0.2 1↑ 1↓

91/5058
MAY 06 0833 26.2s 39.40S 174.92E 147km M=3.8
0.2 0.01 0.02 2
Rsd 0.1s 23ph/16stn Dmin 44km Az.gap 179°
Corr. -0.254 17M/15stn Msd 0.3 1↑

91/5070
MAY 06 2245 53.6s 37.87S 178.13E 60km M=3.8
0.8 0.05 0.06 7
Rsd 0.6s 9ph/5stn Dmin 25km Az.gap 142°
Corr. -0.348 8M/4stn Msd 0.2 1↑ 1↓

91/5083
MAY 07 1408 01.5s 38.29S 177.39E 43km M=3.6
0.2 0.02 0.01 2
Rsd 0.2s 16ph/11stn Dmin 25km Az.gap 120°
Corr. -0.520 22M/18stn Msd 0.2 1↓

91/5086
MAY 07 1629 50.2s 38.03S 176.61E 141km M=4.2
0.3 0.02 0.02 3
Rsd 0.3s 17ph/11stn Dmin 51km Az.gap 152°
Corr. -0.250 8M/4stn Msd 0.2 3↑ 2↓

91/5088
MAY 07 1836 34.2s 44.53S 168.74E 5km M=2.7
0.0 0.00 0.00 R
Rsd 0.1s 14ph/10stn Dmin 67km Az.gap 129°
Corr. 0.014 12M/10stn Msd 0.1 1↓
Felt Mt Aspiring Stn (113) MM4.

91/5094
MAY 07 2211 32.5s 45.24S 167.43E 102km M=3.7
0.3 0.03 0.04 4
Rsd 0.1s 19ph/15stn Dmin 91km Az.gap 241°
Corr. -0.777 14M/14stn Msd 0.1 2↑ 9↓

91/5097
MAY 08 0032 51.4s 45.11S 167.45E 77km M=3.9
0.3 0.01 0.02 3
Rsd 0.1s 25ph/18stn Dmin 61km Az.gap 231°
Corr. -0.586 24M/19stn Msd 0.1 8↑ 1↓

91/5100
MAY 08 0139 53.9s 38.05S 176.08E 193km M=3.6
0.8 0.07 0.09 7
Rsd 0.3s 13ph/8stn Dmin 94km Az.gap 233°
Corr. -0.750 15M/15stn Msd 0.1

91/5105
MAY 08 0543 02.2s 39.95S 175.06E 12km M=3.3
0.1 0.01 0.01 2
Rsd 0.3s 34ph/24stn Dmin 20km Az.gap 80°
Corr. -0.146 29M/26stn Msd 0.2 4↑ 1↓
Felt Wanganui (57) MM4.

91/5109
MAY 08 1221 11.4s 38.56S 175.74E 206km M=3.7
0.2 0.01 0.03 2
Rsd 0.1s 19ph/15stn Dmin 69km Az.gap 304°
Corr. -0.090 9M/9stn Msd 0.2 1↑

91/5122
MAY 08 1939 40.0s 41.57S 174.37E 9km M=3.8
0.1 0.01 0.01 2
Rsd 0.3s 24ph/18stn Dmin 24km Az.gap 132°
Corr. -0.463 12M/5stn Msd 0.1 4↑ 1↓

91/5131
MAY 09 0032 31.6s 42.43S 173.73E 29km M=3.8
0.1 0.01 0.01 1
Rsd 0.1s 32ph/19stn Dmin 16km Az.gap 157°
Corr. -0.453 9M/4stn Msd 0.2 1↑ 6↓

91/5140
MAY 09 0709 41.6s 39.33S 175.87E 80km M=3.5
0.3 0.01 0.01 3
Rsd 0.2s 32ph/26stn Dmin 27km Az.gap 66°
Corr. -0.205 21M/18stn Msd 0.3 3↑ 1↓

91/5149
MAY 09 1509 27.9s 37.08S 176.80E 239km M=3.5
0.6 0.07 0.08 6
Rsd 0.2s 13ph/9stn Dmin 133km Az.gap 273°
Corr. -0.781 9M/9stn Msd 0.2

91/5162
MAY 10 0212 45.5s 37.92S 176.00E 166km M=3.8
0.6 0.05 0.07 6
Rsd 0.2s 11ph/6stn Dmin 105km Az.gap 219°
Corr. -0.820 23M/21stn Msd 0.2 1↑

91/5170
MAY 10 0500 29.9s 36.79S 177.54E 133km M=3.7
0.3 0.03 0.02 4
Rsd 0.1s 10ph/5stn Dmin 113km Az.gap 301°
Corr. -0.381 6M/5stn Msd 0.3

91/5189
MAY 10 2257 52.9s 37.13S 176.42E 246km M=3.6
0.7 0.06 0.10 6
Rsd 0.3s 13ph/10stn Dmin 140km Az.gap 276°
Corr. -0.863 8M/8stn Msd 0.2 1↑

91/5192
MAY 10 2345 18.2s 38.48S 176.01E 180km M=3.5
0.8 0.04 0.09 7
Rsd 0.5s 20ph/13stn Dmin 85km Az.gap 217°
Corr. -0.535 11M/11stn Msd 0.1 1↓

91/5194
MAY 11 0252 17.1s 43.26S 171.92E 19km M=3.8
0.1 0.01 0.01 2
Rsd 0.2s 22ph/12stn Dmin 60km Az.gap 77°
Corr. 0.040 39M/32stn Msd 0.2 1↑ 3↓

91/5195
MAY 11 0258 38.8s 38.07S 175.96E 195km M=3.5
0.7 0.05 0.09 4
Rsd 0.3s 15ph/9stn Dmin 103km Az.gap 235°
Corr. -0.867 14M/14stn Msd 0.1

91/5202
MAY 11 0539 41.7s 40.03S 174.24E 141km M=3.5
0.4 0.02 0.02 4
Rsd 0.3s 29ph/21stn Dmin 65km Az.gap 103°
Corr. -0.200 15M/14stn Msd 0.2 1↑

91/5221
MAY 11 2328 05.5s 37.94S 175.74E 184km M=3.7
0.4 0.03 0.05 3
Rsd 0.2s 19ph/12stn Dmin 125km Az.gap 241°
Corr. -0.840 21M/21stn Msd 0.2

91/5222
MAY 12 0014 00.3s 37.98S 176.43E 158km M=3.7
0.6 0.07 0.06 4
Rsd 0.3s 10ph/5stn Dmin 67km Az.gap 221°
Corr. -0.840 7M/5stn Msd 0.2 1↑

91/5228
MAY 12 0527 55.2s 37.47S 177.19E 198km M=4.3
0.5 0.07 0.03 5
Rsd 0.3s 17ph/10stn Dmin 88km Az.gap 206°
Corr. -0.038 30M/25stn Msd 0.3 1↑

91/5229
MAY 12 0638 39.6s 40.61S 176.03E 38km M=3.7
0.1 0.01 0.01 3
Rsd 0.2s 29ph/24stn Dmin 21km Az.gap 104°
Corr. -0.455 30M/25stn Msd 0.3 7↑ 1↓

91/5230
MAY 12 0650 56.3s 37.08S 177.17E 197km M=3.8
0.5 0.07 0.05 5
Rsd 0.2s 10ph/5stn Dmin 131km Az.gap 291°
Corr. -0.242 17M/17stn Msd 0.2

91/5236
MAY 12 0947 33.5s 35.72S 179.45W 172km M=4.0
1.0 0.11 0.10 22
Rsd 0.1s 9ph/5stn Dmin 331km Az.gap 334°
Corr. 0.155 4M/4stn Msd 0.1

91/5240
MAY 12 1144 32.3s 37.96S 176.78E 141km M=4.1
0.4 0.03 0.02 4
Rsd 0.2s 18ph/11stn Dmin 44km Az.gap 159°
Corr. 0.049 28M/23stn Msd 0.2 4↑ 1↓

91/5256
MAY 13 0148 43.7s 36.41S 178.55E 97km M=3.6
0.4 0.07 0.04 14
Rsd 0.1s 6ph/3stn Dmin 186km Az.gap 337°
Corr. -0.809 3M/3stn Msd 0.1

91/5274
MAY 13 1434 25.1s 37.94S 176.05E 196km M=4.2
0.4 0.03 0.03 4
Rsd 0.2s 15ph/10stn Dmin 100km Az.gap 200°
Corr. -0.369 29M/25stn Msd 0.2 1↑

91/5275
MAY 13 1457 07.1s 45.10S 167.53E 124km M=3.9
0.3 0.01 0.02 2
Rsd 0.1s 23ph/15stn Dmin 57km Az.gap 226°
Corr. 0.008 23M/20stn Msd 0.3 1↑

91/5285
MAY 13 2257 28.1s 44.38S 169.15E 4km M=3.3
0.3 0.01 0.01 4
Rsd 0.3s 14ph/8stn Dmin 61km Az.gap 116°
Corr. 0.165 7M/4stn Msd 0.1 1↑
Felt Minaret Stn (114) MM4.

91/5304
MAY 14 1532 21.8s 40.53S 173.31E 177km M=3.7
0.3 0.02 0.01 2
Rsd 0.2s 30ph/19stn Dmin 60km Az.gap 166°
Corr. -0.252 14M/13stn Msd 0.2 2↑ 2↓

91/5307
MAY 14 1622 55.9s 36.20S 178.68E 54km M=4.2
0.5 0.03 0.04 16
Rsd 0.2s 10ph/5stn Dmin 159km Az.gap 315°
Corr. 0.214 24M/20stn Msd 0.3 1↓

91/5314
MAY 15 0202 36.7s 36.30S 177.77E 199km M=3.8
1.5 0.10 0.13 11
Rsd 0.3s 10ph/7stn Dmin 151km Az.gap 317°
Corr. -0.695 4M/4stn Msd 0.2

91/5316
MAY 15 0240 59.2s 39.98S 174.42E 94km M=4.1
0.2 0.01 0.01 3
Rsd 0.2s 45ph/30stn Dmin 48km Az.gap 91°
Corr. -0.029 26M/20stn Msd 0.2 2↑ 2↓

91/5321
MAY 15 0757 37.0s 42.71S 175.36E 0km M=3.7
0.7 0.03 0.04 3
Rsd 0.1s 21ph/17stn Dmin 142km Az.gap 203°
Corr. -0.855 32M/28stn Msd 0.3 1↑

91/5328
MAY 15 1446 25.8s 39.02S 175.34E 220km M=3.9
0.4 0.02 0.06 3
Rsd 0.2s 17ph/11stn Dmin 27km Az.gap 146°
Corr. -0.338 18M/17stn Msd 0.3

91/5330
MAY 15 1734 17.0s 38.02S 176.54E 158km M=3.9
0.6 0.04 0.02 4
Rsd 0.3s 18ph/11stn Dmin 57km Az.gap 153°
Corr. -0.199 23M/23stn Msd 0.3

91/5347
MAY 16 1447 31.0s 38.10S 176.41E 151km M=3.8
0.6 0.03 0.04 5
Rsd 0.2s 10ph/7stn Dmin 64km Az.gap 178°
Corr. 0.206 8M/8stn Msd 0.4 1↑

91/5348
MAY 16 1457 31.6s 38.39S 177.80E 65km M=3.8
0.1 0.01 0.00 1
Rsd 0.1s 12ph/8stn Dmin 33km Az.gap 104°
Corr. -0.070 21M/17stn Msd 0.2 2↑ 1↓

91/5353
MAY 16 1632 54.5s 39.19S 175.14E 154km M=3.5
0.6 0.06 0.13 13
Rsd 0.3s 11ph/9stn Dmin 161km Az.gap 222°
Corr. -0.934 7M/7stn Msd 0.2

91/5360
MAY 17 0314 37.2s 40.43S 173.97E 100km M=3.8
0.2 0.01 0.01 2
Rsd 0.2s 37ph/24stn Dmin 41km Az.gap 109°
Corr. -0.066 19M/14stn Msd 0.3 2↑ 2↓

91/5361
MAY 17 0546 57.4s 38.96S 176.78E 55km M=4.5
0.1 0.01 0.01 3
Rsd 0.1s 31ph/23stn Dmin 60km Az.gap 122°
Corr. -0.516 25M/19stn Msd 0.3 3↑ 2↓
Felt Ruatuna Rd (35) MM3.

91/5362
MAY 17 0655 15.1s 38.55S 176.71E 60km M=4.0
0.8 0.05 0.05 5
Rsd 0.4s 11ph/7stn Dmin 42km Az.gap 292°
Corr. 0.107 27M/21stn Msd 0.2 1↑ 2↓

91/5364
MAY 17 0812 48.8s 44.18S 168.56E 5km M=3.8
0.1 0.01 0.01 R
Rsd 0.2s 13ph/7stn Dmin 75km Az.gap 183°
Corr. -0.590 12M/8stn Msd 0.3 1↑

91/5375
MAY 18 0047 39.0s 41.28S 172.75E 164km M=3.5
0.3 0.01 0.02 2
Rsd 0.2s 27ph/17stn Dmin 54km Az.gap 104°
Corr. -0.187 10M/10stn Msd 0.1 6↑ 1↓

91/5388
MAY 18 1047 45.8s 40.01S 173.65E 181km M=3.9
0.4 0.02 0.02 3
Rsd 0.2s 29ph/20stn Dmin 91km Az.gap 165°
Corr. -0.177 19M/17stn Msd 0.2 3↑ 1↓

91/5449
MAY 20 1515 04.1s 40.12S 173.74E 134km M=3.7
0.3 0.01 0.01 3
Rsd 0.2s 35ph/21stn Dmin 78km Az.gap 156°
Corr. -0.204 15M/12stn Msd 0.2 3↑ 2↓

91/5453
MAY 20 2047 45.3s 39.01S 175.55E 125km M=4.0
0.5 0.02 0.02 4
Rsd 0.3s 27ph/20stn Dmin 13km Az.gap 78°
Corr. -0.307 27M/23stn Msd 0.2 6↑ 2↓

91/5465
MAY 21 1312 49.8s 44.96S 167.59E 100km M=4.1
0.3 0.01 0.02 2
Rsd 0.1s 24ph/16stn Dmin 41km Az.gap 228°
Corr. -0.040 20M/16stn Msd 0.1 5↑ 1↓

91/5472
MAY 21 1805 48.2s 35.77S 179.56E 33km M=3.7
1.9 0.11 0.17 R
Rsd 0.6s 7ph/4stn Dmin 232km Az.gap 329°
Corr. 0.183 5M/5stn Msd 0.4

91/5486
MAY 22 0250 00.9s 37.89S 175.98E 167km M=3.6
0.9 0.07 0.12 6
Rsd 0.3s 12ph/8stn Dmin 108km Az.gap 240°
Corr. -0.891 10M/10stn Msd 0.2 1↓

91/5489
MAY 22 0451 29.6s 35.98S 178.05E 229km M=3.9
0.6 0.08 0.10 7
Rsd 0.2s 12ph/6stn Dmin 181km Az.gap 325°
Corr. -0.605 9M/9stn Msd 0.3

91/5495
MAY 22 0831 06.1s 39.58S 174.21E 154km M=4.0
0.5 0.01 0.02 4
Rsd 0.2s 30ph/21stn Dmin 36km Az.gap 119°
Corr. -0.375 17M/14stn Msd 0.2 1↓

91/5500
MAY 22 1235 21.0s 38.11S 176.29E 145km M=3.5
0.4 0.05 0.04 3
Rsd 0.2s 10ph/6stn Dmin 74km Az.gap 219°
Corr. -0.754 13M/13stn Msd 0.3 1↑

91/5509
MAY 22 1822 06.9s 45.59S 167.12E 105km M=4.3
0.2 0.01 0.02 1
Rsd 0.1s 19ph/15stn Dmin 72km Az.gap 239°
Corr. -0.218 24M/19stn Msd 0.2 10↑ 2↓

91/5511
MAY 22 1853 18.6s 45.11S 167.42E 117km M=3.8
0.3 0.01 0.02 2
Rsd 0.1s 25ph/18stn Dmin 63km Az.gap 234°
Corr. -0.357 19M/17stn Msd 0.2 7↑ 2↓

91/5512
MAY 22 1855 21.2s 38.39S 176.07E 162km M=4.3
0.5 0.02 0.02 4
Rsd 0.2s 23ph/17stn Dmin 44km Az.gap 103°
Corr. -0.264 27M/23stn Msd 0.2 6↑ 3↓

91/5516
MAY 22 2253 10.3s 38.99S 175.29E 120km M=3.5
0.3 0.01 0.03 2
Rsd 0.1s 20ph/14stn Dmin 15km Az.gap 165°
Corr. 0.648 12M/10stn Msd 0.1 1↑ 2↓

91/5528
MAY 23 1326 17.0s 37.55S 176.57E 191km M=4.2
0.3 0.03 0.01 2
Rsd 0.2s 15ph/10stn Dmin 92km Az.gap 206°
Corr. -0.152 26M/23stn Msd 0.2 2↑ 4↓

91/5533
MAY 23 1601 48.1s 35.00S 179.44E 293km M=4.2
0.7 0.09 0.11 10
Rsd 0.1s 12ph/7stn Dmin 306km Az.gap 342°
Corr. -0.184 13M/13stn Msd 0.3

91/5567
MAY 24 1418 15.2s 36.71S 177.44E 204km M=3.6
0.2 0.02 0.03 2
Rsd 0.1s 14ph/10stn Dmin 174km Az.gap 318°
Corr. -0.547 7M/7stn Msd 0.1

91/5574
MAY 24 1950 27.4s 38.14S 175.94E 193km M=4.6
0.7 0.04 0.03 5
Rsd 0.2s 16ph/12stn Dmin 42km Az.gap 120°
Corr. 0.148 8M/3stn Msd 0.2 2↑ 1↓

91/5577
MAY 24 2317 26.3s 45.28S 167.34E 99km M=3.5
0.3 0.01 0.03 2
Rsd 0.1s 23ph/17stn Dmin 82km Az.gap 233°
Corr. -0.590 20M/18stn Msd 0.2 6↑ 1↓

91/5606
MAY 25 2135 15.3s 38.57S 176.10E 162km M=3.6
0.9 0.04 0.05 7
Rsd 0.3s 17ph/12stn Dmin 80km Az.gap 202°
Corr. -0.531 19M/18stn Msd 0.2

91/5621
MAY 26 0952 43.8s 37.35S 177.79E 104km M=4.0
0.3 0.02 0.02 3
Rsd 0.1s 13ph/9stn Dmin 53km Az.gap 229°
Corr. 0.150 23M/21stn Msd 0.2 1↑ 2↓

91/5637
MAY 26 2320 08.4s 39.65S 174.08E 187km M=3.8
0.6 0.02 0.04 7
Rsd 0.2s 27ph/20stn Dmin 75km Az.gap 195°
Corr. -0.365 20M/18stn Msd 0.2 1↑

91/5652
MAY 27 1333 17.1s 38.30S 175.76E 188km M=3.8
0.6 0.04 0.04 5
Rsd 0.2s 14ph/9stn Dmin 99km Az.gap 208°
Corr. -0.680 13M/13stn Msd 0.3 2↑ 2↓

91/5671
MAY 28 0514 32.3s 38.32S 176.30E 160km M=3.6
1.0 0.06 0.07 7
Rsd 0.4s 16ph/14stn Dmin 71km Az.gap 229°
Corr. -0.637 12M/12stn Msd 0.2 1↑

91/5673
MAY 28 0710 22.3s 37.69S 177.17E 141km M=3.7
0.4 0.04 0.02 4
Rsd 0.3s 10ph/7stn Dmin 64km Az.gap 184°
Corr. -0.299 12M/12stn Msd 0.3 1↓

91/5688
MAY 28 1800 24.0s 35.88S 178.00E 33km M=4.5
1.0 0.06 0.08 R
Rsd 0.4s 12ph/9stn Dmin 193km Az.gap 253°
Corr. 0.465 11M/7stn Msd 0.3
Poor solution.

91/5690
MAY 28 1912 13.1s 37.56S 177.14E 131km M=3.8
0.3 0.03 0.02 3
Rsd 0.1s 10ph/5stn Dmin 78km Az.gap 251°
Corr. -0.520 4M/4stn Msd 0.0 1↑

91/5696
MAY 29 0011 19.4s 35.39S 178.87E 199km M=4.0
0.6 0.10 0.09 14
Rsd 0.2s 8ph/6stn Dmin 250km Az.gap 334°
Corr. -0.641 10M/10stn Msd 0.2

91/5699
MAY 29 0153 25.9s 38.84S 175.83E 147km M=3.5
0.6 0.02 0.03 5
Rsd 0.2s 18ph/13stn Dmin 42km Az.gap 195°
Corr. -0.539 11M/10stn Msd 0.2

91/5722
MAY 29 2141 53.6s 40.66S 176.97E 26km M=3.9
0.2 0.01 0.02 2
Rsd 0.1s 29ph/25stn Dmin 76km Az.gap 212°
Corr. -0.625 33M/31stn Msd 0.1 1↑

91/5724
MAY 29 2225 19.4s 37.56S 179.80W 33km M=3.6
1.5 0.08 0.14 R
Rsd 0.5s 10ph/5stn Dmin 167km Az.gap 321°
Corr. -0.204 5M/5stn Msd 0.2

91/5727
MAY 30 0155 48.6s 39.51S 174.37E 212km M=4.7
0.4 0.01 0.03 3
Rsd 0.3s 40ph/31stn Dmin 42km Az.gap 71°
Corr. -0.254 8M/3stn Msd 0.3 17↑ 4↓

91/5728
MAY 30 0157 37.6s 39.51S 174.37E 214km M=4.7
0.4 0.01 0.03 3
Rsd 0.3s 41ph/32stn Dmin 42km Az.gap 71°
Corr. -0.234 12M/5stn Msd 0.2 2↑ 4↓

91/5729
MAY 30 0247 39.5s 40.13S 174.93E 15km M=3.9
0.2 0.01 0.01 3
Rsd 0.3s 35ph/29stn Dmin 37km Az.gap 68°
Corr. -0.200 8M/4stn Msd 0.3 4↑ 4↓
Felt Wanganui (57) MM4.

91/5733
MAY 30 0420 59.9s 36.35S 177.30E 223km M=4.1
0.5 0.05 0.05 5
Rsd 0.2s 11ph/7stn Dmin 165km Az.gap 303°
Corr. -0.512 23M/23stn Msd 0.3 1↑

91/5737
MAY 30 0630 07.5s 37.07S 179.84E 80km M=3.6
0.3 0.04 0.04 7
Rsd 0.1s 7ph/3stn Dmin 148km Az.gap 345°
Corr. -0.707 3M/3stn Msd 0.3

91/5751
MAY 30 1400 54.0s 37.36S 176.84E 223km M=4.2
0.3 0.04 0.02 3
Rsd 0.2s 17ph/13stn Dmin 102km Az.gap 219°
Corr. -0.072 25M/24stn Msd 0.3 1↑ 1↓

91/5770
MAY 31 0817 55.9s 37.47S 177.83E 92km M=3.6
0.3 0.02 0.02 3
Rsd 0.2s 12ph/8stn Dmin 44km Az.gap 253°
Corr. -0.473 13M/11stn Msd 0.2 1↑ 1↓

91/5784
MAY 31 1920 06.6s 38.38S 176.12E 139km M=4.5
0.4 0.02 0.01 3
Rsd 0.2s 36ph/27stn Dmin 24km Az.gap 58°
Corr. 0.041 12M/5stn Msd 0.2 7↑ 2↓

91/5787
MAY 31 2213 13.0s 37.34S 176.82E 184km M=3.8
0.6 0.06 0.06 4
Rsd 0.3s 12ph/10stn Dmin 105km Az.gap 250°
Corr. -0.641 16M/16stn Msd 0.1

91/5788
MAY 31 2230 46.0s 45.19S 167.37E 127km M=4.0
0.3 0.01 0.03 2
Rsd 0.2s 20ph/15stn Dmin 72km Az.gap 234°
Corr. -0.350 18M/15stn Msd 0.3 1↑

91/5801
JUN 01 1435 50.8s 45.07S 167.55E 113km M=5.1
0.4 0.01 0.03 2
Rsd 0.2s 22ph/16stn Dmin 53km Az.gap 219°
Corr. -0.197 9M/5stn Msd 0.1 8↑ 4↓

91/5802
JUN 01 1515 15.2s 40.67S 176.94E 25km M=3.9
0.3 0.02 0.03 3
Rsd 0.2s 19ph/17stn Dmin 76km Az.gap 228°
Corr. -0.801 24M/21stn Msd 0.2

91/5805
JUN 01 1658 11.3s 41.41S 175.00E 28km M=4.0
0.1 0.01 0.01 1
Rsd 0.1s 20ph/16stn Dmin 11km Az.gap 144°
Corr. 0.078 8M/4stn Msd 0.2 2↑ 6↓
Felt Wellington region (68) MM4, Aramoana (64).

91/5812
JUN 01 1840 23.2s 40.67S 176.89E 14km M=4.4
0.4 0.02 0.03 3
Rsd 0.2s 31ph/28stn Dmin 76km Az.gap 197°
Corr. -0.547 16M/8stn Msd 0.2 1↑

91/5813
JUN 01 1841 23.7s 40.72S 176.89E 7km M=3.8
0.5 0.01 0.02 3
Rsd 0.1s 17ph/12stn Dmin 82km Az.gap 212°
Corr. -0.855 16M/12stn Msd 0.3

91/5817
JUN 01 2010 27.7s 40.64S 176.92E 24km M=3.7
0.2 0.01 0.02 2
Rsd 0.1s 21ph/18stn Dmin 73km Az.gap 209°
Corr. -0.664 29M/24stn Msd 0.2

91/5818
JUN 01 2050 35.9s 40.62S 176.88E 26km M=3.6
0.3 0.01 0.03 3
Rsd 0.1s 15ph/15stn Dmin 71km Az.gap 220°
Corr. -0.820 24M/21stn Msd 0.2 1↓

91/5820
JUN 01 2235 22.7s 38.42S 177.26E 41km M=3.6
0.2 0.02 0.02 3
Rsd 0.2s 14ph/12stn Dmin 22km Az.gap 81°
Corr. -0.465 13M/10stn Msd 0.3 1↑

91/5830
JUN 02 0609 00.1s 40.43S 176.70E 20km M=3.7
0.3 0.01 0.03 3
Rsd 0.3s 28ph/22stn Dmin 50km Az.gap 191°
Corr. -0.680 30M/27stn Msd 0.2 1↓

91/5840
JUN 02 1129 47.3s 37.34S 177.17E 144km M=3.5
0.3 0.02 0.02 2
Rsd 0.1s 11ph/5stn Dmin 103km Az.gap 266°
Corr. -0.434 6M/5stn Msd 0.2 1↑

91/5841
JUN 02 1407 57.3s 39.88S 174.48E 104km M=3.8
0.3 0.01 0.02 4
Rsd 0.2s 34ph/23stn Dmin 40km Az.gap 85°
Corr. -0.091 24M/19stn Msd 0.3 1↑

91/5851
JUN 02 2121 21.5s 38.44S 176.07E 154km M=3.7
1.6 0.09 0.16 13
Rsd 0.4s 13ph/10stn Dmin 92km Az.gap 224°
Corr. -0.574 10M/10stn Msd 0.4 1↑

91/5859
JUN 03 0330 52.7s 43.54S 170.54E 5km M=4.0
0.1 0.01 0.02 R
Rsd 0.2s 21ph/18stn Dmin 26km Az.gap 139°
Corr. -0.570 10M/5stn Msd 0.2 2↑ 1↓
Felt Erewhon Station (106) MM4.

91/5873
JUN 03 1330 15.6s 39.25S 173.82E 12km M=3.5
0.5 0.01 0.02 3
Rsd 0.1s 19ph/15stn Dmin 24km Az.gap 194°
Corr. -0.688 28M/23stn Msd 0.3 1↓

91/5878
JUN 03 1558 49.3s 40.21S 174.64E 93km M=3.5
0.2 0.01 0.01 2
Rsd 0.2s 28ph/21stn Dmin 52km Az.gap 80°
Corr. -0.131 19M/15stn Msd 0.2 9↑ 2↓

91/5882
JUN 03 1936 31.0s 37.16S 176.97E 205km M=3.6
0.9 0.15 0.10 8
Rsd 0.3s 10ph/4stn Dmin 123km Az.gap 267°
Corr. -0.527 9M/9stn Msd 0.2

91/5886
JUN 03 2108 45.1s 37.03S 177.39E 173km M=4.5
0.3 0.03 0.02 4
Rsd 0.1s 13ph/9stn Dmin 103km Az.gap 249°
Corr. -0.081 8M/4stn Msd 0.2 1↓

91/5902
JUN 04 1110 00.3s 36.67S 176.66E 33km M=4.0
0.6 0.04 0.03 R
Rsd 0.2s 9ph/6stn Dmin 178km Az.gap 284°
Corr. -0.625 7M/6stn Msd 0.5

91/5906
JUN 04 1652 18.4s 42.59S 171.85E 5km M=4.1
0.3 0.01 0.01 3
Rsd 0.4s 17ph/9stn Dmin 40km Az.gap 118°
Corr. -0.135 13M/7stn Msd 0.2 1↓

91/5927
JUN 05 1021 33.1s 36.66S 178.00E 131km M=3.7
0.7 0.05 0.07 8
Rsd 0.3s 10ph/5stn Dmin 108km Az.gap 320°
Corr. -0.551 6M/5stn Msd 0.2

91/5928
JUN 05 1108 56.7s 37.24S 176.67E 206km M=3.7
0.4 0.05 0.05 4
Rsd 0.1s 10ph/6stn Dmin 120km Az.gap 256°
Corr. -0.480 15M/14stn Msd 0.2

91/5929
JUN 05 1123 22.6s 45.04S 167.55E 100km M=3.5
0.4 0.01 0.03 3
Rsd 0.2s 19ph/13stn Dmin 50km Az.gap 228°
Corr. -0.359 14M/12stn Msd 0.2 1↑

91/5933
JUN 05 1439 58.7s 37.15S 176.65E 209km M=3.9
0.2 0.03 0.02 2
Rsd 0.1s 11ph/7stn Dmin 129km Az.gap 249°
Corr. -0.395 21M/20stn Msd 0.2

91/5935
JUN 05 1505 19.9s 39.30S 176.07E 94km M=3.9
0.3 0.01 0.01 4
Rsd 0.3s 53ph/40stn Dmin 42km Az.gap 36°
Corr. -0.191 8M/3stn Msd 0.2 5↑ 1↓

91/5939
JUN 05 1909 13.0s 36.91S 177.65E 130km M=3.7
0.5 0.05 0.05 5
Rsd 0.2s 5ph/3stn Dmin 96km Az.gap 293°
Corr. -0.746 7M/6stn Msd 0.1

91/5942
JUN 05 1957 33.6s 38.18S 176.19E 5km
0.0 R R R
Rsd 0.0s 1ph/1stn Dmin 0km Az.gap 360°
Corr. 0.000 0M/0stn Msd 0.0
Felt Rotorua (33) MM4. M_L approximately 2.5.

91/5943
JUN 05 2255 07.0s 37.06S 176.85E 189km M=3.6
0.9 0.13 0.08 9
Rsd 0.4s 11ph/5stn Dmin 135km Az.gap 270°
Corr. -0.314 8M/8stn Msd 0.2

91/5962
JUN 06 1920 43.4s 36.88S 179.29E 13km M=3.6
0.9 0.10 0.07 7
Rsd 0.3s 11ph/6stn Dmin 119km Az.gap 338°
Corr. -0.222 8M/5stn Msd 0.1

91/5964
JUN 06 2257 40.3s 37.93S 176.20E 172km M=3.7
0.3 0.04 0.05 2
Rsd 0.2s 7ph/5stn Dmin 88km Az.gap 228°
Corr. -0.719 6M/4stn Msd 0.0 1↑

91/5969
JUN 07 0159 20.0s 40.94S 172.89E 225km M=3.8
0.3 0.02 0.02 2
Rsd 0.2s 29ph/17stn Dmin 33km Az.gap 120°
Corr. -0.106 13M/11stn Msd 0.2 1↑ 1↓

91/5973
JUN 07 0421 49.3s 36.65S 177.60E 206km M=4.9
0.5 0.04 0.04 5
Rsd 0.2s 17ph/13stn Dmin 122km Az.gap 277°
Corr. -0.023 10M/4stn Msd 0.2 1↓

91/5976
JUN 07 0528 18.2s 37.14S 177.30E 161km M=3.6
0.3 0.04 0.02 3
Rsd 0.2s 11ph/5stn Dmin 102km Az.gap 278°
Corr. -0.227 6M/5stn Msd 0.2 1↑

91/5984
JUN 07 1124 19.5s 39.70S 177.24E 25km M=4.0
0.3 0.02 0.02 2
Rsd 0.3s 27ph/25stn Dmin 31km Az.gap 170°
Corr. -0.488 8M/4stn Msd 0.1 2↑ 1↓

91/5987
JUN 07 1505 24.5s 41.36S 173.33E 98km M=3.5
0.3 0.02 0.02 4
Rsd 0.3s 27ph/16stn Dmin 57km Az.gap 88°
Corr. -0.334 8M/8stn Msd 0.3 1↑ 4↓

91/5988
JUN 07 1942 45.6s 38.47S 176.00E 188km M=4.0
0.3 0.03 0.04 3
Rsd 0.2s 20ph/14stn Dmin 92km Az.gap 207°
Corr. -0.863 10M/9stn Msd 0.2 2↑ 1↓

91/5990
JUN 07 2133 47.8s 35.82S 178.82E 113km M=4.1
0.2 0.05 0.05 13
Rsd 0.1s 7ph/4stn Dmin 203km Az.gap 342°
Corr. -0.773 4M/4stn Msd 0.3

91/5994
JUN 08 0143 14.2s 38.73S 174.82E 186km M=3.6
0.7 0.04 0.07 11
Rsd 0.3s 22ph/14stn Dmin 171km Az.gap 217°
Corr. -0.820 10M/10stn Msd 0.2

91/6000
JUN 08 0806 18.3s 36.96S 178.81E 92km M=3.6
0.4 0.04 0.04 4
Rsd 0.1s 7ph/3stn Dmin 84km Az.gap 336°
Corr. -0.355 4M/3stn Msd 0.1

91/6020
JUN 08 2304 28.6s 41.02S 172.93E 186km M=3.9
0.3 0.02 0.02 3
Rsd 0.2s 25ph/15stn Dmin 40km Az.gap 107°
Corr. -0.134 14M/11stn Msd 0.2 4↑ 1↓

91/6024
JUN 09 0136 02.0s 37.68S 175.45E 5km M=3.8
0.5 0.03 0.02 R
Rsd 0.2s 11ph/7stn Dmin 159km Az.gap 280°
Corr. -0.479 5M/5stn Msd 0.5

91/6029
JUN 09 1101 35.1s 40.11S 174.41E 106km M=5.9
0.2 0.01 0.01 3
Rsd 0.2s 39ph/34stn Dmin 57km Az.gap 92°
Corr. -0.098 9M/5stn Msd 0.3 9↑ 3↓
Felt North Island and northern South Island, maximum intensity MM5 at New Plymouth (47).

91/6030
JUN 09 1134 34.8s 37.75S 177.34E 102km M=3.7
0.2 0.01 0.01 2
Rsd 0.1s 12ph/8stn Dmin 60km Az.gap 175°
Corr. -0.144 9M/7stn Msd 0.2 1↑ 2↓

91/6033
JUN 09 1327 24.8s 38.41S 175.97E 157km M=4.5
0.5 0.02 0.02 5
Rsd 0.2s 27ph/22stn Dmin 34km Az.gap 96°
Corr. -0.200 24M/17stn Msd 0.2 6↑ 4↓

91/6040
JUN 09 2344 21.2s 37.73S 176.38E 207km M=4.4
0.4 0.04 0.02 3
Rsd 0.2s 19ph/13stn Dmin 71km Az.gap 189°
Corr. 0.002 21M/16stn Msd 0.2 1↑

91/6047
JUN 10 0319 33.0s 41.29S 172.65E 211km M=3.8
0.4 0.02 0.02 3
Rsd 0.2s 27ph/16stn Dmin 53km Az.gap 115°
Corr. -0.277 8M/8stn Msd 0.2 1↑

91/6058
JUN 10 1342 57.5s 36.27S 178.39E 33km M=3.6
0.3 0.02 0.02 R
Rsd 0.1s 11ph/6stn Dmin 147km Az.gap 324°
Corr. -0.447 4M/4stn Msd 0.3

91/6067
JUN 10 2041 48.5s 42.28S 172.70E 5km M=3.8
0.1 0.01 0.01 R
Rsd 0.2s 26ph/14stn Dmin 54km Az.gap 81°
Corr. -0.188 9M/5stn Msd 0.2 3↑ 1↓

91/6086
JUN 11 1655 36.4s 36.77S 177.50E 134km M=3.8
0.3 0.03 0.02 4
Rsd 0.1s 9ph/5stn Dmin 116km Az.gap 296°
Corr. -0.359 6M/6stn Msd 0.3 1↑

91/6087
JUN 11 1742 37.9s 38.59S 176.05E 106km M=3.6
0.4 0.01 0.01 4
Rsd 0.2s 27ph/17stn Dmin 50km Az.gap 89°
Corr. -0.081 18M/17stn Msd 0.2 2↑ 1↓

91/6093
JUN 12 0423 46.0s 37.10S 177.44E 123km M=4.1
0.3 0.03 0.03 4
Rsd 0.1s 14ph/10stn Dmin 94km Az.gap 262°
Corr. -0.645 22M/19stn Msd 0.2 1↑

91/6101
JUN 12 1554 50.7s 40.38S 173.54E 170km M=4.2
0.3 0.02 0.02 2
Rsd 0.2s 33ph/22stn Dmin 57km Az.gap 168°
Corr. -0.289 18M/13stn Msd 0.2 2↑ 3↓

91/6108
JUN 13 0149 02.7s 38.32S 176.06E 172km M=3.7
0.7 0.05 0.05 6
Rsd 0.3s 12ph/9stn Dmin 92km Az.gap 213°
Corr. -0.711 13M/13stn Msd 0.2 1↑

91/6114
JUN 13 0620 21.9s 37.07S 176.36E 281km M=3.8
0.3 0.04 0.05 4
Rsd 0.1s 12ph/5stn Dmin 148km Az.gap 283°
Corr. -0.695 17M/17stn Msd 0.2

91/6122
JUN 13 1403 48.6s 38.46S 175.79E 149km M=3.7
0.4 0.03 0.02 4
Rsd 0.1s 16ph/10stn Dmin 82km Az.gap 201°
Corr. -0.746 17M/17stn Msd 0.3 1↑

91/6123
JUN 13 1414 13.4s 37.02S 176.88E 224km M=3.6
0.5 0.07 0.07 6
Rsd 0.3s 11ph/6stn Dmin 139km Az.gap 267°
Corr. -0.375 8M/8stn Msd 0.2 1↓

91/6124
JUN 13 1422 58.1s 38.01S 176.37E 158km M=4.0
0.5 0.03 0.02 4
Rsd 0.3s 23ph/18stn Dmin 70km Az.gap 154°
Corr. -0.277 24M/20stn Msd 0.1 4↑ 4↓

91/6146
JUN 14 1456 14.1s 38.39S 176.17E 172km M=3.5
1.4 0.07 0.12 12
Rsd 0.6s 11ph/7stn Dmin 84km Az.gap 219°
Corr. -0.520 6M/6stn Msd 0.2 1↑

91/6148
JUN 14 1914 36.9s 40.23S 175.01E 71km M=4.9
0.1 0.01 0.01 3
Rsd 0.2s 42ph/35stn Dmin 49km Az.gap 65°
Corr. -0.165 11M/5stn Msd 0.2 7↑ 2↓
Felt southern North Island, max. intensity MM4.

91/6156
JUN 15 0026 34.9s 44.44S 168.21E 12km M=3.6
0.3 0.02 0.01 R
Rsd 0.3s 24ph/19stn Dmin 34km Az.gap 181°
Corr. -0.438 24M/19stn Msd 0.1 1↑ 9↓

91/6166
JUN 15 0939 20.0s 37.03S 177.75E 102km M=4.4
0.3 0.02 0.02 3
Rsd 0.2s 16ph/13stn Dmin 80km Az.gap 260°
Corr. -0.146 8M/4stn Msd 0.2 1↓

91/6168
JUN 15 1015 59.3s 44.91S 167.57E 78km M=4.9
0.3 0.01 0.02 2
Rsd 0.2s 25ph/19stn Dmin 38km Az.gap 180°
Corr. -0.727 13M/7stn Msd 0.3 2↑ 12↓
Felt Fiordland and central Otago, max. intensity MM4.

91/6178
JUN 15 1840 32.8s 44.49S 168.70E 12km M=2.3
0.2 0.01 0.01 R
Rsd 0.2s 16ph/12stn Dmin 66km Az.gap 136°
Corr. -0.002 9M/9stn Msd 0.1
Felt Mt Aspiring Stn (113) MM4.

91/6187
JUN 16 0300 05.0s 38.67S 175.81E 172km M=3.5
0.2 0.01 0.05 2
Rsd 0.1s 16ph/14stn Dmin 59km Az.gap 314°
Corr. -0.566 8M/8stn Msd 0.3 1↑

91/6200
JUN 16 1436 56.7s 38.59S 176.15E 184km M=3.6
0.5 0.02 0.05 4
Rsd 0.2s 14ph/9stn Dmin 80km Az.gap 197°
Corr. -0.633 10M/10stn Msd 0.2

91/6201
JUN 16 1507 29.1s 37.31S 177.80E 102km M=3.8
0.4 0.03 0.02 4
Rsd 0.2s 12ph/8stn Dmin 55km Az.gap 234°
Corr. -0.019 12M/10stn Msd 0.1 1↑

91/6206
JUN 16 1809 33.0s 36.68S 176.98E 271km M=4.3
0.4 0.06 0.07 5
Rsd 0.2s 13ph/9stn Dmin 156km Az.gap 272°
Corr. -0.598 25M/20stn Msd 0.2 1↑

91/6207
JUN 16 1823 43.9s 38.03S 176.07E 192km M=4.6
0.6 0.04 0.03 4
Rsd 0.3s 24ph/18stn Dmin 19km Az.gap 144°
Corr. -0.016 8M/4stn Msd 0.2 4↑ 2↓

91/6208
JUN 16 1839 58.2s 38.34S 176.55E 156km M=3.8
0.5 0.04 0.06 4
Rsd 0.3s 13ph/10stn Dmin 50km Az.gap 192°
Corr. -0.680 10M/9stn Msd 0.3 1↑ 1↓

91/6223
JUN 17 0801 16.0s 37.50S 177.51E 111km M=3.6
0.3 0.02 0.02 3
Rsd 0.1s 12ph/6stn Dmin 71km Az.gap 231°
Corr. -0.578 11M/9stn Msd 0.1 1↑

91/6227
JUN 17 0937 40.5s 44.98S 167.44E 52km M=3.5
0.2 0.01 0.02 2
Rsd 0.1s 22ph/16stn Dmin 51km Az.gap 203°
Corr. -0.742 20M/15stn Msd 0.1 1↑

91/6232
JUN 17 1421 09.5s 41.18S 174.53E 41km M=4.1
0.1 0.01 0.01 2
Rsd 0.2s 34ph/26stn Dmin 16km Az.gap 70°
Corr. -0.220 21M/15stn Msd 0.3 2↑ 4↓
Felt Wellington area (68), maximum intensity MM4.

91/6249
JUN 18 1016 20.5s 36.94S 177.45E 143km M=3.5
0.2 0.04 0.01 4
Rsd 0.1s 7ph/3stn Dmin 144km Az.gap 319°
Corr. -0.273 3M/3stn Msd 0.2 1↑

91/6253
JUN 18 1328 50.8s 39.07S 175.97E 80km M=3.7
0.4 0.01 0.02 5
Rsd 0.4s 34ph/26stn Dmin 22km Az.gap 49°
Corr. -0.301 19M/16stn Msd 0.2 1↑

91/6255
JUN 18 1421 02.6s 37.84S 177.88E 69km M=3.6
0.3 0.02 0.01 2
Rsd 0.2s 18ph/13stn Dmin 42km Az.gap 179°
Corr. -0.314 13M/10stn Msd 0.1 1↑ 1↓

91/6281
JUN 19 0922 38.0s 41.25S 173.40E 89km M=3.6
0.3 0.01 0.02 4
Rsd 0.3s 28ph/18stn Dmin 66km Az.gap 80°
Corr. -0.159 16M/13stn Msd 0.2 7↑ 2↓

91/6289
JUN 19 1501 28.1s 37.67S 176.38E 228km M=4.4
0.6 0.05 0.03 4
Rsd 0.2s 21ph/15stn Dmin 73km Az.gap 196°
Corr. 0.125 26M/23stn Msd 0.2 1↑

91/6292
JUN 19 1859 48.9s 39.73S 174.24E 192km M=3.9
0.6 0.02 0.05 6
Rsd 0.3s 22ph/16stn Dmin 60km Az.gap 186°
Corr. -0.461 13M/11stn Msd 0.2 1↑

91/6293
JUN 19 1906 24.5s 36.41S 177.87E 224km M=4.2
0.3 0.03 0.03 3
Rsd 0.2s 18ph/14stn Dmin 138km Az.gap 293°
Corr. -0.134 17M/16stn Msd 0.4

91/6302
JUN 20 0356 41.5s 44.86S 167.40E 5km M=3.6
0.2 0.01 0.02 R
Rsd 0.1s 17ph/12stn Dmin 46km Az.gap 257°
Corr. -0.789 22M/20stn Msd 0.2 1↑

91/6307
JUN 20 0857 41.8s 36.14S 179.02E 148km M=4.6
1.3 0.13 0.13 18
Rsd 0.3s 12ph/9stn Dmin 174km Az.gap 277°
Corr. 0.001 16M/10stn Msd 0.2

91/6310
JUN 20 1337 24.9s 45.40S 167.15E 81km M=3.6
0.2 0.01 0.03 2
Rsd 0.1s 17ph/12stn Dmin 86km Az.gap 242°
Corr. -0.147 16M/14stn Msd 0.2 1↓
G24

91/6323
JUN 21 0652 04.8s 38.87S 175.51E 128km M=3.7
1.3 0.03 0.05 10
Rsd 0.2s 11ph/8stn Dmin 35km Az.gap 288°
Corr. -0.773 14M/12stn Msd 0.2
Digital P's obscured by previous event.

91/6334
JUN 21 1333 48.4s 40.18S 176.81E 52km M=3.7
0.2 0.01 0.02 3
Rsd 0.2s 31ph/26stn Dmin 22km Az.gap 191°
Corr. -0.625 25M/22stn Msd 0.2 2↑ 2↓

91/6352
JUN 22 0423 30.2s 36.76S 178.11E 166km M=3.7
0.7 0.07 0.08 7
Rsd 0.2s 9ph/5stn Dmin 146km Az.gap 313°
Corr. -0.641 2M/2stn Msd 0.1

91/6371
JUN 22 1459 37.2s 44.02S 168.88E 13km M=3.8
0.2 0.01 0.01 3
Rsd 0.1s 19ph/13stn Dmin 99km Az.gap 176°
Corr. -0.124 32M/27stn Msd 0.2 1↑

91/6376
JUN 22 2004 24.8s 39.96S 177.10E 19km M=4.1
0.4 0.02 0.03 2
Rsd 0.3s 23ph/20stn Dmin 25km Az.gap 191°
Corr. -0.559 34M/29stn Msd 0.2 1↓

91/6387
JUN 23 0522 28.7s 37.83S 175.93E 170km M=3.6
1.3 0.09 0.17 11
Rsd 0.4s 13ph/9stn Dmin 114km Az.gap 274°
Corr. -0.469 10M/10stn Msd 0.3 1↑

91/6388
JUN 23 0726 47.9s 39.14S 175.78E 87km M=4.8
0.2 0.01 0.01 3
Rsd 0.2s 34ph/27stn Dmin 16km Az.gap 45°
Corr. -0.105 12M/5stn Msd 0.2 7↑ 4↓

91/6393
JUN 23 1554 10.8s 39.68S 176.94E 31km M=3.5
0.2 0.01 0.03 1
Rsd 0.3s 19ph/13stn Dmin 5km Az.gap 182°
Corr. -0.586 12M/12stn Msd 0.2 1↓

91/6412
JUN 24 0601 08.5s 37.47S 177.41E 205km M=3.5
2.2 0.18 0.22 21
Rsd 0.8s 11ph/7stn Dmin 80km Az.gap 241°
Corr. -0.664 9M/8stn Msd 0.2 1↑

91/6427
JUN 24 1808 50.8s 35.90S 178.65E 138km M=4.4
0.4 0.07 0.06 10
Rsd 0.1s 10ph/5stn Dmin 191km Az.gap 330°
Corr. -0.656 17M/13stn Msd 0.2

91/6430
JUN 24 2029 35.5s 38.24S 176.21E 191km M=3.8
0.4 0.02 0.03 3
Rsd 0.1s 11ph/10stn Dmin 125km Az.gap 319°
Corr. -0.008 8M/8stn Msd 0.3 1↑

91/6434
JUN 25 0052 12.7s 36.67S 177.29E 224km M=3.5
1.6 0.17 0.16 10
Rsd 0.3s 5ph/3stn Dmin 177km Az.gap 324°
Corr. -0.711 2M/2stn Msd 0.1

91/6445
JUN 25 1202 50.0s 40.26S 173.57E 180km M=4.3
0.5 0.02 0.02 4
Rsd 0.3s 26ph/19stn Dmin 67km Az.gap 143°
Corr. -0.178 8M/3stn Msd 0.1 6↑ 8↓

91/6449
JUN 25 2332 25.6s 37.34S 179.61E 49km M=3.9
0.5 0.05 0.05 14
Rsd 0.2s 12ph/6stn Dmin 119km Az.gap 327°
Corr. -0.135 6M/3stn Msd 0.2

91/6458
JUN 26 0837 24.4s 38.34S 176.08E 176km M=3.6
0.8 0.05 0.07 7
Rsd 0.5s 16ph/12stn Dmin 90km Az.gap 212°
Corr. -0.684 10M/10stn Msd 0.1 1↑

91/6463
JUN 26 1251 47.6s 35.33S 179.43E 249km M=4.0
0.6 0.09 0.15 12
Rsd 0.2s 11ph/5stn Dmin 271km Az.gap 341°
Corr. -0.387 11M/11stn Msd 0.3

91/6466
JUN 26 1453 50.8s 40.10S 173.72E 215km M=4.4
0.3 0.02 0.02 3
Rsd 0.2s 41ph/25stn Dmin 80km Az.gap 141°
Corr. -0.182 27M/22stn Msd 0.2 5↑ 3↓

91/6472
JUN 26 1943 56.9s 45.40S 167.37E 138km M=3.8
0.3 0.02 0.04 5
Rsd 0.1s 13ph/10stn Dmin 152km Az.gap 253°
Corr. -0.840 13M/13stn Msd 0.2 1↑

91/6476
JUN 26 2158 59.9s 37.86S 176.06E 165km M=3.9
0.5 0.04 0.03 3
Rsd 0.1s 14ph/11stn Dmin 102km Az.gap 249°
Corr. -0.563 21M/17stn Msd 0.2 1↑

91/6478
JUN 26 2340 18.0s 38.08S 176.17E 167km M=4.2
0.5 0.04 0.02 4
Rsd 0.2s 19ph/15stn Dmin 85km Az.gap 187°
Corr. -0.236 24M/22stn Msd 0.2 2↑ 1↓

91/6490
JUN 27 0850 26.4s 38.41S 175.96E 128km M=3.6
0.8 0.04 0.04 7
Rsd 0.3s 13ph/9stn Dmin 71km Az.gap 213°
Corr. -0.625 15M/14stn Msd 0.2 1↑

91/6493
JUN 27 1357 24.2s 37.17S 176.95E 159km M=3.7
1.0 0.08 0.11 7
Rsd 0.3s 11ph/6stn Dmin 122km Az.gap 269°
Corr. -0.773 9M/9stn Msd 0.2

91/6497
JUN 28 0108 13.1s 37.85S 176.03E 176km M=3.5
0.9 0.09 0.13 6
Rsd 0.3s 13ph/10stn Dmin 105km Az.gap 235°
Corr. -0.918 8M/8stn Msd 0.2 1↑

91/6505
JUN 28 0832 03.6s 39.38S 176.58E 82km M=3.9
0.2 0.01 0.01 2
Rsd 0.2s 39ph/28stn Dmin 28km Az.gap 70°
Corr. -0.044 29M/23stn Msd 0.2 1↓

91/6527
JUN 29 0355 51.8s 45.10S 167.51E 108km M=3.7
0.3 0.02 0.02 3
Rsd 0.2s 19ph/14stn Dmin 50km Az.gap 180°
Corr. -0.471 18M/16stn Msd 0.2

91/6529
JUN 29 0516 01.7s 37.46S 179.22E 12km M=3.8
0.7 0.04 0.06 R
Rsd 0.3s 10ph/6stn Dmin 82km Az.gap 318°
Corr. -0.118 10M/6stn Msd 0.1 1↑ 1↓

91/6534
JUN 29 1001 26.4s 35.43S 178.36E 198km M=4.2
0.5 0.07 0.11 11
Rsd 0.2s 10ph/5stn Dmin 240km Az.gap 329°
Corr. -0.279 11M/9stn Msd 0.3

91/6541
JUN 29 1509 36.3s 40.35S 173.46E 186km M=4.2
0.2 0.01 0.01 2
Rsd 0.2s 31ph/20stn Dmin 63km Az.gap 149°
Corr. -0.101 24M/19stn Msd 0.2 4↑ 2↓

91/6563
JUL 01 0101 33.9s 37.26S 177.25E 142km M=3.8
0.2 0.03 0.02 3
Rsd 0.1s 9ph/5stn Dmin 100km Az.gap 266°
Corr. -0.393 9M/9stn Msd 0.2 1↓

91/6565
JUL 01 0228 56.6s 38.20S 175.51E 160km M=3.8
0.4 0.02 0.08 4
Rsd 0.1s 10ph/8stn Dmin 108km Az.gap 327°
Corr. -0.142 6M/6stn Msd 0.1 1↑

91/6570
JUL 01 0744 24.8s 35.20S 179.13E 251km M=4.4
0.3 0.05 0.06 7
Rsd 0.1s 10ph/7stn Dmin 277km Az.gap 327°
Corr. -0.350 18M/17stn Msd 0.2

91/6579
JUL 01 1606 06.3s 39.27S 175.28E 103km M=4.4
0.2 0.01 0.01 3
Rsd 0.2s 33ph/26stn Dmin 17km Az.gap 68°
Corr. -0.154 10M/5stn Msd 0.1 6↑ 4↓

91/6598
JUL 02 1224 16.3s 38.12S 176.26E 5km M=2.5
0.2 0.02 0.01 R
Rsd 0.3s 10ph/6stn Dmin 25km Az.gap 167°
Corr. 0.563 5M/5stn Msd 0.5 1↓
Felt Rotorua (33) MM4.

91/6601
JUL 02 1437 15.8s 41.55S 172.88E 99km M=4.0
0.3 0.01 0.02 2
Rsd 0.3s 40ph/22stn Dmin 24km Az.gap 84°
Corr. -0.005 19M/14stn Msd 0.3 5↑ 2↓

91/6607
JUL 02 1800 39.7s 41.42S 173.97E 55km M=3.8
0.2 0.01 0.01 3
Rsd 0.2s 30ph/18stn Dmin 34km Az.gap 61°
Corr. -0.355 16M/10stn Msd 0.2 5↑ 3↓
Felt Picton (78) MM4, Blenheim (77).

91/6631
JUL 03 1914 49.4s 38.08S 176.22E 145km M=3.7
0.4 0.03 0.02 2
Rsd 0.2s 13ph/11stn Dmin 81km Az.gap 222°
Corr. -0.559 11M/11stn Msd 0.2 1↑

91/6635
JUL 04 0058 32.3s 45.85S 166.88E 83km M=3.6
0.2 0.01 0.02 1
Rsd 0.1s 19ph/14stn Dmin 48km Az.gap 246°
Corr. 0.307 21M/19stn Msd 0.2 1↓

91/6652
JUL 04 1323 52.8s 40.44S 176.31E 31km M=4.3
0.2 0.01 0.03 2
Rsd 0.3s 29ph/26stn Dmin 20km Az.gap 147°
Corr. -0.551 14M/6stn Msd 0.1 9↑ 6↓
Felt Dannevirke (63).

91/6662
JUL 04 1611 01.7s 39.45S 175.74E 70km M=3.9
0.2 0.01 0.01 3
Rsd 0.3s 34ph/27stn Dmin 25km Az.gap 57°
Corr. -0.166 25M/20stn Msd 0.2 6↑ 5↓

91/6687
JUL 05 0616 47.8s 38.47S 175.91E 131km M=4.1
0.9 0.05 0.02 6
Rsd 0.2s 15ph/13stn Dmin 68km Az.gap 199°
Corr. -0.535 28M/24stn Msd 0.2 3↑ 1↓

91/6707
JUL 06 0143 32.7s 37.00S 179.28E 12km M=4.0
1.0 0.09 0.05 R
Rsd 0.1s 12ph/10stn Dmin 109km Az.gap 282°
Corr. -0.077 33M/31stn Msd 0.2

91/6712
JUL 06 0521 58.8s 37.67S 176.00E 277km M=4.0
0.8 0.12 0.09 5
Rsd 0.2s 13ph/11stn Dmin 117km Az.gap 262°
Corr. -0.574 22M/20stn Msd 0.2

91/6714
JUL 06 0628 39.7s 36.04S 178.02E 198km M=3.6
0.6 0.07 0.08 6
Rsd 0.2s 6ph/4stn Dmin 174km Az.gap 325°
Corr. -0.734 10M/10stn Msd 0.3

91/6717
JUL 06 0957 24.7s 38.66S 175.78E 155km M=4.2
0.6 0.03 0.02 5
Rsd 0.4s 28ph/20stn Dmin 59km Az.gap 69°
Corr. -0.202 26M/22stn Msd 0.2 1↑

91/6719
JUL 06 1216 27.9s 40.42S 174.58E 12km M=3.7
0.2 0.01 0.02 R
Rsd 0.4s 30ph/24stn Dmin 57km Az.gap 80°
Corr. -0.219 10M/4stn Msd 0.2 8↑ 1↓

91/6757
JUL 07 1318 10.8s 38.65S 175.97E 166km M=3.5
0.6 0.04 0.04 5
Rsd 0.3s 16ph/11stn Dmin 67km Az.gap 191°
Corr. -0.711 17M/17stn Msd 0.2

91/6772
JUL 08 0013 12.2s 37.22S 176.70E 204km M=3.9
0.5 0.05 0.06 4
Rsd 0.2s 10ph/8stn Dmin 121km Az.gap 255°
Corr. -0.730 19M/19stn Msd 0.2

91/6774
JUL 08 0134 21.5s 38.53S 176.03E 140km M=4.3
0.3 0.01 0.01 3
Rsd 0.2s 27ph/22stn Dmin 41km Az.gap 61°
Corr. 0.320 30M/25stn Msd 0.3 5↑ 3↓

91/6778
JUL 08 0422 39.2s 38.79S 175.78E 154km M=3.6
0.2 0.01 0.05 2
Rsd 0.1s 14ph/12stn Dmin 45km Az.gap 325°
Corr. -0.346 8M/8stn Msd 0.2

91/6807
JUL 09 0626 48.1s 40.38S 173.41E 156km M=3.7
0.3 0.02 0.02 3
Rsd 0.2s 24ph/13stn Dmin 63km Az.gap 179°
Corr. -0.138 15M/13stn Msd 0.2 1↑

91/6823
JUL 10 0012 09.9s 37.97S 176.27E 151km M=3.8
1.0 0.08 0.07 6
Rsd 0.3s 11ph/9stn Dmin 81km Az.gap 262°
Corr. -0.605 17M/16stn Msd 0.3 2↑ 1↓

91/6829
JUL 10 0510 01.4s 41.59S 174.02E 61km M=3.5
0.1 0.01 0.01 2
Rsd 0.2s 29ph/18stn Dmin 24km Az.gap 66°
Corr. -0.459 8M/3stn Msd 0.2 1↑ 12↓

91/6832
JUL 10 0641 17.9s 38.91S 175.46E 117km M=3.5
0.6 0.02 0.03 5
Rsd 0.3s 20ph/16stn Dmin 26km Az.gap 116°
Corr. -0.117 15M/13stn Msd 0.2 1↑ 1↓

91/6836
JUL 10 0833 43.6s 37.88S 176.63E 172km M=4.6
0.4 0.03 0.02 3
Rsd 0.3s 23ph/17stn Dmin 41km Az.gap 123°
Corr. -0.344 9M/5stn Msd 0.2 9↑ 4↓

91/6849
JUL 10 1745 29.3s 38.85S 175.63E 211km M=3.6
0.7 0.04 0.06 6
Rsd 0.2s 12ph/9stn Dmin 37km Az.gap 195°
Corr. -0.758 9M/9stn Msd 0.3 1↑ 1↓

91/6852
JUL 10 1932 06.7s 41.72S 172.01E 12km M=3.4
0.3 0.01 0.02 R
Rsd 0.2s 16ph/11stn Dmin 70km Az.gap 179°
Corr. -0.309 15M/12stn Msd 0.1 1↓
Felt Westport (79) MM4.

91/6865
JUL 11 0234 21.7s 36.04S 178.22E 230km M=3.6
0.6 0.07 0.10 7
Rsd 0.2s 9ph/4stn Dmin 226km Az.gap 335°
Corr. -0.727 4M/4stn Msd 0.1

91/6869
JUL 11 0524 56.4s 36.83S 179.64E 73km M=3.7
0.3 0.04 0.04 10
Rsd 0.1s 8ph/4stn Dmin 146km Az.gap 341°
Corr. -0.307 4M/4stn Msd 0.1

91/6873
JUL 11 0819 28.1s 44.59S 168.11E 86km M=3.8
0.3 0.02 0.02 3
Rsd 0.2s 27ph/18stn Dmin 18km Az.gap 162°
Corr. -0.447 24M/19stn Msd 0.2 7↑ 10↓

91/6876
JUL 11 1126 26.0s 37.08S 176.93E 252km M=3.9
0.6 0.10 0.07 8
Rsd 0.3s 15ph/11stn Dmin 132km Az.gap 255°
Corr. -0.516 17M/17stn Msd 0.1 1↑

91/6880
JUL 11 1305 08.6s 38.13S 175.87E 172km M=3.6
1.1 0.07 0.10 8
Rsd 0.5s 16ph/12stn Dmin 100km Az.gap 255°
Corr. -0.695 14M/14stn Msd 0.2 1↓

91/6883
JUL 11 1527 35.0s 38.20S 176.14E 169km M=4.1
0.5 0.04 0.03 3
Rsd 0.2s 18ph/14stn Dmin 82km Az.gap 205°
Corr. -0.543 27M/24stn Msd 0.2 6↑ 4↓

91/6889
JUL 11 2331 41.4s 40.25S 173.54E 175km M=3.7
0.6 0.04 0.03 5
Rsd 0.3s 21ph/16stn Dmin 69km Az.gap 232°
Corr. -0.073 12M/12stn Msd 0.3 3↑ 1↓

91/6893
JUL 12 0442 24.6s 39.31S 175.97E 70km M=6.2
0.2 0.01 0.01 2
Rsd 0.2s 39ph/32stn Dmin 35km Az.gap 29°
Corr. 0.077 11M/5stn Msd 0.2 20↑ 15↓
Felt Bay of Plenty to Nelson, max MM5 at Uruti (38).

91/6898
JUL 12 1125 36.3s 35.83S 179.17E 169km M=5.1
0.4 0.05 0.04 7
Rsd 0.1s 14ph/11stn Dmin 211km Az.gap 281°
Corr. 0.371 10M/4stn Msd 0.3 1↓

91/6901
JUL 12 1635 22.5s 36.65S 177.40E 183km M=3.8
0.1 0.02 0.02 2
Rsd 0.1s 8ph/5stn Dmin 132km Az.gap 297°
Corr. -0.404 6M/6stn Msd 0.3

91/6905
JUL 12 1812 04.2s 38.44S 176.34E 86km M=3.5
0.6 0.02 0.02 8
Rsd 0.2s 13ph/11stn Dmin 51km Az.gap 120°
Corr. 0.412 14M/14stn Msd 0.2 2↑ 1↓

91/6923
JUL 13 0256 44.5s 36.19S 177.64E 185km M=3.8
0.2 0.02 0.02 3
Rsd 0.1s 10ph/6stn Dmin 168km Az.gap 316°
Corr. -0.320 15M/15stn Msd 0.4

91/6929
JUL 13 0959 38.0s 35.86S 178.68E 178km M=3.9
0.2 0.04 0.04 6
Rsd 0.1s 10ph/5stn Dmin 195km Az.gap 339°
Corr. -0.090 8M/8stn Msd 0.3

91/6930
JUL 13 1229 01.1s 40.93S 176.02E 30km M=3.7
0.1 0.01 0.02 2
Rsd 0.3s 21ph/17stn Dmin 41km Az.gap 174°
Corr. -0.520 30M/27stn Msd 0.2 1↑ 2↓

91/6931
JUL 13 1229 39.1s 39.22S 175.85E 65km M=3.5
0.1 0.01 0.02 3
Rsd 0.1s 9ph/5stn Dmin 69km Az.gap 215°
Corr. -0.895 6M/4stn Msd 0.2

91/6934
JUL 13 1408 48.0s 39.73S 174.06E 138km M=3.5
0.5 0.01 0.02 5
Rsd 0.3s 24ph/20stn Dmin 45km Az.gap 120°
Corr. -0.045 12M/10stn Msd 0.2 6↑ 1↓

91/6937
JUL 13 1600 35.3s 39.71S 174.23E 195km M=3.5
0.8 0.03 0.08 9
Rsd 0.4s 15ph/12stn Dmin 61km Az.gap 187°
Corr. -0.369 10M/8stn Msd 0.2 1↓

91/6944
JUL 13 2017 20.7s 40.24S 173.62E 165km M=4.2
0.4 0.01 0.02 3
Rsd 0.2s 33ph/24stn Dmin 68km Az.gap 141°
Corr. -0.049 9M/4stn Msd 0.3 10↑ 2↓

91/6972
JUL 14 2057 06.2s 38.18S 175.70E 174km M=3.6
0.6 0.07 0.09 5
Rsd 0.2s 17ph/14stn Dmin 124km Az.gap 213°
Corr. -0.895 14M/14stn Msd 0.2 1↑

91/6980
JUL 15 0415 20.3s 41.48S 173.78E 67km M=3.6
0.2 0.01 0.01 2
Rsd 0.2s 30ph/19stn Dmin 48km Az.gap 65°
Corr. -0.211 14M/9stn Msd 0.2 1↓

91/6996
JUL 15 1900 03.9s 37.84S 175.93E 184km M=3.5
0.3 0.03 0.04 3
Rsd 0.1s 14ph/10stn Dmin 113km Az.gap 257°
Corr. -0.859 12M/12stn Msd 0.2 1↑

91/7003
JUL 16 0002 07.2s 41.30S 172.68E 213km M=3.8
0.4 0.02 0.03 3
Rsd 0.3s 26ph/18stn Dmin 54km Az.gap 110°
Corr. -0.064 12M/12stn Msd 0.2 2↑

91/7006
JUL 16 0116 52.2s 41.07S 174.42E 66km M=3.7
0.1 0.01 0.01 2
Rsd 0.2s 36ph/24stn Dmin 20km Az.gap 58°
Corr. -0.239 15M/10stn Msd 0.2 6↑ 1↓

91/7030
JUL 16 1020 34.9s 41.92S 171.70E 12km M=2.9
0.2 0.01 0.01 2
Rsd 0.1s 14ph/8stn Dmin 21km Az.gap 183°
Corr. -0.227 10M/10stn Msd 0.2 1↑
Felt Westport (79) MM4.

91/7036
JUL 16 1442 20.8s 37.05S 177.61E 127km M=4.0
0.3 0.02 0.01 3
Rsd 0.1s 17ph/15stn Dmin 86km Az.gap 253°
Corr. 0.316 24M/20stn Msd 0.2

91/7041
JUL 16 1758 57.6s 38.35S 175.74E 178km M=3.8
0.8 0.03 0.04 7
Rsd 0.3s 16ph/12stn Dmin 54km Az.gap 123°
Corr. -0.110 20M/19stn Msd 0.2

91/7074
JUL 17 1327 47.3s 35.94S 178.06E 168km M=4.4
0.4 0.03 0.04 4
Rsd 0.1s 12ph/10stn Dmin 186km Az.gap 320°
Corr. -0.316 25M/21stn Msd 0.2

91/7086
JUL 18 0326 58.7s 45.21S 167.35E 73km M=4.0
0.3 0.01 0.02 2
Rsd 0.2s 26ph/18stn Dmin 32km Az.gap 189°
Corr. -0.176 29M/22stn Msd 0.1 1↑ 9↓

91/7103
JUL 18 1810 35.3s 41.90S 171.75E 11km M=3.4
0.2 0.01 0.01 1
Rsd 0.1s 18ph/11stn Dmin 18km Az.gap 150°
Corr. -0.348 20M/16stn Msd 0.2 1↑
Felt Westport (79) MM3.

91/7105
JUL 18 1844 44.2s 40.89S 172.91E 210km M=4.1
0.3 0.02 0.02 3
Rsd 0.2s 31ph/20stn Dmin 33km Az.gap 105°
Corr. -0.199 27M/22stn Msd 0.2 4↑ 2↓

91/7108
JUL 18 2052 18.3s 39.94S 176.73E 60km M=3.6
0.1 0.01 0.01 2
Rsd 0.2s 34ph/24stn Dmin 9km Az.gap 79°
Corr. -0.498 25M/22stn Msd 0.2 4↑ 2↓

91/7112
JUL 18 2330 19.0s 38.99S 175.67E 158km M=3.7
0.6 0.04 0.05 6
Rsd 0.2s 16ph/13stn Dmin 12km Az.gap 159°
Corr. -0.871 14M/14stn Msd 0.3 5↑ 2↓

91/7113
JUL 18 2335 29.5s 45.47S 166.64E 5km M=4.1
0.7 0.01 0.04 3
Rsd 0.1s 16ph/12stn Dmin 40km Az.gap 265°
Corr. -0.621 9M/5stn Msd 0.1 1↑ 3↓

91/7144
JUL 20 0131 12.2s 38.12S 175.43E 155km M=3.6
1.0 0.09 0.15 14
Rsd 0.5s 17ph/13stn Dmin 148km Az.gap 260°
Corr. -0.875 13M/12stn Msd 0.2 1↑

91/7149
JUL 20 0826 31.5s 35.65S 178.92E 272km M=4.3
0.7 0.07 0.18 6
Rsd 0.2s 8ph/6stn Dmin 224km Az.gap 343°
Corr. -0.582 15M/13stn Msd 0.3

91/7151
JUL 20 0857 51.6s 38.38S 175.46E 231km M=4.0
0.9 0.07 0.08 8
Rsd 0.5s 18ph/13stn Dmin 84km Az.gap 210°
Corr. -0.738 20M/18stn Msd 0.3 4↑ 2↓

91/7152
JUL 20 0931 44.1s 35.72S 177.29W 100km M=4.2
2.9 0.24 0.28 R
Rsd 0.5s 6ph/4stn Dmin 446km Az.gap 343°
Corr. -0.224 5M/5stn Msd 0.3

91/7159
JUL 20 1245 54.9s 37.34S 177.31E 153km M=4.0
0.5 0.03 0.02 4
Rsd 0.2s 13ph/10stn Dmin 92km Az.gap 220°
Corr. -0.017 19M/17stn Msd 0.1 1↑

91/7161
JUL 20 1358 48.6s 39.48S 177.25E 25km M=3.6
0.1 0.01 0.01 2
Rsd 0.3s 18ph/16stn Dmin 37km Az.gap 153°
Corr. -0.578 18M/16stn Msd 0.2 3↑ 1↓

91/7162
JUL 20 1358 58.5s 41.29S 172.73E 183km M=3.5
0.4 0.02 0.02 3
Rsd 0.2s 18ph/13stn Dmin 54km Az.gap 105°
Corr. -0.228 7M/7stn Msd 0.2 1↑

91/7178
JUL 21 0059 51.2s 37.52S 176.66E 199km M=4.3
0.4 0.04 0.02 3
Rsd 0.2s 20ph/14stn Dmin 80km Az.gap 207°
Corr. 0.085 27M/22stn Msd 0.3

91/7195
JUL 21 1052 59.7s 41.67S 172.22E 5km M=3.3
0.1 0.01 0.02 R
Rsd 0.2s 13ph/10stn Dmin 36km Az.gap 120°
Corr. -0.213 21M/19stn Msd 0.2 1↑ 3↓
Felt Greymouth (85).

91/7197
JUL 21 1356 47.7s 38.25S 175.95E 159km M=3.9
0.5 0.03 0.02 4
Rsd 0.1s 17ph/13stn Dmin 102km Az.gap 207°
Corr. -0.668 23M/22stn Msd 0.2 1↑

91/7211
JUL 22 0904 36.2s 40.09S 175.40E 23km M=4.0
0.2 0.01 0.01 3
Rsd 0.3s 29ph/27stn Dmin 52km Az.gap 52°
Corr. 0.007 10M/4stn Msd 0.3 5↑ 6↓
Felt Wanganui (57), Foxton (61) MM3.

91/7222
JUL 22 2155 00.5s 42.08S 174.75E 33km M=3.5
0.1 0.01 0.01 R
Rsd 0.1s 24ph/17stn Dmin 57km Az.gap 178°
Corr. -0.641 9M/4stn Msd 0.2 1↑

91/7243
JUL 23 2032 32.9s 37.95S 176.10E 202km M=4.9
0.5 0.03 0.02 3
Rsd 0.2s 21ph/18stn Dmin 26km Az.gap 157°
Corr. 0.000 8M/4stn Msd 0.2 9↑ 3↓

91/7247
JUL 24 0015 09.3s 42.10S 173.84E 15km M=4.1
0.2 0.01 0.01 2
Rsd 0.2s 25ph/17stn Dmin 43km Az.gap 146°
Corr. -0.621 14M/6stn Msd 0.2 3↑ 4↓

91/7252
JUL 24 1125 11.2s 36.61S 175.97E 107km M=3.7
0.9 0.06 0.08 19
Rsd 0.2s 12ph/11stn Dmin 186km Az.gap 280°
Corr. -0.859 7M/7stn Msd 0.1
Unstable solution.

91/7253
JUL 24 1358 31.4s 42.21S 172.83E 70km M=5.0
0.2 0.01 0.02 3
Rsd 0.2s 26ph/19stn Dmin 50km Az.gap 74°
Corr. -0.303 10M/4stn Msd 0.3 1↑ 6↓
Felt in parts of Nelson and Marlborough, maximum intensity MM4 in Murchison (80).

91/7256
JUL 24 1916 04.1s 40.90S 175.71E 28km M=3.9
0.1 0.01 0.01 1
Rsd 0.2s 21ph/18stn Dmin 34km Az.gap 119°
Corr. -0.350 8M/3stn Msd 0.2 3↑ 7↓
Felt Masterton (66).

91/7258
JUL 24 2104 18.2s 40.18S 173.76E 125km M=3.6
0.4 0.03 0.01 4
Rsd 0.2s 20ph/16stn Dmin 71km Az.gap 234°
Corr. -0.180 12M/10stn Msd 0.2 1↑

91/7265
JUL 25 0649 11.9s 39.04S 175.28E 144km M=4.1
0.5 0.01 0.03 5
Rsd 0.2s 31ph/24stn Dmin 10km Az.gap 143°
Corr. -0.242 22M/20stn Msd 0.3 1↑

91/7281
JUL 26 0217 49.6s 37.63S 176.39E 299km M=4.1
0.4 0.04 0.06 5
Rsd 0.1s 20ph/15stn Dmin 169km Az.gap 227°
Corr. -0.875 12M/11stn Msd 0.2

91/7283
JUL 26 0416 10.9s 39.53S 174.57E 195km M=3.6
0.3 0.02 0.03 3
Rsd 0.1s 16ph/12stn Dmin 43km Az.gap 217°
Corr. -0.017 12M/11stn Msd 0.2 1↑

91/7289
JUL 26 0834 45.1s 37.60S 176.16E 194km M=3.7
0.4 0.06 0.04 4
Rsd 0.2s 7ph/4stn Dmin 111km Az.gap 254°
Corr. -0.249 8M/8stn Msd 0.3 1↑

91/7295
JUL 26 1145 02.7s 41.48S 173.15E 80km M=3.6
0.2 0.01 0.02 3
Rsd 0.3s 23ph/20stn Dmin 38km Az.gap 75°
Corr. -0.281 16M/13stn Msd 0.2 3↑ 8↓

91/7327
JUL 27 1357 56.1s 35.80S 177.95E 183km M=3.9
0.9 0.08 0.12 12
Rsd 0.3s 7ph/5stn Dmin 202km Az.gap 327°
Corr. -0.609 6M/6stn Msd 0.2

91/7331
JUL 27 1724 47.8s 38.63S 178.09E 41km M=3.7
0.5 0.03 0.03 4
Rsd 0.2s 6ph/4stn Dmin 5km Az.gap 273°
Corr. -0.719 8M/4stn Msd 0.1 1↑ 2↓

91/7355
JUL 28 0710 02.7s 38.93S 175.49E 118km M=4.2
0.5 0.01 0.03 4
Rsd 0.3s 29ph/25stn Dmin 24km Az.gap 113°
Corr. -0.330 31M/25stn Msd 0.2 5↑ 7↓

91/7360
JUL 28 1128 51.2s 40.48S 173.68E 115km M=3.7
0.3 0.01 0.01 4
Rsd 0.3s 28ph/20stn Dmin 41km Az.gap 122°
Corr. -0.174 19M/14stn Msd 0.2 7↑ 3↓

91/7369
JUL 28 1752 42.8s 37.98S 175.82E 171km M=3.5
0.4 0.06 0.04 4
Rsd 0.2s 10ph/6stn Dmin 117km Az.gap 222°
Corr. -0.672 19M/19stn Msd 0.2 1↓

91/7376
JUL 29 0201 18.1s 36.34S 176.92E 301km M=3.8
0.6 0.07 0.13 8
Rsd 0.2s 11ph/8stn Dmin 186km Az.gap 297°
Corr. -0.840 4M/4stn Msd 0.3

91/7389
JUL 29 1139 38.8s 41.08S 174.26E 59km M=3.7
0.1 0.01 0.01 2
Rsd 0.1s 27ph/23stn Dmin 15km Az.gap 48°
Corr. -0.328 17M/12stn Msd 0.1 4↑ 1↓

91/7391
JUL 29 1422 22.2s 39.49S 174.39E 253km M=4.5
0.5 0.02 0.03 4
Rsd 0.2s 31ph/26stn Dmin 43km Az.gap 99°
Corr. -0.121 25M/21stn Msd 0.2 6↑ 3↓

91/7401
JUL 30 0014 36.7s 44.88S 167.39E 1km M=3.8
0.3 0.02 0.03 2
Rsd 0.1s 18ph/16stn Dmin 48km Az.gap 244°
Corr. -0.797 23M/16stn Msd 0.2 1↑

91/7413
JUL 30 0951 01.1s 37.75S 177.32E 120km M=4.2
0.2 0.02 0.01 2
Rsd 0.2s 19ph/14stn Dmin 60km Az.gap 130°
Corr. -0.079 8M/4stn Msd 0.2 4↑ 1↓

91/7424
JUL 30 2216 27.0s 39.38S 174.82E 148km M=4.6
0.3 0.01 0.02 3
Rsd 0.2s 37ph/29stn Dmin 48km Az.gap 73°
Corr. -0.297 12M/5stn Msd 0.2 3↑ 4↓

91/7433
JUL 31 0249 53.6s 45.99S 166.44E 12km M=4.0
0.4 0.02 0.04 R
Rsd 0.3s 23ph/16stn Dmin 109km Az.gap 271°
Corr. 0.268 22M/17stn Msd 0.2

91/7435
JUL 31 0840 34.1s 37.06S 179.06E 12km M=3.8
0.2 0.02 0.02 R
Rsd 0.1s 11ph/6stn Dmin 90km Az.gap 276°
Corr. -0.625 12M/8stn Msd 0.2

91/7436
JUL 31 0923 59.8s 44.82S 167.35E 12km M=3.8
0.5 0.02 0.04 R
Rsd 0.3s 17ph/11stn Dmin 48km Az.gap 266°
Corr. -0.809 21M/15stn Msd 0.2 1↑

91/7442
JUL 31 1847 06.4s 36.12S 178.42E 112km M=3.6
0.4 0.04 0.06 10
Rsd 0.2s 7ph/4stn Dmin 165km Az.gap 338°
Corr. -0.566 4M/4stn Msd 0.3

91/7443
JUL 31 1925 13.6s 39.74S 174.07E 133km M=3.8
0.4 0.01 0.02 4
Rsd 0.2s 26ph/19stn Dmin 46km Az.gap 118°
Corr. -0.202 17M/15stn Msd 0.2 1↑

91/7466
AUG 01 1408 52.6s 35.28S 178.98E 246km M=5.1
0.5 0.05 0.04 6
Rsd 0.1s 11ph/10stn Dmin 264km Az.gap 283°
Corr. 0.014 8M/3stn Msd 0.2 1↑

91/7476
AUG 02 0216 00.1s 38.68S 175.66E 152km M=3.8
0.3 0.01 0.02 2
Rsd 0.1s 15ph/11stn Dmin 56km Az.gap 130°
Corr. -0.051 19M/17stn Msd 0.3

91/7482
AUG 02 0608 17.6s 38.75S 175.39E 163km M=3.6
0.6 0.05 0.09 10
Rsd 0.4s 20ph/13stn Dmin 134km Az.gap 222°
Corr. -0.883 9M/9stn Msd 0.3

91/7487
AUG 02 1000 46.3s 42.21S 172.80E 62km M=3.7
0.2 0.01 0.02 3
Rsd 0.3s 21ph/14stn Dmin 50km Az.gap 73°
Corr. -0.171 14M/11stn Msd 0.2 1↑ 2↓
Strong phase precedes S on THZ.

91/7488
AUG 02 1130 07.4s 37.17S 176.51E 246km M=3.5
0.3 0.05 0.03 3
Rsd 0.1s 7ph/4stn Dmin 132km Az.gap 267°
Corr. -0.416 8M/8stn Msd 0.2

91/7491
AUG 02 1251 35.6s 43.55S 171.16E 5km M=4.5
0.1 0.01 0.01 R
Rsd 0.1s 21ph/17stn Dmin 25km Az.gap 96°
Corr. -0.352 19M/10stn Msd 0.2 1↑ 2↓
Felt Ashburton area (108) MM4, Erewhon Station (106).

91/7492
AUG 02 1252 28.8s 43.51S 171.15E 5km M=3.5
0.1 0.02 0.01 R
Rsd 0.2s 11ph/6stn Dmin 24km Az.gap 139°
Corr. -0.283 8M/8stn Msd 0.5
In coda of another event.

91/7495
AUG 02 1342 26.5s 37.81S 176.12E 195km M=4.0
0.3 0.03 0.02 2
Rsd 0.1s 12ph/10stn Dmin 100km Az.gap 222°
Corr. -0.559 19M/18stn Msd 0.2 2↑ 1↓

91/7504
AUG 02 1855 27.2s 35.68S 179.03E 263km M=3.9
1.0 0.16 0.21 12
Rsd 0.3s 7ph/4stn Dmin 223km Az.gap 344°
Corr. -0.723 2M/2stn Msd 0.1

91/7512
AUG 03 0419 33.7s 45.07S 167.54E 88km M=3.8
0.3 0.01 0.02 3
Rsd 0.2s 22ph/16stn Dmin 53km Az.gap 228°
Corr. -0.155 22M/16stn Msd 0.1 1↑ 1↓

91/7513
AUG 03 0631 57.6s 35.68S 179.02E 273km M=3.9
1.3 0.16 0.23 10
Rsd 0.5s 12ph/9stn Dmin 223km Az.gap 337°
Corr. -0.629 10M/10stn Msd 0.2

91/7516
AUG 03 0836 17.4s 40.64S 174.65E 54km M=3.8
0.2 0.01 0.01 5
Rsd 0.2s 26ph/20stn Dmin 33km Az.gap 74°
Corr. -0.344 16M/11stn Msd 0.2 2↑ 3↓

91/7527
AUG 03 2056 57.4s 37.00S 178.01E 184km M=3.8
0.5 0.07 0.13 4
Rsd 0.1s 12ph/8stn Dmin 72km Az.gap 306°
Corr. -0.969 8M/6stn Msd 0.2

91/7529
AUG 03 2219 12.8s 38.81S 175.35E 173km M=4.0
0.7 0.03 0.03 6
Rsd 0.3s 18ph/15stn Dmin 35km Az.gap 174°
Corr. -0.496 22M/20stn Msd 0.3 1↑

91/7540
AUG 04 0719 15.7s 38.88S 175.26E 204km M=4.5
0.7 0.04 0.05 5
Rsd 0.4s 23ph/17stn Dmin 28km Az.gap 129°
Corr. -0.338 25M/20stn Msd 0.2

91/7544
AUG 04 0910 23.1s 39.04S 175.45E 151km M=3.7
0.6 0.03 0.05 5
Rsd 0.5s 22ph/16stn Dmin 9km Az.gap 135°
Corr. -0.406 16M/15stn Msd 0.3

91/7552
AUG 04 2033 00.7s 36.87S 177.46E 28km M=4.4
0.4 0.03 0.01 3
Rsd 0.1s 11ph/9stn Dmin 77km Az.gap 201°
Corr. -0.017 29M/26stn Msd 0.3 1↑

91/7588
AUG 06 1648 55.8s 37.68S 178.02E 311km M=3.9
1.4 0.32 0.58 11
Rsd 0.3s 9ph/7stn Dmin 26km Az.gap 213°
Corr. -0.980 4M/3stn Msd 0.4

91/7596
AUG 07 0823 25.8s 37.49S 178.82E 29km M=4.8
0.3 0.03 0.02 1
Rsd 0.1s 13ph/10stn Dmin 47km Az.gap 271°
Corr. 0.314 39M/32stn Msd 0.2 1↑

91/7599
AUG 07 1551 02.8s 46.89S 166.67E 5km M=3.6
0.3 0.01 0.03 R
Rsd 0.1s 12ph/8stn Dmin 112km Az.gap 313°
Corr. 0.543 10M/9stn Msd 0.1

91/7603
AUG 07 2321 45.9s 39.92S 174.05E 231km M=3.5
0.2 0.02 0.02 2
Rsd 0.1s 17ph/11stn Dmin 99km Az.gap 278°
Corr. -0.173 12M/11stn Msd 0.2

91/7607
AUG 08 0336 08.1s 39.09S 175.96E 73km M=4.2
0.3 0.01 0.02 3
Rsd 0.3s 32ph/26stn Dmin 25km Az.gap 79°
Corr. -0.381 8M/3stn Msd 0.2 1↑

91/7609
AUG 08 0834 19.4s 37.80S 177.59E 38km M=3.7
0.3 0.02 0.03 5
Rsd 0.2s 14ph/12stn Dmin 46km Az.gap 121°
Corr. -0.244 14M/12stn Msd 0.2 1↓

91/7634
AUG 10 0311 24.5s 45.63S 165.25E 33km M=4.5
1.2 0.03 0.13 R
Rsd 0.3s 17ph/14stn Dmin 206km Az.gap 287°
Corr. -0.277 26M/20stn Msd 0.2 1↑ 5↓

91/7639
AUG 10 1126 44.9s 37.35S 177.60E 75km M=3.9
0.2 0.01 0.01 3
Rsd 0.1s 13ph/11stn Dmin 68km Az.gap 184°
Corr. 0.453 15M/13stn Msd 0.2 1↑ 2↓

91/7647
AUG 10 2044 10.6s 38.61S 176.01E 160km M=3.8
0.5 0.03 0.06 4
Rsd 0.3s 18ph/14stn Dmin 82km Az.gap 192°
Corr. -0.813 16M/15stn Msd 0.3 3↑ 1↓

91/7685
AUG 12 1546 56.5s 37.43S 179.50W 33km M=3.9
1.8 0.08 0.17 R
Rsd 0.6s 7ph/5stn Dmin 196km Az.gap 310°
Corr. -0.218 5M/5stn Msd 0.3

91/7700
AUG 13 0913 37.2s 38.32S 175.69E 185km M=4.3
0.5 0.02 0.03 4
Rsd 0.2s 20ph/16stn Dmin 51km Az.gap 95°
Corr. 0.066 25M/21stn Msd 0.2 1↑

91/7704
AUG 13 1531 17.8s 36.68S 177.31E 286km M=4.0
0.3 0.05 0.09 3
Rsd 0.1s 7ph/3stn Dmin 135km Az.gap 300°
Corr. -0.949 3M/3stn Msd 0.2

91/7708
AUG 13 2052 08.8s 35.90S 178.34E 33km M=4.0
0.4 0.02 0.03 R
Rsd 0.2s 7ph/4stn Dmin 188km Az.gap 262°
Corr. 0.543 4M/4stn Msd 0.2

91/7724
AUG 15 0147 28.0s 45.07S 167.59E 124km M=3.8
0.3 0.01 0.02 2
Rsd 0.2s 23ph/13stn Dmin 52km Az.gap 220°
Corr. -0.264 15M/12stn Msd 0.2 1↑

91/7728
AUG 15 0945 36.8s 38.59S 175.74E 171km M=4.2
0.5 0.03 0.02 4
Rsd 0.2s 25ph/18stn Dmin 66km Az.gap 74°
Corr. -0.214 25M/21stn Msd 0.3

91/7729
AUG 15 0948 19.4s 38.38S 176.05E 163km M=3.8
1.1 0.04 0.05 10
Rsd 0.3s 10ph/6stn Dmin 69km Az.gap 117°
Corr. -0.137 12M/12stn Msd 0.2

91/7732
AUG 15 1509 34.8s 35.93S 178.38E 199km M=4.2
0.8 0.08 0.08 7
Rsd 0.2s 12ph/11stn Dmin 185km Az.gap 315°
Corr. -0.664 16M/16stn Msd 0.2

91/7735
AUG 15 1601 41.2s 36.65S 177.58E 181km M=3.6
0.6 0.04 0.06 5
Rsd 0.2s 9ph/5stn Dmin 183km Az.gap 316°
Corr. -0.668 7M/7stn Msd 0.1

91/7745
AUG 16 1839 29.7s 36.87S 179.28E 5km M=3.7
1.6 0.08 0.14 R
Rsd 0.6s 5ph/4stn Dmin 119km Az.gap 298°
Corr. 0.068 3M/2stn Msd 0.2

91/7746
AUG 16 1934 18.8s 37.98S 176.13E 170km M=3.8
0.8 0.11 0.28 12
Rsd 0.3s 12ph/8stn Dmin 92km Az.gap 267°
Corr. -0.945 5M/5stn Msd 0.3

91/7747
AUG 16 2105 14.5s 39.24S 175.00E 236km M=3.6
0.3 0.03 0.03 3
Rsd 0.1s 16ph/13stn Dmin 159km Az.gap 296°
Corr. -0.340 4M/4stn Msd 0.1

91/7749
AUG 17 0123 23.7s 38.36S 176.20E 139km M=4.0
0.4 0.02 0.02 3
Rsd 0.3s 17ph/11stn Dmin 64km Az.gap 111°
Corr. 0.038 24M/20stn Msd 0.2 1↑

91/7757
AUG 17 1837 51.8s 46.81S 165.12E 33km M=3.6
0.7 0.06 0.06 R
Rsd 0.3s 7ph/3stn Dmin 227km Az.gap 335°
Corr. -0.131 2M/2stn Msd 0.1

91/7765
AUG 18 0715 28.5s 40.43S 176.46E 42km M=3.6
0.1 0.01 0.02 3
Rsd 0.2s 30ph/23stn Dmin 27km Az.gap 184°
Corr. -0.582 20M/15stn Msd 0.2 1↑

91/7781
AUG 19 0607 24.0s 37.48S 178.31E 42km M=3.8
0.2 0.01 0.02 2
Rsd 0.1s 9ph/5stn Dmin 13km Az.gap 253°
Corr. 0.249 4M/2stn Msd 0.1

91/7786
AUG 19 1716 39.1s 38.14S 176.72E 80km M=3.5
0.3 0.02 0.03 4
Rsd 0.4s 13ph/11stn Dmin 37km Az.gap 97°
Corr. -0.192 11M/9stn Msd 0.2 1↑

91/7802
AUG 20 0956 09.5s 40.41S 174.41E 62km M=3.7
0.2 0.01 0.01 5
Rsd 0.2s 26ph/16stn Dmin 60km Az.gap 88°
Corr. -0.237 20M/15stn Msd 0.2 1↑ 1↓

91/7814
AUG 20 1918 39.1s 36.25S 177.89E 242km M=3.7
1.6 0.19 0.28 15
Rsd 0.4s 7ph/4stn Dmin 155km Az.gap 324°
Corr. -0.746 3M/3stn Msd 0.2

91/7840
AUG 21 0816 19.4s 37.93S 176.86E 5km M=3.6
0.3 0.02 0.02 R
Rsd 0.4s 13ph/11stn Dmin 43km Az.gap 112°
Corr. 0.416 12M/10stn Msd 0.2 1↑
Felt Edgecumbe-Whakatane area (27).

91/7848
AUG 21 1548 48.2s 42.03S 172.90E 74km M=3.8
0.2 0.01 0.02 2
Rsd 0.3s 28ph/16stn Dmin 30km Az.gap 127°
Corr. -0.028 8M/3stn Msd 0.1 4↑ 3↓

91/7850
AUG 21 1856 58.0s 44.39S 169.16E 15km M=3.9
0.1 0.01 0.01 3
Rsd 0.2s 17ph/12stn Dmin 59km Az.gap 115°
Corr. 0.024 17M/11stn Msd 0.3 1↑ 6↓
Felt Mt Aspiring Stn (113) MM4.

91/7852
AUG 21 2125 00.2s 35.95S 178.11E 217km M=3.6
1.4 0.18 0.26 16
Rsd 0.5s 7ph/4stn Dmin 184km Az.gap 332°
Corr. -0.809 2M/2stn Msd 0.1

91/7855
AUG 21 2326 16.3s 46.16S 165.81E 12km M=4.9
0.8 0.04 0.09 R
Rsd 0.3s 17ph/15stn Dmin 158km Az.gap 290°
Corr. 0.219 12M/7stn Msd 0.1 1↓

91/7858
AUG 22 0152 28.9s 38.12S 176.47E 5km M=3.6
0.3 0.03 0.02 R
Rsd 0.5s 10ph/9stn Dmin 13km Az.gap 95°
Corr. 0.459 15M/13stn Msd 0.2 1↑ 1↓
Felt Lake Okareka, Rotorua (33) MM4. Largest of a series of more than 20 volcanic events.

91/7860
AUG 22 0655 35.8s 38.34S 176.15E 171km M=3.8
0.5 0.03 0.04 4
Rsd 0.3s 15ph/11stn Dmin 72km Az.gap 110°
Corr. -0.395 17M/15stn Msd 0.1

91/7871
AUG 22 2222 58.3s 38.40S 175.68E 124km M=3.7
0.2 0.01 0.02 2
Rsd 0.1s 21ph/16stn Dmin 75km Az.gap 226°
Corr. -0.602 15M/15stn Msd 0.3

91/7872
AUG 23 0306 02.2s 38.49S 175.89E 152km M=4.1
0.5 0.02 0.03 5
Rsd 0.4s 19ph/15stn Dmin 69km Az.gap 112°
Corr. -0.185 28M/24stn Msd 0.2 1↓

91/7873
AUG 23 0323 57.6s 38.59S 175.93E 129km M=4.0
0.4 0.02 0.02 3
Rsd 0.3s 22ph/17stn Dmin 52km Az.gap 65°
Corr. -0.097 25M/22stn Msd 0.3 1↓

91/7875
AUG 23 0336 41.4s 36.36S 177.37E 231km M=3.8
0.3 0.04 0.05 3
Rsd 0.1s 7ph/4stn Dmin 212km Az.gap 328°
Corr. -0.754 2M/2stn Msd 0.1

91/7881
AUG 23 0717 32.2s 38.33S 176.06E 160km M=3.6
1.3 0.07 0.09 10
Rsd 0.5s 13ph/9stn Dmin 72km Az.gap 230°
Corr. -0.391 17M/17stn Msd 0.2

91/7882
AUG 23 0719 04.0s 38.75S 175.74E 163km M=3.6
0.4 0.03 0.04 3
Rsd 0.2s 14ph/9stn Dmin 49km Az.gap 201°
Corr. -0.836 9M/9stn Msd 0.2

91/7883
AUG 23 1103 18.5s 36.73S 176.79E 270km M=3.6
0.7 0.07 0.12 6
Rsd 0.3s 8ph/4stn Dmin 165km Az.gap 292°
Corr. -0.859 2M/2stn Msd 0.1

91/7895
AUG 24 0056 22.1s 39.78S 174.07E 160km M=4.0
0.4 0.01 0.03 4
Rsd 0.3s 36ph/24stn Dmin 50km Az.gap 119°
Corr. -0.270 22M/17stn Msd 0.2 1↑

91/7904
AUG 24 1643 09.9s 38.61S 175.81E 142km M=3.6
0.5 0.02 0.02 4
Rsd 0.2s 14ph/10stn Dmin 66km Az.gap 94°
Corr. -0.523 16M/14stn Msd 0.2 2↑ 1↓

91/7910
AUG 25 0005 56.1s 36.26S 177.91E 215km M=4.8
0.5 0.04 0.04 5
Rsd 0.2s 19ph/15stn Dmin 153km Az.gap 252°
Corr. 0.602 9M/4stn Msd 0.1 1↓

91/7928
AUG 25 1624 49.6s 35.50S 178.64E 214km M=4.5
0.6 0.04 0.04 8
Rsd 0.2s 12ph/11stn Dmin 235km Az.gap 306°
Corr. 0.555 21M/20stn Msd 0.2

91/7960
AUG 26 1714 29.6s 38.97S 177.31E 33km M=4.4
0.1 0.01 0.01 2
Rsd 0.2s 22ph/20stn Dmin 23km Az.gap 84°
Corr. 0.125 12M/5stn Msd 0.2 3↑ 1↓
Felt Wairoa (53).

91/7966
AUG 27 0038 06.2s 42.18S 178.30E 33km M=4.0
0.5 0.03 0.04 R
Rsd 0.3s 29ph/24stn Dmin 232km Az.gap 251°
Corr. -0.570 33M/31stn Msd 0.2
Unidentified phases are T waves.

91/7970
AUG 27 0230 22.5s 38.16S 176.31E 156km M=4.1
0.4 0.02 0.02 3
Rsd 0.3s 26ph/18stn Dmin 19km Az.gap 90°
Corr. 0.064 29M/24stn Msd 0.2 1↑

91/7978
AUG 27 1047 22.5s 35.51S 179.72E 258km M=4.2
2.1 0.21 0.20 17
Rsd 0.4s 12ph/9stn Dmin 264km Az.gap 330°
Corr. 0.130 16M/15stn Msd 0.2

91/7980
AUG 27 1200 12.3s 37.75S 176.66E 145km M=3.6
0.6 0.07 0.06 4
Rsd 0.2s 9ph/6stn Dmin 69km Az.gap 230°
Corr. -0.648 15M/15stn Msd 0.1

91/8042
AUG 29 1334 24.1s 35.38S 178.22E 266km M=4.1
0.2 0.02 0.03 2
Rsd 0.0s 13ph/8stn Dmin 335km Az.gap 336°
Corr. -0.475 4M/4stn Msd 0.2

91/8046
AUG 29 1610 04.5s 36.15S 177.99E 223km M=3.7
1.1 0.08 0.11 10
Rsd 0.2s 10ph/7stn Dmin 163km Az.gap 321°
Corr. -0.609 5M/5stn Msd 0.4

91/8064
AUG 30 0641 40.8s 37.08S 177.32E 193km M=3.9
0.2 0.02 0.02 1
Rsd 0.1s 16ph/12stn Dmin 132km Az.gap 311°
Corr. -0.621 10M/10stn Msd 0.2

91/8080
AUG 30 1916 18.2s 36.95S 176.78E 224km M=3.6
0.3 0.03 0.04 2
Rsd 0.1s 13ph/8stn Dmin 149km Az.gap 310°
Corr. -0.754 8M/8stn Msd 0.2

91/8087
AUG 31 0443 26.6s 36.16S 177.59E 228km M=4.1
0.5 0.04 0.04 4
Rsd 0.1s 10ph/7stn Dmin 172km Az.gap 271°
Corr. 0.695 15M/15stn Msd 0.2

91/8092
AUG 31 0929 57.0s 38.11S 176.43E 145km M=3.8
0.5 0.03 0.03 4
Rsd 0.3s 17ph/15stn Dmin 15km Az.gap 142°
Corr. 0.332 22M/20stn Msd 0.2 1↑

91/8102
AUG 31 1517 42.0s 36.97S 177.45E 160km M=3.9
0.3 0.02 0.02 3
Rsd 0.2s 16ph/14stn Dmin 102km Az.gap 214°
Corr. 0.559 18M/18stn Msd 0.2

91/8107
AUG 31 2237 04.2s 38.79S 175.01E 246km M=3.6
0.4 0.03 0.05 4
Rsd 0.3s 27ph/19stn Dmin 112km Az.gap 211°
Corr. -0.805 12M/12stn Msd 0.2

91/8108
AUG 31 2311 12.2s 39.55S 179.45E 33km M=4.0
0.5 0.02 0.04 R
Rsd 0.2s 20ph/16stn Dmin 160km Az.gap 254°
Corr. -0.455 29M/26stn Msd 0.2

91/8114
SEP 01 0104 05.3s 43.05S 171.77E 4km M=3.6
0.1 0.00 0.00 1
Rsd 0.1s 19ph/9stn Dmin 51km Az.gap 107°
Corr. -0.200 14M/10stn Msd 0.3 1↓

91/8115
SEP 01 0132 47.9s 43.04S 171.77E 6km M=4.6
0.1 0.00 0.01 1
Rsd 0.1s 19ph/12stn Dmin 50km Az.gap 108°
Corr. -0.291 14M/7stn Msd 0.2 2↑ 3↓
Felt Arthur's Pass (93) and Coralyn Stn (94) MM4.

91/8116
SEP 01 0136 44.5s 43.04S 171.77E 6km M=3.8
0.2 0.01 0.01 2
Rsd 0.1s 15ph/9stn Dmin 50km Az.gap 126°
Corr. -0.158 36M/30stn Msd 0.2 1↓

91/8126
SEP 01 0804 13.3s 37.29S 176.26E 304km M=3.6
0.2 0.05 0.12 4
Rsd 0.1s 13ph/10stn Dmin 131km Az.gap 298°
Corr. -0.984 7M/7stn Msd 0.2

91/8130
SEP 01 1311 46.3s 36.15S 179.72E 33km M=4.3
0.5 0.03 0.04 R
Rsd 0.2s 10ph/6stn Dmin 205km Az.gap 310°
Corr. 0.213 18M/16stn Msd 0.1

91/8132
SEP 01 1340 41.5s 39.84S 177.01E 47km M=4.3
0.2 0.01 0.02 2
Rsd 0.2s 35ph/28stn Dmin 22km Az.gap 180°
Corr. -0.625 8M/3stn Msd 0.1 4↑ 2↓
Felt Napier (52) and Hastings (60) MM4.

91/8134
SEP 01 1539 13.8s 43.06S 171.77E 3km M=3.8
0.1 0.00 0.01 1
Rsd 0.1s 15ph/10stn Dmin 51km Az.gap 107°
Corr. -0.154 38M/31stn Msd 0.2 1↓
Clear crustal phases.

91/8137
SEP 01 1928 51.5s 38.74S 176.08E 96km M=3.9
0.4 0.02 0.01 4
Rsd 0.3s 22ph/16stn Dmin 39km Az.gap 112°
Corr. -0.295 25M/21stn Msd 0.2 1↓

91/8148
SEP 02 0304 47.3s 35.52S 178.68E 245km M=4.2
0.2 0.01 0.02 2
Rsd 0.0s 12ph/10stn Dmin 299km Az.gap 307°
Corr. 0.695 14M/13stn Msd 0.2

91/8153
SEP 02 0751 55.8s 40.27S 174.18E 78km M=3.5
0.2 0.01 0.01 4
Rsd 0.2s 27ph/19stn Dmin 63km Az.gap 102°
Corr. -0.160 16M/14stn Msd 0.2 1↑ 2↓

91/8156
SEP 02 1148 25.6s 39.65S 175.49E 69km M=4.6
0.1 0.01 0.01 2
Rsd 0.2s 44ph/33stn Dmin 50km Az.gap 46°
Corr. -0.232 8M/3stn Msd 0.2 3↑ 1↓
Felt Moawhango (58) MM4, Kakahi (39) and Ohakune (49) MM3.

91/8157
SEP 02 1609 59.6s 39.28S 175.12E 124km M=3.7
0.3 0.01 0.03 2
Rsd 0.2s 28ph/23stn Dmin 25km Az.gap 177°
Corr. -0.301 21M/19stn Msd 0.2

91/8158
SEP 02 1809 19.5s 37.75S 177.57E 37km M=4.7
0.2 0.01 0.01 4
Rsd 0.2s 22ph/19stn Dmin 42km Az.gap 128°
Corr. 0.104 8M/3stn Msd 0.2 1↑ 2↓
Felt Ruatuna Road (35) MM4.

91/8160
SEP 02 1848 41.2s 38.17S 176.26E 5km M=2.0
0.1 0.01 0.01 R
Rsd 0.2s 8ph/6stn Dmin 6km Az.gap 115°
Corr. -0.042 1M/1stn Msd N.D.
Felt Rotorua (33) MM4.

91/8164
SEP 03 0010 41.8s 37.05S 176.28E 257km M=3.8
0.6 0.06 0.11 7
Rsd 0.3s 12ph/9stn Dmin 153km Az.gap 299°
Corr. -0.867 7M/7stn Msd 0.2

91/8171
SEP 03 0734 46.8s 37.61S 176.39E 181km M=3.6
0.6 0.04 0.06 5
Rsd 0.3s 11ph/8stn Dmin 96km Az.gap 124°
Corr. -0.196 10M/10stn Msd 0.1

91/8180
SEP 03 1733 25.9s 44.41S 169.88E 5km M=3.6
0.1 0.00 0.01 R
Rsd 0.1s 23ph/17stn Dmin 22km Az.gap 126°
Corr. -0.244 24M/18stn Msd 0.2 1↓

91/8189
SEP 04 0235 18.4s 36.56S 177.12E 222km M=4.3
0.7 0.05 0.06 5
Rsd 0.2s 11ph/10stn Dmin 156km Az.gap 288°
Corr. -0.594 27M/22stn Msd 0.2 1↓

91/8191
SEP 04 0311 51.5s 38.34S 175.77E 173km M=3.9
1.2 0.07 0.06 9
Rsd 0.4s 11ph/9stn Dmin 88km Az.gap 222°
Corr. -0.531 21M/21stn Msd 0.3 1↑

91/8198
SEP 04 0850 05.6s 38.48S 175.83E 158km M=4.0
0.5 0.02 0.03 4
Rsd 0.3s 19ph/15stn Dmin 70km Az.gap 75°
Corr. -0.049 25M/22stn Msd 0.3 1↑ 1↓

91/8200
SEP 04 0931 56.8s 37.66S 176.27E 197km M=3.6
0.2 0.01 0.02 1
Rsd 0.1s 15ph/13stn Dmin 99km Az.gap 125°
Corr. 0.344 19M/19stn Msd 0.2

91/8210
SEP 04 1828 02.6s 38.96S 175.78E 104km M=4.0
0.3 0.01 0.02 3
Rsd 0.3s 31ph/23stn Dmin 29km Az.gap 59°
Corr. -0.264 27M/21stn Msd 0.2 1↑

91/8228
SEP 05 0553 17.8s 35.80S 179.00E 275km M=3.9
3.3 0.12 0.17 26
Rsd 0.4s 9ph/8stn Dmin 209km Az.gap 325°
Corr. 0.359 13M/13stn Msd 0.2

91/8229
SEP 05 0634 02.0s 45.59S 166.96E 74km M=4.9
0.2 0.01 0.03 2
Rsd 0.1s 19ph/15stn Dmin 83km Az.gap 239°
Corr. -0.137 13M/7stn Msd 0.2 1↑ 10↓
Felt Te Anau (130) MM4, Dunedin (145) and Tuatapere (145).

91/8236
SEP 05 0936 55.1s 36.97S 177.61E 19km M=3.5
0.7 0.04 0.03 9
Rsd 0.3s 8ph/5stn Dmin 93km Az.gap 221°
Corr. -0.028 9M/7stn Msd 0.2

91/8239
SEP 05 1011 29.3s 37.35S 176.79E 206km M=4.8
0.5 0.03 0.04 3
Rsd 0.2s 22ph/18stn Dmin 101km Az.gap 154°
Corr. 0.621 10M/4stn Msd 0.2 2↑ 3↓

91/8246
SEP 05 1319 54.8s 38.42S 175.87E 164km M=3.5
0.6 0.03 0.03 5
Rsd 0.2s 11ph/8stn Dmin 87km Az.gap 164°
Corr. -0.295 14M/14stn Msd 0.1 1↓

91/8257
SEP 05 2330 47.0s 37.97S 177.20E 61km M=3.5
0.3 0.03 0.02 4
Rsd 0.3s 10ph/8stn Dmin 33km Az.gap 111°
Corr. -0.151 4M/2stn Msd 0.3 1↑

91/8262
SEP 06 0327 09.2s 36.06S 179.00E 289km M=3.9
0.5 0.06 0.04 5
Rsd 0.1s 11ph/10stn Dmin 182km Az.gap 323°
Corr. 0.238 10M/10stn Msd 0.1

91/8273
SEP 06 1137 05.3s 40.44S 176.53E 41km M=3.7
0.2 0.01 0.02 3
Rsd 0.2s 25ph/21stn Dmin 29km Az.gap 189°
Corr. -0.194 23M/18stn Msd 0.2 1↑ 1↓

91/8287
SEP 06 1955 50.4s 47.52S 165.61E 33km M=3.5
0.4 0.03 0.04 R
Rsd 0.2s 14ph/9stn Dmin 204km Az.gap 335°
Corr. -0.320 14M/14stn Msd 0.1

91/8292
SEP 06 2306 09.7s 40.49S 173.63E 118km M=3.8
0.2 0.01 0.01 2
Rsd 0.2s 38ph/21stn Dmin 42km Az.gap 137°
Corr. -0.199 21M/16stn Msd 0.3 2↑ 2↓

91/8297
SEP 07 0410 59.3s 38.37S 177.16E 40km M=3.6
0.2 0.01 0.01 2
Rsd 0.2s 20ph/18stn Dmin 13km Az.gap 71°
Corr. 0.069 14M/12stn Msd 0.3 1↓

91/8300
SEP 07 0737 43.3s 37.37S 176.70E 204km M=4.0
0.6 0.04 0.04 4
Rsd 0.3s 16ph/14stn Dmin 97km Az.gap 221°
Corr. 0.169 19M/18stn Msd 0.2

91/8308
SEP 07 1723 20.7s 38.29S 175.93E 173km M=3.7
0.7 0.04 0.03 5
Rsd 0.1s 14ph/11stn Dmin 83km Az.gap 224°
Corr. -0.164 20M/18stn Msd 0.2

91/8320
SEP 08 0333 56.4s 37.90S 175.84E 184km M=3.7
1.0 0.08 0.13 10
Rsd 0.4s 11ph/8stn Dmin 119km Az.gap 276°
Corr. -0.762 11M/10stn Msd 0.2

91/8324
SEP 08 0537 49.9s 40.10S 174.92E 24km M=3.7
0.2 0.01 0.02 3
Rsd 0.4s 27ph/21stn Dmin 33km Az.gap 68°
Corr. -0.093 30M/27stn Msd 0.2 1↑
Felt Wanganui (57).

91/8340
SEP 08 1350 32.0s 40.24S 175.17E 87km M=6.3
0.1 0.01 0.01 2
Rsd 0.2s 42ph/35stn Dmin 49km Az.gap 60°
Corr. -0.426 10M/5stn Msd 0.2 16↑ 12↓
Felt widely throughout North Island and northern South Island, max. int. MM7 at Wanganui (57).

91/8366
SEP 09 1153 45.5s 37.97S 176.30E 167km M=3.8
0.3 0.04 0.04 2
Rsd 0.2s 11ph/9stn Dmin 78km Az.gap 225°
Corr. -0.855 14M/14stn Msd 0.2

91/8369
SEP 09 1732 16.5s 38.58S 175.30E 252km M=4.4
0.6 0.05 0.04 4
Rsd 0.3s 20ph/14stn Dmin 44km Az.gap 148°
Corr. -0.106 24M/22stn Msd 0.3 1↑ 3↓

91/8379
SEP 10 0612 51.2s 37.26S 177.03E 206km M=4.1
0.7 0.03 0.03 6
Rsd 0.3s 16ph/15stn Dmin 111km Az.gap 173°
Corr. 0.245 20M/20stn Msd 0.2 2↑ 1↓

91/8385
SEP 10 1307 50.2s 37.97S 177.32E 63km M=3.8
0.1 0.01 0.01 3
Rsd 0.1s 20ph/15stn Dmin 37km Az.gap 112°
Corr. -0.260 19M/17stn Msd 0.3 1↑
Crustal phases on KIW, MRW and TCW.

91/8392
SEP 10 1738 12.8s 36.90S 177.50E 157km M=4.1
0.6 0.03 0.04 6
Rsd 0.3s 15ph/13stn Dmin 105km Az.gap 223°
Corr. 0.381 21M/19stn Msd 0.1

91/8393
SEP 10 1935 08.9s 38.59S 176.02E 159km M=3.7
0.6 0.04 0.06 4
Rsd 0.4s 23ph/16stn Dmin 84km Az.gap 193°
Corr. -0.852 16M/15stn Msd 0.3 1↑

91/8397
SEP 10 2055 52.1s 35.45S 178.82E 242km M=4.4
1.7 0.09 0.13 16
Rsd 0.6s 12ph/10stn Dmin 242km Az.gap 309°
Corr. 0.216 19M/16stn Msd 0.3

91/8399
SEP 10 2117 12.9s 39.01S 175.44E 147km M=3.6
1.0 0.03 0.05 8
Rsd 0.4s 21ph/14stn Dmin 23km Az.gap 106°
Corr. 0.056 15M/14stn Msd 0.3 1↑

91/8403
SEP 11 0300 42.5s 36.72S 177.12E 242km M=4.6
0.3 0.02 0.04 3
Rsd 0.2s 15ph/13stn Dmin 125km Az.gap 225°
Corr. 0.598 29M/24stn Msd 0.2 1↓

91/8420
SEP 11 1708 23.6s 39.98S 176.80E 43km M=3.7
0.2 0.01 0.02 2
Rsd 0.2s 34ph/26stn Dmin 1km Az.gap 91°
Corr. -0.494 25M/22stn Msd 0.2 1↑ 2↓
Felt Mount Vernon (60), MM4.

91/8426
SEP 11 2154 18.6s 38.34S 176.11E 235km M=3.6
1.1 0.08 0.13 11
Rsd 0.3s 12ph/10stn Dmin 108km Az.gap 221°
Corr. -0.914 6M/6stn Msd 0.1

91/8428
SEP 11 2339 20.3s 40.49S 173.35E 150km M=3.5
0.4 0.03 0.02 4
Rsd 0.3s 21ph/11stn Dmin 59km Az.gap 214°
Corr. -0.083 12M/12stn Msd 0.1 1↑ 1↓

91/8430
SEP 12 0205 35.2s 40.19S 173.78E 129km M=3.5
0.3 0.01 0.02 4
Rsd 0.3s 31ph/20stn Dmin 69km Az.gap 150°
Corr. -0.242 15M/13stn Msd 0.2 1↓

91/8431
SEP 12 0253 10.1s 41.01S 175.94E 20km M=4.7
0.2 0.01 0.01 2
Rsd 0.2s 25ph/21stn Dmin 37km Az.gap 170°
Corr. -0.590 18M/8stn Msd 0.2 1↓
Felt Wellington and Wairarapa areas, max. intensity MM4 at Paraparaumu (65).

91/8442
SEP 12 0759 18.6s 39.61S 174.49E 119km M=4.3
0.4 0.01 0.02 4
Rsd 0.3s 36ph/28stn Dmin 43km Az.gap 72°
Corr. -0.192 28M/22stn Msd 0.2 8↑ 3↓

91/8443
SEP 12 0803 06.2s 36.78S 177.41E 12km M=4.0
0.4 0.03 0.03 R
Rsd 0.3s 9ph/4stn Dmin 121km Az.gap 228°
Corr. 0.680 11M/8stn Msd 0.2

91/8448
SEP 12 0934 45.8s 39.15S 179.82E 33km M=4.3
0.8 0.03 0.08 R
Rsd 0.3s 13ph/11stn Dmin 166km Az.gap 287°
Corr. -0.277 7M/5stn Msd 0.3
Many arrivals obscurred by earlier event.

91/8449
SEP 12 0935 10.2s 40.68S 175.51E 29km M=4.6
0.1 0.01 0.01 1
Rsd 0.2s 30ph/26stn Dmin 8km Az.gap 79°
Corr. -0.346 12M/5stn Msd 0.2 5↑ 7↓
Felt widely in southern North Island, max. intensity MM5 in Wanganui (57).

91/8460
SEP 12 1328 45.8s 38.04S 176.31E 160km M=3.7
0.3 0.01 0.03 3
Rsd 0.1s 8ph/6stn Dmin 74km Az.gap 130°
Corr. 0.044 10M/10stn Msd 0.3 1↑

91/8486
SEP 13 1609 22.5s 37.13S 177.76E 33km M=3.8
0.3 0.02 0.02 R
Rsd 0.2s 10ph/5stn Dmin 67km Az.gap 214°
Corr. 0.237 10M/6stn Msd 0.3 1↓

91/8489
SEP 13 1747 48.7s 45.37S 166.95E 61km M=3.7
0.3 0.01 0.04 5
Rsd 0.1s 19ph/13stn Dmin 100km Az.gap 251°
Corr. -0.574 22M/16stn Msd 0.2

91/8493
SEP 13 2228 34.8s 38.70S 175.87E 189km M=3.7
0.2 0.02 0.02 3
Rsd 0.1s 18ph/14stn Dmin 119km Az.gap 304°
Corr. -0.488 12M/11stn Msd 0.2

91/8504
SEP 14 1208 09.0s 39.69S 179.46E 33km M=3.5
0.2 0.01 0.02 R
Rsd 0.1s 12ph/9stn Dmin 171km Az.gap 263°
Corr. -0.377 10M/10stn Msd 0.1

91/8508
SEP 14 1414 42.8s 39.10S 174.63E 585km M=5.4
0.5 0.05 0.08 5
Rsd 0.2s 40ph/32stn Dmin 50km Az.gap 109°
Corr. -0.190 10M/4stn Msd 0.4 7↑ 21↓

91/8533
SEP 15 0513 53.3s 40.04S 175.16E 66km M=4.0
0.1 0.00 0.01 2
Rsd 0.2s 34ph/25stn Dmin 34km Az.gap 58°
Corr. -0.057 28M/22stn Msd 0.2 3↑ 7↓

91/8544
SEP 15 1147 18.1s 38.52S 176.17E 104km M=4.4
0.3 0.01 0.01 3
Rsd 0.2s 31ph/25stn Dmin 17km Az.gap 55°
Corr. 0.283 8M/3stn Msd 0.1 4↑ 2↓

91/8573
SEP 16 0837 25.0s 38.57S 175.99E 167km M=3.6
0.5 0.03 0.05 3
Rsd 0.3s 15ph/12stn Dmin 80km Az.gap 209°
Corr. -0.149 15M/15stn Msd 0.2 1↑

91/8579
SEP 16 1323 37.1s 37.90S 176.53E 132km M=3.7
0.5 0.04 0.04 3
Rsd 0.2s 12ph/10stn Dmin 65km Az.gap 229°
Corr. -0.516 20M/20stn Msd 0.2 1↑

91/8584
SEP 16 1726 02.0s 37.57S 179.26E 33km M=3.5
0.3 0.01 0.02 R
Rsd 0.1s 7ph/3stn Dmin 85km Az.gap 298°
Corr. -0.110 6M/6stn Msd 0.1

91/8585
SEP 16 1832 35.9s 36.94S 177.06E 256km M=4.0
0.4 0.02 0.03 3
Rsd 0.2s 12ph/9stn Dmin 122km Az.gap 204°
Corr. 0.144 15M/14stn Msd 0.3

91/8589
SEP 16 2021 47.9s 36.91S 177.16E 180km M=3.6
0.9 0.09 0.12 6
Rsd 0.4s 8ph/4stn Dmin 150km Az.gap 319°
Corr. -0.758 2M/2stn Msd 0.2

91/8600
SEP 17 0344 14.6s 39.56S 175.57E 5km M=3.8
0.1 0.01 0.01 R
Rsd 0.3s 32ph/25stn Dmin 41km Az.gap 50°
Corr. -0.254 8M/3stn Msd 0.2 2↑ 1↓
Felt Moawhango (58) MM4.

91/8611
SEP 17 1132 27.9s 37.22S 176.67E 233km M=4.5
0.4 0.04 0.06 3
Rsd 0.1s 15ph/13stn Dmin 100km Az.gap 165°
Corr. 0.170 28M/24stn Msd 0.2 1↑

91/8622
SEP 17 2022 00.3s 36.90S 176.84E 203km M=4.1
0.8 0.07 0.09 6
Rsd 0.2s 9ph/8stn Dmin 151km Az.gap 278°
Corr. -0.715 22M/22stn Msd 0.2

91/8635
SEP 18 0804 02.4s 45.19S 167.49E 122km M=3.8
0.3 0.01 0.02 2
Rsd 0.2s 22ph/15stn Dmin 67km Az.gap 225°
Corr. 0.164 22M/19stn Msd 0.2 1↑ 1↓

91/8640
SEP 18 1712 35.2s 41.02S 173.88E 80km M=3.9
0.2 0.01 0.01 2
Rsd 0.2s 30ph/23stn Dmin 25km Az.gap 82°
Corr. -0.254 8M/3stn Msd 0.3 1↑ 8↓

91/8643
SEP 18 2044 33.3s 39.22S 174.99E 9km M=3.5
0.2 0.01 0.01 2
Rsd 0.2s 25ph/19stn Dmin 32km Az.gap 87°
Corr. -0.101 30M/26stn Msd 0.2 4↑ 1↓

91/8644
SEP 18 2056 25.3s 36.04S 178.93E 260km M=3.9
0.6 0.12 0.16 7
Rsd 0.1s 6ph/3stn Dmin 182km Az.gap 345°
Corr. -0.914 2M/2stn Msd 0.1

91/8645
SEP 18 2124 30.9s 39.32S 174.97E 157km M=3.5
0.2 0.01 0.02 2
Rsd 0.1s 17ph/13stn Dmin 53km Az.gap 292°
Corr. 0.037 11M/11stn Msd 0.3 1↑

91/8652
SEP 19 0324 37.6s 40.37S 176.42E 34km M=3.8
0.2 0.01 0.02 2
Rsd 0.3s 28ph/23stn Dmin 30km Az.gap 166°
Corr. -0.371 24M/21stn Msd 0.1 2↑ 1↓
Felt Dannevirke (63).

91/8661
SEP 19 1306 33.5s 40.61S 173.27E 194km M=3.6
0.3 0.02 0.02 2
Rsd 0.2s 27ph/16stn Dmin 59km Az.gap 169°
Corr. -0.260 12M/12stn Msd 0.3 1↑

91/8680
SEP 20 1203 51.0s 38.11S 177.14E 250km M=3.5
0.2 0.07 0.18 1
Rsd 0.1s 13ph/9stn Dmin 17km Az.gap 334°
Corr. -0.988 5M/5stn Msd 0.2

91/8691
SEP 20 1956 58.6s 46.93S 165.67E 33km M=3.7
0.4 0.02 0.04 R
Rsd 0.1s 13ph/9stn Dmin 188km Az.gap 307°
Corr. 0.179 13M/12stn Msd 0.1

91/8707
SEP 21 1007 29.4s 39.00S 176.21E 78km M=5.1
0.3 0.01 0.01 3
Rsd 0.3s 46ph/33stn Dmin 16km Az.gap 40°
Corr. 0.149 10M/4stn Msd 0.4 9↑ 8↓
Felt Opotiki (35), Patoka (52) and Moawhango (58) MM4.

91/8709
SEP 21 1051 00.0s 38.97S 176.20E 69km M=3.9
0.1 0.01 0.01 1
Rsd 0.1s 10ph/6stn Dmin 58km Az.gap 112°
Corr. -0.609 1M/1stn Msd 0.0 1↓

91/8718
SEP 21 1542 36.9s 36.45S 178.24E 33km M=4.0
0.5 0.02 0.03 3
Rsd 0.1s 11ph/8stn Dmin 128km Az.gap 276°
Corr. 0.813 27M/24stn Msd 0.2

91/8749
SEP 22 1216 43.0s 41.27S 172.63E 214km M=4.1
0.3 0.02 0.02 2
Rsd 0.2s 33ph/20stn Dmin 50km Az.gap 118°
Corr. -0.124 18M/15stn Msd 0.2 2↑

91/8753
SEP 22 1605 52.5s 39.69S 174.37E 221km M=3.6
0.2 0.02 0.02 2
Rsd 0.1s 17ph/13stn Dmin 49km Az.gap 209°
Corr. -0.021 14M/14stn Msd 0.2

91/8767
SEP 23 0948 23.1s 36.95S 177.68E 111km M=3.8
0.5 0.03 0.03 5
Rsd 0.3s 9ph/6stn Dmin 91km Az.gap 226°
Corr. 0.455 5M/4stn Msd 0.1

91/8778
SEP 24 0202 59.3s 37.56S 177.06E 138km M=3.9
0.5 0.03 0.03 5
Rsd 0.3s 12ph/6stn Dmin 78km Az.gap 146°
Corr. 0.590 16M/13stn Msd 0.2 1↓

91/8780
SEP 24 0525 54.8s 40.40S 174.55E 79km M=3.6
0.2 0.01 0.02 3
Rsd 0.2s 24ph/16stn Dmin 60km Az.gap 82°
Corr. -0.064 17M/12stn Msd 0.2 1↑

91/8785
SEP 24 1357 04.3s 38.86S 175.42E 160km M=4.2
0.6 0.03 0.03 5
Rsd 0.4s 30ph/21stn Dmin 19km Az.gap 60°
Corr. -0.203 25M/22stn Msd 0.3 4↑ 1↓

91/8803
SEP 25 0507 34.1s 38.73S 177.35E 169km M=3.6
1.2 0.04 0.13 8
Rsd 0.5s 8ph/4stn Dmin 57km Az.gap 226°
Corr. 0.322 11M/11stn Msd 0.2

91/8809
SEP 25 0835 29.5s 40.19S 173.55E 176km M=3.5
0.3 0.02 0.01 3
Rsd 0.2s 28ph/17stn Dmin 75km Az.gap 183°
Corr. -0.227 12M/11stn Msd 0.2 1↑

91/8811
SEP 25 0901 11.1s 35.59S 178.94E 156km M=4.2
2.3 0.13 0.12 12
Rsd 0.2s 10ph/8stn Dmin 231km Az.gap 308°
Corr. 0.891 15M/13stn Msd 0.3

91/8812
SEP 25 1104 34.9s 37.98S 176.77E 94km M=4.0
0.2 0.01 0.01 2
Rsd 0.2s 17ph/14stn Dmin 43km Az.gap 108°
Corr. -0.019 25M/21stn Msd 0.2 1↑ 2↓

91/8832
SEP 26 0835 57.4s 37.15S 177.42E 124km M=4.0
0.5 0.03 0.03 6
Rsd 0.3s 11ph/9stn Dmin 92km Az.gap 197°
Corr. 0.281 13M/11stn Msd 0.2 2↑ 1↓

91/8847
SEP 26 2356 43.4s 39.19S 175.02E 217km M=3.6
0.4 0.02 0.05 3
Rsd 0.1s 18ph/15stn Dmin 45km Az.gap 218°
Corr. -0.363 12M/12stn Msd 0.2 1↑ 1↓

91/8854
SEP 27 0924 52.1s 38.68S 177.12E 43km M=3.7
0.1 0.01 0.01 3
Rsd 0.2s 26ph/24stn Dmin 20km Az.gap 92°
Corr. -0.026 21M/19stn Msd 0.2 1↑ 1↓

91/8872
SEP 27 2338 50.9s 37.87S 176.54E 149km M=3.6
0.2 0.01 0.02 2
Rsd 0.2s 10ph/7stn Dmin 66km Az.gap 121°
Corr. 0.216 7M/7stn Msd 0.1

91/8880
SEP 28 0507 03.9s 38.40S 175.87E 158km M=3.6
0.9 0.05 0.07 7
Rsd 0.5s 16ph/13stn Dmin 77km Az.gap 218°
Corr. -0.699 17M/15stn Msd 0.2 1↓

91/8882
SEP 28 1036 50.3s 38.81S 175.32E 201km M=4.1
0.9 0.03 0.05 7
Rsd 0.4s 19ph/15stn Dmin 28km Az.gap 80°
Corr. -0.219 22M/17stn Msd 0.2 5↑ 3↓

91/8893
SEP 28 1711 44.1s 37.73S 177.21E 132km M=4.4
0.3 0.02 0.02 2
Rsd 0.2s 19ph/16stn Dmin 60km Az.gap 133°
Corr. 0.463 8M/3stn Msd 0.2 1↓

91/8897
SEP 28 2337 35.5s 38.54S 175.93E 144km M=4.1
0.4 0.02 0.02 4
Rsd 0.3s 20ph/15stn Dmin 62km Az.gap 86°
Corr. -0.138 23M/19stn Msd 0.2 2↑ 2↓

91/8898
SEP 29 0107 39.9s 37.71S 177.42E 113km M=4.1
0.4 0.03 0.02 5
Rsd 0.3s 13ph/11stn Dmin 67km Az.gap 137°
Corr. -0.100 15M/13stn Msd 0.2 1↓

91/8906
SEP 29 0732 37.9s 38.58S 175.85E 166km M=3.6
0.3 0.02 0.04 2
Rsd 0.1s 16ph/13stn Dmin 54km Az.gap 305°
Corr. 0.121 6M/6stn Msd 0.5

91/8920
SEP 30 0413 07.3s 41.51S 173.37E 73km M=3.7
0.2 0.01 0.01 3
Rsd 0.3s 28ph/18stn Dmin 48km Az.gap 64°
Corr. -0.082 8M/3stn Msd 0.2 2↑ 5↓

91/8930
SEP 30 1245 30.6s 39.44S 177.92E 63km M=3.6
0.5 0.02 0.04 8
Rsd 0.3s 8ph/7stn Dmin 75km Az.gap 231°
Corr. -0.520 5M/5stn Msd 0.1

91/8934
SEP 30 1541 01.0s 37.07S 176.91E 189km M=3.6
0.7 0.08 0.11 5
Rsd 0.3s 12ph/8stn Dmin 133km Az.gap 270°
Corr. -0.867 5M/5stn Msd 0.3

91/8935
SEP 30 1652 30.1s 37.09S 177.01E 254km M=3.8
0.4 0.06 0.11 4
Rsd 0.1s 13ph/9stn Dmin 128km Az.gap 265°
Corr. -0.945 9M/9stn Msd 0.2

91/8937
SEP 30 1746 01.1s 45.09S 167.40E 67km M=3.8
0.2 0.01 0.02 2
Rsd 0.1s 20ph/14stn Dmin 62km Az.gap 238°
Corr. -0.477 25M/18stn Msd 0.2 1↑ 4↓

91/8940
SEP 30 2012 31.3s 45.70S 166.81E 82km M=5.1
0.3 0.01 0.03 3
Rsd 0.1s 20ph/14stn Dmin 87km Az.gap 256°
Corr. 0.052 13M/7stn Msd 0.2 1↓
Felt Queenstown to Invercargill, max. int. MM4 at Queenstown (132).

91/8941
SEP 30 2130 29.3s 39.10S 174.98E 223km M=4.6
0.8 0.03 0.04 7
Rsd 0.3s 30ph/27stn Dmin 50km Az.gap 91°
Corr. 0.008 27M/21stn Msd 0.1 1↓

91/8952
OCT 01 0501 37.6s 40.32S 174.73E 87km M=3.6
0.2 0.01 0.01 2
Rsd 0.2s 27ph/21stn Dmin 61km Az.gap 75°
Corr. -0.064 14M/12stn Msd 0.2 5↑ 1↓

91/8977
OCT 02 0534 21.8s 41.87S 171.69E 9km M=3.6
0.3 0.01 0.02 2
Rsd 0.2s 14ph/10stn Dmin 16km Az.gap 181°
Corr. -0.414 20M/16stn Msd 0.2 2↑ 1↓
Felt Westport (79) MM4.

91/8984
OCT 02 1000 31.3s 41.42S 175.02E 29km M=3.4
0.1 0.01 0.00 0
Rsd 0.1s 24ph/15stn Dmin 17km Az.gap 126°
Corr. 0.061 19M/14stn Msd 0.1 3↑ 5↓
Felt Silverstream (69).

91/8991
OCT 02 1549 54.4s 46.42S 165.75E 33km M=3.9
0.5 0.02 0.05 R
Rsd 0.2s 18ph/14stn Dmin 168km Az.gap 296°
Corr. 0.154 20M/15stn Msd 0.2 1↓

91/8992
OCT 02 1614 24.8s 36.97S 177.70E 133km M=3.8
0.7 0.08 0.07 8
Rsd 0.3s 8ph/5stn Dmin 88km Az.gap 278°
Corr. -0.699 9M/8stn Msd 0.1

91/8996
OCT 02 1833 57.3s 38.67S 175.09E 195km M=3.8
0.5 0.04 0.05 7
Rsd 0.3s 20ph/15stn Dmin 182km Az.gap 214°
Corr. -0.824 9M/9stn Msd 0.3 1↑

91/8999
OCT 02 2042 47.6s 38.23S 177.54E 46km M=3.7
0.1 0.01 0.01 2
Rsd 0.1s 15ph/13stn Dmin 38km Az.gap 91°
Corr. 0.199 12M/10stn Msd 0.3 1↑ 1↓

91/9019
OCT 03 1325 34.4s 40.84S 175.42E 24km M=3.8
0.1 0.01 0.01 1
Rsd 0.3s 32ph/25stn Dmin 25km Az.gap 79°
Corr. -0.381 29M/24stn Msd 0.4 1↑
Felt Wellington (68) MM4, Hutt Valley (68,69), Greytown (69).

91/9024
OCT 03 1548 57.1s 38.63S 175.24E 264km M=3.6
0.5 0.04 0.07 5
Rsd 0.3s 20ph/14stn Dmin 132km Az.gap 213°
Corr. -0.789 9M/9stn Msd 0.2 1↑

91/9032
OCT 04 0038 30.7s 38.43S 175.95E 166km M=4.1
0.7 0.03 0.04 6
Rsd 0.4s 18ph/15stn Dmin 69km Az.gap 107°
Corr. 0.144 23M/20stn Msd 0.4 8↑ 4↓

91/9034
OCT 04 0209 26.0s 40.98S 172.90E 219km M=4.1
0.4 0.02 0.03 3
Rsd 0.2s 21ph/15stn Dmin 36km Az.gap 88°
Corr. -0.273 17M/14stn Msd 0.2 5↑ 1↓

91/9047
OCT 04 1202 25.6s 35.14S 179.02E 247km M=4.1
0.3 0.02 0.04 3
Rsd 0.1s 12ph/9stn Dmin 280km Az.gap 315°
Corr. -0.320 6M/6stn Msd 0.3

91/9052
OCT 04 1623 46.9s 45.73S 166.02E 33km M=4.4
0.5 0.02 0.06 R
Rsd 0.2s 18ph/15stn Dmin 145km Az.gap 280°
Corr. -0.111 29M/22stn Msd 0.1

91/9055
OCT 04 1818 34.8s 38.28S 175.83E 174km M=4.1
0.5 0.02 0.05 5
Rsd 0.2s 13ph/11stn Dmin 89km Az.gap 133°
Corr. 0.022 24M/20stn Msd 0.2

91/9066
OCT 05 0832 39.1s 38.75S 175.20E 236km M=4.5
0.9 0.03 0.06 7
Rsd 0.3s 19ph/18stn Dmin 44km Az.gap 83°
Corr. -0.041 24M/21stn Msd 0.3 9↑ 4↓

91/9073
OCT 05 1435 34.4s 38.42S 175.95E 160km M=3.7
0.4 0.02 0.02 3
Rsd 0.3s 18ph/13stn Dmin 69km Az.gap 73°
Corr. -0.032 22M/21stn Msd 0.3 1↑

91/9078
OCT 05 1857 09.6s 47.40S 165.33E 33km M=3.8
0.3 0.02 0.03 R
Rsd 0.1s 18ph/13stn Dmin 220km Az.gap 326°
Corr. -0.079 14M/14stn Msd 0.1

91/9089
OCT 06 0419 25.6s 35.88S 177.89E 246km M=3.9
0.2 0.02 0.03 2
Rsd 0.0s 11ph/7stn Dmin 273km Az.gap 332°
Corr. -0.535 4M/4stn Msd 0.1

91/9103
OCT 06 1649 49.3s 37.91S 176.38E 165km M=4.3
0.4 0.02 0.02 4
Rsd 0.2s 16ph/14stn Dmin 69km Az.gap 104°
Corr. 0.172 25M/21stn Msd 0.3 3↑ 2↓

91/9118
OCT 07 0738 55.6s 38.24S 175.54E 177km M=3.6
0.4 0.03 0.09 8
Rsd 0.2s 11ph/8stn Dmin 138km Az.gap 243°
Corr. -0.910 8M/8stn Msd 0.3

91/9124
OCT 07 1301 11.9s 37.03S 177.47E 173km M=3.6
1.1 0.09 0.10 8
Rsd 0.5s 11ph/8stn Dmin 97km Az.gap 273°
Corr. -0.629 6M/6stn Msd 0.2

91/9136
OCT 08 0036 06.2s 41.12S 175.08E 8km M=3.4
0.1 0.00 0.01 1
Rsd 0.2s 23ph/15stn Dmin 2km Az.gap 58°
Corr. -0.307 21M/15stn Msd 0.2 2↑ 6↓
Felt Wellington (68) and Hutt Valley (68,69).

91/9147
OCT 08 0758 15.8s 38.70S 175.74E 168km M=3.5
0.3 0.01 0.04 3
Rsd 0.1s 13ph/11stn Dmin 58km Az.gap 302°
Corr. -0.406 5M/5stn Msd 0.4

91/9151
OCT 08 1102 48.5s 45.04S 167.28E 69km M=3.8
0.3 0.01 0.03 3
Rsd 0.1s 22ph/15stn Dmin 65km Az.gap 242°
Corr. -0.160 26M/19stn Msd 0.2 1↑ 2↓

91/9174
OCT 09 0400 06.3s 42.95S 173.26E 14km M=3.1
0.2 0.01 0.02 4
Rsd 0.2s 11ph/5stn Dmin 64km Az.gap 189°
Corr. -0.586 9M/5stn Msd 0.1 1↑ 1↓
Felt Cheviot (96).

91/9176
OCT 09 0413 47.0s 42.95S 173.26E 12km M=3.1
0.1 0.01 0.01 R
Rsd 0.1s 16ph/8stn Dmin 64km Az.gap 172°
Corr. -0.574 11M/9stn Msd 0.1 1↑
Felt Cheviot (96).

91/9187
OCT 09 1323 34.8s 41.29S 178.46E 33km M=3.7
0.4 0.02 0.03 R
Rsd 0.2s 17ph/12stn Dmin 199km Az.gap 241°
Corr. -0.559 12M/12stn Msd 0.2

91/9200
OCT 10 0123 52.7s 36.49S 177.70E 33km M=3.6
0.8 0.06 0.04 R
Rsd 0.4s 7ph/3stn Dmin 134km Az.gap 257°
Corr. 0.672 4M/4stn Msd 0.2

91/9202
OCT 10 0556 16.3s 38.62S 175.49E 183km M=3.7
0.4 0.02 0.02 3
Rsd 0.1s 16ph/13stn Dmin 58km Az.gap 218°
Corr. -0.613 7M/7stn Msd 0.1

91/9206
OCT 10 1308 52.6s 40.87S 172.16E 5km M=3.6
0.5 0.02 0.03 R
Rsd 0.3s 12ph/8stn Dmin 31km Az.gap 211°
Corr. -0.523 20M/18stn Msd 0.1 1↓

91/9211
OCT 10 2011 04.4s 37.90S 176.78E 131km M=3.8
0.4 0.02 0.03 4
Rsd 0.2s 10ph/8stn Dmin 44km Az.gap 113°
Corr. 0.084 13M/13stn Msd 0.1 1↑

91/9221
OCT 11 0103 33.5s 39.97S 176.78E 44km M=3.5
0.3 0.02 0.04 4
Rsd 0.3s 24ph/20stn Dmin 3km Az.gap 111°
Corr. -0.750 19M/17stn Msd 0.2 1↑

91/9227
OCT 11 0414 05.5s 44.24S 168.62E 5km M=3.6
0.2 0.01 0.01 R
Rsd 0.1s 18ph/16stn Dmin 74km Az.gap 198°
Corr. -0.367 22M/16stn Msd 0.2 1↑
Felt Mt Aspiring Homestead (113) MM3.

91/9242
OCT 11 1642 09.4s 44.56S 168.58E 12km M=2.7
0.1 0.01 0.01 R
Rsd 0.2s 13ph/11stn Dmin 54km Az.gap 191°
Corr. 0.322 15M/13stn Msd 0.1
Felt Mt Aspiring Homestead (113) MM3.

91/9246
OCT 11 1819 38.1s 47.75S 165.40E 110km M=3.6
1.1 0.06 0.14 18
Rsd 0.2s 6ph/4stn Dmin 229km Az.gap 339°
Corr. -0.062 3M/3stn Msd 0.3 1↑

91/9270
OCT 12 1142 01.7s 38.43S 176.19E 149km M=3.6
0.8 0.05 0.03 5
Rsd 0.3s 13ph/10stn Dmin 57km Az.gap 208°
Corr. -0.504 14M/14stn Msd 0.3

91/9279
OCT 12 2040 01.3s 40.05S 174.25E 95km M=4.1
0.3 0.01 0.02 4
Rsd 0.3s 31ph/21stn Dmin 65km Az.gap 102°
Corr. -0.025 8M/3stn Msd 0.2 1↑

91/9281
OCT 13 0155 29.9s 37.23S 176.72E 202km M=4.1
0.3 0.02 0.02 2
Rsd 0.1s 14ph/10stn Dmin 104km Az.gap 164°
Corr. 0.209 22M/20stn Msd 0.2

91/9301
OCT 14 0516 54.3s 40.76S 176.03E 29km M=3.9
0.1 0.01 0.02 2
Rsd 0.3s 22ph/15stn Dmin 26km Az.gap 148°
Corr. -0.605 31M/26stn Msd 0.3 3↑ 1↓
Felt Pahiatua (62).

91/9308
OCT 14 1344 39.4s 37.01S 179.27E 12km M=3.7
0.9 0.04 0.07 R
Rsd 0.3s 7ph/5stn Dmin 108km Az.gap 297°
Corr. 0.131 5M/3stn Msd 0.2

91/9310
OCT 14 1519 38.7s 36.87S 178.16E 96km M=3.7
0.1 0.01 0.01 2
Rsd 0.0s 6ph/4stn Dmin 82km Az.gap 320°
Corr. -0.416 3M/3stn Msd 0.3

91/9312
OCT 14 1556 37.3s 35.23S 179.11W 12km M=3.9
0.7 0.09 0.13 R
Rsd 0.2s 6ph/4stn Dmin 350km Az.gap 349°
Corr. -0.852 3M/3stn Msd 0.2

91/9313
OCT 14 1706 43.4s 41.28S 172.85E 147km M=3.9
0.3 0.01 0.02 2
Rsd 0.2s 22ph/16stn Dmin 53km Az.gap 111°
Corr. -0.022 14M/13stn Msd 0.2 4↑ 2↓

91/9315
OCT 14 1725 58.5s 38.64S 175.88E 136km M=3.5
0.6 0.03 0.03 6
Rsd 0.3s 14ph/11stn Dmin 65km Az.gap 208°
Corr. -0.494 13M/12stn Msd 0.2 1↑ 1↓

91/9318
OCT 14 2245 48.5s 44.23S 168.59E 12km M=4.0
0.2 0.01 0.01 R
Rsd 0.1s 19ph/16stn Dmin 73km Az.gap 199°
Corr. -0.445 22M/15stn Msd 0.3 1↑

91/9320
OCT 14 2320 17.2s 38.85S 175.91E 96km M=3.6
0.6 0.03 0.04 6
Rsd 0.3s 15ph/13stn Dmin 45km Az.gap 180°
Corr. -0.660 22M/19stn Msd 0.2 2↑ 1↓

91/9334
OCT 15 1903 24.0s 37.41S 178.41E 36km M=3.7
0.4 0.02 0.03 4
Rsd 0.2s 9ph/5stn Dmin 23km Az.gap 264°
Corr. 0.475 6M/3stn Msd 0.1

91/9338
OCT 16 0416 04.3s 37.06S 179.37E 0km M=4.2
0.6 0.05 0.04 5
Rsd 0.2s 12ph/9stn Dmin 112km Az.gap 293°
Corr. 0.046 26M/22stn Msd 0.3
Depth uncertain.

91/9342
OCT 16 0525 43.5s 38.49S 175.72E 154km M=3.7
0.5 0.03 0.02 4
Rsd 0.2s 19ph/15stn Dmin 77km Az.gap 158°
Corr. -0.346 21M/20stn Msd 0.3

91/9344
OCT 16 0701 43.8s 38.72S 177.66E 58km M=3.7
0.2 0.01 0.01 3
Rsd 0.2s 22ph/17stn Dmin 35km Az.gap 90°
Corr. 0.001 24M/21stn Msd 0.2 1↓

91/9346
OCT 16 0800 02.6s 38.60S 175.96E 5km M=3.6
0.1 0.01 0.01 R
Rsd 0.3s 18ph/13stn Dmin 35km Az.gap 63°
Corr. -0.226 27M/25stn Msd 0.3 1↓
Felt Waihora Rd (40) MM5, Taupo District (41).

91/9378
OCT 17 2012 25.8s 37.03S 179.65E 33km M=4.4
0.6 0.05 0.06 R
Rsd 0.2s 13ph/9stn Dmin 135km Az.gap 292°
Corr. -0.125 33M/28stn Msd 0.2
Poor depth control.

91/9380
OCT 17 2026 22.5s 37.15S 179.65E 64km M=4.6
0.9 0.07 0.07 21
Rsd 0.2s 12ph/9stn Dmin 130km Az.gap 290°
Corr. 0.475 28M/22stn Msd 0.3 1↑ 2↓
Poor depth control.

91/9383
OCT 17 2039 11.4s 36.96S 179.61E 33km M=4.4
0.7 0.06 0.06 R
Rsd 0.2s 9ph/7stn Dmin 136km Az.gap 292°
Corr. -0.381 31M/27stn Msd 0.2

91/9388
OCT 18 0056 22.1s 38.41S 175.85E 148km M=3.7
0.7 0.03 0.03 6
Rsd 0.3s 15ph/11stn Dmin 77km Az.gap 178°
Corr. -0.320 19M/17stn Msd 0.2

91/9395
OCT 18 0409 24.2s 37.37S 176.89E 259km M=3.7
1.7 0.14 0.19 13
Rsd 0.6s 8ph/6stn Dmin 101km Az.gap 295°
Corr. -0.719 4M/4stn Msd 0.2

91/9407
OCT 18 1340 13.6s 37.11S 177.16E 170km M=3.7
0.3 0.03 0.02 3
Rsd 0.1s 6ph/4stn Dmin 114km Az.gap 296°
Corr. -0.350 3M/3stn Msd 0.3

91/9414
OCT 18 1858 45.1s 45.21S 167.48E 118km M=4.3
0.4 0.01 0.03 3
Rsd 0.2s 20ph/16stn Dmin 69km Az.gap 225°
Corr. -0.301 25M/20stn Msd 0.2 6↑ 2↓

91/9416
OCT 18 2041 57.6s 37.79S 176.69E 134km M=3.7
0.3 0.01 0.01 3
Rsd 0.1s 15ph/12stn Dmin 52km Az.gap 119°
Corr. 0.201 19M/19stn Msd 0.2 1↑ 1↓

91/9418
OCT 18 2345 38.9s 38.58S 176.95E 46km M=3.9
0.1 0.01 0.01 2
Rsd 0.2s 21ph/19stn Dmin 32km Az.gap 61°
Corr. -0.155 29M/23stn Msd 0.2 2↑ 5↓

91/9422
OCT 19 0445 53.7s 36.93S 179.56E 8km M=4.0
1.0 0.09 0.15 18
Rsd 0.2s 13ph/9stn Dmin 134km Az.gap 298°
Corr. 0.695 16M/12stn Msd 0.2

91/9426
OCT 19 0542 53.6s 37.01S 179.41E 12km M=3.6
0.7 0.03 0.06 R
Rsd 0.2s 9ph/5stn Dmin 118km Az.gap 300°
Corr. -0.042 5M/3stn Msd 0.1

91/9440
OCT 19 1726 38.1s 38.13S 176.52E 198km M=3.5
0.9 0.28 0.73 18
Rsd 0.4s 13ph/9stn Dmin 54km Az.gap 262°
Corr. -0.988 5M/5stn Msd 0.2 1↑

91/9442
OCT 19 1838 44.8s 38.14S 176.23E 5km M=2.6
0.3 0.02 0.01 R
Rsd 0.1s 4ph/3stn Dmin 5km Az.gap 256°
Corr. -0.684 2M/2stn Msd 0.1 1↑
Felt Rotorua (33) MM3.

91/9446
OCT 19 2259 39.9s 43.08S 171.75E 21km M=3.6
0.5 0.03 0.04 10
Rsd 0.2s 13ph/8stn Dmin 83km Az.gap 105°
Corr. 0.844 34M/31stn Msd 0.2 1↓

91/9449
OCT 20 0510 48.6s 35.42S 178.67E 317km M=4.1
0.4 0.03 0.08 3
Rsd 0.1s 10ph/7stn Dmin 297km Az.gap 340°
Corr. -0.734 11M/10stn Msd 0.2

91/9462
OCT 20 2124 08.2s 35.15S 179.13E 193km M=4.2
0.3 0.03 0.03 7
Rsd 0.1s 9ph/6stn Dmin 281km Az.gap 314°
Corr. 0.801 17M/15stn Msd 0.3 1↑

91/9470
OCT 21 0247 18.1s 45.42S 167.23E 89km M=3.5
0.2 0.01 0.02 2
Rsd 0.1s 21ph/15stn Dmin 81km Az.gap 236°
Corr. -0.214 19M/17stn Msd 0.2 1↑ 9↓

91/9484
OCT 21 1258 03.5s 39.31S 175.03E 23km M=3.8
0.1 0.01 0.01 1
Rsd 0.2s 18ph/15stn Dmin 34km Az.gap 80°
Corr. -0.171 31M/26stn Msd 0.2 3↑ 3↓

91/9494
OCT 21 1852 01.3s 46.02S 170.34E 13km M=3.7
0.4 0.02 0.02 4
Rsd 0.2s 18ph/14stn Dmin 111km Az.gap 204°
Corr. -0.477 20M/16stn Msd 0.1 1↓
Felt Dunedin (144), maximum intensity MM4.

91/9505
OCT 22 0413 10.2s 39.49S 174.55E 147km M=3.6
0.4 0.02 0.05 4
Rsd 0.3s 26ph/18stn Dmin 47km Az.gap 190°
Corr. -0.330 14M/13stn Msd 0.2 1↓

91/9514
OCT 22 1427 35.0s 36.72S 177.37E 218km M=4.0
0.5 0.03 0.04 4
Rsd 0.2s 9ph/7stn Dmin 147km Az.gap 257°
Corr. 0.523 10M/10stn Msd 0.2

91/9540
OCT 23 0821 22.3s 36.75S 177.59E 12km M=3.6
1.0 0.08 0.07 R
Rsd 0.4s 7ph/5stn Dmin 113km Az.gap 236°
Corr. 0.871 8M/7stn Msd 0.3
Poorly controlled solution.

91/9548
OCT 23 1256 56.4s 39.20S 174.90E 210km M=4.0
0.4 0.02 0.03 4
Rsd 0.2s 28ph/23stn Dmin 56km Az.gap 195°
Corr. -0.393 23M/21stn Msd 0.3 1↑

91/9550
OCT 23 1438 45.0s 36.98S 177.26E 217km M=6.0
0.5 0.04 0.04 3
Rsd 0.2s 20ph/15stn Dmin 115km Az.gap 194°
Corr. 0.621 12M/5stn Msd 0.1 10↑ 3↓
Felt southern Bay of Plenty (35) MM4, Napier (52) and Wellington (68).

91/9551
OCT 23 1501 20.2s 36.82S 176.97E 222km M=3.8
0.7 0.06 0.08 5
Rsd 0.2s 11ph/9stn Dmin 146km Az.gap 288°
Corr. -0.680 9M/9stn Msd 0.2

91/9552
OCT 23 1501 44.8s 39.69S 179.17E 33km M=3.6
1.2 0.05 0.11 R
Rsd 0.3s 12ph/10stn Dmin 155km Az.gap 246°
Corr. -0.656 17M/17stn Msd 0.2
Confused with previous event.

91/9554
OCT 23 1640 44.1s 38.14S 176.27E 155km M=3.6
0.6 0.02 0.04 5
Rsd 0.3s 8ph/5stn Dmin 75km Az.gap 126°
Corr. -0.183 8M/7stn Msd 0.1 1↑

91/9557
OCT 23 2237 59.9s 37.99S 177.30E 52km M=3.6
0.3 0.03 0.02 5
Rsd 0.4s 10ph/7stn Dmin 34km Az.gap 110°
Corr. -0.256 7M/3stn Msd 0.1 1↓

91/9569
OCT 24 0949 00.6s 42.15S 178.11E 33km M=3.6
0.9 0.06 0.06 R
Rsd 0.3s 18ph/15stn Dmin 229km Az.gap 248°
Corr. -0.492 16M/16stn Msd 0.2

91/9570
OCT 24 0954 47.2s 36.41S 177.39E 207km M=3.9
0.4 0.06 0.04 6
Rsd 0.2s 10ph/6stn Dmin 155km Az.gap 302°
Corr. -0.555 3M/3stn Msd 0.3

91/9571
OCT 24 0957 24.0s 38.23S 176.47E 130km M=3.6
0.6 0.03 0.03 5
Rsd 0.3s 15ph/13stn Dmin 56km Az.gap 116°
Corr. 0.402 15M/15stn Msd 0.2

91/9592
OCT 25 1453 16.1s 39.94S 175.07E 11km M=3.4
0.3 0.00 0.01 2
Rsd 0.2s 34ph/24stn Dmin 20km Az.gap 59°
Corr. -0.303 32M/30stn Msd 0.3 3↑ 2↓
Felt Wanganui (57) MM4.

91/9598
OCT 25 1702 49.6s 38.57S 176.03E 155km M=3.6
0.3 0.01 0.02 3
Rsd 0.2s 25ph/17stn Dmin 86km Az.gap 105°
Corr. -0.492 17M/16stn Msd 0.3

91/9604
OCT 25 2106 06.0s 38.02S 176.22E 209km M=6.0
0.4 0.02 0.02 3
Rsd 0.2s 35ph/24stn Dmin 17km Az.gap 93°
Corr. 0.114 11M/5stn Msd 0.2 20↑ 11↓
Felt Ruatuna Rd (35), Stokes Valley (68) MM4.

91/9618
OCT 26 0958 03.9s 38.12S 176.08E 209km M=4.1
0.8 0.04 0.04 7
Rsd 0.4s 18ph/16stn Dmin 51km Az.gap 86°
Corr. 0.111 26M/22stn Msd 0.2 4↑ 2↓

91/9621
OCT 26 1131 49.2s 37.48S 176.92E 182km M=3.7
1.0 0.07 0.11 9
Rsd 0.5s 9ph/5stn Dmin 89km Az.gap 258°
Corr. -0.711 5M/4stn Msd 0.4 1↑

91/9652
OCT 27 0356 05.3s 45.96S 166.38E 12km M=4.0
0.4 0.02 0.03 R
Rsd 0.2s 17ph/11stn Dmin 113km Az.gap 273°
Corr. -0.023 21M/16stn Msd 0.1
Poor solution, MSZ P very early.

91/9654
OCT 27 0557 04.4s 36.68S 177.32E 214km M=3.7
0.7 0.07 0.09 8
Rsd 0.3s 10ph/6stn Dmin 134km Az.gap 293°
Corr. -0.451 11M/10stn Msd 0.2

91/9663
OCT 27 1736 29.4s 38.09S 176.43E 144km M=3.8
0.4 0.03 0.03 3
Rsd 0.2s 10ph/8stn Dmin 63km Az.gap 213°
Corr. -0.801 13M/13stn Msd 0.3

91/9671
OCT 27 2028 20.1s 40.39S 173.48E 169km M=3.6
0.3 0.03 0.02 3
Rsd 0.2s 24ph/14stn Dmin 60km Az.gap 221°
Corr. -0.061 11M/9stn Msd 0.2 1↑

91/9695
OCT 27 2333 01.4s 42.51S 173.78E 5km M=3.8
0.1 0.00 0.01 1
Rsd 0.1s 23ph/17stn Dmin 22km Az.gap 165°
Corr. -0.547 25M/19stn Msd 0.2 1↑

91/9769
OCT 28 0244 13.2s 42.50S 173.76E 7km M=3.5
0.2 0.01 0.01 2
Rsd 0.2s 16ph/10stn Dmin 20km Az.gap 164°
Corr. -0.346 21M/16stn Msd 0.3 1↓

91/9819
OCT 28 0744 47.3s 37.98S 176.33E 212km M=3.8
0.5 0.02 0.04 4
Rsd 0.1s 15ph/12stn Dmin 65km Az.gap 193°
Corr. 0.077 12M/12stn Msd 0.2

91/9843
OCT 28 1504 34.1s 38.22S 175.99E 160km M=3.9
0.7 0.04 0.03 6
Rsd 0.2s 12ph/11stn Dmin 86km Az.gap 244°
Corr. -0.539 21M/19stn Msd 0.2 1↑ 1↓

91/9894
OCT 29 0844 11.2s 37.22S 177.30E 151km M=3.6
0.9 0.07 0.08 6
Rsd 0.3s 8ph/4stn Dmin 98km Az.gap 274°
Corr. -0.660 2M/2stn Msd 0.1

91/9919
OCT 29 2019 21.9s 41.43S 175.01E 28km M=3.7
0.1 0.01 0.01 1
Rsd 0.2s 22ph/16stn Dmin 12km Az.gap 130°
Corr. -0.260 25M/19stn Msd 0.3 1↓
Felt Lower Hutt (68).

91/9945
OCT 30 0156 14.1s 42.50S 173.76E 8km M=3.6
0.1 0.00 0.01 1
Rsd 0.1s 24ph/16stn Dmin 20km Az.gap 164°
Corr. -0.377 22M/18stn Msd 0.3 1↓
Felt Kaikoura (90).

91/9975
OCT 30 0553 15.3s 37.33S 176.57E 226km M=3.9
0.6 0.06 0.08 4
Rsd 0.3s 11ph/9stn Dmin 114km Az.gap 252°
Corr. -0.758 14M/14stn Msd 0.3 1↑

91/9976
OCT 30 0625 19.0s 38.71S 175.85E 150km M=3.8
0.5 0.02 0.05 5
Rsd 0.2s 16ph/14stn Dmin 56km Az.gap 301°
Corr. -0.050 12M/12stn Msd 0.3

91/9984
OCT 30 0914 41.1s 39.42S 175.36E 12km M=4.0
0.1 0.01 0.02 R
Rsd 0.3s 23ph/19stn Dmin 24km Az.gap 66°
Corr. -0.408 10M/4stn Msd 0.2 4↑ 4↓
Felt Ohakune (49) MM4.

91/9998
OCT 30 1303 03.5s 45.70S 166.90E 87km M=3.6
0.2 0.01 0.02 2
Rsd 0.1s 20ph/14stn Dmin 80km Az.gap 251°
Corr. -0.033 18M/15stn Msd 0.2 1↓

91/10023
OCT 30 2030 54.7s 39.44S 175.33E 4km M=3.1
0.2 0.01 0.01 2
Rsd 0.2s 17ph/14stn Dmin 27km Az.gap 116°
Corr. 0.073 19M/17stn Msd 0.2 2↑ 1↓
Felt Ohakune (49) MM4.

91/10026
OCT 30 2049 18.9s 36.55S 177.06E 269km M=3.6
0.3 0.05 0.09 3
Rsd 0.1s 10ph/8stn Dmin 190km Az.gap 316°
Corr. -0.820 9M/9stn Msd 0.1

91/10056
OCT 31 0051 29.6s 37.78S 176.29E 195km M=4.6
0.5 0.02 0.03 4
Rsd 0.3s 24ph/22stn Dmin 45km Az.gap 108°
Corr. 0.131 29M/23stn Msd 0.2 8↑ 4↓

91/10077
OCT 31 0334 43.1s 39.23S 173.80E 18km M=3.8
0.4 0.01 0.03 4
Rsd 0.3s 17ph/10stn Dmin 16km Az.gap 196°
Corr. -0.555 27M/23stn Msd 0.3 1↑

91/10088
OCT 31 0738 57.6s 37.90S 178.60E 12km M=5.0
0.2 0.01 0.02 R
Rsd 0.1s 12ph/10stn Dmin 36km Az.gap 242°
Corr. -0.206 14M/7stn Msd 0.3 1↑
Felt Gisborne area, max. intensity MM5 at Ruatoria (29). URZ P not recorded.

91/10089
OCT 31 0740 01.8s 37.86S 178.41E 5km M=4.4
0.6 0.02 0.05 R
Rsd 0.3s 10ph/8stn Dmin 27km Az.gap 215°
Corr. -0.185 15M/10stn Msd 0.2

91/10093
OCT 31 0745 35.1s 37.85S 178.30E 5km M=4.2
0.2 0.01 0.03 R
Rsd 0.2s 10ph/8stn Dmin 25km Az.gap 188°
Corr. -0.122 6M/5stn Msd 0.2 1↓

91/10096
OCT 31 0825 23.6s 37.93S 178.63E 5km M=4.9
0.2 0.01 0.01 R
Rsd 0.1s 15ph/11stn Dmin 36km Az.gap 243°
Corr. -0.268 13M/7stn Msd 0.4 1↑ 1↓
Felt Rukuhanga Stn (29), Pakarae Stn (45) MM4.

91/10099
OCT 31 0837 46.5s 37.90S 178.59E 5km M=4.3
0.3 0.01 0.03 R
Rsd 0.2s 16ph/13stn Dmin 35km Az.gap 240°
Corr. -0.279 39M/32stn Msd 0.3
Felt Pakarae Stn (45) MM4. Small aftershock not locatable.

91/10101
OCT 31 0900 51.2s 38.77S 176.44E 59km M=3.7
0.2 0.01 0.01 3
Rsd 0.2s 31ph/23stn Dmin 14km Az.gap 42°
Corr. 0.106 21M/17stn Msd 0.2 1↑ 2↓

91/10104
OCT 31 0936 03.9s 37.85S 178.39E 12km M=3.5
0.5 0.01 0.05 R
Rsd 0.3s 10ph/8stn Dmin 27km Az.gap 216°
Corr. -0.077 10M/6stn Msd 0.2

91/10117
OCT 31 1324 15.4s 42.50S 173.79E 4km M=1.4
0.1 R R R
Rsd 0.2s 3ph/1stn Dmin 22km Az.gap 360°
Corr. 0.000 1M/1stn Msd 0.0 1↓
Felt Blenheim (77) and Picton (78) MM4.

91/10122
OCT 31 1401 22.5s 36.36S 179.68E 33km M=3.6
0.6 0.03 0.06 R
Rsd 0.2s 6ph/4stn Dmin 185km Az.gap 308°
Corr. 0.254 3M/3stn Msd 0.3

91/10123
OCT 31 1422 10.3s 41.82S 173.98E 45km M=5.1
0.1 0.01 0.01 4
Rsd 0.2s 25ph/19stn Dmin 21km Az.gap 137°
Corr. -0.229 8M/4stn Msd 0.2 4↑ 8↓
Felt Raumati (65) to Christchurch (110), max. intensity MM4.

91/10128
OCT 31 1510 44.4s 38.59S 175.90E 151km M=4.0
0.4 0.02 0.02 4
Rsd 0.3s 22ph/16stn Dmin 62km Az.gap 67°
Corr. -0.146 26M/24stn Msd 0.4 4↑ 2↓

91/10208
NOV 01 0016 11.5s 41.38S 173.20E 100km M=3.6
0.4 0.01 0.02 4
Rsd 0.3s 24ph/14stn Dmin 49km Az.gap 107°
Corr. 0.091 16M/15stn Msd 0.2 2↑ 1↓

91/10348
NOV 02 0048 33.2s 37.96S 177.23E 65km M=3.8
0.2 0.01 0.01 2
Rsd 0.2s 21ph/15stn Dmin 35km Az.gap 113°
Corr. -0.094 22M/17stn Msd 0.3 1↓

91/10413
NOV 02 2143 45.5s 47.91S 165.96E 33km M=4.0
0.2 0.01 0.02 R
Rsd 0.1s 17ph/13stn Dmin 201km Az.gap 339°
Corr. -0.377 16M/15stn Msd 0.2

91/10420
NOV 02 2353 52.6s 42.16S 172.95E 65km M=3.8
0.2 0.01 0.01 2
Rsd 0.2s 30ph/20stn Dmin 44km Az.gap 67°
Corr. -0.383 8M/3stn Msd 0.1 2↑ 2↓
Felt Murchison (80) MM4.

91/10430
NOV 03 0514 19.8s 38.53S 176.13E 103km M=3.6
0.5 0.02 0.02 4
Rsd 0.1s 12ph/10stn Dmin 51km Az.gap 196°
Corr. -0.473 13M/13stn Msd 0.2 1↓

91/10446
NOV 03 1033 26.3s 37.09S 179.67E 33km M=4.1
1.0 0.04 0.09 R
Rsd 0.2s 10ph/7stn Dmin 134km Az.gap 301°
Corr. 0.283 10M/6stn Msd 0.1

91/10458
NOV 03 1352 47.8s 41.05S 173.64E 92km M=3.6
0.2 0.01 0.01 3
Rsd 0.2s 34ph/20stn Dmin 36km Az.gap 84°
Corr. -0.316 18M/13stn Msd 0.2 3↑ 3↓

91/10468
NOV 03 2127 03.7s 37.97S 178.01E 49km M=3.5
0.4 0.02 0.03 4
Rsd 0.3s 10ph/5stn Dmin 24km Az.gap 89°
Corr. -0.373 8M/4stn Msd 0.2 1↑

91/10469
NOV 03 2134 54.9s 37.12S 176.94E 195km M=4.6
0.4 0.03 0.03 3
Rsd 0.2s 17ph/10stn Dmin 116km Az.gap 175°
Corr. 0.742 8M/4stn Msd 0.2 1↓

91/10482
NOV 04 0215 53.8s 39.78S 174.49E 154km M=3.9
0.5 0.02 0.04 5
Rsd 0.3s 21ph/15stn Dmin 37km Az.gap 170°
Corr. -0.075 15M/13stn Msd 0.2 1↑

91/10503
NOV 04 0723 42.5s 45.01S 167.52E 119km M=5.1
0.3 0.01 0.02 2
Rsd 0.2s 26ph/16stn Dmin 49km Az.gap 233°
Corr. 0.006 12M/7stn Msd 0.2 4↑ 11↓

91/10506
NOV 04 0836 54.4s 37.49S 177.04E 5km M=3.6
0.2 0.02 0.02 R
Rsd 0.3s 10ph/6stn Dmin 86km Az.gap 152°
Corr. 0.241 12M/6stn Msd 0.3 1↑

91/10538
NOV 05 0646 28.1s 44.17S 168.57E 12km M=3.9
0.1 0.01 0.01 R
Rsd 0.2s 19ph/16stn Dmin 75km Az.gap 185°
Corr. -0.443 26M/20stn Msd 0.2 1↑ 2↓

91/10543
NOV 05 0903 47.9s 38.55S 176.12E 150km M=3.7
0.5 0.04 0.05 4
Rsd 0.3s 16ph/14stn Dmin 83km Az.gap 196°
Corr. -0.832 12M/12stn Msd 0.3 1↑

91/10551
NOV 05 1357 23.2s 37.96S 177.32E 67km M=3.8
0.2 0.01 0.01 3
Rsd 0.2s 21ph/16stn Dmin 38km Az.gap 112°
Corr. 0.157 22M/18stn Msd 0.3 1↑ 2↓

91/10585
NOV 06 0219 39.1s 39.69S 175.43E 72km M=4.2
0.2 0.01 0.02 4
Rsd 0.3s 39ph/29stn Dmin 45km Az.gap 72°
Corr. -0.104 8M/3stn Msd 0.1 1↓
Felt Wanganui (57) MM4.

91/10597
NOV 06 1016 37.3s 36.37S 179.86W 92km M=3.7
0.4 0.03 0.04 12
Rsd 0.1s 7ph/4stn Dmin 213km Az.gap 313°
Corr. -0.179 3M/3stn Msd 0.3

91/10696
NOV 07 0916 34.2s 36.39S 179.84W 149km M=3.9
1.1 0.06 0.10 18
Rsd 0.4s 9ph/7stn Dmin 213km Az.gap 314°
Corr. -0.111 4M/4stn Msd 0.1
Trace confused with a later event.

91/10707
NOV 07 1051 07.7s 36.41S 179.66W 33km M=3.7
0.3 0.04 0.04 R
Rsd 0.1s 9ph/5stn Dmin 224km Az.gap 345°
Corr. -0.773 4M/4stn Msd 0.1

91/10714
NOV 07 1323 56.9s 38.28S 176.33E 127km M=3.7
0.4 0.03 0.02 2
Rsd 0.1s 13ph/11stn Dmin 68km Az.gap 199°
Corr. -0.602 17M/17stn Msd 0.2 1↑ 1↓

91/10731
NOV 07 1647 51.7s 40.60S 173.65E 97km M=3.7
0.3 0.01 0.01 4
Rsd 0.2s 30ph/22stn Dmin 32km Az.gap 115°
Corr. 0.211 24M/19stn Msd 0.2 8↑ 2↓

91/10733
NOV 07 1815 46.7s 39.21S 173.75E 20km M=4.5
0.3 0.01 0.03 1
Rsd 0.1s 19ph/16stn Dmin 21km Az.gap 151°
Corr. -0.738 16M/7stn Msd 0.3 1↓
Felt Taranaki (38,46,47), maximum intensity MM4.

91/10741
NOV 07 2344 36.7s 41.03S 172.93E 193km M=3.8
0.3 0.02 0.02 3
Rsd 0.2s 25ph/16stn Dmin 41km Az.gap 106°
Corr. -0.182 11M/11stn Msd 0.3 6↑ 1↓

91/10806
NOV 08 1603 37.9s 38.40S 175.97E 136km M=3.6
0.4 0.02 0.02 3
Rsd 0.2s 14ph/12stn Dmin 92km Az.gap 213°
Corr. -0.711 19M/19stn Msd 0.2 1↑

91/10823
NOV 08 2038 04.6s 36.85S 176.98E 248km M=4.2
0.3 0.02 0.02 2
Rsd 0.2s 16ph/12stn Dmin 113km Az.gap 211°
Corr. 0.305 26M/23stn Msd 0.2

91/10839
NOV 09 0250 48.0s 37.49S 177.79E 87km M=3.6
0.2 0.01 0.01 2
Rsd 0.1s 13ph/9stn Dmin 47km Az.gap 171°
Corr. -0.281 11M/9stn Msd 0.3 2↑ 1↓

91/10844
NOV 09 0351 51.8s 37.01S 177.18E 194km M=3.6
0.8 0.07 0.10 6
Rsd 0.3s 8ph/4stn Dmin 119km Az.gap 284°
Corr. -0.727 4M/4stn Msd 0.1

91/10875
NOV 09 1628 54.3s 38.09S 176.21E 167km M=3.9
0.4 0.03 0.02 4
Rsd 0.2s 14ph/12stn Dmin 92km Az.gap 221°
Corr. -0.516 21M/20stn Msd 0.2 1↑

91/10881
NOV 09 1836 51.0s 40.47S 173.32E 156km M=4.3
0.2 0.01 0.01 2
Rsd 0.2s 35ph/24stn Dmin 63km Az.gap 144°
Corr. -0.016 8M/4stn Msd 0.3 6↑ 2↓

91/10883
NOV 09 1935 32.9s 44.63S 167.70E 7km M=5.5
0.8 0.02 0.05 3
Rsd 0.2s 19ph/15stn Dmin 18km Az.gap 217°
Corr. -0.633 20M/11stn Msd 0.2 2↓
Felt widely in lower central South Island, maximum intensity MM4.

91/10892
NOV 09 2357 27.0s 36.31S 179.18W 167km M=4.1
1.8 0.10 0.18 20
Rsd 0.5s 7ph/6stn Dmin 266km Az.gap 316°
Corr. -0.396 2M/2stn Msd 0.0

91/10893
NOV 10 0017 52.2s 40.34S 176.90E 33km M=3.5
0.1 0.00 0.01 R
Rsd 0.1s 19ph/14stn Dmin 40km Az.gap 223°
Corr. -0.656 30M/27stn Msd 0.3 3↑ 1↓

91/10904
NOV 10 0521 49.2s 36.34S 179.86W 90km M=4.2
0.5 0.04 0.05 19
Rsd 0.2s 14ph/8stn Dmin 215km Az.gap 298°
Corr. 0.656 22M/19stn Msd 0.3

91/10943
NOV 11 0045 31.4s 37.61S 178.87E 26km M=4.1
0.2 0.01 0.02 1
Rsd 0.1s 13ph/11stn Dmin 50km Az.gap 278°
Corr. 0.101 28M/23stn Msd 0.2 1↑ 1↓

91/10954
NOV 11 0642 48.0s 37.93S 176.21E 180km M=4.4
0.3 0.02 0.02 3
Rsd 0.3s 26ph/18stn Dmin 55km Az.gap 98°
Corr. 0.145 11M/5stn Msd 0.2 7↑ 4↓

91/10960
NOV 11 1127 17.1s 45.35S 167.81E 12km M=3.9
0.1 0.01 0.01 R
Rsd 0.2s 23ph/16stn Dmin 73km Az.gap 188°
Corr. 0.141 21M/14stn Msd 0.1 2↑ 12↓

91/10976
NOV 11 2005 23.2s 38.44S 175.25E 257km M=3.8
0.4 0.04 0.07 5
Rsd 0.2s 14ph/10stn Dmin 164km Az.gap 211°
Corr. -0.914 9M/9stn Msd 0.2

91/10983
NOV 12 0124 13.2s 37.08S 177.48E 165km M=3.8
0.7 0.04 0.06 6
Rsd 0.4s 9ph/6stn Dmin 93km Az.gap 206°
Corr. 0.268 6M/5stn Msd 0.2 1↓

91/10987
NOV 12 0434 23.7s 40.99S 172.84E 241km M=3.5
0.9 0.06 0.07 5
Rsd 0.3s 10ph/7stn Dmin 32km Az.gap 136°
Corr. -0.235 4M/4stn Msd 0.2
Poorly recorded.

91/10988
NOV 12 0438 21.5s 40.21S 174.42E 101km M=3.7
0.3 0.01 0.02 4
Rsd 0.3s 27ph/19stn Dmin 63km Az.gap 91°
Corr. 0.028 17M/14stn Msd 0.2 1↓

91/11022
NOV 12 0851 29.5s 36.54S 177.44E 201km M=4.0
0.3 0.02 0.03 4
Rsd 0.1s 6ph/4stn Dmin 140km Az.gap 246°
Corr. 0.371 3M/3stn Msd 0.3 1↑

91/11025
NOV 12 0931 12.5s 38.47S 176.04E 155km M=4.2
0.4 0.02 0.02 3
Rsd 0.3s 28ph/20stn Dmin 60km Az.gap 74°
Corr. -0.049 25M/22stn Msd 0.4 9↑ 6↓

91/11037
NOV 12 1403 08.3s 41.04S 174.51E 54km M=3.9
0.1 0.01 0.01 2
Rsd 0.2s 30ph/23stn Dmin 27km Az.gap 53°
Corr. -0.277 18M/13stn Msd 0.2 11↑ 2↓
Felt Wellington (68) MM4.

91/11043
NOV 12 1610 38.9s 36.83S 177.02E 268km M=4.5
0.6 0.05 0.04 5
Rsd 0.2s 14ph/10stn Dmin 117km Az.gap 213°
Corr. 0.523 26M/23stn Msd 0.2 1↑

91/11048
NOV 12 2042 00.0s 39.59S 174.06E 184km M=4.2
0.4 0.01 0.03 5
Rsd 0.2s 28ph/23stn Dmin 78km Az.gap 165°
Corr. -0.242 30M/25stn Msd 0.3 3↑ 1↓

91/11052
NOV 12 2103 28.3s 38.34S 175.29E 170km M=3.8
0.7 0.07 0.12 12
Rsd 0.4s 20ph/14stn Dmin 160km Az.gap 234°
Corr. -0.949 14M/14stn Msd 0.4

91/11056
NOV 12 2227 32.8s 38.76S 175.03E 228km M=3.7
0.7 0.09 0.10 10
Rsd 0.3s 10ph/8stn Dmin 210km Az.gap 322°
Corr. -0.480 7M/7stn Msd 0.3

91/11071
NOV 13 0511 32.2s 43.20S 170.92E 5km M=3.7
0.1 0.01 0.01 R
Rsd 0.2s 17ph/13stn Dmin 20km Az.gap 73°
Corr. 0.200 27M/24stn Msd 0.3 1↑ 1↓

91/11075
NOV 13 0602 37.3s 41.24S 172.53E 229km M=4.5
0.2 0.01 0.02 2
Rsd 0.1s 30ph/22stn Dmin 46km Az.gap 133°
Corr. -0.271 26M/20stn Msd 0.3 2↑

91/11080
NOV 13 0754 17.5s 37.81S 176.46E 155km M=3.5
0.2 0.01 0.02 2
Rsd 0.1s 10ph/7stn Dmin 76km Az.gap 125°
Corr. -0.004 5M/5stn Msd 0.1

91/11082
NOV 13 0916 54.1s 38.38S 176.99E 57km M=3.7
0.1 0.01 0.01 2
Rsd 0.2s 25ph/21stn Dmin 17km Az.gap 69°
Corr. -0.149 26M/22stn Msd 0.2 1↑ 1↓

91/11085
NOV 13 1046 48.1s 39.57S 174.22E 209km M=4.0
0.4 0.01 0.03 4
Rsd 0.2s 31ph/24stn Dmin 66km Az.gap 158°
Corr. -0.322 27M/23stn Msd 0.3 4↑ 1↓

91/11091
NOV 13 1522 53.4s 36.94S 177.39E 185km M=3.7
0.7 0.06 0.06 5
Rsd 0.2s 11ph/7stn Dmin 149km Az.gap 314°
Corr. -0.216 7M/7stn Msd 0.3

91/11108
NOV 14 0058 10.3s 37.64S 176.44E 164km M=4.1
0.2 0.02 0.03 1
Rsd 0.1s 13ph/11stn Dmin 90km Az.gap 238°
Corr. -0.566 24M/22stn Msd 0.3 1↑

91/11119
NOV 14 1154 58.1s 40.22S 173.60E 152km M=4.2
0.3 0.01 0.01 3
Rsd 0.2s 38ph/26stn Dmin 70km Az.gap 143°
Corr. -0.065 28M/22stn Msd 0.2 5↑ 2↓

91/11133
NOV 14 2233 01.9s 40.25S 173.58E 174km M=3.9
0.4 0.02 0.02 3
Rsd 0.2s 26ph/22stn Dmin 68km Az.gap 155°
Corr. -0.219 15M/14stn Msd 0.2 2↑ 2↓

91/11182
NOV 15 2011 30.0s 37.33S 179.28E 13km M=4.0
0.4 0.03 0.03 3
Rsd 0.2s 12ph/8stn Dmin 92km Az.gap 287°
Corr. -0.410 37M/32stn Msd 0.2

91/11186
NOV 15 2244 16.9s 34.91S 179.04E 12km M=4.2
0.8 0.04 0.09 R
Rsd 0.2s 7ph/5stn Dmin 305km Az.gap 329°
Corr. 0.034 17M/15stn Msd 0.1

91/11187
NOV 16 0035 40.0s 37.13S 176.89E 264km M=6.4
0.5 0.05 0.04 3
Rsd 0.2s 30ph/24stn Dmin 113km Az.gap 174°
Corr. 0.473 10M/5stn Msd 0.1 2↑ 5↓
Felt Whakatane (27) to Wellington (68), maximum intensity MM4.

91/11196
NOV 16 0708 10.1s 39.65S 174.30E 195km M=3.6
0.4 0.02 0.04 4
Rsd 0.2s 22ph/16stn Dmin 56km Az.gap 211°
Corr. -0.459 15M/13stn Msd 0.2 1↑

91/11201
NOV 16 0838 40.4s 38.72S 177.95E 59km M=3.6
0.2 0.01 0.02 3
Rsd 0.2s 19ph/14stn Dmin 14km Az.gap 153°
Corr. -0.161 23M/20stn Msd 0.2 1↑

91/11203
NOV 16 0936 12.8s 37.28S 177.04E 141km M=3.7
0.4 0.03 0.02 5
Rsd 0.2s 15ph/11stn Dmin 109km Az.gap 172°
Corr. 0.473 17M/17stn Msd 0.2

91/11217
NOV 16 1935 33.7s 35.64S 178.39E 234km M=4.0
1.1 0.05 0.07 11
Rsd 0.4s 11ph/9stn Dmin 218km Az.gap 300°
Corr. 0.258 8M/8stn Msd 0.2

91/11223
NOV 17 0049 00.3s 36.85S 177.33E 194km M=3.6
0.4 0.04 0.05 3
Rsd 0.1s 12ph/9stn Dmin 158km Az.gap 315°
Corr. -0.688 9M/9stn Msd 0.2

91/11255
NOV 18 0653 16.2s 45.15S 167.27E 12km M=3.9
0.3 0.01 0.03 R
Rsd 0.2s 20ph/15stn Dmin 74km Az.gap 243°
Corr. -0.379 20M/15stn Msd 0.2 4↑ 3↓

91/11268
NOV 18 1558 29.3s 38.36S 176.13E 180km M=4.3
0.4 0.02 0.02 3
Rsd 0.3s 28ph/18stn Dmin 66km Az.gap 79°
Corr. 0.022 26M/23stn Msd 0.3 8↑ 3↓

91/11269
NOV 18 1615 02.2s 38.63S 176.03E 5km M=2.0
0.1 0.01 0.01 R
Rsd 0.3s 7ph/5stn Dmin 5km Az.gap 138°
Corr. 0.138 2M/2stn Msd 0.2 1↑
Felt Oruanui Rd (41) MM4.

91/11272
NOV 18 1719 15.1s 37.68S 176.57E 160km M=3.9
0.2 0.01 0.02 2
Rsd 0.1s 14ph/12stn Dmin 80km Az.gap 123°
Corr. 0.004 22M/22stn Msd 0.3 1↑

91/11284
NOV 19 0031 10.7s 38.03S 176.21E 259km M=3.7
0.3 0.03 0.08 3
Rsd 0.1s 11ph/8stn Dmin 83km Az.gap 248°
Corr. -0.863 5M/5stn Msd 0.2

91/11307
NOV 19 2126 56.5s 37.84S 175.95E 165km M=3.7
0.6 0.06 0.06 5
Rsd 0.2s 10ph/8stn Dmin 112km Az.gap 241°
Corr. -0.684 18M/18stn Msd 0.1

91/11314
NOV 20 0923 09.6s 36.39S 178.64E 33km M=6.3
0.9 0.05 0.05 R
Rsd 0.3s 22ph/19stn Dmin 138km Az.gap 240°
Corr. 0.688 27M/14stn Msd 0.4 3↑4↓
Felt widely in North Island, maximum intensity MM6 at Waihi (21).

91/11316
NOV 20 1404 34.9s 38.49S 176.20E 150km M=3.8
0.5 0.04 0.05 4
Rsd 0.3s 15ph/12stn Dmin 83km Az.gap 197°
Corr. -0.762 12M/12stn Msd 0.4 1↑

91/11318
NOV 20 1550 03.5s 36.50S 178.52E 33km M=3.6
1.5 0.09 0.12 R
Rsd 0.6s 7ph/6stn Dmin 124km Az.gap 285°
Corr. 0.750 7M/5stn Msd 0.2

91/11330
NOV 21 0802 34.6s 47.38S 165.62E 33km M=3.5
0.7 0.05 0.06 R
Rsd 0.3s 6ph/3stn Dmin 199km Az.gap 335°
Corr. -0.146 2M/2stn Msd 0.1

91/11334
NOV 21 1023 54.4s 39.39S 174.45E 248km M=4.3
0.6 0.02 0.04 5
Rsd 0.2s 27ph/24stn Dmin 45km Az.gap 143°
Corr. 0.037 28M/23stn Msd 0.2 4↑1↓

91/11336
NOV 21 1615 50.2s 37.90S 175.83E 135km M=3.6
0.4 0.03 0.06 4
Rsd 0.1s 18ph/15stn Dmin 119km Az.gap 243°
Corr. -0.922 10M/10stn Msd 0.4 1↑

91/11341
NOV 21 2248 21.2s 40.31S 173.57E 169km M=3.9
0.3 0.02 0.01 3
Rsd 0.2s 26ph/16stn Dmin 63km Az.gap 179°
Corr. -0.199 15M/13stn Msd 0.2 8↑2↓

91/11345
NOV 22 0501 59.9s 37.70S 176.63E 162km M=3.8
0.3 0.02 0.02 3
Rsd 0.2s 15ph/13stn Dmin 75km Az.gap 124°
Corr. 0.328 19M/18stn Msd 0.2

91/11347
NOV 22 0507 07.5s 38.36S 176.20E 119km M=3.5
0.5 0.02 0.02 5
Rsd 0.3s 17ph/14stn Dmin 64km Az.gap 110°
Corr. 0.256 12M/12stn Msd 0.2

91/11357
NOV 22 1449 47.5s 39.41S 177.09E 23km M=4.4
0.1 0.01 0.01 1
Rsd 0.2s 31ph/29stn Dmin 27km Az.gap 131°
Corr. -0.369 15M/8stn Msd 0.2 1↓
Felt Hawkes Bay (52,60), maximum intensity MM4.

91/11358
NOV 22 1532 38.1s 37.37S 177.35E 129km M=3.8
0.2 0.01 0.01 2
Rsd 0.1s 12ph/6stn Dmin 88km Az.gap 172°
Corr. 0.373 5M/4stn Msd 0.1 1↑

91/11364
NOV 22 2057 44.9s 39.98S 173.74E 220km M=3.5
0.4 0.03 0.03 4
Rsd 0.2s 19ph/12stn Dmin 93km Az.gap 195°
Corr. -0.336 9M/9stn Msd 0.3

91/11370
NOV 23 0756 13.0s 37.94S 176.43E 147km M=4.4
0.3 0.01 0.01 3
Rsd 0.2s 28ph/22stn Dmin 33km Az.gap 103°
Corr. 0.217 8M/4stn Msd 0.1 1↑1↓

91/11391
NOV 24 0924 19.9s 37.72S 177.03E 149km M=3.6
0.7 0.04 0.05 6
Rsd 0.5s 7ph/5stn Dmin 60km Az.gap 130°
Corr. 0.145 3M/3stn Msd 0.1 1↑

91/11393
NOV 24 1051 45.7s 38.41S 176.52E 161km M=3.6
0.4 0.02 0.04 4
Rsd 0.2s 16ph/14stn Dmin 54km Az.gap 200°
Corr. -0.547 6M/6stn Msd 0.3

91/11396
NOV 24 1202 24.1s 45.16S 167.47E 125km M=3.8
0.2 0.01 0.02 2
Rsd 0.1s 21ph/15stn Dmin 65km Az.gap 230°
Corr. -0.199 19M/15stn Msd 0.2 1↓

91/11410
NOV 24 2256 21.1s 45.07S 167.49E 116km M=3.9
0.4 0.02 0.03 3
Rsd 0.2s 18ph/15stn Dmin 56km Az.gap 232°
Corr. -0.434 20M/15stn Msd 0.2 9↑ 1↓

91/11411
NOV 24 2309 59.0s 38.89S 175.35E 121km M=3.5
0.8 0.03 0.05 6
Rsd 0.3s 22ph/20stn Dmin 26km Az.gap 188°
Corr. -0.633 18M/16stn Msd 0.2 1↑ 1↓

91/11418
NOV 25 0309 26.5s 37.90S 176.71E 129km M=3.6
0.3 0.02 0.02 3
Rsd 0.2s 14ph/12stn Dmin 41km Az.gap 112°
Corr. -0.132 18M/18stn Msd 0.2 1↑

91/11420
NOV 25 0340 01.3s 39.87S 174.42E 114km M=3.9
0.3 0.01 0.02 3
Rsd 0.2s 31ph/23stn Dmin 44km Az.gap 88°
Corr. -0.279 28M/22stn Msd 0.3 4↑ 3↓

91/11425
NOV 25 1011 13.5s 35.01S 178.55E 270km M=4.1
1.1 0.13 0.15 13
Rsd 0.2s 12ph/10stn Dmin 288km Az.gap 337°
Corr. -0.539 8M/8stn Msd 0.2

91/11427
NOV 25 1215 49.3s 37.82S 177.01E 131km M=4.0
0.3 0.02 0.01 3
Rsd 0.2s 25ph/18stn Dmin 49km Az.gap 122°
Corr. 0.182 26M/22stn Msd 0.2 1↑

91/11430
NOV 25 1338 40.0s 37.11S 177.54E 136km M=3.5
0.7 0.03 0.04 6
Rsd 0.4s 9ph/5stn Dmin 86km Az.gap 206°
Corr. 0.453 4M/4stn Msd 0.2

91/11433
NOV 25 1710 52.6s 40.05S 174.43E 76km M=3.5
0.3 0.01 0.01 4
Rsd 0.2s 28ph/20stn Dmin 51km Az.gap 91°
Corr. -0.026 16M/14stn Msd 0.2

91/11439
NOV 25 2217 46.5s 37.56S 178.33E 47km M=4.0
0.2 0.01 0.02 2
Rsd 0.1s 17ph/11stn Dmin 5km Az.gap 250°
Corr. 0.083 18M/14stn Msd 0.4 2↑ 1↓

91/11441
NOV 25 2305 47.8s 37.52S 178.33E 52km M=4.0
0.1 0.01 0.01 1
Rsd 0.1s 11ph/5stn Dmin 9km Az.gap 256°
Corr. -0.030 8M/4stn Msd 0.3 2↑ 1↓

91/11442
NOV 25 2306 51.4s 39.29S 175.00E 145km M=3.7
0.2 0.01 0.02 2
Rsd 0.1s 16ph/12stn Dmin 49km Az.gap 228°
Corr. -0.287 13M/11stn Msd 0.2 1↑

91/11447
NOV 26 0204 52.4s 43.66S 170.71E 5km M=2.7
0.1 0.01 0.02 R
Rsd 0.2s 16ph/13stn Dmin 20km Az.gap 177°
Corr. -0.758 11M/11stn Msd 0.1 1↓
Felt Erewhon Stn (106) MM4.

91/11454
NOV 26 0809 15.9s 40.38S 173.41E 201km M=3.5
0.4 0.04 0.02 3
Rsd 0.2s 22ph/14stn Dmin 64km Az.gap 223°
Corr. -0.136 8M/8stn Msd 0.1 1↑

91/11457
NOV 26 0943 39.7s 39.71S 174.84E 112km M=4.5
0.2 0.01 0.02 3
Rsd 0.2s 41ph/34stn Dmin 13km Az.gap 76°
Corr. -0.539 8M/4stn Msd 0.7 8↑ 6↓
Felt Tawa (68) MM3.

91/11479
NOV 27 0044 40.0s 36.29S 178.32E 33km M=3.9
1.2 0.08 0.10 R
Rsd 0.5s 10ph/5stn Dmin 145km Az.gap 331°
Corr. -0.410 16M/12stn Msd 0.1

91/11480
NOV 27 0130 25.6s 37.95S 176.28E 174km M=4.5
0.4 0.03 0.02 3
Rsd 0.2s 28ph/22stn Dmin 27km Az.gap 116°
Corr. -0.348 8M/4stn Msd 0.1

91/11507
NOV 28 0301 24.9s 44.97S 167.63E 128km M=4.0
0.4 0.02 0.03 3
Rsd 0.2s 22ph/15stn Dmin 41km Az.gap 222°
Corr. -0.307 21M/16stn Msd 0.2 9↑ 2↓

91/11508
NOV 28 0330 21.9s 38.10S 175.83E 174km M=3.5
0.5 0.03 0.06 4
Rsd 0.2s 14ph/11stn Dmin 114km Az.gap 236°
Corr. -0.859 12M/11stn Msd 0.2

91/11513
NOV 28 0514 42.9s 37.98S 176.10E 167km M=3.8
0.5 0.05 0.04 3
Rsd 0.1s 14ph/12stn Dmin 94km Az.gap 228°
Corr. -0.660 21M/19stn Msd 0.1

91/11514
NOV 28 0557 06.2s 37.90S 176.20E 196km M=4.4
0.5 0.04 0.04 4
Rsd 0.2s 23ph/18stn Dmin 31km Az.gap 218°
Corr. -0.438 10M/4stn Msd 0.2

91/11517
NOV 28 0737 35.0s 40.95S 175.52E 26km M=3.0
0.1 0.00 0.01 1
Rsd 0.2s 18ph/13stn Dmin 23km Az.gap 94°
Corr. -0.135 20M/16stn Msd 0.2 1↓
Felt Arthur's Pass (93) MM4.

91/11518
NOV 28 0745 11.4s 36.16S 178.72E 112km M=4.7
0.5 0.06 0.04 10
Rsd 0.2s 13ph/10stn Dmin 164km Az.gap 279°
Corr. -0.056 25M/21stn Msd 0.3

91/11548
NOV 29 1340 56.6s 39.94S 175.09E 27km M=3.7
0.1 0.01 0.02 2
Rsd 0.2s 24ph/17stn Dmin 21km Az.gap 59°
Corr. 0.056 23M/18stn Msd 0.2 3↑ 2↓
Felt Wanganui (57). No WLN net records.

91/11555
NOV 29 2004 28.4s 46.18S 166.03E 5km M=3.7
0.3 0.01 0.03 R
Rsd 0.1s 18ph/13stn Dmin 142km Az.gap 303°
Corr. -0.139 16M/14stn Msd 0.1 1↑

91/11560
NOV 29 2257 22.5s 37.12S 176.52E 246km M=4.0
0.7 0.09 0.09 5
Rsd 0.2s 14ph/12stn Dmin 137km Az.gap 283°
Corr. -0.414 18M/18stn Msd 0.2

91/11561
NOV 29 2335 06.5s 44.51S 167.61E 5km M=5.6
0.3 0.02 0.02 R
Rsd 0.1s 18ph/14stn Dmin 30km Az.gap 219°
Corr. 0.040 17M/9stn Msd 0.2 1↓
Felt parts of Otago and Southland (114,133,139), max int MM4.

91/11562
NOV 29 2335 56.7s 44.86S 168.07E 5km M=4.0
0.5 0.04 0.06 R
Rsd 0.1s 5ph/3stn Dmin 24km Az.gap 216°
Corr. 0.984 3M/1stn Msd 0.1
2 quakes, traces overloaded by previous quake.

91/11566
NOV 29 2341 19.9s 44.63S 167.68E 5km M=3.9
0.2 0.02 0.02 R
Rsd 0.1s 14ph/13stn Dmin 19km Az.gap 237°
Corr. -0.299 15M/12stn Msd 0.1

91/11570
NOV 29 2356 50.9s 44.51S 167.63E 5km M=4.1
0.2 0.01 0.01 R
Rsd 0.1s 18ph/14stn Dmin 29km Az.gap 232°
Corr. -0.014 23M/18stn Msd 0.2 1↓
2nd event in coda.

91/11588
NOV 30 0644 32.2s 37.95S 176.96E 5km M=4.1
0.2 0.01 0.01 R
Rsd 0.3s 21ph/18stn Dmin 37km Az.gap 71°
Corr. -0.311 24M/22stn Msd 0.3

91/11595
NOV 30 0658 08.8s 37.96S 176.95E 5km M=3.5
0.3 0.02 0.02 R
Rsd 0.4s 13ph/12stn Dmin 49km Az.gap 110°
Corr. -0.393 15M/13stn Msd 0.2
No URZ records.

91/11600
NOV 30 1021 36.8s 36.00S 177.79E 241km M=4.2
0.2 0.02 0.02 2
Rsd 0.1s 9ph/5stn Dmin 183km Az.gap 320°
Corr. -0.381 8M/6stn Msd 0.3

91/11604
NOV 30 1334 40.5s 36.01S 177.81E 215km M=4.0
1.1 0.08 0.08 8
Rsd 0.1s 10ph/8stn Dmin 182km Az.gap 319°
Corr. -0.504 8M/8stn Msd 0.3

91/11616
DEC 01 0736 54.0s 44.64S 167.58E 5km M=2.8
0.3 0.02 0.02 R
Rsd 0.2s 15ph/12stn Dmin 27km Az.gap 295°
Corr. 0.342 14M/12stn Msd 0.1 1↓
Felt Te Anau (130).

91/11622
DEC 01 1112 31.8s 43.18S 172.25E 33km M=3.8
0.1 0.00 0.01 R
Rsd 0.1s 19ph/17stn Dmin 67km Az.gap 99°
Corr. 0.121 32M/26stn Msd 0.2 1↓

91/11625
DEC 01 2006 07.2s 40.48S 175.21E 6km M=2.9
0.2 0.01 0.01 3
Rsd 0.2s 18ph/16stn Dmin 23km Az.gap 91°
Corr. -0.385 18M/16stn Msd 0.2 1↑ 1↓
Felt Foxton-Shannon Highway (61) MM4.

91/11630
DEC 02 0252 06.6s 37.67S 177.37E 83km M=3.5
0.2 0.01 0.01 2
Rsd 0.1s 5ph/3stn Dmin 69km Az.gap 246°
Corr. -0.871 4M/2stn Msd 0.1

91/11633
DEC 02 0738 19.5s 38.48S 178.23E 26km M=3.5
0.3 0.01 0.03 3
Rsd 0.3s 12ph/9stn Dmin 22km Az.gap 197°
Corr. -0.320 18M/14stn Msd 0.2 1↑

91/11640
DEC 02 1258 48.1s 36.74S 177.09E 259km M=4.0
0.7 0.09 0.08 6
Rsd 0.3s 11ph/9stn Dmin 144km Az.gap 282°
Corr. -0.707 13M/13stn Msd 0.2

91/11644
DEC 02 1951 43.2s 38.39S 176.04E 151km M=3.9
0.8 0.03 0.04 7
Rsd 0.4s 16ph/14stn Dmin 68km Az.gap 98°
Corr. 0.262 20M/20stn Msd 0.3 1↑

91/11656
DEC 03 0800 59.1s 38.20S 175.43E 33km M=3.9
0.5 0.03 0.03 R
Rsd 0.3s 12ph/8stn Dmin 147km Az.gap 257°
Corr. -0.832 6M/6stn Msd 0.4 1↑

91/11666
DEC 03 2101 25.9s 40.48S 173.29E 165km M=4.5
0.3 0.02 0.02 2
Rsd 0.2s 32ph/22stn Dmin 64km Az.gap 171°
Corr. -0.434 26M/21stn Msd 0.2 2↑ 3↓

91/11678
DEC 04 1218 22.7s 37.35S 176.36E 228km M=3.7
0.5 0.05 0.09 5
Rsd 0.2s 8ph/4stn Dmin 121km Az.gap 268°
Corr. -0.871 3M/3stn Msd 0.1

91/11692
DEC 04 2139 08.5s 38.07S 175.75E 209km M=4.0
0.5 0.05 0.04 4
Rsd 0.2s 12ph/10stn Dmin 111km Az.gap 217°
Corr. -0.590 20M/18stn Msd 0.2

91/11707
DEC 05 1510 44.4s 38.61S 175.95E 138km M=3.9
0.5 0.02 0.02 5
Rsd 0.3s 23ph/17stn Dmin 56km Az.gap 110°
Corr. -0.242 21M/20stn Msd 0.4 5↑ 2↓

91/11714
DEC 05 2010 08.9s 38.15S 176.49E 5km M=2.7
0.1 0.01 0.01 R
Rsd 0.2s 6ph/4stn Dmin 9km Az.gap 199°
Corr. -0.096 3M/3stn Msd 0.4
Felt Rotorua (33). First of a sequence.

91/11720
DEC 06 0012 48.7s 42.06S 172.74E 73km M=3.7
0.2 0.01 0.02 2
Rsd 0.2s 23ph/17stn Dmin 35km Az.gap 60°
Corr. -0.299 14M/12stn Msd 0.3 2↑ 1↓

91/11737
DEC 06 1425 18.4s 38.52S 175.87E 157km M=3.5
0.4 0.02 0.03 4
Rsd 0.2s 10ph/6stn Dmin 77km Az.gap 221°
Corr. -0.602 9M/9stn Msd 0.3 1↑

91/11742
DEC 06 2010 14.4s 39.43S 177.11E 23km M=3.9
0.1 0.01 0.01 1
Rsd 0.2s 32ph/28stn Dmin 28km Az.gap 135°
Corr. -0.422 28M/25stn Msd 0.2 2↑ 7↓

91/11744
DEC 06 2249 29.6s 38.62S 176.03E 116km M=3.5
0.6 0.03 0.03 5
Rsd 0.2s 12ph/10stn Dmin 50km Az.gap 215°
Corr. -0.660 17M/17stn Msd 0.2 1↑

91/11763
DEC 07 0953 14.4s 38.28S 176.04E 147km M=3.7
0.5 0.04 0.02 3
Rsd 0.2s 13ph/11stn Dmin 94km Az.gap 217°
Corr. -0.641 16M/16stn Msd 0.4 1↑ 1↓

91/11784
DEC 08 0423 29.7s 41.25S 175.35E 31km M=4.4
0.1 0.01 0.01 1
Rsd 0.1s 27ph/22stn Dmin 16km Az.gap 61°
Corr. -0.285 15M/8stn Msd 0.3 6↑ 6↓
Felt Otaki (65) to Wellington (68), max. int. MM 4. Several events in coda.

91/11813
DEC 08 0615 37.4s 41.24S 175.35E 30km M=3.9
0.1 0.01 0.01 1
Rsd 0.3s 27ph/20stn Dmin 16km Az.gap 60°
Corr. -0.402 8M/3stn Msd 0.1 4↑ 3↓
Felt Wellington (68) MM4.

91/11829
DEC 08 0826 39.0s 38.59S 178.69E 33km M=4.0
0.2 0.01 0.02 R
Rsd 0.1s 15ph/13stn Dmin 57km Az.gap 238°
Corr. -0.680 36M/34stn Msd 0.3 1↑ 1↓

91/11848
DEC 08 1338 53.6s 37.34S 177.85E 100km M=3.9
0.4 0.03 0.02 4
Rsd 0.2s 14ph/10stn Dmin 49km Az.gap 198°
Corr. -0.101 22M/18stn Msd 0.2 1↑

91/11856
DEC 08 1508 58.7s 38.55S 175.76E 172km M=4.0
0.5 0.02 0.03 5
Rsd 0.3s 22ph/18stn Dmin 71km Az.gap 122°
Corr. -0.199 8M/3stn Msd 0.2 1↑

91/11857
DEC 08 1521 23.9s 38.80S 175.91E 187km M=3.6
0.2 0.03 0.05 3
Rsd 0.1s 13ph/10stn Dmin 107km Az.gap 312°
Corr. -0.816 10M/10stn Msd 0.3 1↓

91/11867
DEC 08 2012 20.3s 38.58S 175.92E 156km M=3.7
0.9 0.05 0.08 6
Rsd 0.4s 21ph/14stn Dmin 79km Az.gap 211°
Corr. -0.793 18M/18stn Msd 0.3

91/11874
DEC 09 0032 03.2s 38.13S 176.04E 331km M=3.7
0.4 0.08 0.12 7
Rsd 0.1s 14ph/10stn Dmin 176km Az.gap 307°
Corr. -0.891 7M/7stn Msd 0.2

91/11907
DEC 09 2258 28.9s 37.16S 177.32E 170km M=3.7
0.9 0.05 0.08 8
Rsd 0.4s 7ph/4stn Dmin 123km Az.gap 232°
Corr. 0.457 2M/2stn Msd 0.0

91/11914
DEC 10 0734 31.2s 37.73S 177.68E 81km M=3.7
0.2 0.02 0.02 2
Rsd 0.2s 14ph/10stn Dmin 57km Az.gap 135°
Corr. -0.602 20M/18stn Msd 0.2 1↑ 1↓

91/11956
DEC 11 1344 53.2s 41.36S 173.62E 75km M=3.7
0.3 0.02 0.01 3
Rsd 0.3s 21ph/17stn Dmin 20km Az.gap 77°
Corr. -0.559 17M/12stn Msd 0.1 2↑ 4↓

91/11991
DEC 12 1624 11.0s 37.08S 179.27E 33km M=5.2
0.5 0.03 0.03 R
Rsd 0.1s 20ph/19stn Dmin 104km Az.gap 282°
Corr. 0.563 19M/10stn Msd 0.2 2↑ 1↓

91/12011
DEC 13 1111 34.9s 43.65S 170.15E 0km M=4.0
0.1 R R R
Rsd 0.3s 10ph/10stn Dmin 59km Az.gap 144°
Corr. 0.000 9M/5stn Msd 0.1
Mt Cook avalanche.

91/12025
DEC 13 1759 07.2s 37.47S 178.34E 42km M=3.6
0.2 0.01 0.02 1
Rsd 0.1s 11ph/7stn Dmin 14km Az.gap 259°
Corr. 0.408 6M/4stn Msd 0.2 1↑ 1↓

91/12035
DEC 14 0053 56.3s 38.45S 176.86E 181km M=3.5
0.5 0.02 0.04 5
Rsd 0.1s 14ph/10stn Dmin 145km Az.gap 317°
Corr. -0.147 10M/10stn Msd 0.2 1↑

91/12036
DEC 14 0103 10.4s 37.67S 176.20E 203km M=3.7
0.5 0.05 0.07 4
Rsd 0.2s 13ph/10stn Dmin 104km Az.gap 239°
Corr. -0.688 18M/18stn Msd 0.2 1↑

91/12041
DEC 14 0532 17.4s 38.18S 177.74E 61km M=3.6
0.2 0.01 0.01 2
Rsd 0.1s 20ph/15stn Dmin 47km Az.gap 130°
Corr. -0.182 22M/18stn Msd 0.2 2↑ 1↓

91/12056
DEC 14 1912 33.6s 44.37S 169.15E 12km M=2.3
0.1 0.01 0.01 R
Rsd 0.1s 12ph/9stn Dmin 61km Az.gap 116°
Corr. -0.029 9M/9stn Msd 0.2 1↑
Felt Minaret Stn (114) MM4.

91/12067
DEC 15 1508 46.3s 37.93S 176.55E 151km M=3.6
0.4 0.04 0.05 3
Rsd 0.2s 9ph/7stn Dmin 62km Az.gap 219°
Corr. -0.805 7M/7stn Msd 0.2

91/12073
DEC 15 2237 38.4s 44.60S 167.65E 12km M=3.6
0.5 0.03 0.03 R
Rsd 0.2s 16ph/10stn Dmin 23km Az.gap 203°
Corr. -0.848 19M/16stn Msd 0.2 1↓

91/12078
DEC 16 0244 48.1s 40.40S 176.53E 30km M=3.5
0.1 0.01 0.02 2
Rsd 0.2s 27ph/24stn Dmin 32km Az.gap 191°
Corr. -0.695 23M/21stn Msd 0.2

91/12083
DEC 16 0441 46.9s 39.23S 173.87E 17km M=3.5
0.4 0.02 0.03 5
Rsd 0.2s 12ph/10stn Dmin 13km Az.gap 195°
Corr. -0.469 23M/20stn Msd 0.3 1↑

91/12084
DEC 16 0446 28.4s 41.26S 173.89E 65km M=3.9
0.2 0.02 0.01 3
Rsd 0.3s 24ph/21stn Dmin 23km Az.gap 71°
Corr. -0.113 8M/3stn Msd 0.2 4↑ 5↓
Felt Picton (76).

91/12097
DEC 17 0050 30.6s 41.29S 172.85E 146km M=3.9
0.3 0.02 0.02 3
Rsd 0.2s 26ph/20stn Dmin 53km Az.gap 93°
Corr. -0.289 8M/3stn Msd 0.2 12↑ 1↓

91/12106
DEC 17 0754 44.2s 37.61S 175.12E 33km M=3.5
0.4 0.03 0.02 R
Rsd 0.1s 9ph/6stn Dmin 189km Az.gap 288°
Corr. -0.730 5M/5stn Msd 0.2

91/12127
DEC 17 1226 47.1s 38.29S 176.39E 5km M=2.6
0.1 0.01 0.01 R
Rsd 0.2s 11ph/9stn Dmin 13km Az.gap 111°
Corr. -0.365 5M/5stn Msd 0.4
Felt Lake Okaro MM4, Rotomahana (33). Largest of several events felt.

91/12136
DEC 17 1626 24.8s 38.29S 176.39E 5km M=2.3
0.0 0.00 0.00 R
Rsd 0.1s 6ph/4stn Dmin 12km Az.gap 141°
Corr. -0.214 3M/3stn Msd 0.4
Felt Lake Okaro (33).

91/12137
DEC 17 1701 29.9s 46.80S 166.52E 12km M=3.5
0.2 0.01 0.01 R
Rsd 0.1s 20ph/13stn Dmin 124km Az.gap 285°
Corr. 0.307 15M/14stn Msd 0.2

91/12155
DEC 18 0814 53.3s 42.14S 173.04E 5km M=3.7
0.1 0.01 0.02 R
Rsd 0.3s 22ph/16stn Dmin 43km Az.gap 122°
Corr. -0.262 9M/5stn Msd 0.3 3↑ 1↓

91/12156
DEC 18 0818 10.0s 40.68S 175.48E 10km M=4.0
0.1 0.01 0.01 1
Rsd 0.2s 31ph/29stn Dmin 6km Az.gap 93°
Corr. -0.457 10M/5stn Msd 0.3 4↑ 2↓
Felt Palmerston North (62) to Wellington (68), maximum intensity MM4.

91/12162
DEC 18 0829 01.7s 38.26S 176.42E 5km M=2.7
0.1 0.01 0.01 R
Rsd 0.1s 7ph/5stn Dmin 8km Az.gap 136°
Corr. -0.332 7M/7stn Msd 0.4
Felt Tarawera, Waiotapu (33) MM4, Rotomahana (33).

91/12182
DEC 18 1817 42.5s 39.58S 177.00E 28km M=3.6
0.2 0.01 0.02 1
Rsd 0.3s 27ph/21stn Dmin 13km Az.gap 139°
Corr. -0.428 32M/29stn Msd 0.3 1↑ 1↓

91/12197
DEC 19 0151 32.5s 36.24S 176.60E 218km M=4.0
1.3 0.18 0.45 34
Rsd 0.3s 10ph/7stn Dmin 229km Az.gap 330°
Corr. -0.902 8M/8stn Msd 0.3

91/12205
DEC 19 0755 46.9s 37.38S 176.57E 218km M=4.5
0.4 0.03 0.03 3
Rsd 0.2s 16ph/13stn Dmin 102km Az.gap 147°
Corr. 0.177 29M/24stn Msd 0.3 2↑ 1↓

91/12207
DEC 19 0846 22.5s 37.09S 176.93E 332km M=3.6
0.3 0.05 0.11 3
Rsd 0.1s 12ph/9stn Dmin 131km Az.gap 322°
Corr. -0.945 3M/3stn Msd 0.0 1↓

91/12213
DEC 19 1348 54.4s 38.66S 176.47E 218km M=3.7
0.3 0.04 0.08 2
Rsd 0.1s 15ph/11stn Dmin 115km Az.gap 332°
Corr. -0.879 8M/8stn Msd 0.2 1↑

91/12214
DEC 19 1438 45.4s 41.28S 172.76E 164km M=3.5
0.4 0.02 0.02 3
Rsd 0.3s 29ph/17stn Dmin 53km Az.gap 102°
Corr. -0.099 12M/11stn Msd 0.2 1↑

91/12218
DEC 19 2039 31.3s 38.89S 175.46E 120km M=3.8
0.5 0.02 0.02 5
Rsd 0.3s 31ph/20stn Dmin 29km Az.gap 60°
Corr. -0.227 26M/23stn Msd 0.2 1↑ 1↓

91/12227
DEC 20 0504 58.1s 40.33S 173.97E 119km M=3.5
0.2 0.01 0.01 3
Rsd 0.2s 36ph/19stn Dmin 53km Az.gap 113°
Corr. -0.236 18M/15stn Msd 0.2 1↑ 1↓

91/12232
DEC 20 1012 57.1s 37.68S 176.30E 285km M=3.9
0.2 0.04 0.05 2
Rsd 0.1s 9ph/5stn Dmin 96km Az.gap 226°
Corr. -0.871 9M/9stn Msd 0.2

91/12236
DEC 20 1448 46.8s 38.73S 175.54E 230km M=3.8
0.8 0.08 0.16 6
Rsd 0.2s 12ph/7stn Dmin 50km Az.gap 203°
Corr. -0.750 12M/12stn Msd 0.3 1↑

91/12241
DEC 20 1800 28.9s 36.86S 176.98E 260km M=4.4
0.5 0.05 0.04 5
Rsd 0.2s 15ph/11stn Dmin 113km Az.gap 209°
Corr. 0.570 24M/22stn Msd 0.2 1↑

91/12243
DEC 20 1911 49.2s 38.36S 175.87E 173km M=3.7
0.5 0.05 0.05 4
Rsd 0.3s 9ph/7stn Dmin 94km Az.gap 218°
Corr. -0.754 17M/16stn Msd 0.3 1↑ 1↓

91/12253
DEC 21 0832 54.9s 39.68S 174.32E 177km M=4.0
0.3 0.01 0.02 3
Rsd 0.2s 34ph/22stn Dmin 54km Az.gap 187°
Corr. -0.318 27M/22stn Msd 0.2 11↑ 3↓

91/12258
DEC 21 1108 11.6s 41.29S 172.96E 104km M=3.6
0.4 0.01 0.02 4
Rsd 0.3s 26ph/17stn Dmin 53km Az.gap 83°
Corr. 0.037 16M/13stn Msd 0.2 1↑

91/12264
DEC 21 1554 18.3s 37.27S 177.43E 123km M=4.1
0.3 0.02 0.02 4
Rsd 0.2s 12ph/8stn Dmin 85km Az.gap 186°
Corr. 0.313 15M/11stn Msd 0.2 1↑

91/12273
DEC 22 0006 54.2s 44.54S 167.59E 5km M=3.9
0.3 0.02 0.02 R
Rsd 0.2s 17ph/13stn Dmin 29km Az.gap 208°
Corr. -0.480 27M/20stn Msd 0.1 2↓

91/12274
DEC 22 0249 32.3s 42.02S 172.28E 83km M=3.8
0.3 0.01 0.02 3
Rsd 0.2s 21ph/15stn Dmin 49km Az.gap 76°
Corr. 0.054 15M/13stn Msd 0.3 4↑ 2↓

91/12275
DEC 22 0349 18.4s 36.69S 178.19E 5km M=3.5
0.5 0.03 0.03 R
Rsd 0.1s 10ph/4stn Dmin 101km Az.gap 267°
Corr. 0.594 7M/5stn Msd 0.3 1↓

91/12276
DEC 22 0425 28.2s 38.06S 176.16E 165km M=4.0
0.3 0.01 0.02 3
Rsd 0.2s 18ph/15stn Dmin 87km Az.gap 98°
Corr. 0.056 27M/23stn Msd 0.2 6↑ 2↓

91/12277
DEC 22 0639 00.3s 37.28S 177.16E 262km M=3.8
1.3 0.18 0.27 9
Rsd 0.3s 11ph/8stn Dmin 107km Az.gap 255°
Corr. -0.934 10M/10stn Msd 0.3

91/12278
DEC 22 0657 40.7s 37.24S 177.70E 99km M=3.7
0.4 0.03 0.03 4
Rsd 0.1s 5ph/3stn Dmin 67km Az.gap 283°
Corr. -0.754 5M/3stn Msd 0.1 1↓

91/12280
DEC 22 0855 36.9s 36.69S 176.56E 248km M=4.3
1.4 0.09 0.08 10
Rsd 0.4s 14ph/12stn Dmin 161km Az.gap 221°
Corr. -0.242 12M/8stn Msd 0.2 1↑

91/12285
DEC 22 1238 22.5s 38.28S 176.47E 152km M=3.6
0.2 0.04 0.05 1
Rsd 0.1s 13ph/10stn Dmin 56km Az.gap 208°
Corr. -0.938 8M/8stn Msd 0.2 1↑

91/12288
DEC 22 1547 00.7s 36.09S 179.67W 33km M=4.2
0.7 0.02 0.07 R
Rsd 0.1s 15ph/13stn Dmin 246km Az.gap 304°
Corr. -0.080 26M/22stn Msd 0.2 1↓

91/12289
DEC 22 1623 46.9s 36.19S 179.74W 90km M=4.5
0.2 0.02 0.03 10
Rsd 0.1s 11ph/9stn Dmin 235km Az.gap 302°
Corr. 0.480 26M/21stn Msd 0.4

91/12290
DEC 22 1749 10.0s 36.15S 179.75W 33km M=3.9
0.2 0.01 0.02 R
Rsd 0.1s 11ph/7stn Dmin 237km Az.gap 316°
Corr. 0.025 7M/5stn Msd 0.3

91/12302
DEC 23 1050 27.0s 39.41S 174.91E 122km M=3.8
0.3 0.01 0.02 3
Rsd 0.2s 40ph/28stn Dmin 43km Az.gap 79°
Corr. -0.173 28M/23stn Msd 0.2 1↑

91/12304
DEC 23 1214 16.6s 41.44S 172.69E 101km M=3.8
0.3 0.01 0.02 3
Rsd 0.3s 28ph/21stn Dmin 41km Az.gap 104°
Corr. -0.125 16M/12stn Msd 0.2 2↑ 3↓

91/12310
DEC 23 1506 45.1s 36.13S 179.65W 60km M=5.3
0.4 0.02 0.04 R
Rsd 0.1s 19ph/17stn Dmin 245km Az.gap 302°
Corr. -0.046 9M/5stn Msd 0.4

91/12317
DEC 23 2113 53.3s 37.79S 175.07E 33km M=3.6
0.4 0.03 0.03 R
Rsd 0.2s 13ph/8stn Dmin 186km Az.gap 277°
Corr. -0.766 8M/7stn Msd 0.3

91/12330
DEC 24 0621 23.3s 44.73S 167.49E 5km M=3.5
0.4 0.02 0.03 R
Rsd 0.2s 19ph/14stn Dmin 35km Az.gap 210°
Corr. -0.945 20M/16stn Msd 0.2 1↓

91/12334
DEC 24 0931 07.4s 36.12S 179.87W 12km M=3.6
0.2 0.01 0.02 R
Rsd 0.1s 8ph/5stn Dmin 232km Az.gap 314°
Corr. -0.223 5M/4stn Msd 0.3

91/12347
DEC 24 2028 29.1s 38.28S 177.66E 60km M=3.7
0.1 0.01 0.01 2
Rsd 0.1s 23ph/16stn Dmin 48km Az.gap 83°
Corr. 0.126 28M/24stn Msd 0.3 3↑ 2↓

91/12354
DEC 25 0025 13.9s 39.10S 175.61E 1km M=3.6
0.2 0.01 0.01 1
Rsd 0.4s 21ph/18stn Dmin 9km Az.gap 51°
Corr. 0.104 32M/31stn Msd 0.3

91/12357
DEC 25 0027 34.1s 39.10S 175.64E 3km M=3.5
0.7 0.02 0.02 7
Rsd 0.4s 12ph/8stn Dmin 9km Az.gap 79°
Corr. 0.330 17M/15stn Msd 0.2

91/12363
DEC 25 0032 25.2s 39.08S 175.64E 0km M=3.6
0.6 0.02 0.03 4
Rsd 0.4s 16ph/14stn Dmin 11km Az.gap 81°
Corr. 0.208 18M/18stn Msd 0.3

91/12369
DEC 25 0057 14.1s 39.11S 175.60E 5km M=3.8
0.1 0.01 0.01 R
Rsd 0.3s 30ph/25stn Dmin 4km Az.gap 49°
Corr. 0.064 40M/35stn Msd 0.2 1↑

91/12375
DEC 25 0539 42.7s 39.14S 174.89E 219km M=4.4
0.3 0.01 0.02 2
Rsd 0.2s 36ph/26stn Dmin 39km Az.gap 99°
Corr. -0.107 10M/4stn Msd 0.2 16↑ 6↓

91/12376
DEC 25 0600 50.1s 36.41S 178.51E 5km M=3.7
0.4 0.02 0.03 R
Rsd 0.2s 9ph/5stn Dmin 133km Az.gap 286°
Corr. 0.621 9M/5stn Msd 0.1

91/12382
DEC 25 0950 39.4s 45.07S 167.51E 64km M=4.0
0.3 0.01 0.02 3
Rsd 0.2s 28ph/17stn Dmin 53km Az.gap 185°
Corr. -0.369 10M/6stn Msd 0.3 8↑ 3↓

91/12392
DEC 25 1710 46.5s 37.18S 177.35E 141km M=3.5
0.2 0.02 0.02 2
Rsd 0.1s 7ph/4stn Dmin 96km Az.gap 191°
Corr. -0.062 3M/3stn Msd 0.2

91/12407
DEC 26 0713 38.2s 38.47S 175.89E 186km M=4.4
0.5 0.02 0.02 3
Rsd 0.2s 33ph/21stn Dmin 70km Az.gap 72°
Corr. 0.106 12M/5stn Msd 0.2 10↑ 3↓

91/12421
DEC 26 1728 42.9s 38.48S 177.94E 37km M=4.5
0.2 0.01 0.01 3
Rsd 0.2s 25ph/21stn Dmin 18km Az.gap 119°
Corr. -0.156 9M/4stn Msd 0.3 4↑ 3↓

91/12426
DEC 26 2130 41.7s 37.54S 178.80E 24km M=3.8
0.1 0.01 0.01 1
Rsd 0.1s 13ph/7stn Dmin 45km Az.gap 282°
Corr. 0.136 24M/20stn Msd 0.2 1↑

91/12431
DEC 27 0122 29.4s 37.06S 177.45E 142km M=4.1
0.2 0.02 0.02 3
Rsd 0.1s 15ph/11stn Dmin 96km Az.gap 247°
Corr. -0.270 27M/24stn Msd 0.2

91/12458
DEC 27 2248 02.9s 38.27S 175.96E 186km M=3.7
0.5 0.03 0.03 4
Rsd 0.2s 15ph/13stn Dmin 55km Az.gap 107°
Corr. 0.068 19M/19stn Msd 0.2

91/12467
DEC 28 0525 52.3s 38.72S 177.63E 60km M=3.6
0.4 0.01 0.02 5
Rsd 0.3s 17ph/12stn Dmin 37km Az.gap 84°
Corr. 0.079 25M/21stn Msd 0.2 1↑

91/12475
DEC 28 1207 33.3s 36.12S 179.76E 33km M=3.9
0.5 0.02 0.04 R
Rsd 0.1s 12ph/8stn Dmin 210km Az.gap 310°
Corr. 0.574 14M/14stn Msd 0.2

91/12480
DEC 28 1502 24.3s 37.07S 177.53E 123km M=3.6
0.3 0.02 0.02 3
Rsd 0.1s 10ph/8stn Dmin 90km Az.gap 209°
Corr. 0.330 7M/7stn Msd 0.1

91/12487
DEC 28 1741 04.8s 38.72S 175.97E 153km M=3.5
0.5 0.05 0.05 3
Rsd 0.2s 14ph/8stn Dmin 60km Az.gap 189°
Corr. -0.867 15M/15stn Msd 0.2 1↑

91/12489
DEC 28 2110 53.4s 38.71S 176.02E 146km M=3.6
0.5 0.05 0.05 4
Rsd 0.2s 13ph/7stn Dmin 63km Az.gap 190°
Corr. -0.875 14M/12stn Msd 0.2

91/12507
DEC 29 1406 36.6s 38.56S 175.80E 151km M=3.5
0.5 0.04 0.03 5
Rsd 0.3s 10ph/7stn Dmin 71km Az.gap 161°
Corr. -0.535 16M/15stn Msd 0.2

91/12529
DEC 30 0651 42.4s 38.20S 176.61E 5km M=3.2
0.3 0.02 0.01 R
Rsd 0.5s 21ph/17stn Dmin 10km Az.gap 134°
Corr. -0.206 15M/13stn Msd 0.2 1↑
Felt Kawerau (34).

91/12544

DEC 30 1652 55.4s 37.38S 177.50E 99km M=3.6
0.1 0.01 0.01 2
Rsd 0.1s 13ph/9stn Dmin 75km Az.gap 176°
Corr. 0.171 14M/12stn Msd 0.2 1↓

91/12545

DEC 30 1725 59.4s 41.25S 172.61E 213km M=3.8
0.3 0.02 0.02 2
Rsd 0.2s 26ph/18stn Dmin 48km Az.gap 121°
Corr. -0.092 11M/11stn Msd 0.3 1↑

91/12561

DEC 31 0709 55.4s 39.91S 173.99E 129km M=4.3
0.5 0.01 0.02 5
Rsd 0.3s 35ph/22stn Dmin 71km Az.gap 138°
Corr. -0.516 16M/12stn Msd 0.2 10↑ 3↓

91/12568

DEC 31 1151 47.0s 37.96S 175.94E 291km M=3.9
0.6 0.11 0.05 16
Rsd 0.2s 18ph/14stn Dmin 335km Az.gap 320°
Corr. -0.070 10M/10stn Msd 0.2

LISTS OF ORIGINS AND MAGNITUDE DETERMINATIONS

HIGHER MAGNITUDE EARTHQUAKES

A chronological list of 1991 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 33 and NP phases from NS recording stations have been used to determine the origins.

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
488	JAN 19	2356 28.4	37.36S	177.65E	42	5.0F	0.3	31	23
707	JAN 26	0528 10.3	37.17S	177.00E	253	5.0	0.2	29	23
776	JAN 28	1258 46.6	41.89S	171.61E	0	6.1F	0.1	20	12
977	JAN 28	1800 54.5	41.90S	171.73E	17	6.3F	0.1	19	12
2300	FEB 09	1511 24.2	40.60S	173.93E	111	5.4F	0.2	42	31
2556	FEB 15	1048 10.7	42.04S	171.59E	7	6.0F	0.1	18	11
3088	FEB 24	0050 34.9	42.05S	171.57E	12R	5.1F	0.1	18	9
3990	MAR 28	0712 1.7	45.68S	166.65E	81	5.1F	0.0	16	13
5801	JUN 01	1435 50.8	45.07S	167.55E	113	5.1	0.2	22	16
6029	JUN 09	1101 35.1	40.11S	174.41E	106	5.9F	0.2	39	34
6893	JUL 12	0442 24.6	39.31S	175.97E	70	6.2F	0.2	39	32
6898	JUL 12	1125 36.3	35.83S	179.17E	169	5.1	0.1	14	11
7253	JUL 24	1358 31.4	42.21S	172.83E	70	5.0F	0.2	26	19
7466	AUG 01	1408 52.6	35.28S	178.98E	246	5.1	0.1	11	10
8340	SEP 08	1350 32.0	40.24S	175.17E	87	6.3F	0.2	42	35
8508	SEP 14	1414 42.8	39.10S	174.63E	585	5.4	0.2	40	32
8707	SEP 21	1007 29.4	39.00S	176.21E	78	5.1F	0.3	46	33
8940	SEP 30	2012 31.3	45.70S	166.81E	82	5.1F	0.1	20	14
9550	OCT 23	1438 45.0	36.98S	177.26E	217	6.0F	0.2	20	15
9604	OCT 25	2106 6.0	38.02S	176.22E	209	6.0F	0.2	35	24
10088	OCT 31	0738 57.6	37.90S	178.60E	12R	5.0F	0.1	12	10
10123	OCT 31	1422 10.3	41.82S	173.98E	45	5.1F	0.2	25	19
10503	NOV 04	0723 42.5	45.01S	167.52E	119	5.1	0.2	26	16
10883	NOV 09	1935 32.9	44.63S	167.70E	7	5.5F	0.2	19	15
11187	NOV 16	0035 40.0	37.13S	176.89E	264	6.4F	0.2	30	24
11314	NOV 20	0923 9.6	36.39S	178.64E	33R	6.3F	0.3	22	19
11561	NOV 29	2335 6.5	44.51S	167.61E	5R	5.6F	0.1	18	14
11991	DEC 12	1624 11.0	37.08S	179.27E	33R	5.2	0.1	20	19
12310	DEC 23	1506 45.1	36.13S	179.65W	60R	5.3	0.1	19	17

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 33 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 28.

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
011	JAN 01	1043 28.0	40.68S	174.37E	68	2.6	0.2	15	10
017	JAN 01	1453 23.4	40.87S	173.96E	81	2.6	0.2	13	8
022	JAN 02	0116 58.9	40.93S	174.99E	37	2.0	0.1	11	8
025	JAN 02	0326 14.2	40.58S	174.39E	13	2.4	0.2	11	7
029	JAN 02	0639 14.8	41.19S	173.86E	50	2.2	0.1	9	7
038	JAN 03	0017 50.0	41.09S	174.71E	33	3.2	0.2	22	16
040	JAN 03	0155 42.2	40.52S	173.60E	129	3.2	0.3	18	12
060	JAN 03	1447 32.7	41.61S	174.66E	28	2.2	0.2	16	13
073	JAN 04	0238 36.4	41.77S	174.36E	28	2.1	0.2	12	9
076	JAN 04	0356 11.9	41.14S	174.64E	32	2.4	0.1	19	12
084	JAN 04	1116 49.7	41.45S	174.50E	51	3.0	0.1	30	17
088	JAN 04	1659 33.2	40.86S	175.83E	33	2.0	0.1	8	6
093	JAN 04	2331 33.9	41.36S	174.73E	52	2.1	0.1	11	8
096	JAN 05	0132 43.1	41.03S	174.99E	27	2.0	0.2	13	10
097	JAN 05	0225 0.1	40.61S	175.14E	34	2.6	0.2	9	7
098	JAN 05	0344 18.0	40.91S	173.87E	74	3.2	0.2	17	13
110	JAN 05	1422 50.1	40.51S	174.62E	12R	2.1	0.2	11	7
114	JAN 05	1708 41.0	41.39S	175.07E	25	2.2	0.1	22	12
115	JAN 05	1719 29.8	41.22S	175.51E	21	2.1	0.1	12	9
125	JAN 06	0853 50.9	40.70S	174.44E	65	2.5	0.2	16	8
128	JAN 06	1018 33.0	41.22S	175.08E	27	2.0	0.1	9	7
138	JAN 06	2122 33.2	41.22S	175.22E	29	2.5	0.1	16	11
139	JAN 06	2332 54.2	41.09S	175.29E	28	2.0	0.1	13	9
141	JAN 07	0256 9.0	40.77S	175.95E	32	2.6	0.2	8	5
142	JAN 07	0530 42.5	41.04S	174.53E	36	2.3	0.1	9	7

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
145	JAN 07	1023 39.6	41.68S	173.96E	10	2.5	0.3	12	11
146	JAN 07	1345 23.6	41.08S	174.47E	36	2.2F	0.1	10	8
152	JAN 07	1818 7.0	41.58S	175.33E	12	2.1	0.0	7	6
156	JAN 07	2307 50.0	41.66S	175.36E	11	2.7	0.1	15	10
158	JAN 08	0137 33.5	40.94S	175.43E	25	2.1	0.2	10	6
160	JAN 08	0221 49.6	40.68S	174.66E	75	2.5	0.1	11	8
165	JAN 08	0601 23.8	41.22S	174.66E	32	2.2	0.1	18	11
166	JAN 08	0724 29.3	40.85S	174.60E	56	2.4	0.1	9	5
170	JAN 08	1400 38.2	40.88S	175.65E	27	3.2	0.2	17	13
171	JAN 08	1420 31.7	41.61S	175.36E	18	2.6	0.2	15	11
172	JAN 08	1726 24.4	40.70S	174.75E	27	2.2	0.2	15	11
175	JAN 08	1803 23.3	41.57S	174.21E	15	2.0	0.2	8	6
191	JAN 09	0642 58.9	40.57S	174.08E	72	2.9	0.3	18	10
193	JAN 09	0921 13.6	41.74S	174.51E	28	2.3	0.2	14	10
196	JAN 09	1103 2.7	40.96S	175.43E	26	2.0	0.1	11	8
198	JAN 09	1242 59.4	40.99S	174.52E	11	2.1	0.1	14	9
199	JAN 09	1307 28.1	41.78S	174.53E	28	2.1	0.2	11	8
201	JAN 09	1334 30.1	41.45S	174.82E	29	2.9	0.1	21	13
207	JAN 09	1550 14.9	41.05S	174.72E	60	3.9F	0.2	35	25
209	JAN 09	1607 20.8	41.58S	174.40E	15	2.3	0.2	18	14
224	JAN 10	0145 58.3	41.60S	175.37E	24	2.9	0.2	13	10
225	JAN 10	0217 35.6	41.64S	175.34E	12	2.2	0.1	11	8
226	JAN 10	0234 18.6	41.65S	175.37E	14	2.1	0.2	13	9
229	JAN 10	0448 25.3	41.94S	175.09E	31	2.5	0.1	14	11
232	JAN 10	0650 43.7	41.62S	175.38E	16	2.3	0.2	14	11
253	JAN 11	0615 23.8	41.08S	175.27E	11	2.8	0.2	20	14
257	JAN 11	1018 59.1	40.56S	175.84E	28	2.0	0.2	13	10
262	JAN 11	1308 17.5	41.27S	175.33E	26	2.0	0.1	11	7
267	JAN 11	1536 50.1	40.88S	175.03E	55	2.1	0.1	11	9
272	JAN 11	2003 30.0	41.39S	174.60E	21	2.1	0.2	13	10
300	JAN 12	2258 30.8	41.14S	175.07E	22	2.2	0.2	16	11
313	JAN 13	1356 15.8	40.71S	175.99E	28	2.2	0.2	10	7
320	JAN 13	1838 27.4	40.71S	175.14E	32	2.1	0.1	11	9
321	JAN 13	1945 48.7	41.60S	174.76E	25	2.0F	0.1	9	7
332	JAN 14	0454 49.0	41.32S	174.67E	19	2.4	0.2	15	11
335	JAN 14	0554 37.3	41.57S	174.05E	9	2.4	0.2	15	13
337	JAN 14	0859 33.3	40.99S	175.01E	45	2.1	0.1	15	11
342	JAN 14	1313 52.7	40.50S	174.11E	73	2.0	0.3	8	6
345	JAN 14	1441 8.3	40.84S	175.32E	27	2.5	0.2	19	12
349	JAN 14	1624 6.7	40.91S	174.91E	68	3.1	0.2	30	20
351	JAN 14	1728 8.0	41.16S	174.65E	32	2.4	0.2	17	12
358	JAN 14	2354 41.6	41.03S	174.98E	29	2.3	0.2	14	10
364	JAN 15	0253 31.7	40.78S	174.55E	70	2.3	0.0	10	8
367	JAN 15	0641 19.3	41.76S	174.50E	33	2.6	0.2	11	9
389	JAN 16	0039 48.9	40.89S	175.49E	29	2.7	0.1	14	10

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
393	JAN 16	0334 10.7	41.64S	175.38E	23	2.5	0.2	13	9
394	JAN 16	0347 17.4	41.62S	175.37E	15	2.3	0.1	13	9
397	JAN 16	0906 3.7	40.87S	175.06E	32	2.2	0.1	14	9
403	JAN 16	1120 6.1	41.14S	174.65E	32	2.5	0.1	14	11
404	JAN 16	1339 48.2	40.90S	175.67E	29	2.8	0.2	17	11
406	JAN 16	1914 48.4	40.70S	173.68E	92	3.2	0.2	19	14
407	JAN 16	2118 34.1	41.28S	175.33E	29	2.5	0.1	11	8
412	JAN 17	0621 1.7	41.64S	175.38E	21	2.5	0.2	13	9
414	JAN 17	0729 47.5	40.61S	175.17E	33	2.2	0.1	12	8
415	JAN 17	0755 13.5	40.96S	175.68E	34	2.6	0.1	12	10
417	JAN 17	0839 49.8	40.64S	174.55E	32	2.2	0.2	10	6
419	JAN 17	1232 19.4	41.58S	174.15E	9	2.4	0.3	14	12
430	JAN 17	2347 38.5	40.69S	175.88E	29	2.2	0.2	12	9
439	JAN 18	0539 26.7	40.99S	174.45E	63	3.1	0.1	19	13
440	JAN 18	0607 36.8	41.56S	175.36E	20	2.7	0.2	18	11
442	JAN 18	0754 26.1	41.59S	174.66E	32	2.3	0.1	14	9
443	JAN 18	0807 14.2	41.37S	174.09E	40	2.8	0.2	18	15
445	JAN 18	0931 13.5	40.70S	175.47E	30	2.1	0.1	7	5
446	JAN 18	1014 52.7	41.68S	174.50E	31	2.1	0.1	9	7
447	JAN 18	1303 30.9	40.81S	174.16E	63	2.8	0.2	17	13
451	JAN 18	1835 4.6	40.99S	175.32E	21	2.9	0.2	21	14
452	JAN 18	1949 9.3	40.98S	175.32E	27	2.7	0.2	14	10
467	JAN 19	0755 11.0	41.38S	174.55E	28	2.5	0.1	13	10
468	JAN 19	0810 39.8	41.74S	175.51E	30	2.2	0.2	10	7
474	JAN 19	1545 41.7	40.53S	174.75E	26	2.1	0.2	13	10
475	JAN 19	1641 30.7	41.12S	173.91E	59	2.2	0.1	14	8
482	JAN 19	2041 8.8	41.02S	174.80E	31	2.2	0.1	14	10
485	JAN 19	2148 32.7	40.73S	174.87E	15	2.4	0.1	11	8
486	JAN 19	2339 29.2	41.18S	175.17E	25	2.0	0.1	11	8
487	JAN 19	2344 12.3	41.59S	175.38E	24	2.4	0.2	16	10
489	JAN 20	0017 28.5	40.97S	174.61E	61	3.1	0.2	25	16
490	JAN 20	0036 27.1	41.45S	174.41E	21	2.1	0.1	10	7
494	JAN 20	0423 56.0	41.60S	175.37E	15	2.2	0.1	11	8
495	JAN 20	0437 40.9	41.62S	175.40E	24	2.8	0.2	13	11
497	JAN 20	0526 31.6	41.63S	175.39E	22	2.4	0.1	12	10
504	JAN 20	0940 59.6	41.61S	175.39E	22	2.1	0.2	12	8
530	JAN 21	0309 42.6	40.56S	174.36E	11	2.1	0.2	11	7
531	JAN 21	0341 38.3	40.56S	175.42E	34	2.3	0.1	11	9
534	JAN 21	0705 50.5	41.04S	175.35E	25	2.4	0.2	14	9
536	JAN 21	0722 54.0	40.97S	174.64E	59	2.1	0.1	12	8
542	JAN 21	1201 57.0	40.90S	173.89E	72	2.1	0.2	7	5
543	JAN 21	1342 23.5	40.54S	173.76E	98	2.7	0.2	18	10
566	JAN 22	0233 20.5	40.59S	174.35E	12	2.0	0.2	13	7
573	JAN 22	0715 35.4	41.65S	174.15E	23	2.0	0.2	12	8
575	JAN 22	0941 28.4	41.15S	174.65E	31	2.1	0.1	18	12

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
587	JAN 22	1350 22.6	41.14S	174.59E	42	2.4	0.1	14	11
588	JAN 22	1443 59.7	41.65S	175.40E	24	3.2	0.2	18	13
590	JAN 22	1552 7.1	41.22S	174.06E	51	2.6	0.2	20	13
591	JAN 22	1733 52.4	41.64S	175.38E	11	2.1	0.2	15	10
599	JAN 22	1955 34.4	40.67S	174.38E	69	2.3	0.2	10	7
606	JAN 22	2235 31.9	41.15S	173.77E	72	2.8	0.2	19	12
616	JAN 23	0658 32.0	41.30S	175.28E	27	2.0	0.1	13	8
628	JAN 23	1158 54.0	40.66S	175.88E	18	2.5	0.3	11	10
630	JAN 23	1233 41.1	41.14S	175.16E	25	2.6	0.2	16	12
635	JAN 23	1707 17.9	41.40S	174.98E	29	2.0	0.2	10	9
643	JAN 24	0029 18.6	41.29S	174.43E	38	3.0	0.1	18	13
648	JAN 24	0545 37.5	41.33S	174.66E	18	2.0	0.2	13	10
657	JAN 24	1714 53.0	40.73S	175.38E	33	3.7	0.1	23	20
658	JAN 24	1931 37.8	40.74S	175.44E	35	3.5F	0.2	27	21
672	JAN 25	0235 49.6	40.91S	175.50E	30	2.1	0.1	7	5
679	JAN 25	0857 18.9	40.76S	174.89E	33	2.1	0.2	7	6
691	JAN 25	1654 18.8	40.84S	175.12E	32	2.1	0.1	14	9
692	JAN 25	1804 9.4	40.96S	175.12E	29	2.0	0.1	11	8
695	JAN 25	2027 55.3	40.63S	174.58E	76	2.3	0.1	10	7
698	JAN 26	0111 59.6	41.66S	173.94E	18	2.0	0.2	7	5
699	JAN 26	0130 3.8	41.74S	174.32E	23	2.0	0.1	10	6
709	JAN 26	0551 48.6	41.07S	174.70E	55	2.0	0.1	11	8
712	JAN 26	0724 36.7	41.68S	174.33E	19	2.1	0.2	11	9
713	JAN 26	0745 18.2	41.65S	174.40E	5R	2.6	0.3	23	16
714	JAN 26	0820 16.7	41.66S	174.37E	12	2.1	0.2	12	9
716	JAN 26	0857 35.5	41.13S	174.13E	46	2.7	0.2	20	15
718	JAN 26	0915 21.8	41.65S	175.34E	10	2.0	0.1	11	9
722	JAN 26	1020 21.3	40.67S	175.09E	43	3.2	0.2	25	20
725	JAN 26	1133 18.1	41.59S	174.48E	11	3.0	0.3	20	15
730	JAN 26	1538 35.0	41.35S	174.61E	15	2.3	0.2	18	13
741	JAN 27	0244 33.8	41.78S	174.35E	23	2.5	0.2	13	11
746	JAN 27	0505 12.9	40.97S	175.27E	20	2.3	0.2	14	10
759	JAN 27	2156 46.5	41.58S	174.04E	36	2.6	0.3	22	15
760	JAN 27	2208 30.2	40.82S	173.80E	96	3.5	0.2	33	21
761	JAN 27	2252 11.3	41.22S	175.40E	29	2.2	0.1	11	8
762	JAN 27	2308 11.9	40.97S	175.59E	27	2.1	0.1	15	9
771	JAN 28	0922 30.5	40.85S	174.58E	47	2.4	0.2	12	8
775	JAN 28	1234 4.8	41.07S	175.56E	30	2.6	0.2	13	9
1394	JAN 29	0418 25.9	41.14S	174.65E	33	2.7	0.1	13	11
1448	JAN 29	0759 4.9	41.73S	174.47E	27	2.4	0.3	13	10
1461	JAN 29	0852 56.8	41.15S	174.72E	54	2.5	0.0	13	11
1495	JAN 29	1114 44.4	41.66S	173.60E	46	2.6	0.3	20	15
1539	JAN 29	1402 21.6	40.67S	175.54E	28	2.5	0.1	11	8
1564	JAN 29	1506 48.5	41.25S	173.78E	79	2.6	0.2	11	7
1696	JAN 30	1049 48.9	40.99S	175.12E	24	2.2	0.1	11	9

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1700	JAN 30	1213 12.5	41.07S	174.16E	50	2.3	0.1	7	5
1701	JAN 30	1219 41.3	40.67S	175.89E	31	2.5	0.2	9	6
1761	JAN 31	0919 18.7	40.50S	175.92E	38	2.6	0.0	6	4
1803	JAN 31	2120 43.5	41.28S	175.26E	30	2.8	0.1	14	10
1807	JAN 31	2214 21.2	40.99S	175.32E	23	2.6	0.1	12	9
1823	FEB 01	0344 38.9	41.02S	174.34E	42	2.2	0.1	9	6
1840	FEB 01	0957 37.0	41.52S	173.83E	49	2.9	0.2	17	13
1844	FEB 01	1157 41.4	41.31S	173.78E	61	2.3	0.2	9	6
1851	FEB 01	1721 34.3	41.65S	174.35E	3	2.4	0.2	11	9
1852	FEB 01	1740 43.1	41.61S	175.47E	24	2.3	0.3	12	10
1853	FEB 01	1742 14.3	41.64S	175.49E	24	3.1	0.3	13	11
1857	FEB 01	1922 16.4	40.80S	175.24E	29	2.5	0.1	15	11
1871	FEB 02	0139 31.9	40.80S	175.25E	29	2.1	0.2	12	8
1888	FEB 02	0530 21.4	40.97S	175.63E	27	2.1	0.1	13	9
1892	FEB 02	0642 46.0	41.43S	175.02E	24	2.5	0.1	13	10
1896	FEB 02	0749 42.8	41.17S	175.71E	23	2.5	0.2	12	10
1901	FEB 02	0959 18.4	41.33S	173.90E	50	2.2	0.2	12	10
1915	FEB 02	1512 26.5	40.82S	175.23E	27	2.3	0.1	15	11
1922	FEB 02	1655 35.6	41.01S	174.71E	57	2.7	0.0	14	10
1942	FEB 02	2142 25.6	40.91S	175.76E	29	2.0	0.2	9	8
1944	FEB 02	2156 4.5	41.41S	175.02E	27	2.3	0.1	14	12
1953	FEB 03	0134 59.1	41.71S	173.87E	33	2.4	0.1	11	9
1954	FEB 03	0143 21.1	40.53S	174.70E	30	2.2	0.2	10	8
1957	FEB 03	0245 53.7	40.97S	175.28E	21	2.0	0.2	13	10
1970	FEB 03	0652 29.4	40.82S	174.75E	38	2.1	0.1	15	10
1971	FEB 03	0717 14.0	40.98S	175.63E	27	2.1	0.1	14	10
1977	FEB 03	0920 15.1	40.79S	175.07E	33	2.1	0.1	9	7
1979	FEB 03	0940 17.0	41.64S	174.28E	6	3.0	0.3	21	18
1996	FEB 03	1534 24.0	41.30S	175.20E	23	2.0	0.1	10	7
2016	FEB 04	0029 1.9	40.78S	175.18E	30	2.0	0.2	9	7
2042	FEB 04	1228 48.3	40.62S	175.52E	27	2.6	0.2	19	15
2049	FEB 04	1528 3.1	40.94S	175.50E	18	2.0	0.2	9	6
2052	FEB 04	1617 10.3	40.70S	174.35E	46	2.4	0.1	9	6
2053	FEB 04	1635 14.3	41.71S	175.41E	13	2.0	0.2	8	6
2054	FEB 04	1728 23.5	41.44S	174.17E	35	2.4	0.2	9	7
2075	FEB 05	0357 11.1	41.57S	174.32E	26	2.0	0.1	8	5
2081	FEB 05	0643 38.7	41.48S	174.94E	41	2.1	0.0	8	6
2082	FEB 05	0657 4.0	41.71S	174.18E	11	2.5	0.3	14	12
2085	FEB 05	0722 34.2	40.51S	174.66E	22	2.2	0.2	11	7
2088	FEB 05	0934 42.2	40.78S	174.60E	28	2.5	0.3	14	9
2143	FEB 06	1250 39.6	41.24S	173.81E	59	2.3	0.1	10	8
2154	FEB 06	1630 10.5	41.21S	173.87E	64	2.6	0.2	18	11
2157	FEB 06	1836 37.3	41.65S	175.29E	11	2.1	0.2	11	8
2158	FEB 06	1838 7.7	41.62S	175.30E	18	2.1	0.2	10	8
2226	FEB 07	2122 33.2	40.78S	175.48E	32	4.0F	0.2	32	25

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2247	FEB 08	0609 16.4	40.95S	175.20E	23	2.1	0.1	10	8
2248	FEB 08	0639 31.2	40.57S	175.94E	29	2.5	0.3	9	7
2251	FEB 08	0825 42.5	40.57S	175.87E	39	2.4	0.1	12	10
2256	FEB 08	1101 7.6	40.88S	175.87E	40	2.9	0.3	22	17
2266	FEB 08	1650 53.1	41.17S	175.14E	10	2.3	0.1	13	10
2291	FEB 09	0817 13.4	40.86S	173.95E	65	2.7	0.2	18	11
2300	FEB 09	1511 24.2	40.60S	173.93E	111	5.4F	0.2	42	31
2308	FEB 09	1914 58.3	40.69S	174.45E	65	3.1	0.2	24	16
2342	FEB 10	1156 47.5	41.60S	174.78E	28	2.2	0.2	12	10
2348	FEB 10	1256 22.0	40.98S	174.12E	78	3.0F	0.2	18	13
2365	FEB 10	2155 27.1	41.34S	174.52E	8	2.2	0.2	10	9
2369	FEB 10	2322 51.0	41.77S	174.35E	28	2.1	0.2	15	12
2371	FEB 10	2328 56.9	41.57S	174.37E	9	3.7	0.3	21	19
2372	FEB 10	2335 54.4	41.58S	174.37E	8	3.3	0.3	21	18
2387	FEB 11	1022 55.0	40.87S	175.77E	30	2.4	0.2	10	8
2401	FEB 11	1618 35.7	41.37S	175.80E	14	2.1	0.0	6	5
2403	FEB 11	1703 45.2	40.99S	175.10E	31	2.4	0.0	10	8
2405	FEB 11	1734 35.6	41.13S	174.63E	56	2.5	0.1	14	11
2420	FEB 12	0054 57.9	40.93S	174.93E	35	2.1	0.1	11	9
2441	FEB 12	0955 38.4	41.68S	174.23E	1	2.0	0.2	13	9
2459	FEB 12	1624 9.8	40.94S	175.22E	25	2.0	0.1	9	8
2464	FEB 12	2033 17.9	41.75S	173.75E	45	2.1	0.3	19	11
2469	FEB 12	2259 28.9	41.19S	174.91E	30	2.3	0.1	14	10
2470	FEB 13	0030 41.2	40.70S	174.29E	57	2.4	0.2	13	9
2471	FEB 13	0037 5.8	41.63S	174.51E	30	2.6	0.2	10	8
2475	FEB 13	0255 22.4	41.76S	174.50E	30	2.7	0.2	17	13
2476	FEB 13	0313 23.2	41.12S	174.67E	34	2.1	0.0	10	7
2481	FEB 13	0617 22.0	41.41S	174.99E	25	2.0	0.1	15	9
2482	FEB 13	0814 48.6	40.89S	174.49E	65	2.5	0.1	10	8
2489	FEB 13	1209 23.2	41.77S	174.34E	13	2.0	0.1	10	7
2493	FEB 13	1351 13.2	41.19S	174.92E	29	2.0	0.1	10	8
2506	FEB 13	2251 1.7	41.33S	174.78E	53	2.9	0.2	21	13
2523	FEB 14	0750 3.2	40.51S	174.42E	40	2.0	0.0	9	5
2531	FEB 14	1058 56.3	41.27S	174.26E	37	2.3	0.2	13	9
2532	FEB 14	1110 39.6	41.00S	175.59E	28	3.0	0.1	17	12
2540	FEB 14	1829 44.0	41.04S	174.10E	58	3.3	0.3	18	15
2553	FEB 15	0657 3.4	41.75S	174.12E	14	2.5	0.3	14	11
2555	FEB 15	1014 0.8	40.98S	175.39E	9	2.0	0.1	12	8
2692	FEB 15	1528 37.5	40.67S	173.97E	76	3.2	0.2	29	19
2763	FEB 16	0304 10.6	40.53S	175.87E	28	2.5	0.2	13	9
2767	FEB 16	0355 47.6	41.67S	174.18E	5R	3.1	0.3	17	14
2773	FEB 16	0557 38.2	41.26S	173.60E	81	2.1	0.1	9	6
2781	FEB 16	0847 56.2	40.72S	174.70E	37	2.4	0.1	14	10
2795	FEB 16	1418 56.4	41.12S	174.64E	32	3.1	0.1	24	17
2806	FEB 16	1721 60.0	41.72S	174.34E	12R	2.5	0.3	18	15

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2810	FEB 16	1826 36.3	40.91S	175.66E	5R	2.7	0.2	12	12
2814	FEB 16	2022 10.4	40.58S	174.42E	54	2.1	0.2	10	6
2819	FEB 16	2232 20.2	40.97S	175.61E	32	2.4	0.1	16	11
2837	FEB 17	0532 18.3	40.50S	174.64E	21	3.3	0.2	29	20
2839	FEB 17	0717 23.4	40.85S	175.94E	36	2.5	0.2	14	10
2854	FEB 17	1250 47.8	40.69S	174.08E	73	2.9	0.2	14	9
2862	FEB 17	1715 57.1	40.55S	175.45E	11	2.2	0.3	8	7
2874	FEB 18	0019 43.4	40.70S	174.73E	66	2.5	0.1	12	8
2879	FEB 18	0408 33.2	41.16S	173.57E	84	2.3	0.1	10	5
2894	FEB 18	0858 34.7	41.11S	174.63E	33	2.4	0.1	16	11
2896	FEB 18	1200 22.3	40.95S	175.98E	26	2.2	0.2	13	8
2898	FEB 18	1303 22.1	40.59S	174.93E	37	2.2	0.1	11	7
2901	FEB 18	1535 18.7	41.64S	175.39E	14	2.3	0.2	13	9
2902	FEB 18	1535 54.7	41.63S	175.40E	13	2.5	0.2	14	10
2903	FEB 18	1547 17.2	41.61S	175.39E	16	2.0	0.2	13	9
2912	FEB 18	2111 46.9	40.87S	175.34E	28	2.1	0.1	9	6
2913	FEB 18	2121 0.0	40.87S	173.77E	10	2.2	0.0	8	4
2924	FEB 19	0630 28.9	40.50S	174.45E	5R	2.5	0.3	11	8
2925	FEB 19	0642 2.6	41.66S	175.40E	14	2.4	0.2	11	8
2929	FEB 19	0837 11.5	41.64S	175.41E	18	2.3	0.2	11	8
2935	FEB 19	1548 6.7	40.53S	174.63E	15	2.2	0.2	10	7
2936	FEB 19	1623 53.7	40.95S	175.20E	31	2.2	0.1	8	6
2942	FEB 19	2119 28.2	40.50S	174.85E	57	3.7	0.3	33	24
2943	FEB 19	2338 54.9	41.67S	175.39E	8	2.0	0.3	9	6
2947	FEB 20	0228 39.2	41.77S	174.51E	43	2.2	0.1	9	7
2951	FEB 20	0447 22.1	40.87S	175.83E	27	2.0	0.2	12	6
2952	FEB 20	0457 52.2	41.68S	175.39E	4	2.2	0.3	13	9
2954	FEB 20	0711 1.5	41.74S	174.42E	12R	2.1	0.3	11	10
2957	FEB 20	1014 4.5	40.62S	174.37E	64	2.8	0.2	11	9
2970	FEB 20	2323 59.3	41.63S	175.40E	22	3.6	0.2	26	16
2971	FEB 20	2326 58.8	41.66S	175.40E	13	2.0	0.2	14	9
2972	FEB 20	2327 42.9	41.65S	175.41E	22	3.6	0.2	23	17
2973	FEB 20	2335 41.4	40.66S	175.78E	29	2.1	0.3	9	7
2974	FEB 20	2338 55.3	41.66S	175.40E	15	2.6	0.2	12	9
2975	FEB 21	0002 9.0	41.70S	175.42E	13	2.1	0.2	11	8
2976	FEB 21	0111 3.2	41.67S	175.41E	14	2.3	0.1	12	9
2978	FEB 21	0120 9.9	41.73S	174.35E	5R	2.3	0.4	13	11
2979	FEB 21	0125 16.7	41.66S	175.39E	13	2.0	0.2	11	8
2981	FEB 21	0145 15.3	41.65S	175.40E	18	2.2	0.3	12	9
2985	FEB 21	0419 29.9	41.65S	175.41E	22	2.7	0.2	13	9
2986	FEB 21	0422 31.6	41.63S	175.41E	21	2.0	0.1	8	6
2987	FEB 21	0447 21.8	41.64S	175.40E	22	3.0	0.2	16	11
2990	FEB 21	0603 1.4	41.67S	175.41E	16	2.7	0.2	15	11
2996	FEB 21	0743 36.5	40.77S	174.04E	59	2.1	0.2	8	5
3004	FEB 21	1245 25.1	40.78S	175.38E	30	2.4	0.2	16	13

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3006	FEB 21	1252 55.3	41.66S	175.40E	13	2.0	0.1	14	10
3019	FEB 21	2055 10.5	40.59S	174.85E	33	2.4	0.1	14	10
3020	FEB 21	2115 28.7	40.62S	174.67E	65	3.4	0.2	28	21
3025	FEB 21	2319 11.2	41.48S	174.50E	20	2.1	0.2	15	12
3029	FEB 22	0025 57.8	40.61S	175.48E	30	2.4	0.2	14	11
3031	FEB 22	0139 13.7	40.61S	174.26E	87	2.2	0.1	8	6
3037	FEB 22	0454 42.6	41.06S	174.12E	51	2.4	0.1	11	8
3039	FEB 22	0719 25.0	41.60S	175.39E	19	2.7	0.2	16	11
3065	FEB 23	0523 0.4	41.88S	174.49E	27	2.3	0.1	10	7
3067	FEB 23	0924 3.4	41.19S	174.54E	58	2.0	0.0	8	6
3076	FEB 23	1413 29.4	40.78S	174.70E	50	3.7F	0.2	23	20
3082	FEB 23	1937 39.5	40.79S	174.29E	46	2.7	0.2	17	13
3083	FEB 23	1952 56.1	41.83S	174.18E	12R	2.4	0.2	14	10
3086	FEB 23	2257 54.4	40.98S	174.88E	62	2.9	0.2	24	16
3100	FEB 24	0433 35.0	41.61S	174.35E	8	2.5	0.3	18	12
3102	FEB 24	0748 1.5	41.87S	175.24E	30	2.0	0.1	6	5
3104	FEB 24	0837 40.4	40.98S	174.04E	94	2.5	0.1	10	9
3111	FEB 24	1359 30.6	40.56S	175.29E	33	2.5	0.2	15	11
3118	FEB 24	1947 54.9	40.76S	174.68E	39	2.7	0.1	18	12
3133	FEB 25	0623 7.1	41.80S	174.56E	31	3.0	0.2	24	14
3136	FEB 25	0828 29.9	40.98S	175.89E	21	2.5	0.2	12	10
3139	FEB 25	0846 21.9	40.98S	175.92E	22	2.6	0.1	13	10
3148	FEB 25	1254 6.9	40.98S	174.63E	58	3.2	0.1	20	13
3155	FEB 25	1705 55.2	41.35S	175.15E	23	2.0	0.1	14	11
3164	FEB 26	0005 5.2	40.85S	174.73E	18	2.6	0.2	17	11
3165	FEB 26	0147 48.4	41.62S	174.60E	30	2.2	0.0	10	7
3167	FEB 26	0310 36.9	41.00S	175.89E	12R	2.3	0.1	13	9
3168	FEB 26	0411 12.5	40.88S	175.79E	28	3.1	0.2	21	13
3185	FEB 27	0143 34.2	40.61S	175.46E	31	2.2	0.3	7	5
3187	FEB 27	0156 0.4	41.13S	174.70E	32	2.1	0.0	8	6
3188	FEB 27	0242 29.0	40.98S	175.90E	21	2.9	0.2	13	10
3196	FEB 27	0858 44.1	41.43S	174.39E	18	2.1	0.2	10	8
3198	FEB 27	1124 52.9	41.63S	175.34E	17	2.2	0.2	12	10
3204	FEB 27	1544 34.6	40.64S	173.97E	82	2.4	0.2	10	8
3205	FEB 27	1606 15.6	41.58S	174.41E	12	2.1	0.2	14	11
3206	FEB 27	1624 27.7	41.29S	173.82E	63	2.3	0.2	12	9
3207	FEB 27	1742 43.4	41.02S	174.49E	62	2.7	0.0	14	10
3222	FEB 28	0417 24.7	41.62S	175.40E	15	2.1	0.2	11	7
3224	FEB 28	0910 16.3	41.61S	174.28E	18	2.0	0.3	11	8
3231	FEB 28	1542 43.5	40.55S	174.01E	85	2.5	0.1	9	7
3239	MAR 01	0034 9.0	40.86S	175.76E	30	2.1	0.2	13	8
3241	MAR 01	0258 41.0	41.29S	175.00E	22	2.0	0.1	10	6
3245	MAR 01	0607 36.7	40.62S	174.46E	71	2.5	0.2	12	8
3249	MAR 01	0947 20.0	40.54S	173.84E	105	2.6	0.3	11	9
3252	MAR 01	1224 48.0	40.89S	174.58E	59	2.2	0.1	11	8

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
3253	MAR 01	1248 36.9	40.98S	173.75E	75	2.3	0.1	9	6
3254	MAR 01	1249 55.8	40.55S	174.46E	29	2.2	0.3	9	7
3257	MAR 01	1424 34.1	40.78S	174.11E	61	2.4	0.1	9	6
3261	MAR 01	1738 19.5	40.99S	175.90E	20	3.2	0.2	16	13
3262	MAR 01	1909 51.8	41.85S	174.19E	20	2.4	0.3	14	12
3269	MAR 02	0304 0.6	40.69S	174.42E	74	2.5	0.1	9	6
3270	MAR 02	0348 41.5	40.55S	174.49E	58	3.5	0.2	31	20
3274	MAR 02	0458 46.5	41.83S	174.37E	21	2.1	0.2	12	8
3276	MAR 02	0508 38.6	41.75S	174.49E	32	2.1	0.2	13	9
3281	MAR 02	0833 35.1	41.65S	175.40E	13	2.6	0.2	14	10
3282	MAR 02	0918 15.8	41.71S	174.48E	31	2.1	0.1	12	8
3286	MAR 02	1223 50.8	41.79S	174.21E	31	2.2	0.2	18	10
3289	MAR 02	1408 26.5	41.74S	174.46E	31	2.6	0.1	17	11
3290	MAR 02	1439 49.7	40.66S	174.98E	33	2.0	0.1	9	6
3296	MAR 02	1919 30.2	40.96S	175.02E	44	2.1	0.1	13	9
3298	MAR 02	2049 31.3	41.21S	175.21E	27	2.3	0.1	15	10
3306	MAR 03	0656 13.4	41.54S	174.22E	5R	3.9F	0.3	22	19
3307	MAR 03	0730 28.5	41.64S	174.53E	32	2.0	0.2	15	11
3309	MAR 03	0816 29.6	41.66S	175.35E	13	2.1	0.2	14	10
3310	MAR 03	0922 13.7	41.16S	173.91E	54	2.3	0.2	11	8
3311	MAR 03	0942 43.9	41.51S	174.93E	37	2.2	0.0	12	8
3312	MAR 03	1128 28.4	40.71S	174.43E	40	2.0	0.1	6	4
3316	MAR 03	1936 39.4	40.64S	174.57E	37	2.9	0.1	15	11
3317	MAR 03	2035 6.7	41.60S	174.36E	23	2.2	0.2	11	8
3318	MAR 03	2107 23.6	40.73S	174.31E	50	2.6	0.2	9	7
3321	MAR 03	2230 3.6	40.72S	175.06E	31	3.0	0.2	20	14
3323	MAR 03	2306 50.9	41.10S	175.11E	27	2.3	0.1	12	9
3324	MAR 03	2309 51.0	40.83S	174.79E	14	2.1	0.2	11	8
3325	MAR 04	0011 36.6	40.76S	174.57E	44	2.7	0.2	16	12
3338	MAR 04	0531 18.7	41.14S	174.01E	55	2.4	0.2	14	9
3341	MAR 04	0609 29.7	40.89S	175.81E	27	2.0	0.2	10	7
3350	MAR 04	1431 59.1	41.36S	174.64E	20	2.4	0.2	14	10
3355	MAR 05	0155 8.8	41.18S	174.48E	55	2.6	0.1	17	11
3371	MAR 05	1948 23.0	40.64S	174.06E	77	3.1	0.3	15	9
3373	MAR 06	0038 9.0	41.67S	174.32E	14	2.1	0.2	9	5
3374	MAR 06	0100 56.1	41.05S	173.80E	59	2.4	0.2	12	7
3378	MAR 06	0251 9.8	40.51S	174.46E	55	2.9	0.2	14	8
3380	MAR 06	0348 53.0	41.52S	174.26E	15	2.1	0.3	10	9
3386	MAR 06	0714 54.7	41.08S	174.42E	36	2.3	0.2	11	9
3388	MAR 06	0830 42.1	41.07S	175.05E	27	2.6	0.2	17	10
3403	MAR 07	0252 44.4	40.93S	174.91E	34	2.0	0.1	11	7
3405	MAR 07	0442 2.4	41.60S	174.66E	31	2.5	0.1	8	6
3410	MAR 07	0900 37.9	40.57S	174.45E	76	2.8	0.1	16	10
3416	MAR 07	1652 23.5	40.92S	174.56E	45	2.6	0.2	15	10
3422	MAR 08	0114 30.4	40.78S	175.22E	54	2.3	0.1	11	7

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
3423	MAR 08	0206 22.2	40.78S	175.23E	30	2.1	0.2	13	9
3426	MAR 08	0349 24.7	40.68S	175.53E	29	2.2	0.1	11	8
3438	MAR 08	1112 15.4	41.68S	175.34E	10	2.2	0.2	13	10
3453	MAR 08	2257 26.8	41.07S	175.19E	26	2.1	0.2	16	10
3464	MAR 09	0415 35.6	40.50S	174.68E	9	2.2	0.2	8	6
3471	MAR 09	0915 37.0	40.82S	174.75E	16	2.0	0.3	15	10
3472	MAR 09	1109 7.3	40.75S	175.41E	26	2.3	0.1	15	9
3474	MAR 09	1155 26.1	40.54S	175.88E	31	2.2	0.2	10	8
3488	MAR 10	0000 3.6	40.57S	174.87E	2R	3.1	0.2	23	17
3496	MAR 10	0739 12.6	40.75S	175.29E	51	2.7	0.2	22	14
3500	MAR 10	1038 45.1	40.68S	175.96E	30	2.0	0.3	8	6
3503	MAR 10	1351 2.8	41.50S	173.53E	65	3.0	0.3	24	16
3535	MAR 11	2359 24.2	40.81S	175.22E	30	2.2	0.1	13	9
3537	MAR 12	0052 43.9	41.74S	174.47E	31	2.1	0.1	11	6
3544	MAR 12	0346 24.2	40.98S	174.36E	40	2.2	0.1	9	7
3549	MAR 12	0914 12.6	41.76S	174.03E	27	2.2	0.3	13	8
3551	MAR 12	1006 24.3	40.89S	175.28E	35	2.0	0.2	13	8
3555	MAR 12	1234 25.4	41.93S	174.12E	12R	2.2	0.2	9	8
3568	MAR 13	0212 46.0	40.52S	174.18E	57	2.3	0.2	10	7
3582	MAR 13	1544 32.3	40.92S	174.71E	61	2.1	0.1	10	8
3585	MAR 13	1735 19.6	41.54S	173.75E	61	2.6	0.2	18	12
3593	MAR 14	0026 28.2	41.71S	174.19E	10	2.0	0.2	10	8
3594	MAR 14	0040 44.6	40.81S	174.61E	39	2.0	0.1	12	8
3601	MAR 14	0438 31.1	41.38S	175.47E	19	2.9	0.1	19	12
3603	MAR 14	0539 47.6	41.48S	174.03E	39	2.7	0.2	19	15
3606	MAR 14	1001 49.2	41.51S	173.59E	64	3.7	0.2	29	20
3611	MAR 14	1639 8.0	41.21S	174.95E	39	2.2	0.1	10	7
3614	MAR 14	2042 22.3	41.00S	174.52E	34	2.0	0.1	12	8
3619	MAR 15	0514 37.9	41.09S	174.76E	52	2.3	0.1	15	10
3625	MAR 15	0759 55.1	41.09S	174.87E	31	2.9	0.2	18	11
3629	MAR 15	1149 55.0	40.56S	174.50E	41	2.8	0.3	19	12
3633	MAR 15	1432 16.5	41.71S	174.27E	22	2.1	0.2	12	9
3636	MAR 15	1715 17.4	41.13S	174.79E	48	2.0	0.1	12	8
3637	MAR 15	1907 38.1	40.52S	174.42E	39	2.7	0.2	14	8
3645	MAR 16	0311 44.7	41.03S	175.29E	14	2.3	0.2	15	10
3651	MAR 16	1212 48.6	41.66S	175.27E	29	2.2	0.1	13	9
3652	MAR 16	1224 36.4	41.65S	175.26E	29	2.0	0.1	14	10
3658	MAR 16	1622 2.9	41.10S	174.30E	64	2.1	0.1	13	8
3673	MAR 17	0146 17.1	41.20S	175.26E	30	2.2	0.1	13	8
3675	MAR 17	0433 17.7	41.30S	173.53E	92	2.2	0.2	8	5
3676	MAR 17	0458 49.0	40.67S	174.62E	70	2.0	0.1	11	7
3678	MAR 17	0555 52.7	41.29S	175.29E	28	2.5	0.1	17	10
3679	MAR 17	0652 44.3	41.04S	174.51E	37	2.6	0.2	17	13
3685	MAR 17	1352 56.6	41.21S	174.60E	45	3.6F	0.1	23	21
3689	MAR 17	2116 18.5	40.71S	173.91E	81	3.3	0.3	31	20

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
3690	MAR 17	2150 52.6	40.69S	174.39E	47	2.0	0.1	12	6
3692	MAR 18	0055 10.2	41.52S	174.50E	19	2.0	0.2	16	11
3697	MAR 18	0605 28.5	40.76S	174.77E	39	2.5	0.1	15	10
3700	MAR 18	0619 0.2	40.94S	175.53E	25	2.0	0.1	13	8
3717	MAR 18	1402 40.6	40.58S	175.14E	32	2.5	0.3	21	17
3720	MAR 18	1538 13.9	41.52S	173.98E	40	2.2	0.3	15	12
3724	MAR 18	1759 40.6	41.19S	173.70E	80	2.8	0.2	20	16
3725	MAR 18	1845 58.4	40.88S	175.82E	29	3.0	0.2	15	13
3739	MAR 19	1622 28.3	41.68S	175.36E	8	2.2	0.2	15	10
3745	MAR 19	1907 15.9	40.70S	174.59E	73	2.4	0.2	15	10
3751	MAR 20	0037 55.6	41.34S	175.08E	25	2.3	0.1	13	10
3753	MAR 20	0328 54.1	41.19S	174.49E	33	2.0	0.1	8	6
3755	MAR 20	0544 45.4	40.82S	174.47E	66	2.4	0.1	12	8
3762	MAR 20	1138 20.8	41.22S	175.21E	24	2.2	0.2	17	12
3763	MAR 20	1705 29.8	41.10S	173.88E	61	2.1	0.0	8	5
3779	MAR 21	1107 38.3	40.57S	175.49E	28	2.5	0.3	16	13
3780	MAR 21	1128 27.2	40.97S	175.58E	26	2.9	0.1	16	12
3789	MAR 21	2019 21.2	40.54S	174.71E	46	3.4	0.1	26	20
3795	MAR 22	0159 17.1	40.54S	174.69E	35	3.2	0.2	24	19
3797	MAR 22	0231 24.8	40.98S	174.52E	11	2.1	0.2	10	6
3802	MAR 22	0418 50.4	40.56S	173.68E	95	2.9	0.4	23	13
3814	MAR 22	1333 1.2	41.13S	173.53E	78	2.2	0.2	12	6
3833	MAR 22	2357 37.6	40.59S	174.65E	45	3.0	0.2	25	18
3834	MAR 23	0105 49.9	41.64S	174.61E	30	2.1	0.2	14	10
3836	MAR 23	0121 21.9	40.51S	175.44E	21	2.5	0.3	18	12
3837	MAR 23	0159 49.1	40.54S	174.98E	30	2.1	0.1	12	7
3846	MAR 23	1002 8.2	41.17S	174.69E	33	2.0	0.1	11	8
3850	MAR 23	1322 36.8	41.71S	174.00E	34	3.8	0.3	23	19
3851	MAR 23	1334 55.3	40.60S	174.34E	56	2.2	0.1	13	9
3861	MAR 23	2029 5.8	40.53S	173.87E	117	2.3	0.1	8	5
3869	MAR 24	0905 47.2	41.57S	174.28E	3	2.1	0.3	14	10
3875	MAR 24	1323 44.5	40.54S	174.61E	73	2.5	0.2	15	9
3880	MAR 24	1504 49.1	41.05S	174.78E	58	2.3	0.1	15	9
3882	MAR 24	1517 8.8	41.23S	174.46E	59	2.6	0.1	19	12
3895	MAR 24	2052 56.1	41.76S	173.85E	49	2.4	0.1	16	8
3899	MAR 24	2151 33.2	41.08S	173.93E	57	2.4	0.1	11	6
3902	MAR 25	0200 40.1	40.88S	175.79E	27	2.0	0.1	11	6
3917	MAR 25	1538 38.5	40.83S	174.48E	43	2.0	0.1	11	8
3919	MAR 25	1622 39.5	40.55S	174.65E	73	2.2	0.1	12	7
3926	MAR 25	2337 19.8	40.84S	174.54E	30	2.2	0.2	12	6
3931	MAR 26	0253 11.6	41.14S	175.65E	23	2.4	0.1	10	9
3964	MAR 27	0814 21.6	40.83S	173.54E	88	2.2	0.1	9	4
3970	MAR 27	1927 12.3	40.86S	175.59E	25	2.9	0.1	18	13
3971	MAR 27	2028 43.6	41.77S	174.52E	34	2.4	0.2	19	13
3973	MAR 27	2216 17.6	40.99S	174.47E	42	2.4	0.2	15	10

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3983	MAR 28	0444 27.8	41.63S	174.29E	18	2.3	0.2	10	8
3984	MAR 28	0451 52.9	41.09S	174.74E	30	2.0	0.1	5	4
3985	MAR 28	0519 8.9	40.51S	174.41E	33	2.1	0.2	11	6
3991	MAR 28	0721 7.3	40.78S	173.55E	91	2.4	0.1	7	5
3993	MAR 28	1103 27.7	41.84S	174.20E	13	2.5	0.3	13	9
3995	MAR 28	1214 59.1	41.71S	174.00E	31	2.1	0.2	12	8
4007	MAR 28	1749 19.2	41.10S	175.04E	27	2.1	0.2	11	7
4011	MAR 28	2033 44.8	41.00S	175.56E	26	2.2	0.1	12	8
4012	MAR 28	2112 30.1	41.04S	175.35E	24	2.3	0.2	17	12
4015	MAR 28	2348 13.1	41.76S	174.24E	14	2.1	0.1	12	8
4017	MAR 29	0302 29.1	40.93S	175.17E	38	2.5	0.1	14	10
4019	MAR 29	0346 27.0	41.80S	173.78E	5	2.6	0.2	12	9
4025	MAR 29	0759 5.0	41.58S	174.33E	27	2.6	0.2	22	15
4032	MAR 29	1833 18.9	40.89S	175.31E	32	2.1	0.1	13	9
4040	MAR 30	0333 45.5	40.53S	174.86E	5R	2.3	0.2	10	7
4047	MAR 30	0751 11.4	40.81S	173.78E	140	2.6	0.1	12	8
4050	MAR 30	0931 52.0	41.00S	175.57E	27	2.5	0.1	14	9
4065	MAR 30	1711 18.5	41.71S	174.49E	33	2.1	0.1	8	6
4074	MAR 30	2252 38.0	40.71S	174.90E	25	2.1	0.2	14	10
4075	MAR 30	2355 24.9	41.08S	174.82E	57	3.7F	0.2	26	23
4080	MAR 31	0338 28.6	41.47S	174.63E	54	2.3	0.1	13	10
4085	MAR 31	0546 27.6	41.36S	174.85E	31	2.0	0.1	15	10
4124	APR 01	1816 49.4	40.89S	174.87E	20	2.5	0.3	16	11
4144	APR 02	1422 20.5	40.97S	175.29E	27	2.7	0.3	17	12
4145	APR 02	1428 32.6	40.97S	175.28E	26	2.1	0.2	16	10
4152	APR 02	1806 12.6	40.64S	175.94E	26	2.7	0.3	13	10
4155	APR 02	2152 48.9	40.62S	175.94E	26	2.4	0.3	10	7
4159	APR 03	0212 26.0	41.50S	174.54E	55	2.8	0.1	17	11
4160	APR 03	0258 3.9	41.83S	174.14E	15	2.2	0.2	10	9
4164	APR 03	0522 12.3	40.53S	174.07E	57	2.8	0.3	15	10
4166	APR 03	0634 12.1	40.77S	173.53E	100	2.7	0.2	14	8
4168	APR 03	1041 47.9	41.75S	174.10E	12R	2.5	0.2	14	12
4176	APR 03	1755 36.2	41.62S	174.66E	28	2.5	0.2	15	11
4180	APR 03	2215 52.7	40.50S	174.28E	92	3.0	0.1	12	10
4184	APR 04	0438 44.9	40.66S	174.25E	65	3.4	0.2	21	18
4187	APR 04	1146 45.8	41.43S	174.24E	61	2.2	0.1	8	5
4197	APR 05	0031 9.9	40.91S	175.17E	29	2.3	0.2	7	5
4199	APR 05	0125 4.9	41.83S	173.65E	26	2.5	0.3	14	10
4204	APR 05	0527 38.6	41.47S	174.63E	52	3.0	0.1	22	15
4208	APR 05	0834 11.5	41.71S	173.55E	45	2.3	0.1	8	3
4209	APR 05	0914 20.0	40.50S	175.90E	32	2.4	0.2	10	8
4218	APR 05	2016 10.3	41.14S	174.60E	42	2.1	0.1	9	7
4219	APR 05	2100 24.3	41.28S	174.97E	26	2.2	0.1	10	8
4220	APR 05	2200 32.9	40.76S	174.02E	79	3.2	0.3	20	11
4234	APR 06	0947 55.1	40.68S	174.17E	73	3.1	0.2	22	18

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4250	APR 06	1843 29.3	41.75S	175.46E	33	2.3	0.1	10	8
4251	APR 06	1851 30.9	41.41S	174.70E	21	2.0	0.1	14	11
4252	APR 06	1936 29.3	40.64S	174.32E	49	2.0	0.1	11	7
4254	APR 06	2344 6.2	40.91S	175.20E	24	2.6	0.2	16	12
4256	APR 07	0422 51.2	41.43S	174.41E	30	2.2	0.1	10	7
4258	APR 07	0632 48.1	40.72S	174.76E	38	2.1	0.1	10	6
4261	APR 07	0731 45.9	40.82S	174.76E	15	2.4	0.3	17	11
4262	APR 07	0750 23.0	41.28S	175.28E	21	2.2	0.1	13	9
4268	APR 07	1249 35.4	40.97S	175.30E	23	2.5	0.3	14	11
4269	APR 07	1417 37.8	41.21S	174.36E	34	2.7	0.2	13	9
4272	APR 07	1659 51.7	41.87S	174.05E	26	2.7	0.2	10	8
4278	APR 08	0156 30.7	41.77S	174.54E	34	2.3	0.2	10	8
4286	APR 08	0921 31.2	40.97S	173.97E	73	2.3	0.1	7	4
4287	APR 08	1012 3.4	41.32S	173.51E	89	2.7	0.2	12	7
4291	APR 08	1500 48.1	40.54S	174.77E	32	2.4	0.2	9	7
4297	APR 08	2153 5.1	41.65S	173.53E	27	2.7	0.2	20	10
4300	APR 08	2258 32.8	40.90S	175.75E	27	2.4	0.2	11	7
4307	APR 09	0409 24.6	41.45S	175.60E	26	2.7	0.2	13	8
4310	APR 09	0523 15.9	41.65S	174.21E	4	2.9	0.4	18	15
4311	APR 09	0544 18.4	41.69S	174.18E	12R	2.2	0.1	9	6
4312	APR 09	0545 58.1	41.69S	174.19E	12R	2.3	0.1	10	7
4315	APR 09	0848 40.5	41.62S	174.30E	4	3.5	0.3	19	15
4318	APR 09	0943 57.1	40.87S	175.49E	23	2.0	0.1	9	5
4323	APR 09	1556 7.2	40.51S	174.77E	32	2.3	0.1	9	6
4325	APR 09	1705 20.8	40.67S	174.07E	70	2.4	0.2	8	6
4326	APR 09	1840 13.7	40.92S	174.33E	46	2.4	0.2	6	5
4334	APR 10	0110 14.5	41.02S	174.60E	11	2.4	0.2	12	8
4353	APR 10	0404 39.6	41.29S	175.00E	24	2.0	0.0	6	4
4359	APR 10	0535 47.0	41.01S	175.24E	20	2.1	0.3	5	3
4365	APR 10	0957 46.6	40.65S	174.38E	36	2.0	0.1	9	6
4374	APR 10	1725 11.9	40.89S	175.02E	32	2.4	0.1	12	8
4384	APR 11	0442 17.0	41.70S	174.47E	27	2.8	0.1	14	8
4405	APR 12	0536 59.4	40.85S	175.12E	31	2.3	0.1	14	10
4407	APR 12	0701 29.1	40.91S	174.61E	33R	2.2	0.3	14	10
4411	APR 12	0958 3.5	40.92S	175.18E	15	3.0	0.2	24	17
4412	APR 12	0958 49.4	40.90S	175.20E	31	2.6	0.2	11	8
4414	APR 12	1135 35.2	41.62S	173.80E	33	2.1	0.0	5	3
4417	APR 12	1326 8.8	41.12S	174.48E	56	2.4	0.0	8	6
4419	APR 12	1539 17.9	41.62S	175.44E	24	2.3	0.3	10	8
4420	APR 12	1544 7.3	40.91S	175.68E	26	2.1	0.2	10	6
4421	APR 12	1759 12.3	40.90S	175.23E	35	2.0	0.2	13	7
4422	APR 12	1817 31.2	41.00S	175.03E	43	2.1	0.0	14	10
4426	APR 12	1922 16.8	40.98S	175.37E	6	2.4	0.2	17	12
4452	APR 13	1940 30.4	40.50S	174.52E	77	2.1	0.1	7	5
4453	APR 13	2134 57.0	41.22S	173.85E	53	2.6	0.2	14	10

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
4473	APR 14	1606 46.0	41.44S	174.62E	51	3.0	0.1	25	14
4477	APR 14	1912 48.2	40.87S	174.60E	55	2.1	0.1	9	6
4481	APR 14	2347 33.2	41.04S	173.64E	32	2.2	0.2	8	5
4487	APR 15	0403 12.5	41.35S	174.85E	27	2.0	0.0	9	7
4498	APR 15	1436 47.7	40.84S	174.53E	25	2.2	0.2	9	7
4500	APR 15	1649 43.9	40.83S	174.76E	17	2.2	0.3	13	7
4511	APR 16	0800 55.8	41.18S	173.84E	53	2.5	0.2	13	8
4514	APR 16	1009 25.6	41.34S	173.82E	49	2.5	0.2	15	10
4517	APR 16	1147 28.4	41.66S	174.63E	31	2.3	0.2	14	10
4520	APR 16	1416 41.4	41.26S	173.76E	56	2.3	0.1	8	5
4526	APR 16	1912 41.8	40.53S	174.87E	26	2.8	0.2	18	12
4535	APR 17	0613 12.6	40.97S	174.82E	48	2.3	0.1	12	9
4538	APR 17	0923 9.5	41.06S	174.55E	34	2.5	0.1	17	11
4539	APR 17	1018 32.2	40.57S	174.04E	82	2.6	0.2	19	12
4549	APR 17	1406 5.5	41.29S	175.21E	23	3.1	0.1	20	15
4550	APR 17	1407 14.2	41.30S	175.21E	27	3.4	0.2	24	16
4551	APR 17	1410 17.2	41.28S	175.20E	22	2.5	0.2	15	12
4556	APR 17	1644 28.7	41.29S	175.19E	22	2.1	0.1	17	12
4563	APR 18	0016 19.9	40.56S	174.11E	72	2.2	0.1	12	6
4565	APR 18	0113 2.7	40.85S	174.74E	17	2.3	0.2	18	10
4577	APR 18	0632 15.4	41.46S	173.71E	56	2.3	0.2	19	12
4579	APR 18	0710 33.9	41.64S	174.36E	7	2.5	0.3	21	14
4585	APR 18	1537 54.3	40.90S	175.06E	32	2.7	0.2	16	13
4587	APR 18	1759 27.2	41.02S	175.32E	13	2.1	0.2	12	9
4588	APR 18	1948 36.2	41.31S	174.66E	19	2.2	0.3	13	9
4593	APR 19	0240 24.4	40.97S	175.21E	28	3.0	0.2	20	13
4595	APR 19	0305 47.3	40.98S	175.22E	26	2.0	0.2	10	6
4596	APR 19	0311 5.8	40.98S	175.20E	27	2.0	0.2	9	5
4599	APR 19	0352 11.9	41.30S	175.20E	17	2.1	0.1	12	9
4608	APR 19	1322 10.8	40.50S	174.37E	25	2.2	0.1	9	6
4618	APR 19	1946 53.3	40.78S	174.48E	74	3.4	0.1	22	15
4624	APR 20	0537 6.4	40.62S	175.50E	31	2.0	0.1	8	6
4626	APR 20	0918 27.7	41.62S	174.64E	25	2.4	0.2	11	8
4627	APR 20	0950 13.1	41.79S	174.75E	31	2.3	0.1	9	6
4628	APR 20	0952 4.9	41.40S	174.07E	49	3.3	0.3	26	17
4629	APR 20	1123 17.3	41.65S	174.36E	9	3.1	0.3	26	18
4630	APR 20	1327 49.7	40.63S	173.99E	81	2.7	0.2	12	6
4631	APR 20	1343 1.4	41.61S	174.33E	21	2.4	0.1	9	7
4634	APR 20	1804 55.4	40.90S	174.09E	78	2.8	0.2	13	9
4637	APR 20	2339 10.8	41.30S	175.20E	22	2.2	0.1	9	7
4641	APR 21	0638 30.9	40.81S	174.77E	29	2.3	0.4	10	8
4642	APR 21	0638 35.2	40.82S	174.77E	12	2.5	0.2	13	8
4644	APR 21	0723 28.9	41.30S	173.56E	103	2.3	0.2	10	7
4658	APR 21	1635 43.3	41.70S	174.67E	30	2.2	0.1	11	8
4659	APR 21	1725 43.9	41.26S	175.18E	24	2.8	0.2	19	13

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
4664	APR 21	2234 13.9	40.85S	175.81E	35	2.0	0.2	8	6
4665	APR 21	2252 47.1	41.09S	175.56E	37	2.8	0.1	17	13
4667	APR 22	0041 26.7	41.63S	175.02E	27	2.4	0.1	16	10
4671	APR 22	0234 10.8	40.91S	175.80E	29	2.1	0.2	14	10
4674	APR 22	0615 41.3	41.30S	175.19E	22	2.0	0.2	11	8
4687	APR 22	1816 35.1	40.54S	174.38E	60	2.2	0.1	12	7
4694	APR 23	0011 8.5	41.29S	175.28E	28	2.4	0.1	17	11
4700	APR 23	0442 16.5	41.06S	175.18E	18	2.5	0.2	15	11
4702	APR 23	0944 25.4	41.18S	174.93E	29	2.6	0.2	19	13
4704	APR 23	1134 45.2	40.83S	174.73E	11	2.6	0.2	20	13
4707	APR 23	1315 6.3	41.01S	174.54E	9	2.0	0.1	10	7
4708	APR 23	1326 46.9	40.74S	175.76E	28	2.0	0.2	13	9
4711	APR 23	1618 43.9	41.39S	175.44E	22	2.2	0.2	14	10
4716	APR 24	0153 50.0	40.65S	174.08E	79	2.4	0.0	8	5
4722	APR 24	0905 0.0	40.52S	174.17E	79	2.8	0.3	20	13
4724	APR 24	1401 24.7	40.90S	175.09E	31	2.1	0.1	11	8
4728	APR 24	1626 56.9	40.53S	174.42E	85	3.7	0.2	32	20
4729	APR 24	1710 53.7	40.55S	175.48E	32	2.2	0.1	6	4
4730	APR 24	1723 52.6	40.95S	175.46E	23	2.3	0.3	11	10
4735	APR 24	2106 42.5	41.57S	175.44E	18	2.2	0.2	10	8
4737	APR 24	2226 24.9	40.57S	173.55E	143	3.0	0.3	18	13
4738	APR 25	0008 17.6	40.85S	175.07E	36	2.3	0.2	10	8
4742	APR 25	0412 50.9	41.10S	174.07E	50	2.7	0.2	15	10
4744	APR 25	0704 45.5	40.56S	174.13E	67	2.2	0.3	9	6
4747	APR 25	1228 19.4	41.68S	174.95E	28	2.0	0.1	9	5
4748	APR 25	1344 11.9	41.00S	175.61E	25	2.0	0.2	13	9
4750	APR 25	1435 22.4	40.53S	173.89E	104	2.9	0.2	21	14
4757	APR 25	2202 57.8	41.31S	175.67E	19	2.4	0.2	13	9
4761	APR 26	0143 16.8	41.09S	174.89E	29	2.5	0.1	19	13
4762	APR 26	0221 51.8	40.80S	175.26E	27	2.0	0.2	10	6
4763	APR 26	0254 35.8	40.73S	174.78E	40	2.2	0.0	8	5
4767	APR 26	1002 1.2	40.78S	175.28E	30	2.7	0.2	17	13
4775	APR 26	1512 55.2	41.31S	173.75E	75	3.4	0.3	25	19
4784	APR 26	2140 5.8	41.47S	174.50E	47	2.6	0.2	16	13
4785	APR 26	2248 59.4	41.31S	175.25E	25	2.0	0.1	13	10
4786	APR 26	2330 56.9	40.64S	174.26E	79	2.4	0.1	9	7
4788	APR 27	0026 59.9	41.65S	174.96E	29	2.5	0.1	12	10
4791	APR 27	0248 44.3	41.10S	173.91E	60	2.6	0.2	13	9
4794	APR 27	0547 39.2	41.29S	175.19E	22	2.0	0.1	14	10
4795	APR 27	0554 5.6	41.50S	174.62E	19	2.2	0.2	16	13
4796	APR 27	0629 55.6	40.62S	174.37E	45	2.6	0.1	20	12
4798	APR 27	0810 45.3	40.87S	175.53E	24	2.2	0.1	14	10
4807	APR 27	1224 59.3	41.06S	173.67E	76	2.3	0.1	10	6
4809	APR 27	1442 8.7	40.64S	174.44E	72	2.6	0.1	17	12
4815	APR 27	1731 39.1	41.95S	174.36E	30	2.2	0.1	8	5

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
4820	APR 27	2129 28.7	41.79S	174.55E	28	2.5	0.2	13	11
4825	APR 28	0452 17.5	41.16S	174.40E	34	2.1	0.2	11	8
4828	APR 28	0911 38.8	41.44S	174.03E	36	2.8	0.2	19	14
4841	APR 28	2054 47.2	41.91S	174.00E	9	2.2	0.1	7	5
4858	APR 29	0931 44.2	40.62S	175.24E	34	2.0	0.1	8	5
4859	APR 29	1042 27.1	40.92S	175.25E	19	2.3	0.3	15	11
4869	APR 29	2305 11.2	40.85S	173.53E	144	2.5	0.0	8	5
4876	APR 30	0759 52.3	40.80S	174.99E	53	2.6	0.1	16	12
4881	APR 30	1247 42.9	40.86S	174.41E	64	3.3	0.2	27	18
4883	APR 30	1545 40.1	41.33S	174.63E	28	2.0	0.1	10	8
4886	APR 30	1725 13.0	40.98S	175.20E	28	2.5	0.2	13	11
4887	APR 30	1906 32.3	40.80S	174.38E	61	2.5	0.2	8	7
4890	APR 30	2212 2.3	40.76S	174.52E	67	2.1	0.2	9	7
4892	APR 30	2303 25.3	40.59S	174.33E	16	2.8	0.2	13	11
4907	MAY 01	1239 56.7	40.68S	175.81E	24	2.2	0.2	9	7
4909	MAY 01	1300 2.3	40.55S	175.45E	32	2.1	0.1	6	4
4922	MAY 02	0137 18.4	40.57S	175.28E	32	2.7	0.2	17	13
4924	MAY 02	0249 4.4	40.72S	174.33E	50	2.2	0.1	8	5
4929	MAY 02	0433 34.9	40.72S	174.35E	47	2.0	0.1	7	5
4931	MAY 02	0636 30.1	40.79S	174.66E	5	2.1	0.3	13	8
4933	MAY 02	0640 1.2	40.77S	174.65E	8	2.0	0.2	10	6
4935	MAY 02	0736 52.3	41.56S	174.41E	15	2.2	0.2	19	15
4937	MAY 02	0848 58.2	41.01S	174.43E	66	2.1	0.1	10	8
4938	MAY 02	1125 40.3	40.86S	174.65E	39	2.6	0.2	17	12
4945	MAY 02	1514 34.2	41.87S	174.25E	12R	2.3	0.2	11	10
4950	MAY 02	2047 52.5	41.74S	174.20E	13	2.4	0.2	10	8
4955	MAY 03	0158 43.4	41.35S	175.30E	12	2.1	0.2	17	11
4957	MAY 03	0416 3.3	40.82S	174.76E	17	2.2	0.2	15	9
4968	MAY 03	1218 1.8	41.03S	174.11E	60	3.2	0.2	24	17
4969	MAY 03	1237 29.8	40.77S	174.72E	5R	3.0	0.2	21	17
4977	MAY 03	1752 25.3	41.05S	173.95E	67	3.2	0.2	22	16
4983	MAY 03	2124 31.8	41.71S	174.60E	33	2.2	0.1	13	9
4984	MAY 03	2146 28.6	41.12S	173.89E	66	3.4	0.1	26	18
4986	MAY 03	2243 20.2	41.92S	173.88E	14	2.8	0.1	19	12
4987	MAY 03	2248 33.3	40.68S	174.62E	70	2.7	0.2	15	11
4991	MAY 03	2301 55.6	41.25S	174.60E	35	2.7	0.1	19	13
4992	MAY 04	0040 7.6	41.69S	174.60E	30	2.6	0.2	20	14
4993	MAY 04	0047 44.5	41.67S	174.59E	30	2.4	0.2	19	12
4995	MAY 04	0149 43.3	41.09S	174.68E	53	2.0	0.0	7	5
4998	MAY 04	0446 22.9	41.42S	174.59E	45	2.1	0.1	9	6
4999	MAY 04	0515 41.1	41.88S	174.49E	25	2.2	0.1	10	6
5000	MAY 04	0521 5.2	41.26S	173.58E	92	2.4	0.1	11	8
5006	MAY 04	1045 13.7	41.41S	174.55E	30	2.1	0.1	12	9
5011	MAY 04	1734 16.9	41.79S	174.56E	33	2.5	0.1	18	13
5012	MAY 04	1740 26.3	40.72S	174.95E	23	2.2	0.2	15	10

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
5021	MAY 05	0228 40.2	41.61S	175.47E	28	3.2	0.3	23	15
5022	MAY 05	0237 51.2	41.57S	175.45E	26	2.4	0.3	17	12
5027	MAY 05	0742 31.1	40.52S	174.04E	62	2.8	0.3	18	11
5028	MAY 05	0754 21.2	41.60S	175.45E	25	2.5	0.3	18	12
5029	MAY 05	0822 31.7	41.30S	175.23E	31	2.2	0.1	17	12
5030	MAY 05	0955 48.4	41.38S	174.84E	27	2.0	0.1	12	8
5040	MAY 05	1139 20.6	40.58S	175.67E	36	4.3F	0.2	34	28
5042	MAY 05	1235 17.6	41.98S	174.03E	9	2.2	0.2	6	5
5043	MAY 05	1319 53.6	41.92S	174.27E	31	2.4	0.1	11	7
5046	MAY 05	1538 1.9	40.85S	174.76E	16	2.0	0.2	13	8
5053	MAY 06	0323 42.8	40.84S	174.78E	16	2.6	0.3	17	12
5059	MAY 06	1044 1.6	41.06S	174.21E	51	2.7	0.3	18	9
5062	MAY 06	1603 55.4	41.23S	175.82E	25	2.0	0.1	9	6
5066	MAY 06	1835 10.2	41.21S	174.62E	31	2.4	0.1	16	10
5068	MAY 06	2012 52.9	41.19S	173.99E	52	2.4	0.1	6	4
5072	MAY 07	0002 35.0	41.46S	173.59E	85	2.5	0.1	9	6
5080	MAY 07	1220 18.7	40.59S	175.67E	26	2.5	0.3	19	14
5082	MAY 07	1259 55.0	40.57S	175.91E	29	2.3	0.2	11	8
5085	MAY 07	1539 23.2	40.51S	174.47E	66	2.7	0.3	19	11
5092	MAY 07	2027 14.0	40.60S	175.76E	31	2.6	0.2	16	12
5112	MAY 08	1437 2.6	41.51S	174.62E	53	3.3	0.2	32	20
5120	MAY 08	1835 46.7	41.37S	174.51E	54	2.0	0.1	9	6
5122	MAY 08	1939 40.0	41.57S	174.37E	9	3.8	0.3	24	18
5123	MAY 08	1948 23.2	41.58S	174.38E	15	2.5	0.2	16	12
5124	MAY 08	1958 3.8	41.58S	174.39E	11	3.3	0.3	23	19
5127	MAY 08	2230 44.4	40.72S	175.37E	27	2.2	0.1	10	8
5128	MAY 08	2252 25.3	41.61S	174.66E	29	2.0	0.0	7	5
5129	MAY 08	2313 22.5	40.76S	175.88E	24	3.4	0.2	20	14
5144	MAY 09	1040 22.3	41.01S	175.20E	23	3.3	0.3	24	19
5151	MAY 09	1555 18.6	41.68S	174.00E	41	2.5	0.2	15	12
5152	MAY 09	1650 10.6	41.23S	173.98E	58	2.0	0.1	7	4
5153	MAY 09	1928 3.3	40.96S	173.96E	56	2.4	0.2	9	6
5154	MAY 09	1929 27.5	40.81S	174.75E	5R	2.0	0.2	6	5
5155	MAY 09	2006 31.2	41.29S	174.50E	56	2.9	0.1	17	10
5156	MAY 09	2351 58.8	41.09S	174.87E	31	2.2	0.1	16	11
5157	MAY 10	0009 43.5	40.70S	175.33E	29	2.3	0.2	17	12
5159	MAY 10	0144 48.7	40.82S	174.89E	55	2.7	0.1	14	10
5165	MAY 10	0344 40.2	40.60S	175.11E	34	2.0	0.2	10	6
5181	MAY 10	1633 52.2	41.37S	175.13E	26	2.0	0.1	14	10
5185	MAY 10	1900 49.0	40.75S	175.69E	26	2.3	0.1	14	10
5186	MAY 10	1944 49.8	41.08S	175.40E	24	2.0	0.1	14	8
5187	MAY 10	1954 32.6	41.09S	174.71E	51	2.4	0.1	15	11
5188	MAY 10	2144 28.4	41.29S	175.26E	28	2.0	0.1	8	6
5201	MAY 11	0526 43.8	41.28S	175.73E	18	2.2	0.1	16	12
5204	MAY 11	0647 44.2	41.10S	175.46E	26	2.0	0.1	15	10

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
5205	MAY 11	0811 38.7	41.21S	175.21E	25	2.1	0.2	17	12
5210	MAY 11	1425 48.8	41.13S	174.16E	49	2.2	0.1	12	9
5215	MAY 11	1948 37.5	41.25S	175.25E	23	2.0	0.2	15	10
5217	MAY 11	2050 3.5	41.73S	174.61E	28	2.3	0.2	11	8
5218	MAY 11	2118 58.9	40.78S	173.83E	76	2.3	0.1	9	6
5225	MAY 12	0339 9.6	41.50S	174.62E	20	2.9	0.2	22	15
5227	MAY 12	0358 24.6	41.71S	174.11E	11	2.2	0.2	14	10
5242	MAY 12	1345 59.5	40.51S	174.15E	55	2.0	0.2	9	6
5244	MAY 12	1501 56.8	40.93S	174.94E	34	2.3	0.1	13	10
5246	MAY 12	1710 3.7	40.77S	174.56E	64	2.4	0.1	13	8
5254	MAY 13	0130 0.4	40.90S	175.54E	23	2.3	0.1	11	8
5262	MAY 13	0546 56.9	40.84S	174.80E	21	2.1	0.2	10	5
5264	MAY 13	0627 55.7	41.18S	173.93E	54	2.5	0.2	9	6
5265	MAY 13	0658 0.5	41.06S	174.42E	64	2.8	0.1	16	12
5266	MAY 13	0751 4.3	40.57S	173.72E	100	2.6	0.2	13	8
5267	MAY 13	0801 22.8	40.83S	174.77E	16	2.3	0.2	14	10
5289	MAY 14	0416 22.1	41.21S	174.18E	39	2.3	0.2	13	9
5296	MAY 14	0643 18.0	40.89S	175.69E	30	2.0	0.1	11	7
5299	MAY 14	1342 33.3	40.67S	174.20E	55	2.3	0.2	12	8
5303	MAY 14	1520 13.2	41.58S	174.84E	27	2.8	0.1	19	13
5306	MAY 14	1546 3.8	41.57S	174.84E	26	2.0	0.1	14	10
5308	MAY 14	1853 2.2	41.72S	174.74E	28	2.0	0.1	10	7
5315	MAY 15	0207 31.0	40.75S	174.78E	39	2.0	0.1	11	7
5318	MAY 15	0339 2.1	40.89S	175.93E	28	2.0	0.2	9	7
5319	MAY 15	0526 45.4	40.71S	174.85E	14	2.2	0.2	12	7
5324	MAY 15	0948 34.8	41.62S	174.66E	31	2.6	0.2	17	12
5341	MAY 16	0419 0.7	41.73S	174.52E	33	2.6	0.1	11	8
5343	MAY 16	0716 43.5	40.84S	174.78E	16	2.6	0.3	14	10
5344	MAY 16	0933 35.8	41.09S	174.43E	35	2.6	0.2	14	10
5366	MAY 17	0935 40.9	41.35S	174.19E	39	3.1	0.2	13	10
5367	MAY 17	1310 29.9	41.11S	174.74E	56	3.1	0.1	12	8
5369	MAY 17	1426 19.9	41.40S	174.67E	20	2.0	0.2	11	8
5371	MAY 17	1702 59.5	41.36S	174.83E	30	2.5	0.1	10	8
5378	MAY 18	0312 50.2	41.14S	174.96E	17	2.3	0.3	18	11
5379	MAY 18	0315 8.3	40.77S	174.55E	65	2.1	0.1	8	5
5381	MAY 18	0548 0.8	40.91S	175.29E	28	2.0	0.1	8	6
5384	MAY 18	0905 56.5	40.60S	175.33E	32	2.1	0.1	6	4
5385	MAY 18	0922 38.0	41.41S	174.15E	36	2.3	0.3	11	8
5386	MAY 18	1003 24.1	41.61S	173.70E	47	2.7	0.2	14	9
5387	MAY 18	1009 47.1	41.73S	173.94E	32	2.3	0.1	6	5
5394	MAY 18	1656 55.0	40.85S	174.72E	48	2.0	0.1	12	7
5404	MAY 19	0152 7.5	41.06S	173.89E	52	2.4	0.2	9	6
5405	MAY 19	0230 58.2	41.62S	175.41E	18	2.5	0.2	11	8
5408	MAY 19	0359 22.4	40.58S	173.66E	127	3.0	0.3	22	13
5410	MAY 19	0443 56.7	40.80S	174.66E	5	2.1	0.2	10	5

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5416	MAY 19	0758 24.8	40.94S	175.60E	26	2.1	0.1	15	11
5419	MAY 19	0825 49.4	41.71S	174.54E	30	2.4	0.2	16	12
5427	MAY 19	2300 30.9	40.61S	174.35E	13	2.9	0.2	18	10
5429	MAY 20	0009 11.7	41.85S	174.83E	26	2.5	0.2	9	6
5430	MAY 20	0046 59.8	41.07S	174.76E	54	2.6	0.1	14	9
5432	MAY 20	0204 40.4	40.85S	174.80E	22	2.0	0.3	10	5
5435	MAY 20	0526 53.6	41.18S	173.78E	66	2.6	0.1	16	9
5452	MAY 20	2024 34.0	41.01S	174.79E	46	2.2	0.1	10	5
5459	MAY 21	0539 53.9	41.10S	174.47E	44	2.8	0.2	16	13
5463	MAY 21	1144 16.6	41.03S	175.30E	12	2.4	0.2	14	9
5464	MAY 21	1151 48.1	40.53S	174.21E	56	2.2	0.2	9	6
5467	MAY 21	1437 49.8	41.83S	174.16E	14	2.2	0.2	11	8
5471	MAY 21	1730 33.8	41.13S	175.35E	26	2.2	0.2	15	10
5474	MAY 21	2005 45.5	41.26S	175.34E	19	2.5	0.1	17	11
5481	MAY 22	0033 26.4	40.50S	173.73E	96	2.6	0.4	16	10
5488	MAY 22	0439 43.3	40.94S	175.46E	23	2.2	0.1	11	8
5492	MAY 22	0729 8.3	41.50S	174.54E	44	2.6	0.1	14	10
5498	MAY 22	1134 3.3	41.18S	173.84E	61	2.4	0.2	13	8
5501	MAY 22	1303 16.0	40.57S	174.59E	67	2.5	0.2	14	10
5507	MAY 22	1807 28.7	41.41S	174.36E	23	2.2	0.1	8	5
5515	MAY 22	2246 14.4	41.02S	174.05E	56	2.5	0.2	13	8
5531	MAY 23	1503 23.7	41.08S	175.19E	25	2.0	0.1	14	10
5534	MAY 23	1902 55.1	40.88S	175.38E	25	2.0	0.2	11	8
5538	MAY 23	2201 0.2	40.91S	175.69E	28	2.6	0.1	17	12
5548	MAY 24	0444 15.3	41.41S	174.12E	43	2.3	0.2	14	11
5557	MAY 24	0952 43.6	40.96S	173.84E	72	2.3	0.1	12	7
5559	MAY 24	1142 39.1	40.63S	174.37E	5R	2.0	0.3	14	9
5561	MAY 24	1212 53.5	40.79S	175.25E	26	2.1	0.1	14	10
5575	MAY 24	2106 20.3	41.74S	174.46E	27	2.2	0.2	14	10
5581	MAY 25	0215 41.3	40.64S	173.57E	165	2.8	0.1	15	10
5588	MAY 25	0827 22.3	41.22S	175.06E	10	2.3	0.3	18	12
5608	MAY 26	0028 9.7	41.40S	175.06E	37	2.1	0.1	7	6
5609	MAY 26	0218 49.1	41.12S	175.15E	6	3.1	0.2	23	17
5612	MAY 26	0459 42.2	40.86S	174.74E	17	2.2	0.2	13	7
5614	MAY 26	0531 53.0	41.39S	173.61E	76	3.3	0.2	29	19
5615	MAY 26	0611 12.0	40.90S	175.18E	27	2.0	0.2	14	10
5617	MAY 26	0715 16.7	41.23S	175.06E	11	2.1	0.2	16	12
5618	MAY 26	0737 57.7	41.74S	174.88E	42	2.5	0.2	19	14
5620	MAY 26	0950 58.7	41.77S	174.53E	32	2.0	0.1	8	5
5622	MAY 26	1023 16.5	40.86S	174.62E	61	2.4	0.1	14	10
5629	MAY 26	1710 36.0	40.63S	174.37E	5	2.2	0.3	13	9
5630	MAY 26	1837 55.0	40.94S	175.35E	27	2.0	0.1	13	9
5638	MAY 27	0004 44.3	40.81S	173.82E	75	2.2	0.1	10	6
5649	MAY 27	1028 50.2	41.19S	173.95E	61	2.4	0.2	14	10
5654	MAY 27	2027 23.0	40.63S	175.53E	31	2.6	0.1	13	9

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5656	MAY 27	2053 40.3	40.72S	173.84E	67	2.4	0.1	8	4
5667	MAY 28	0315 23.2	40.68S	175.25E	33	2.3	0.1	8	7
5670	MAY 28	0347 33.2	40.83S	174.76E	17	2.1	0.2	13	8
5675	MAY 28	0841 17.3	41.61S	175.31E	13	2.0	0.2	11	9
5677	MAY 28	0959 52.9	41.22S	173.85E	61	2.2	0.4	7	6
5682	MAY 28	1453 2.6	41.61S	173.61E	38	2.2	0.2	9	6
5683	MAY 28	1555 40.1	40.89S	175.74E	29	2.3	0.1	16	11
5684	MAY 28	1614 15.1	41.03S	175.97E	33	2.5	0.2	13	10
5685	MAY 28	1657 38.8	40.78S	174.76E	44	2.1	0.2	13	8
5689	MAY 28	1806 16.3	40.81S	173.94E	61	2.1	0.1	8	5
5694	MAY 28	2248 53.8	40.61S	175.87E	31	2.4	0.1	7	5
5703	MAY 29	0630 55.8	40.91S	174.83E	57	2.3	0.1	13	9
5705	MAY 29	1028 51.3	40.95S	175.61E	29	2.1	0.1	10	8
5709	MAY 29	1412 37.3	40.57S	174.03E	79	2.6	0.2	18	11
5717	MAY 29	1838 33.9	41.06S	175.86E	31	2.9	0.1	20	13
5725	MAY 30	0044 26.0	40.83S	174.77E	17	2.0	0.3	12	7
5740	MAY 30	0824 13.9	40.97S	174.84E	57	2.8	0.1	15	11
5752	MAY 30	1633 52.6	41.11S	173.68E	78	2.3	0.3	15	9
5754	MAY 30	1707 46.6	41.60S	174.70E	31	2.0	0.2	13	10
5755	MAY 30	1716 57.8	40.59S	174.43E	64	2.1	0.1	11	6
5762	MAY 30	2335 19.4	41.65S	174.41E	4	2.3	0.2	15	11
5766	MAY 31	0200 40.6	41.59S	174.06E	6	2.8	0.3	21	17
5768	MAY 31	0446 30.1	41.23S	175.06E	11	3.2	0.2	22	16
5772	MAY 31	1006 29.2	41.17S	174.67E	33	2.0	0.1	13	10
5774	MAY 31	1115 6.8	41.56S	173.64E	81	2.9	0.2	23	13
5776	MAY 31	1135 52.9	40.57S	175.89E	47	2.5	0.2	8	5
5777	MAY 31	1314 51.7	41.04S	174.47E	60	2.4	0.1	9	7
5783	MAY 31	1906 41.8	40.56S	174.36E	57	3.1	0.2	21	15
5785	MAY 31	1928 30.7	40.89S	174.92E	123	2.4	0.0	6	5
5791	JUN 01	0444 43.8	40.54S	175.47E	48	2.7	0.1	11	7
5794	JUN 01	0932 35.2	41.91S	173.90E	13	2.8	0.2	11	7
5796	JUN 01	1052 26.7	41.98S	174.04E	13	3.0	0.3	15	12
5798	JUN 01	1102 22.1	41.68S	174.51E	28	2.0	0.1	7	4
5799	JUN 01	1337 34.3	40.97S	174.52E	7	2.5	0.2	11	7
5803	JUN 01	1613 29.4	40.82S	174.54E	29	2.3	0.2	12	7
5805	JUN 01	1658 11.3	41.41S	175.00E	28	4.0F	0.1	20	16
5806	JUN 01	1701 38.7	41.40S	175.00E	25	2.3	0.1	11	8
5807	JUN 01	1702 36.8	41.40S	175.00E	24	2.1	0.1	10	7
5808	JUN 01	1706 59.9	41.59S	175.47E	27	2.3	0.3	10	8
5809	JUN 01	1735 46.4	41.41S	175.00E	24	2.2	0.1	11	8
5811	JUN 01	1752 19.9	41.39S	174.99E	27	2.5	0.1	14	8
5819	JUN 01	2127 6.0	40.87S	174.83E	48	2.6	0.1	13	8
5821	JUN 01	2247 53.8	41.42S	175.01E	27	2.4	0.2	17	11
5827	JUN 02	0341 3.0	41.06S	174.56E	33	2.1	0.1	14	9
5829	JUN 02	0523 18.2	41.43S	175.01E	27	3.2	0.2	23	16

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5831	JUN 02	0653 41.7	41.13S	174.64E	31	2.2	0.0	12	8
5833	JUN 02	0812 2.7	41.10S	174.15E	60	2.0	0.1	8	6
5836	JUN 02	0934 42.5	41.42S	175.00E	28	2.3	0.1	14	10
5844	JUN 02	1529 40.2	40.69S	175.95E	28	2.8	0.3	10	8
5850	JUN 02	2033 40.8	41.53S	173.52E	74	2.3	0.3	9	6
5852	JUN 02	2156 48.9	41.00S	175.21E	20	2.1	0.2	11	9
5854	JUN 03	0016 18.3	41.10S	174.18E	47	3.0	0.2	18	13
5861	JUN 03	0501 52.0	40.80S	175.71E	27	2.3	0.2	14	10
5869	JUN 03	1244 18.9	41.14S	174.12E	51	2.4	0.1	12	8
5874	JUN 03	1344 35.9	40.60S	174.38E	60	2.2	0.2	12	8
5887	JUN 03	2217 37.9	40.99S	175.33E	16	2.7	0.2	12	9
5891	JUN 04	0050 58.1	40.71S	174.29E	58	2.3	0.1	9	7
5892	JUN 04	0215 57.2	41.19S	175.74E	26	2.4	0.2	14	10
5897	JUN 04	0743 53.7	41.61S	174.60E	30	2.3	0.1	6	5
5900	JUN 04	0951 14.2	41.01S	175.34E	23	2.7	0.2	16	11
5913	JUN 04	2230 26.9	41.11S	174.26E	52	2.0	0.1	7	5
5917	JUN 05	0153 9.4	41.41S	174.57E	20	2.1	0.2	9	7
5919	JUN 05	0253 30.2	40.72S	174.94E	37	2.8	0.2	12	8
5920	JUN 05	0650 4.8	41.53S	173.96E	59	2.3	0.0	6	5
5923	JUN 05	0738 19.5	41.71S	174.11E	10	2.4	0.2	12	9
5930	JUN 05	1252 12.7	41.72S	174.10E	12R	2.5	0.2	13	9
5937	JUN 05	1732 37.4	41.41S	175.01E	25	2.8	0.1	17	12
5938	JUN 05	1847 26.1	40.55S	174.59E	54	2.1	0.2	8	5
5947	JUN 06	0143 5.7	41.23S	175.06E	11	2.3	0.3	15	11
5968	JUN 07	0155 26.0	41.24S	175.16E	22	2.2	0.1	9	7
5986	JUN 07	1450 52.4	41.78S	174.57E	15	2.3	0.2	9	7
5989	JUN 07	2048 28.6	40.56S	175.07E	10	2.7	0.2	10	7
5999	JUN 08	0723 49.9	40.57S	174.99E	31	2.6	0.2	14	10
6001	JUN 08	0834 8.5	40.72S	175.61E	25	2.7	0.2	11	7
6009	JUN 08	1513 7.2	41.72S	174.11E	12	2.4	0.1	10	9
6019	JUN 08	2127 52.9	41.03S	174.80E	27	2.7	0.1	18	11
6023	JUN 08	2348 18.7	40.98S	175.51E	23	2.9	0.2	12	8
6027	JUN 09	0849 3.9	40.73S	174.93E	35	2.3	0.1	10	6
6036	JUN 09	1850 24.4	40.92S	175.72E	31	2.3	0.1	10	6
6039	JUN 09	2339 49.7	40.75S	174.30E	50	2.6	0.1	13	7
6048	JUN 10	0329 25.3	40.89S	175.47E	28	2.4	0.2	10	6
6069	JUN 11	0013 9.6	41.67S	175.35E	13	2.1	0.2	11	7
6071	JUN 11	0403 13.3	41.38S	174.39E	58	3.4	0.1	34	20
6074	JUN 11	0549 22.8	41.57S	175.47E	24	2.3	0.2	12	9
6079	JUN 11	0719 53.3	41.50S	175.50E	25	2.0	0.1	7	4
6080	JUN 11	0907 40.3	40.72S	175.83E	30	2.3	0.2	10	6
6081	JUN 11	1200 48.9	40.95S	175.16E	30	2.2	0.1	14	10
6085	JUN 11	1647 26.8	41.93S	174.62E	24	2.8	0.2	16	9
6088	JUN 11	1936 6.0	41.36S	174.36E	57	2.2	0.1	9	5
6091	JUN 12	0333 7.4	40.60S	175.54E	28	2.4	0.3	10	6

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6095	JUN 12	0653 1.1	41.36S	173.85E	53	2.6	0.2	13	8
6096	JUN 12	1015 37.0	41.23S	175.17E	24	2.3	0.2	14	10
6104	JUN 12	2026 50.4	40.63S	175.45E	30	2.5	0.3	11	9
6126	JUN 13	1530 19.3	41.00S	174.74E	33	2.1	0.0	12	8
6127	JUN 13	1603 25.0	41.28S	174.99E	26	2.0	0.1	10	8
6133	JUN 14	0211 33.9	41.71S	174.53E	31	2.7	0.2	18	14
6142	JUN 14	0755 56.9	41.07S	174.46E	32	2.4	0.1	11	8
6143	JUN 14	0834 59.7	40.55S	175.07E	5R	2.2	0.2	9	6
6147	JUN 14	1703 56.1	41.38S	174.29E	33	2.1	0.1	9	6
6151	JUN 14	2049 0.9	41.23S	174.37E	39	2.0	0.1	9	6
6153	JUN 14	2137 1.5	40.50S	175.03E	28	2.2	0.1	12	9
6169	JUN 15	1025 18.3	40.95S	175.13E	34	2.0	0.0	5	4
6171	JUN 15	1127 14.6	41.29S	175.32E	23	2.0	0.0	8	5
6182	JUN 16	0004 42.0	41.61S	174.61E	32	2.0	0.1	9	6
6184	JUN 16	0044 22.0	41.02S	174.42E	63	2.8	0.1	18	13
6190	JUN 16	0708 53.5	41.14S	175.07E	21	2.1	0.2	13	11
6191	JUN 16	0813 50.8	41.07S	173.95E	57	2.4	0.2	10	7
6194	JUN 16	0931 35.1	41.29S	174.77E	43	2.3	0.1	15	11
6196	JUN 16	1106 8.5	40.96S	174.41E	61	2.3	0.1	10	7
6212	JUN 16	2116 30.1	41.35S	175.12E	28	2.8	0.1	19	13
6213	JUN 16	2200 32.7	40.94S	174.55E	60	2.4	0.0	12	9
6214	JUN 16	2257 49.4	41.05S	174.79E	31	2.5	0.1	16	12
6217	JUN 17	0357 55.8	41.95S	174.01E	22	2.5	0.2	18	11
6220	JUN 17	0647 15.0	41.42S	174.99E	24	2.3	0.1	13	11
6222	JUN 17	0712 35.7	40.99S	174.04E	56	2.4	0.1	8	5
6225	JUN 17	0921 10.5	40.99S	174.12E	53	3.4	0.2	23	18
6229	JUN 17	1100 49.6	41.30S	174.52E	33	2.1	0.1	11	9
6230	JUN 17	1249 27.7	41.23S	175.83E	31	3.0	0.2	17	12
6232	JUN 17	1421 9.5	41.18S	174.53E	41	4.1F	0.2	34	26
6234	JUN 17	1620 52.0	41.69S	174.50E	32	2.2	0.2	11	8
6238	JUN 18	0007 10.4	41.43S	173.77E	53	2.7	0.2	21	13
6241	JUN 18	0433 34.8	40.50S	174.41E	72	2.6	0.1	9	6
6242	JUN 18	0436 13.2	41.19S	175.04E	30	2.0	0.1	5	3
6243	JUN 18	0513 12.9	40.76S	174.97E	33	2.8	0.2	15	11
6247	JUN 18	0836 12.5	40.85S	174.51E	46	3.0	0.2	14	9
6256	JUN 18	1508 0.3	41.13S	173.56E	94	2.9	0.3	15	9
6261	JUN 18	1742 47.9	40.84S	174.78E	17	2.1	0.2	12	7
6267	JUN 19	0301 45.0	41.18S	174.81E	30	3.1	0.2	18	14
6268	JUN 19	0301 59.9	41.18S	174.77E	29	2.6	0.0	6	4
6269	JUN 19	0302 50.2	41.18S	174.80E	29	2.4	0.1	14	10
6274	JUN 19	0411 29.9	41.18S	174.79E	28	2.1	0.1	9	7
6279	JUN 19	0618 27.6	41.47S	174.87E	27	2.1	0.1	9	7
6284	JUN 19	1402 59.7	41.72S	174.12E	12R	2.1	0.3	14	12
6285	JUN 19	1407 23.0	41.74S	174.16E	12R	2.3	0.4	13	11
6296	JUN 20	0052 17.5	40.82S	174.77E	16	2.4	0.2	11	6

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
6297	JUN 20	0052 31.3	40.82S	174.78E	21	2.2	0.3	8	5
6299	JUN 20	0119 38.9	41.11S	174.67E	55	2.9	0.1	12	8
6301	JUN 20	0221 42.0	41.08S	173.74E	74	2.5	0.1	9	5
6305	JUN 20	0658 46.7	40.91S	175.43E	23	2.2	0.1	10	6
6306	JUN 20	0814 32.6	40.90S	174.98E	33	2.0	0.2	13	8
6309	JUN 20	1203 47.6	41.00S	174.47E	65	2.9	0.2	13	10
6316	JUN 21	0432 55.8	40.96S	174.91E	30	2.1	0.1	10	8
6321	JUN 21	0645 35.5	41.40S	173.80E	54	2.3	0.2	11	8
6322	JUN 21	0651 58.2	41.10S	174.59E	33	3.4	0.3	27	19
6325	JUN 21	0803 50.9	41.01S	173.76E	58	2.4	0.1	16	11
6329	JUN 21	0926 51.9	40.84S	174.54E	26	2.4	0.2	13	8
6337	JUN 21	1428 27.1	41.02S	174.43E	43	2.3	0.1	12	9
6340	JUN 21	1656 25.7	40.51S	174.32E	48	2.4	0.3	9	7
6342	JUN 21	1720 29.0	40.77S	174.05E	89	3.0	0.3	20	12
6351	JUN 22	0328 4.0	41.11S	174.78E	52	2.3	0.1	11	8
6355	JUN 22	0437 24.3	41.33S	174.79E	24	3.0	0.2	20	14
6356	JUN 22	0449 24.6	40.75S	174.63E	51	2.0	0.1	7	4
6358	JUN 22	0610 47.4	40.92S	175.24E	20	2.2	0.2	14	10
6365	JUN 22	1059 32.3	41.84S	174.54E	24	2.4	0.3	13	9
6369	JUN 22	1325 19.1	41.80S	174.45E	11	2.1	0.3	10	7
6381	JUN 22	2319 29.3	41.61S	174.25E	3	2.8	0.3	17	16
6383	JUN 23	0313 46.1	41.02S	175.58E	14	2.6	0.2	12	8
6384	JUN 23	0336 7.7	41.02S	175.58E	11	2.4	0.2	14	10
6389	JUN 23	0732 43.6	41.14S	173.88E	64	2.2	0.2	8	6
6390	JUN 23	0750 5.6	41.26S	175.04E	20	2.1	0.0	9	6
6402	JUN 23	2311 51.0	41.11S	174.30E	58	2.1	0.1	6	4
6404	JUN 24	0120 40.3	41.26S	173.83E	56	2.3	0.2	8	6
6422	JUN 24	1230 9.4	41.57S	174.38E	10	3.4	0.3	25	17
6423	JUN 24	1536 30.4	41.34S	174.38E	36	2.8	0.2	17	12
6426	JUN 24	1801 22.1	41.01S	175.61E	27	2.5	0.2	11	7
6431	JUN 24	2205 34.3	40.82S	174.47E	73	2.9	0.2	13	9
6433	JUN 25	0046 31.1	41.72S	174.12E	12R	3.1	0.3	19	16
6435	JUN 25	0143 14.2	40.80S	174.72E	36	2.5	0.1	10	6
6455	JUN 26	0640 15.7	40.64S	174.61E	35	2.2	0.2	12	7
6459	JUN 26	0956 6.7	40.54S	174.71E	32	2.2	0.1	12	7
6471	JUN 26	1825 49.1	40.68S	175.77E	22	2.7	0.1	15	11
6477	JUN 26	2246 15.2	41.02S	175.47E	23	2.3	0.2	12	8
6479	JUN 27	0222 30.7	41.41S	175.00E	26	2.6	0.1	22	13
6491	JUN 27	1025 13.5	40.95S	175.41E	9	3.0	0.2	17	12
6494	JUN 27	1804 42.1	41.07S	174.79E	32	2.5	0.1	11	9
6496	JUN 28	0041 19.1	40.85S	174.76E	16	2.9	0.2	16	9
6498	JUN 28	0300 20.7	40.88S	175.41E	26	2.6	0.1	12	8
6511	JUN 28	1251 56.0	41.41S	175.01E	25	2.3	0.1	13	9
6515	JUN 28	1617 33.5	41.60S	174.69E	32	3.0	0.2	14	10
6519	JUN 28	1918 29.7	41.84S	176.00E	35	3.2	0.2	16	11

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
6521	JUN 28	2047 29.3	41.59S	174.37E	19	2.2	0.1	11	7
6523	JUN 28	2333 43.4	41.34S	175.68E	20	2.1	0.1	12	7
6524	JUN 28	2334 9.3	41.34S	175.67E	20	2.2	0.1	7	4
6536	JUN 29	1306 40.7	40.71S	175.55E	27	2.4	0.2	14	7
6540	JUN 29	1501 25.3	41.30S	175.16E	52	3.1	0.2	22	14
6550	JUN 30	0608 28.2	41.83S	174.08E	32	2.2	0.2	12	8
6555	JUN 30	1115 49.1	41.61S	174.62E	29	2.1	0.1	9	7
6559	JUN 30	1854 32.1	41.74S	174.56E	32	2.1	0.1	9	6
6564	JUL 01	0226 35.4	41.18S	174.64E	30	3.0	0.3	16	12
6566	JUL 01	0327 17.1	40.52S	175.66E	31	2.6	0.1	15	12
6574	JUL 01	1316 57.7	41.75S	174.33E	28	2.0	0.1	10	7
6583	JUL 01	2307 28.0	41.65S	173.61E	50	2.5	0.1	9	6
6594	JUL 02	0751 50.6	40.91S	175.99E	30	2.9	0.2	13	9
6599	JUL 02	1349 33.8	41.21S	175.23E	23	2.2	0.2	17	11
6600	JUL 02	1357 46.5	41.38S	173.64E	62	2.5	0.2	16	10
6603	JUL 02	1502 23.1	41.81S	174.15E	12R	3.0	0.2	16	15
6607	JUL 02	1800 39.7	41.42S	173.97E	55	3.8F	0.2	30	18
6608	JUL 02	1805 14.3	41.38S	173.99E	47	2.8	0.2	19	12
6611	JUL 02	2233 44.3	41.46S	174.23E	17	2.7	0.3	17	13
6633	JUL 03	2210 18.5	41.55S	174.59E	28	2.5	0.1	12	9
6634	JUL 03	2343 26.1	41.23S	174.83E	51	2.3	0.1	13	9
6638	JUL 04	0432 9.6	40.57S	174.30E	48	2.2	0.2	10	6
6639	JUL 04	0532 27.8	41.24S	175.15E	23	2.0	0.1	11	7
6641	JUL 04	0822 29.7	40.63S	175.49E	29	2.2	0.2	12	8
6646	JUL 04	1034 8.4	40.91S	175.20E	27	3.3	0.2	15	12
6649	JUL 04	1226 17.0	41.06S	175.53E	26	2.2	0.1	10	8
6651	JUL 04	1310 50.1	41.16S	174.25E	63	2.4	0.1	9	7
6661	JUL 04	1604 40.3	41.10S	174.10E	55	3.0	0.2	18	13
6673	JUL 04	2143 9.5	41.91S	175.15E	31	2.2	0.1	7	4
6676	JUL 05	0134 40.7	40.67S	174.20E	65	2.1	0.2	7	4
6680	JUL 05	0252 15.5	40.78S	174.19E	57	2.1	0.2	9	5
6695	JUL 05	1751 5.9	40.87S	175.60E	23	2.4	0.1	13	11
6704	JUL 05	2229 56.8	41.78S	174.34E	27	2.0	0.1	10	8
6706	JUL 05	2350 47.6	41.65S	174.02E	29	2.0	0.1	7	5
6713	JUL 06	0540 55.8	40.70S	175.43E	26	2.0	0.1	11	8
6721	JUL 06	1232 17.6	41.56S	175.50E	25	2.3	0.2	17	12
6722	JUL 06	1246 35.3	41.21S	173.67E	73	3.0	0.3	18	12
6726	JUL 06	1425 46.4	40.98S	175.38E	30	2.0	0.1	12	7
6734	JUL 06	2037 33.4	41.52S	175.19E	29	2.3	0.2	14	11
6737	JUL 06	2326 45.8	41.42S	174.82E	29	2.9	0.2	20	14
6738	JUL 07	0046 27.2	40.67S	174.56E	44	2.1	0.2	12	8
6749	JUL 07	1015 52.6	41.89S	173.97E	12R	2.1	0.3	10	8
6756	JUL 07	1304 30.1	41.77S	174.36E	23	2.2	0.1	10	7
6760	JUL 07	1420 9.4	41.56S	174.15E	4	3.3	0.3	22	17
6764	JUL 07	1802 17.4	41.58S	174.38E	13	2.0	0.1	15	10

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
6768	JUL 07	2027 4.7	40.90S	174.07E	55	2.8	0.3	16	12
6777	JUL 08	0409 34.1	40.64S	174.51E	39	2.0	0.2	9	5
6787	JUL 08	1117 35.8	40.65S	174.89E	5R	2.8	0.2	18	15
6790	JUL 08	1338 36.6	40.53S	173.50E	167	2.6	0.1	8	7
6791	JUL 08	1430 4.6	40.61S	175.85E	31	2.2	0.0	6	4
6794	JUL 08	1724 11.6	41.38S	175.11E	27	2.0	0.1	14	10
6798	JUL 08	1844 47.3	40.72S	175.33E	28	2.8	0.1	12	10
6804	JUL 08	2219 14.3	41.34S	174.78E	25	2.3	0.1	13	10
6805	JUL 08	2319 38.3	41.15S	175.79E	31	2.6	0.1	14	10
6808	JUL 09	0711 23.9	41.73S	174.31E	13	2.1	0.2	11	8
6811	JUL 09	0943 15.6	41.03S	175.92E	32	2.1	0.2	12	7
6812	JUL 09	1056 28.8	40.61S	175.77E	32	2.6	0.1	10	7
6814	JUL 09	1222 13.2	41.27S	174.53E	33	2.1	0.1	11	7
6815	JUL 09	1309 49.7	41.47S	174.18E	31	2.3	0.2	13	9
6818	JUL 09	1709 46.3	40.88S	175.76E	31	2.1	0.2	9	6
6820	JUL 09	1900 59.0	41.40S	174.82E	27	2.7	0.1	16	11
6821	JUL 09	1915 38.4	40.69S	174.81E	35	2.0	0.1	12	7
6829	JUL 10	0510 1.4	41.59S	174.02E	61	3.5	0.2	29	18
6857	JUL 10	2308 36.6	41.63S	175.32E	9	2.1	0.2	8	6
6862	JUL 11	0151 51.4	40.69S	173.87E	85	2.3	0.2	11	7
6875	JUL 11	0930 12.5	41.66S	173.94E	21	2.0	0.1	7	5
6886	JUL 11	1743 0.1	41.90S	174.28E	25	2.2	0.2	10	6
6900	JUL 12	1316 1.0	40.85S	174.63E	39	2.0	0.1	11	8
6904	JUL 12	1757 51.2	41.14S	175.32E	22	2.0	0.1	8	6
6914	JUL 12	2206 54.2	40.53S	174.18E	71	2.3	0.2	7	5
6919	JUL 13	0120 5.4	41.52S	173.61E	92	2.4	0.0	10	8
6928	JUL 13	0922 19.1	41.93S	174.15E	12R	2.7	0.4	21	17
6935	JUL 13	1423 17.4	40.91S	175.99E	30	2.2	0.2	6	4
6936	JUL 13	1453 2.1	40.91S	175.99E	31	2.7	0.2	10	8
6946	JUL 14	0004 6.3	40.90S	175.69E	26	2.2	0.1	11	7
6947	JUL 14	0117 50.7	40.52S	175.79E	30	2.3	0.2	10	8
6948	JUL 14	0221 16.4	40.75S	174.42E	72	2.7	0.2	17	11
6953	JUL 14	0538 54.5	41.41S	174.46E	32	2.1	0.1	9	6
6959	JUL 14	1058 30.1	40.95S	173.89E	69	2.5	0.1	12	7
6961	JUL 14	1132 12.4	40.94S	176.00E	25	2.3	0.1	9	5
6975	JUL 14	2234 10.3	40.87S	174.37E	43	2.3	0.1	12	9
6979	JUL 15	0411 40.4	41.57S	174.34E	24	2.3	0.2	15	11
6980	JUL 15	0415 20.3	41.48S	173.78E	67	3.6	0.2	30	19
6985	JUL 15	1128 24.0	41.83S	174.03E	12R	2.0	0.3	7	6
7001	JUL 15	2318 13.4	40.94S	173.89E	82	2.6	0.3	12	7
7006	JUL 16	0116 52.2	41.07S	174.42E	66	3.7	0.2	36	24
7020	JUL 16	0809 30.2	41.81S	174.52E	34	2.4	0.1	15	11
7024	JUL 16	0922 34.0	41.08S	173.51E	89	2.6	0.2	16	8
7032	JUL 16	1149 14.0	41.07S	174.13E	48	2.0	0.1	9	6
7033	JUL 16	1154 31.2	40.53S	174.04E	95	2.2	0.1	7	5

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7038	JUL 16	1648 6.7	40.92S	175.23E	27	2.0	0.1	14	10
7044	JUL 16	1843 33.5	41.05S	174.45E	63	2.2	0.1	9	7
7048	JUL 16	2125 52.6	40.63S	173.50E	122	3.4	0.2	29	17
7049	JUL 16	2135 20.7	40.56S	174.60E	8	2.5	0.2	13	9
7054	JUL 16	2306 58.4	40.88S	174.37E	47	2.9	0.2	18	12
7059	JUL 17	0041 15.4	41.41S	175.00E	26	2.2	0.2	15	10
7066	JUL 17	0829 16.8	40.74S	174.88E	17	2.1	0.1	13	8
7069	JUL 17	1037 8.8	40.57S	173.91E	79	2.2	0.2	8	5
7078	JUL 17	1600 26.0	40.97S	175.56E	27	2.0	0.1	12	7
7080	JUL 17	1910 8.4	41.07S	174.96E	30	2.4	0.1	17	11
7081	JUL 18	0042 40.6	41.21S	173.69E	68	2.4	0.1	10	6
7090	JUL 18	0723 0.9	40.58S	174.22E	79	3.4	0.3	32	20
7096	JUL 18	1301 29.6	40.70S	175.32E	28	2.3	0.1	15	10
7109	JUL 18	2154 41.2	41.44S	174.51E	30	2.3	0.1	13	11
7114	JUL 19	0104 14.9	41.34S	173.95E	40	2.1	0.2	9	7
7117	JUL 19	0203 11.4	40.91S	175.68E	20	2.2	0.2	14	10
7118	JUL 19	0249 7.2	40.74S	175.17E	32	2.2	0.1	11	8
7129	JUL 19	1326 46.0	41.65S	174.94E	30	2.1	0.1	7	5
7153	JUL 20	0949 8.0	40.81S	174.50E	72	2.9	0.2	22	14
7155	JUL 20	1002 49.9	40.76S	175.86E	29	3.3	0.4	19	18
7156	JUL 20	1021 22.8	40.71S	175.32E	28	2.4	0.2	9	8
7164	JUL 20	1511 51.1	41.03S	174.15E	56	2.6	0.1	10	8
7168	JUL 20	1657 18.1	41.60S	175.31E	17	2.2	0.3	10	8
7174	JUL 20	2057 51.0	41.77S	174.26E	12R	2.5	0.3	18	13
7175	JUL 20	2121 43.4	41.79S	174.26E	12R	2.7	0.4	18	14
7188	JUL 21	0833 53.3	41.04S	174.59E	59	2.3	0.1	11	8
7194	JUL 21	1015 53.6	41.00S	175.10E	31	2.2	0.1	9	7
7199	JUL 21	1607 46.9	40.68S	174.98E	41	2.0	0.1	9	6
7201	JUL 21	1938 25.9	41.71S	174.48E	27	2.5	0.2	10	7
7202	JUL 21	2033 25.4	41.42S	173.57E	97	2.1	0.1	12	7
7204	JUL 21	2232 2.3	41.57S	174.67E	33	2.1	0.1	7	4
7205	JUL 21	2245 31.5	40.74S	174.90E	5	2.8	0.2	13	9
7216	JUL 22	1552 21.1	41.26S	174.85E	29	2.5	0.1	11	9
7231	JUL 23	1038 55.7	40.98S	173.86E	64	2.7	0.2	17	12
7236	JUL 23	1509 34.6	40.52S	174.22E	68	2.6	0.1	9	5
7241	JUL 23	1812 56.5	40.99S	175.32E	19	2.0	0.1	11	8
7245	JUL 24	0006 5.2	41.58S	175.31E	17	2.5	0.2	13	9
7248	JUL 24	0020 3.8	40.97S	175.26E	26	2.2	0.2	13	9
7250	JUL 24	0643 42.0	40.77S	175.14E	56	3.4	0.1	30	20
7256	JUL 24	1916 4.1	40.90S	175.72E	28	3.9F	0.2	21	18
7267	JUL 25	1256 59.4	40.85S	174.76E	18	2.1	0.0	10	6
7270	JUL 25	1600 43.3	40.95S	173.70E	82	3.2	0.2	26	15
7278	JUL 26	0026 41.8	41.40S	174.63E	21	2.3	0.2	12	10
7279	JUL 26	0147 7.7	41.49S	174.32E	18	2.2	0.1	11	9
7286	JUL 26	0529 48.7	41.32S	175.10E	36	2.5	0.2	13	9

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7288	JUL 26	0725 9.0	41.04S	175.37E	28	3.1	0.3	16	13
7293	JUL 26	1031 32.3	40.93S	175.49E	17	2.2	0.1	12	8
7297	JUL 26	1328 23.5	40.80S	175.24E	29	2.2	0.1	7	5
7299	JUL 26	1512 55.0	41.49S	175.51E	22	2.7	0.2	16	10
7301	JUL 26	1845 5.4	41.47S	175.52E	21	2.0	0.2	8	7
7310	JUL 27	0215 3.6	41.06S	174.75E	50	2.5	0.1	13	10
7315	JUL 27	0520 49.5	40.62S	174.91E	23	2.6	0.3	14	10
7319	JUL 27	0908 48.0	41.46S	174.53E	19	2.1	0.2	10	8
7320	JUL 27	0936 10.6	41.34S	173.76E	59	2.2	0.1	7	5
7328	JUL 27	1408 30.9	40.85S	175.97E	30	2.2	0.2	12	10
7332	JUL 27	1747 55.0	40.87S	175.81E	30	2.1	0.1	11	9
7334	JUL 27	2133 43.6	41.65S	174.30E	12R	2.1	0.2	12	10
7347	JUL 28	0207 35.3	40.98S	175.34E	28	2.2	0.1	14	10
7349	JUL 28	0355 47.0	41.86S	174.21E	12R	3.0	0.4	27	18
7350	JUL 28	0409 24.0	41.34S	173.70E	72	2.9	0.2	22	14
7351	JUL 28	0459 9.1	40.67S	175.32E	28	2.5	0.2	13	10
7362	JUL 28	1259 50.6	40.50S	175.95E	28	2.3	0.2	11	9
7364	JUL 28	1449 59.1	40.62S	175.94E	25	2.7	0.3	19	16
7371	JUL 28	1842 6.0	40.70S	175.33E	28	2.1	0.1	11	8
7379	JUL 29	0417 43.0	41.11S	174.51E	36	2.1	0.2	8	7
7382	JUL 29	0522 29.6	40.88S	175.64E	28	2.4	0.1	14	10
7383	JUL 29	0554 34.5	41.69S	174.28E	11	2.1	0.2	10	7
7387	JUL 29	1036 1.2	40.96S	175.43E	28	2.2	0.2	13	10
7388	JUL 29	1100 8.9	41.29S	175.25E	30	2.3	0.1	13	9
7389	JUL 29	1139 38.8	41.08S	174.26E	59	3.7	0.1	27	23
7393	JUL 29	1532 16.8	41.14S	174.02E	57	2.4	0.2	13	9
7394	JUL 29	1843 16.9	41.69S	174.52E	33	3.0	0.2	20	14
7412	JUL 30	0926 7.6	41.71S	174.51E	27	2.3	0.1	9	7
7415	JUL 30	1127 16.4	40.62S	174.58E	11	2.0	0.2	8	6
7419	JUL 30	1751 52.9	41.88S	173.71E	71	2.7	0.2	9	6
7421	JUL 30	2045 28.2	41.91S	174.00E	23	2.5	0.2	9	7
7428	JUL 31	0010 22.7	40.91S	175.69E	30	2.4	0.2	14	10
7440	JUL 31	1308 6.6	40.85S	174.83E	132	2.1	0.2	7	4
7441	JUL 31	1824 47.4	41.77S	174.35E	24	2.4	0.1	14	9
7444	JUL 31	2001 10.1	41.77S	174.37E	26	2.5	0.1	13	9
7447	JUL 31	2204 29.9	40.71S	173.91E	63	2.6	0.2	8	5
7455	AUG 01	0510 27.9	41.77S	174.37E	23	2.3	0.1	8	6
7459	AUG 01	0631 35.0	40.61S	175.89E	33	3.1	0.3	14	11
7461	AUG 01	1131 39.1	41.61S	175.32E	17	2.0	0.2	11	8
7463	AUG 01	1158 26.9	41.61S	175.32E	16	2.2	0.2	13	9
7464	AUG 01	1229 50.0	41.08S	174.51E	31	2.2	0.2	10	7
7470	AUG 01	1819 17.0	41.20S	174.32E	39	2.1	0.1	10	7
7483	AUG 02	0631 33.1	40.84S	174.58E	40	3.2	0.2	21	16
7499	AUG 02	1636 10.1	41.29S	175.20E	22	2.0	0.1	11	8
7506	AUG 02	2153 15.6	40.70S	175.98E	24	3.1	0.3	17	14

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7509	AUG 03	0028 54.9	40.78S	175.38E	28	2.2	0.1	8	5
7516	AUG 03	0836 17.4	40.64S	174.65E	54	3.8	0.2	26	20
7518	AUG 03	1005 44.5	41.40S	174.55E	15	2.1	0.2	14	9
7519	AUG 03	1018 31.7	41.52S	174.17E	5R	2.3	0.3	12	10
7521	AUG 03	1237 21.0	41.05S	173.54E	5R	2.2	0.2	6	4
7533	AUG 04	0237 29.0	41.27S	174.98E	28	2.2	0.1	14	11
7537	AUG 04	0342 6.9	41.23S	175.15E	25	2.4	0.2	18	12
7539	AUG 04	0559 25.6	40.70S	175.65E	29	2.2	0.1	8	6
7546	AUG 04	1409 12.3	41.02S	175.97E	32	2.0	0.2	7	5
7547	AUG 04	1441 20.1	40.82S	174.14E	58	2.7	0.2	15	10
7557	AUG 05	0405 20.9	41.42S	174.99E	27	2.5	0.2	18	12
7561	AUG 05	0549 5.5	40.81S	174.60E	38	2.0	0.2	15	10
7572	AUG 05	1446 41.3	40.92S	175.65E	26	2.4	0.1	11	8
7576	AUG 05	1621 36.3	40.52S	174.88E	29	2.3	0.2	8	6
7579	AUG 05	2110 59.2	40.92S	175.36E	27	2.8	0.1	8	5
7586	AUG 06	1120 30.9	41.07S	175.82E	30	2.6	0.2	7	5
7595	AUG 07	0815 56.7	41.17S	174.79E	28	2.4	0.1	7	6
7602	AUG 07	2006 3.2	41.30S	175.27E	24	2.4	0.1	12	9
7604	AUG 08	0116 38.1	40.91S	175.85E	34	2.1	0.1	6	4
7606	AUG 08	0210 27.1	40.86S	173.98E	163	2.5	0.4	6	4
7612	AUG 08	1548 26.5	41.53S	173.60E	59	2.6	0.3	13	8
7617	AUG 09	0225 12.4	40.56S	174.48E	52	2.8	0.2	15	9
7619	AUG 09	0518 4.1	41.23S	173.72E	88	2.9	0.3	22	14
7620	AUG 09	0828 25.6	40.87S	173.59E	92	2.9	0.3	17	10
7622	AUG 09	1420 23.9	41.72S	174.48E	26	2.2	0.1	11	7
7625	AUG 09	1647 27.7	40.54S	173.87E	85	2.7	0.1	10	5
7626	AUG 09	1702 8.8	40.86S	175.16E	31	2.8	0.2	17	13
7629	AUG 09	2227 52.9	41.74S	174.55E	28	2.3	0.2	15	12
7632	AUG 10	0159 15.5	40.84S	174.54E	23	2.2	0.1	10	7
7638	AUG 10	1112 38.0	41.04S	174.45E	7	2.0	0.1	13	9
7643	AUG 10	1739 24.5	41.11S	175.47E	25	2.0	0.1	12	8
7644	AUG 10	1912 11.8	40.57S	174.23E	68	3.2	0.2	10	7
7645	AUG 10	1927 58.9	40.62S	173.65E	92	2.6	0.2	10	6
7646	AUG 10	2016 15.9	41.44S	173.61E	62	2.4	0.2	10	6
7648	AUG 10	2241 27.0	40.72S	174.03E	61	2.8	0.3	13	9
7649	AUG 11	0348 50.3	41.19S	175.13E	8	2.1	0.1	10	8
7656	AUG 11	0814 58.4	41.67S	174.93E	25	2.3	0.1	12	10
7657	AUG 11	0901 10.0	41.50S	175.53E	22	2.0	0.1	10	7
7660	AUG 11	1026 55.3	41.10S	173.56E	74	2.4	0.1	13	8
7668	AUG 11	1617 45.1	41.18S	175.13E	8	2.2	0.1	16	10
7669	AUG 11	1741 7.6	41.34S	174.91E	28	2.1	0.1	17	11
7670	AUG 11	1851 44.5	41.77S	174.18E	36	2.8	0.3	19	14
7673	AUG 11	2221 42.2	40.98S	174.56E	52	2.1	0.0	11	8
7677	AUG 12	0241 57.8	40.64S	175.90E	19	2.2	0.2	9	7
7682	AUG 12	1328 33.4	40.97S	175.59E	29	2.6	0.1	16	12

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7689	AUG 12	1905 51.3	40.58S	175.68E	31	3.0	0.2	20	16
7694	AUG 13	0232 48.9	40.80S	175.94E	32	2.0	0.1	8	7
7695	AUG 13	0427 25.3	41.29S	175.20E	22	2.0	0.1	10	7
7696	AUG 13	0430 35.9	41.29S	175.20E	22	2.1	0.1	11	8
7697	AUG 13	0447 19.3	41.11S	173.79E	60	2.4	0.1	11	6
7698	AUG 13	0728 24.4	41.59S	175.29E	17	2.2	0.2	12	10
7699	AUG 13	0729 56.3	41.66S	174.99E	28	2.6	0.2	15	11
7701	AUG 13	1054 25.6	40.89S	174.88E	34	2.3	0.1	13	11
7702	AUG 13	1500 51.3	41.59S	174.39E	12	2.0	0.1	9	6
7703	AUG 13	1510 10.3	41.02S	174.91E	48	2.1	0.0	11	8
7705	AUG 13	1611 29.2	41.12S	174.29E	62	3.3	0.1	34	22
7713	AUG 14	0721 54.8	41.20S	175.05E	25	2.3	0.1	10	8
7714	AUG 14	1131 58.2	41.17S	174.18E	59	2.5	0.2	7	5
7718	AUG 14	1718 56.1	41.77S	174.48E	35	2.4	0.2	15	11
7719	AUG 14	1956 0.9	40.96S	174.81E	33	2.8	0.1	18	12
7720	AUG 14	2200 30.5	41.35S	174.99E	24	2.0	0.1	12	9
7722	AUG 15	0125 31.9	40.88S	175.24E	28	2.2	0.3	10	7
7727	AUG 15	0915 39.8	41.20S	174.58E	36	3.3	0.2	24	18
7731	AUG 15	1440 7.7	41.44S	174.49E	54	2.3	0.1	12	9
7733	AUG 15	1525 34.8	41.22S	174.70E	45	2.0	0.1	10	8
7737	AUG 15	1958 7.7	41.84S	174.15E	11	2.4	0.2	9	6
7739	AUG 15	2239 0.1	41.83S	174.15E	12	2.1	0.1	9	6
7740	AUG 15	2342 52.5	40.85S	174.56E	69	2.1	0.1	11	6
7741	AUG 16	0101 35.8	40.89S	174.98E	35	2.4	0.1	14	10
7750	AUG 17	0508 50.1	40.60S	174.66E	28	2.3	0.1	7	5
7751	AUG 17	0509 57.2	41.20S	174.50E	48	2.2	0.1	6	4
7758	AUG 17	1950 26.2	40.93S	174.19E	73	2.0	0.1	8	5
7763	AUG 18	0317 46.5	41.51S	174.16E	33	2.2	0.2	14	10
7767	AUG 18	1053 8.0	40.60S	174.68E	28	2.3	0.1	9	8
7770	AUG 18	1548 0.0	40.98S	174.52E	9	2.2	0.1	11	8
7778	AUG 19	0444 26.4	40.56S	175.85E	19	2.3	0.3	8	6
7779	AUG 19	0446 22.7	41.73S	174.19E	17	2.3	0.1	11	7
7785	AUG 19	1420 57.0	41.06S	174.67E	55	2.3	0.1	11	8
7787	AUG 19	1740 30.3	41.41S	174.97E	28	2.5	0.1	16	11
7788	AUG 19	1820 0.2	41.00S	173.85E	62	2.3	0.2	6	4
7799	AUG 20	0511 53.6	40.97S	174.91E	33	3.2	0.1	19	13
7807	AUG 20	1357 14.1	41.08S	174.10E	52	2.2	0.1	10	7
7817	AUG 20	2107 24.8	41.40S	175.08E	25	2.0	0.0	17	10
7820	AUG 20	2324 25.7	40.52S	174.20E	58	2.2	0.2	7	5
7822	AUG 20	2346 54.0	40.56S	173.59E	115	3.3	0.3	25	17
7834	AUG 21	0549 20.4	41.05S	174.61E	53	2.4	0.1	12	10
7844	AUG 21	1048 57.6	40.53S	174.76E	48	2.2	0.2	14	9
7845	AUG 21	1205 28.7	41.20S	175.42E	28	2.4	0.1	16	11
7846	AUG 21	1220 35.2	41.11S	173.95E	56	2.2	0.1	9	7
7853	AUG 21	2222 21.8	41.71S	174.48E	26	2.4	0.2	13	9

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7857	AUG 22	0121 31.8	40.56S	175.08E	33	3.0	0.2	21	17
7861	AUG 22	0900 59.8	41.53S	174.79E	29	2.4	0.1	13	9
7864	AUG 22	1242 46.9	41.54S	173.86E	48	3.0	0.3	27	18
7865	AUG 22	1403 57.1	40.91S	175.39E	10	2.3	0.3	15	11
7866	AUG 22	1427 33.7	41.02S	173.61E	101	3.3	0.2	35	20
7869	AUG 22	2107 33.8	40.98S	175.60E	30	3.3	0.1	20	14
7876	AUG 23	0344 17.9	40.75S	175.80E	32	2.1	0.1	9	6
7877	AUG 23	0354 41.5	41.34S	174.19E	40	2.3	0.2	13	11
7878	AUG 23	0426 5.2	41.53S	174.53E	30	2.5	0.1	11	9
7879	AUG 23	0454 36.9	40.82S	175.73E	28	2.5	0.1	13	10
7885	AUG 23	1514 25.0	40.62S	175.35E	30	2.3	0.1	11	9
7888	AUG 23	1714 58.5	40.66S	175.27E	31	2.0	0.1	10	7
7891	AUG 23	2015 9.1	41.09S	174.69E	30	2.1	0.1	12	9
7896	AUG 24	0108 50.6	41.72S	174.50E	26	2.6	0.2	20	12
7908	AUG 24	2159 1.0	40.92S	175.19E	26	2.0	0.0	10	8
7914	AUG 25	0832 36.1	40.85S	175.79E	30	2.0	0.2	13	9
7917	AUG 25	0906 39.6	41.55S	174.43E	16	2.6	0.1	24	15
7921	AUG 25	1113 9.4	40.97S	175.55E	4	2.5	0.2	13	11
7929	AUG 25	1640 38.5	41.85S	174.15E	13	2.1	0.2	11	8
7930	AUG 25	1732 16.0	41.06S	175.91E	31	2.4	0.1	16	11
7932	AUG 25	1918 34.4	40.91S	175.88E	23	2.4	0.2	17	12
7938	AUG 25	2254 13.8	41.13S	174.07E	54	2.6	0.2	16	10
7941	AUG 26	0101 24.8	41.56S	175.37E	23	2.1	0.1	13	8
7947	AUG 26	0703 5.0	41.06S	175.21E	25	2.3	0.2	18	12
7955	AUG 26	1513 25.9	40.57S	174.17E	90	2.6	0.1	13	7
7957	AUG 26	1616 17.6	41.25S	175.15E	24	2.2	0.1	16	13
7963	AUG 26	2056 47.3	40.78S	174.55E	61	2.6	0.1	17	12
7971	AUG 27	0238 40.0	41.25S	175.33E	27	2.4	0.1	18	11
7973	AUG 27	0632 29.0	41.77S	174.22E	52	2.5	0.1	19	13
7976	AUG 27	0930 20.9	41.50S	174.45E	26	2.4	0.1	17	12
7986	AUG 27	1931 17.0	41.12S	173.96E	58	2.4	0.2	16	13
7991	AUG 28	0039 50.0	41.14S	173.96E	64	3.1	0.2	26	18
7992	AUG 28	0125 9.7	40.65S	174.68E	37	2.3	0.1	12	7
8009	AUG 28	1730 35.6	40.87S	174.62E	56	2.9	0.2	27	20
8014	AUG 28	1912 57.3	41.02S	175.97E	30	2.1	0.1	10	7
8015	AUG 28	1959 44.8	41.03S	175.99E	31	2.6	0.2	15	12
8016	AUG 28	2000 26.5	41.02S	175.97E	31	2.4	0.1	13	9
8019	AUG 28	2237 59.6	41.02S	175.95E	30	2.0	0.1	11	7
8021	AUG 28	2313 7.3	41.02S	175.95E	29	2.0	0.1	10	7
8026	AUG 29	0239 32.0	41.02S	175.99E	32	2.2	0.2	14	9
8035	AUG 29	0936 30.8	41.31S	174.84E	29	2.0	0.1	18	13
8043	AUG 29	1409 34.5	41.53S	174.24E	54	2.5	0.1	17	13
8065	AUG 30	0657 59.5	41.55S	173.52E	84	3.0	0.3	28	18
8072	AUG 30	1045 2.1	40.64S	175.49E	30	2.1	0.1	7	5
8073	AUG 30	1110 46.8	41.64S	174.19E	22	2.0	0.0	8	6

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8077	AUG 30	1444 1.8	40.87S	175.51E	26	2.1	0.1	16	11
8091	AUG 31	0812 30.9	40.96S	175.48E	24	2.4	0.1	13	10
8098	AUG 31	1200 28.5	41.18S	174.93E	29	2.2	0.1	19	13
8099	AUG 31	1317 52.8	40.93S	174.46E	65	2.0	0.0	10	7
8150	SEP 02	0533 39.9	40.50S	174.05E	72	2.4	0.2	9	6
8155	SEP 02	0917 34.5	41.78S	174.52E	34	2.0	0.1	9	6
8167	SEP 03	0428 40.7	40.77S	175.48E	27	2.1	0.1	12	8
8168	SEP 03	0527 22.7	41.66S	174.58E	29	2.1	0.1	9	6
8179	SEP 03	1730 56.0	40.75S	174.71E	39	2.4	0.1	14	9
8183	SEP 03	2100 5.3	41.14S	174.03E	54	2.3	0.2	12	8
8185	SEP 03	2214 24.0	41.37S	173.50E	88	2.8	0.3	13	7
8201	SEP 04	1020 18.7	41.84S	174.13E	26	2.2	0.2	10	7
8222	SEP 05	0328 50.5	40.89S	175.46E	25	2.1	0.1	12	8
8223	SEP 05	0354 49.2	41.53S	174.45E	15	2.1	0.2	16	12
8227	SEP 05	0543 53.8	41.63S	173.91E	22	2.2	0.2	14	8
8237	SEP 05	0954 51.2	41.49S	173.52E	99	2.3	0.1	10	7
8260	SEP 06	0038 27.2	41.18S	173.73E	83	2.4	0.2	7	4
8266	SEP 06	0556 36.8	41.72S	174.62E	30	2.2	0.2	13	10
8269	SEP 06	0638 12.5	40.89S	173.73E	71	2.1	0.1	6	4
8274	SEP 06	1302 16.9	41.33S	173.72E	47	2.5	0.1	8	6
8275	SEP 06	1441 57.4	41.37S	174.26E	36	2.1	0.1	8	6
8280	SEP 06	1651 38.8	41.63S	174.12E	16	2.1	0.1	11	7
8291	SEP 06	2238 43.1	40.97S	175.47E	27	2.0	0.1	11	7
8301	SEP 07	0904 22.7	41.18S	173.85E	54	2.0	0.2	8	6
8313	SEP 07	2210 14.7	41.30S	174.79E	29	2.0	0.1	14	9
8317	SEP 07	2346 14.1	41.30S	175.43E	42	2.4	0.1	12	9
8323	SEP 08	0537 39.7	40.92S	175.98E	29	2.0	0.1	7	5
8325	SEP 08	0539 23.1	41.63S	174.55E	23	2.4	0.2	15	9
8328	SEP 08	0637 1.9	40.84S	174.54E	23	2.0	0.1	10	7
8336	SEP 08	1222 49.2	40.72S	175.24E	29	2.3	0.2	13	10
8342	SEP 08	1430 2.2	41.82S	174.42E	30	2.3	0.2	13	9
8346	SEP 08	1815 36.9	41.27S	174.57E	56	2.4	0.1	19	12
8350	SEP 08	2252 12.3	40.74S	175.13E	28	3.0	0.2	21	17
8353	SEP 09	0146 54.6	40.97S	175.51E	27	2.0	0.1	10	8
8355	SEP 09	0155 38.1	40.70S	175.12E	32	2.3	0.1	9	8
8364	SEP 09	1125 40.7	41.28S	175.20E	21	2.4	0.2	18	13
8372	SEP 09	2239 32.6	40.67S	175.49E	30	2.3	0.1	11	8
8373	SEP 09	2239 52.3	41.12S	175.79E	32	2.5	0.1	15	9
8375	SEP 10	0247 45.7	40.78S	175.05E	34	2.6	0.2	14	10
8376	SEP 10	0304 50.6	41.03S	174.57E	35	2.0	0.2	12	7
8388	SEP 10	1503 36.1	40.98S	174.65E	63	2.4	0.1	14	10
8389	SEP 10	1534 15.1	40.75S	174.81E	25	2.0	0.3	9	6
8398	SEP 10	2103 19.7	40.90S	175.21E	29	2.8	0.1	10	8
8400	SEP 10	2253 9.7	40.54S	173.77E	117	2.5	0.2	10	8
8404	SEP 11	0424 25.3	41.07S	175.83E	27	2.0	0.0	13	9

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8413	SEP 11	1104 32.3	41.30S	174.35E	24	2.1	0.2	14	11
8418	SEP 11	1457 16.8	40.98S	175.26E	25	2.0	0.1	10	7
8425	SEP 11	2124 30.6	41.17S	175.24E	12	3.4	0.2	20	14
8427	SEP 11	2211 15.8	40.52S	175.57E	32	2.3	0.2	10	8
8431	SEP 12	0253 10.1	41.01S	175.94E	20	4.7F	0.2	25	21
8432	SEP 12	0302 7.8	40.99S	175.90E	21	2.5	0.2	16	11
8434	SEP 12	0351 35.9	40.99S	175.91E	18	2.3	0.2	14	10
8435	SEP 12	0400 4.6	41.00S	175.96E	14	2.1	0.2	8	6
8436	SEP 12	0459 58.5	40.99S	175.90E	21	2.7	0.1	17	12
8437	SEP 12	0502 48.4	40.99S	175.90E	21	2.8	0.2	16	12
8439	SEP 12	0558 53.4	41.00S	175.88E	21	2.1	0.2	14	9
8441	SEP 12	0716 13.9	41.00S	175.90E	19	2.4	0.2	13	9
8444	SEP 12	0812 37.6	41.00S	175.90E	21	2.8	0.2	16	12
8445	SEP 12	0815 10.4	40.99S	175.89E	20	2.2	0.2	17	11
8446	SEP 12	0846 42.2	41.00S	175.93E	18	2.1	0.2	12	8
8449	SEP 12	0935 10.2	40.68S	175.51E	29	4.6F	0.2	30	26
8450	SEP 12	0938 3.7	40.62S	175.48E	30	2.6	0.1	9	7
8451	SEP 12	0950 4.9	40.61S	175.50E	31	2.2	0.1	7	5
8452	SEP 12	0955 29.7	40.62S	175.49E	30	2.3	0.1	8	6
8453	SEP 12	1030 58.9	40.68S	175.49E	27	2.7	0.2	21	18
8456	SEP 12	1044 53.5	40.67S	175.48E	26	2.4	0.2	14	10
8457	SEP 12	1103 57.6	40.62S	175.50E	31	2.2	0.1	7	5
8464	SEP 12	1608 47.3	40.72S	173.56E	94	2.6	0.2	16	8
8466	SEP 12	2146 20.3	40.61S	175.49E	31	2.3	0.0	6	4
8468	SEP 12	2330 58.8	40.59S	175.42E	33R	2.1	0.1	6	4
8472	SEP 13	0141 31.0	41.58S	174.30E	27	2.5	0.2	18	14
8473	SEP 13	0143 8.7	41.58S	174.34E	27	2.9	0.2	22	16
8478	SEP 13	0326 25.8	40.99S	175.89E	22	2.2	0.2	17	12
8480	SEP 13	0409 0.6	41.24S	174.39E	35	2.4	0.1	12	9
8481	SEP 13	0750 33.9	40.63S	175.48E	30	2.1	0.2	9	7
8483	SEP 13	1102 35.9	41.00S	175.89E	21	2.1	0.2	15	11
8484	SEP 13	1244 15.1	40.99S	174.59E	35	2.0	0.1	10	7
8487	SEP 13	1632 20.5	41.00S	175.89E	20	2.3	0.2	16	11
8495	SEP 14	0049 42.3	40.91S	175.48E	24	2.1	0.2	7	5
8496	SEP 14	0651 31.3	41.78S	174.56E	32	2.9	0.2	21	14
8497	SEP 14	0656 25.7	40.62S	175.48E	31	2.0	0.1	6	5
8498	SEP 14	0728 37.6	40.97S	175.96E	21	2.4	0.1	13	10
8501	SEP 14	0912 26.3	41.26S	174.66E	27	2.2	0.1	17	12
8505	SEP 14	1313 15.3	40.68S	174.42E	55	2.4	0.1	10	8
8510	SEP 14	1707 50.8	41.74S	174.37E	24	2.0	0.1	10	6
8513	SEP 14	1840 8.5	41.72S	174.51E	29	2.0	0.1	8	6
8515	SEP 14	1909 0.4	40.67S	175.50E	29	3.0	0.2	18	14
8519	SEP 14	1950 57.3	40.60S	174.07E	79	2.7	0.3	15	12
8521	SEP 14	2136 43.7	40.88S	175.72E	29	2.1	0.1	14	8
8524	SEP 15	0037 31.1	41.45S	174.32E	61	2.8	0.1	28	16

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
8526	SEP 15	0055 51.9	41.99S	174.41E	31	2.4	0.1	12	8
8528	SEP 15	0113 37.3	41.49S	174.55E	30	2.4	0.2	18	13
8531	SEP 15	0329 25.3	41.00S	175.57E	22	2.0	0.1	14	9
8532	SEP 15	0422 40.5	40.73S	173.88E	100	2.6	0.2	17	8
8538	SEP 15	0741 38.6	40.62S	175.48E	30	2.1	0.1	10	8
8542	SEP 15	0939 57.2	40.92S	175.78E	28	2.1	0.2	12	8
8547	SEP 15	1339 22.6	40.62S	175.49E	31	2.1	0.1	9	7
8548	SEP 15	1626 29.0	41.29S	174.51E	53	2.2	0.0	8	6
8551	SEP 15	1807 40.7	40.68S	175.46E	26	2.3	0.1	13	11
8556	SEP 15	2016 27.6	41.23S	175.23E	11	2.9	0.2	18	14
8558	SEP 15	2302 46.2	40.97S	175.28E	35	2.0	0.1	7	5
8564	SEP 16	0320 25.3	40.95S	175.40E	25	2.6	0.3	15	11
8578	SEP 16	1230 59.8	40.91S	175.43E	21	2.5	0.2	14	11
8588	SEP 16	1949 24.2	41.35S	175.37E	16	2.8	0.1	21	13
8593	SEP 16	2312 42.6	41.25S	174.66E	26	2.0	0.1	13	11
8595	SEP 17	0236 28.7	40.97S	175.50E	22	2.6	0.2	17	12
8596	SEP 17	0258 57.6	40.97S	175.50E	23	2.0	0.1	12	8
8601	SEP 17	0353 56.4	40.92S	174.62E	34	2.5	0.2	13	9
8607	SEP 17	0801 20.6	40.97S	175.91E	20	2.4	0.2	15	11
8608	SEP 17	1012 26.7	41.72S	174.35E	20	3.2	0.3	24	19
8614	SEP 17	1335 22.9	41.75S	174.33E	28	2.0	0.2	12	9
8617	SEP 17	1709 34.8	41.03S	174.40E	63	2.2	0.1	12	9
8618	SEP 17	1742 8.7	41.43S	174.93E	17	2.0	0.1	13	11
8620	SEP 17	1959 19.0	40.64S	175.49E	29	2.3	0.2	13	9
8623	SEP 17	2156 39.9	41.30S	173.72E	81	2.3	0.2	9	5
8634	SEP 18	0755 43.2	41.00S	175.43E	26	2.4	0.1	17	12
8636	SEP 18	0804 54.7	40.62S	175.48E	30	2.0	0.1	7	5
8637	SEP 18	0900 53.7	41.03S	175.45E	25	2.0	0.1	15	10
8640	SEP 18	1712 35.2	41.02S	173.88E	80	3.9	0.2	30	23
8653	SEP 19	0428 11.4	40.98S	175.96E	20	2.0	0.1	8	5
8664	SEP 19	1839 40.8	41.55S	175.39E	17	2.5	0.2	13	9
8670	SEP 20	0403 17.2	40.70S	175.41E	27	2.3	0.2	11	7
8678	SEP 20	1054 49.1	40.81S	174.61E	44	2.2	0.1	13	10
8679	SEP 20	1159 23.6	41.03S	175.80E	26	2.1	0.2	9	6
8681	SEP 20	1208 32.6	40.55S	173.78E	116	2.4	0.1	10	8
8692	SEP 20	2039 1.2	41.16S	173.52E	102	3.0	0.2	27	15
8698	SEP 21	0016 47.3	41.11S	173.90E	61	2.2	0.1	8	5
8699	SEP 21	0024 35.6	41.50S	174.19E	36	2.6	0.3	16	12
8700	SEP 21	0150 41.1	41.62S	174.64E	31	2.0	0.1	7	5
8701	SEP 21	0224 56.3	41.13S	175.42E	27	2.3	0.1	16	11
8704	SEP 21	0924 49.9	40.62S	175.49E	31	2.3	0.1	11	8
8712	SEP 21	1152 43.4	40.76S	174.57E	61	2.3	0.2	8	7
8717	SEP 21	1534 1.3	40.52S	174.01E	87	2.8	0.3	22	14
8720	SEP 21	1710 9.7	40.98S	175.41E	25	2.3	0.2	14	9
8724	SEP 21	2200 11.6	40.86S	175.38E	60	2.1	0.2	10	7

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
8747	SEP 22	1056 10.9	41.02S	174.17E	43	2.4	0.1	17	12
8752	SEP 22	1530 27.8	41.27S	174.31E	60	2.4	0.1	8	5
8755	SEP 22	2009 13.1	40.75S	175.08E	35	2.0	0.1	8	5
8757	SEP 23	0036 42.2	40.83S	175.69E	29	3.3	0.3	15	12
8766	SEP 23	0730 57.7	41.55S	175.34E	21	2.8	0.3	18	10
8771	SEP 23	1617 58.8	41.40S	175.14E	24	2.2	0.0	12	9
8776	SEP 24	0033 28.3	41.69S	173.93E	31	2.4	0.2	15	9
8781	SEP 24	0924 22.7	40.55S	173.57E	120	2.8	0.2	14	11
8786	SEP 24	1421 55.4	41.57S	174.45E	18	3.0	0.2	23	14
8791	SEP 24	1842 48.0	41.59S	174.45E	5R	2.3	0.4	12	8
8796	SEP 24	2225 31.8	41.75S	173.84E	66	2.5	0.1	11	8
8797	SEP 24	2319 36.3	40.53S	174.25E	79	2.8	0.3	15	9
8798	SEP 24	2331 56.9	40.67S	174.41E	74	2.5	0.1	8	5
8799	SEP 25	0102 22.3	41.56S	175.59E	11	2.1	0.1	12	8
8805	SEP 25	0538 12.3	41.72S	174.34E	17	2.7	0.3	19	14
8808	SEP 25	0730 5.3	40.60S	174.49E	38	2.0	0.2	13	8
8810	SEP 25	0853 55.7	40.92S	174.99E	58	2.0	0.1	8	6
8817	SEP 25	1646 42.1	40.50S	173.95E	83	2.7	0.3	18	11
8820	SEP 25	1955 40.7	41.05S	174.82E	52	2.3	0.1	12	10
8821	SEP 25	2034 31.9	41.15S	174.64E	30	2.1	0.2	15	11
8826	SEP 26	0145 38.3	41.51S	175.55E	14	2.0	0.2	12	8
8827	SEP 26	0258 41.6	41.42S	175.01E	26	2.8	0.1	21	14
8828	SEP 26	0258 59.2	41.43S	175.00E	28	2.6	0.1	16	9
8835	SEP 26	1228 21.5	40.99S	175.98E	31	2.4	0.2	12	9
8837	SEP 26	1406 48.9	40.81S	175.18E	13	2.0	0.1	10	6
8842	SEP 26	2015 8.7	40.54S	174.49E	31	2.3	0.2	11	5
8845	SEP 26	2224 53.7	41.00S	175.00E	45	2.1	0.1	10	8
8851	SEP 27	0540 9.4	41.55S	175.54E	12R	2.1	0.2	12	9
8857	SEP 27	1204 24.0	40.79S	173.82E	74	2.6	0.2	15	8
8858	SEP 27	1453 58.3	41.70S	174.34E	3	2.5	0.3	16	12
8864	SEP 27	1758 8.1	41.79S	174.47E	32	2.4	0.1	12	8
8867	SEP 27	2032 15.5	40.84S	174.83E	47	2.0	0.1	9	7
8871	SEP 27	2253 31.6	41.43S	173.64E	78	2.9	0.2	21	14
8875	SEP 28	0117 46.3	40.75S	173.69E	88	2.5	0.1	6	4
8878	SEP 28	0303 9.5	40.62S	175.80E	50	2.4	0.2	12	8
8881	SEP 28	0909 15.1	40.94S	174.95E	29	2.1	0.0	10	7
8883	SEP 28	1055 0.2	41.67S	173.86E	13	2.2	0.2	11	7
8890	SEP 28	1509 21.3	40.53S	174.24E	5R	2.1	0.2	9	6
8891	SEP 28	1525 48.2	40.91S	175.21E	26	3.0	0.2	19	12
8896	SEP 28	1952 29.8	40.50S	174.49E	63	2.3	0.2	11	7
8901	SEP 29	0311 20.5	40.83S	174.73E	48	2.0	0.1	10	6
8907	SEP 29	1324 25.3	41.61S	174.43E	18	2.3	0.4	10	7
8908	SEP 29	1529 18.1	41.68S	174.28E	8	2.8	0.3	17	15
8910	SEP 29	1636 23.9	40.90S	175.72E	29	2.3	0.2	10	8
8923	SEP 30	0529 26.5	41.78S	174.33E	31	2.3	0.2	10	7

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8927	SEP 30	0940 17.0	40.63S	175.48E	30	2.1	0.1	8	6
8928	SEP 30	1039 0.5	40.90S	175.72E	28	2.6	0.1	17	13
8929	SEP 30	1059 20.1	40.82S	174.85E	56	2.3	0.1	9	7
8939	SEP 30	1924 38.1	40.91S	174.86E	50	2.4	0.1	10	7
8945	OCT 01	0056 27.6	41.00S	174.65E	32	2.2	0.0	13	8
8960	OCT 01	1518 35.3	41.44S	175.37E	23	2.2	0.1	13	9
8961	OCT 01	1545 31.2	40.88S	174.75E	15	2.1	0.1	10	7
8962	OCT 01	1716 50.5	40.87S	175.79E	28	2.4	0.1	13	9
8964	OCT 01	1845 7.4	40.84S	174.79E	21	2.1	0.2	11	6
8981	OCT 02	0643 26.3	40.98S	174.90E	50	2.6	0.1	15	10
8982	OCT 02	0654 47.7	40.77S	174.83E	26	2.4	0.3	12	7
8984	OCT 02	1000 31.3	41.42S	175.02E	29	3.4F	0.1	24	15
8989	OCT 02	1508 10.5	40.67S	174.91E	46	2.2	0.1	8	4
8994	OCT 02	1649 45.2	41.69S	174.35E	23	2.4	0.3	12	9
9016	OCT 03	1108 41.0	41.43S	175.47E	18	2.2	0.2	16	10
9019	OCT 03	1325 34.4	40.84S	175.42E	24	3.8F	0.3	32	25
9020	OCT 03	1330 52.1	40.83S	175.39E	24	3.0	0.2	20	15
9021	OCT 03	1342 47.7	40.81S	175.41E	27	2.3	0.2	13	8
9036	OCT 04	0334 37.3	40.72S	174.47E	48	2.1	0.1	9	6
9037	OCT 04	0413 49.6	41.38S	174.63E	23	2.5	0.1	15	10
9040	OCT 04	0612 52.5	41.77S	173.81E	14	3.4	0.3	28	17
9042	OCT 04	0706 5.3	41.18S	173.61E	72	2.6	0.2	14	8
9043	OCT 04	0741 41.9	40.81S	175.40E	26	2.0	0.1	11	8
9044	OCT 04	0809 8.1	41.58S	174.66E	29	2.0	0.0	8	6
9045	OCT 04	0844 13.3	40.90S	174.43E	72	2.7	0.2	15	10
9046	OCT 04	1142 51.1	40.99S	175.91E	21	3.0	0.2	14	10
9054	OCT 04	1808 51.0	40.77S	175.09E	12R	3.0	0.3	20	16
9057	OCT 05	0219 30.5	40.52S	174.38E	53	2.5	0.2	11	6
9063	OCT 05	0620 46.8	41.38S	174.71E	45	2.5	0.1	15	10
9067	OCT 05	0849 3.7	40.64S	175.09E	32	2.1	0.1	8	6
9069	OCT 05	1000 11.2	40.52S	173.86E	92	2.5	0.2	14	8
9081	OCT 06	0004 9.2	40.95S	174.87E	33	2.4	0.1	16	11
9085	OCT 06	0218 18.0	41.69S	174.61E	31	2.2	0.1	11	8
9088	OCT 06	0415 3.2	40.91S	173.85E	77	2.5	0.2	7	4
9092	OCT 06	0812 50.9	40.70S	175.68E	27	3.0	0.3	21	15
9095	OCT 06	1058 23.9	41.32S	173.54E	77	2.5	0.1	8	5
9096	OCT 06	1240 56.6	41.83S	174.56E	28	2.7	0.2	22	13
9107	OCT 06	2005 28.6	41.65S	174.32E	9	2.2	0.3	13	8
9125	OCT 07	1517 30.0	40.63S	175.49E	31	2.1	0.1	8	6
9129	OCT 07	2144 59.5	40.52S	175.14E	8	3.0	0.2	15	12
9130	OCT 07	2148 29.8	40.70S	175.27E	30	2.5	0.1	10	8
9132	OCT 07	2311 4.0	40.95S	175.46E	8	2.0	0.2	11	8
9136	OCT 08	0036 6.2	41.12S	175.08E	8	3.4F	0.2	23	15
9137	OCT 08	0052 26.0	41.12S	175.09E	7	2.1	0.2	14	9
9138	OCT 08	0132 20.1	41.12S	175.09E	8	2.2	0.2	14	9

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9139	OCT 08	0209 36.9	41.05S	174.58E	57	3.2	0.1	18	12
9145	OCT 08	0449 36.3	40.74S	175.19E	11	2.7	0.2	11	7
9148	OCT 08	0951 48.8	41.48S	174.09E	40	2.2	0.1	11	8
9149	OCT 08	1021 45.1	40.88S	175.83E	33	2.1	0.1	8	6
9155	OCT 08	1515 45.1	40.82S	175.24E	28	2.2	0.2	9	7
9160	OCT 08	1951 23.4	40.81S	174.61E	67	2.2	0.1	10	7
9164	OCT 08	2153 42.6	41.01S	174.81E	27	2.6	0.1	14	10
9165	OCT 08	2205 5.7	41.25S	175.24E	24	2.5	0.1	13	9
9167	OCT 09	0102 26.1	40.76S	174.51E	22	2.0	0.1	9	6
9170	OCT 09	0214 5.8	40.63S	175.53E	30	2.3	0.2	8	5
9172	OCT 09	0315 7.7	41.41S	175.01E	26	2.9	0.1	14	10
9173	OCT 09	0318 25.3	41.41S	175.01E	25	2.9	0.1	13	9
9189	OCT 09	1710 11.7	41.77S	174.53E	33	2.4	0.1	12	9
9190	OCT 09	1844 26.7	41.73S	174.29E	12R	2.0	0.3	10	8
9192	OCT 09	1927 27.5	41.73S	174.30E	12R	2.7	0.3	16	13
9193	OCT 09	1927 49.1	41.73S	174.29E	12R	2.6	0.3	13	11
9194	OCT 09	1930 13.6	41.74S	174.30E	12R	2.1	0.2	10	8
9195	OCT 09	2021 59.7	41.64S	174.29E	12R	2.4	0.3	14	10
9203	OCT 10	0618 54.7	41.26S	175.71E	16	2.4	0.1	12	8
9208	OCT 10	1622 27.1	40.84S	174.79E	16	2.5	0.2	14	9
9210	OCT 10	1921 28.4	40.74S	174.96E	34	2.6	0.1	14	9
9215	OCT 10	2154 48.9	40.98S	175.57E	26	2.9	0.2	13	11
9228	OCT 11	0434 9.4	41.16S	174.75E	31	2.1	0.0	8	6
9232	OCT 11	0756 51.2	40.92S	174.39E	62	2.7	0.1	15	10
9233	OCT 11	0910 42.5	41.75S	174.47E	28	2.7	0.1	19	14
9241	OCT 11	1623 12.2	41.31S	174.87E	37	2.8	0.1	17	12
9244	OCT 11	1738 40.6	41.70S	173.76E	7	2.2	0.2	9	7
9245	OCT 11	1751 25.2	41.71S	173.80E	13	2.5	0.2	13	10
9257	OCT 12	0238 6.7	41.23S	175.25E	26	2.1	0.1	12	8
9261	OCT 12	0516 36.2	41.37S	174.19E	34	2.2	0.1	10	7
9263	OCT 12	0757 51.8	41.66S	174.32E	9	2.6	0.2	13	10
9269	OCT 12	1110 56.7	41.24S	174.66E	26	2.1	0.1	13	9
9272	OCT 12	1212 14.0	41.63S	174.34E	8	2.8	0.3	24	15
9283	OCT 13	0435 53.3	41.01S	174.96E	41	3.2	0.1	18	12
9286	OCT 13	1446 45.4	41.08S	174.57E	34	2.4	0.3	14	10
9289	OCT 13	1642 17.2	41.80S	174.55E	31	3.0	0.2	22	14
9292	OCT 13	1752 43.8	40.86S	174.66E	49	2.0	0.1	9	6
9295	OCT 14	0038 12.2	41.02S	174.16E	56	2.6	0.1	9	6
9296	OCT 14	0038 58.4	40.81S	175.40E	27	2.2	0.1	9	7
9297	OCT 14	0055 9.9	41.27S	175.21E	15	2.0	0.2	10	8
9298	OCT 14	0305 25.1	40.94S	175.18E	23	2.2	0.2	12	8
9299	OCT 14	0349 40.6	41.11S	174.52E	34	2.0	0.1	10	7
9303	OCT 14	0617 28.3	41.69S	174.33E	21	2.2	0.3	13	9
9305	OCT 14	1054 0.3	40.67S	175.53E	29	2.5	0.2	14	11
9316	OCT 14	1753 50.6	40.65S	174.34E	56	2.4	0.1	10	8

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
9319	OCT 14	2257 26.3	41.37S	174.37E	34	2.6	0.1	11	8
9324	OCT 15	0442 25.2	41.74S	174.50E	29	3.1	0.2	18	12
9325	OCT 15	0625 20.5	41.41S	174.18E	38	2.6	0.2	14	11
9331	OCT 15	1728 44.8	41.18S	174.58E	53	2.1	0.1	8	5
9333	OCT 15	1846 9.6	40.97S	175.48E	20	2.6	0.2	16	11
9348	OCT 16	0928 35.7	41.56S	174.69E	32	2.0	0.2	9	6
9354	OCT 16	1718 33.8	41.33S	174.63E	30	2.2	0.1	9	8
9355	OCT 16	1724 3.0	41.12S	174.05E	50	2.8	0.1	15	12
9358	OCT 16	1839 14.0	41.59S	174.67E	30	2.5	0.2	12	9
9362	OCT 17	0150 1.6	40.67S	175.73E	28	2.4	0.2	8	6
9368	OCT 17	0904 30.2	41.83S	174.07E	5R	2.2	0.2	7	5
9374	OCT 17	1920 25.2	41.38S	174.16E	34	3.2	0.2	25	14
9394	OCT 18	0405 29.2	40.96S	174.90E	31	2.2	0.1	12	9
9399	OCT 18	0942 9.8	41.00S	174.95E	41	2.2	0.1	12	10
9401	OCT 18	1014 34.5	40.91S	174.95E	56	3.1	0.1	21	15
9406	OCT 18	1337 0.8	41.86S	173.94E	12R	2.0	0.2	8	6
9420	OCT 19	0334 58.5	40.56S	175.72E	31	2.8	0.2	18	15
9421	OCT 19	0344 45.4	41.76S	174.51E	30	2.7	0.2	20	14
9429	OCT 19	0749 31.9	41.09S	174.76E	55	2.0	0.1	8	6
9430	OCT 19	1046 54.0	40.98S	175.42E	23	2.3	0.2	14	9
9432	OCT 19	1247 49.3	40.84S	175.14E	32	2.5	0.2	15	11
9436	OCT 19	1609 55.7	40.98S	175.38E	26	2.3	0.2	16	12
9460	OCT 20	1902 19.4	40.86S	174.30E	51	2.4	0.2	12	9
9469	OCT 21	0245 24.5	41.83S	174.28E	14	2.4	0.3	14	12
9480	OCT 21	0912 22.5	41.72S	174.53E	29	2.0	0.2	10	8
9493	OCT 21	1849 32.1	40.57S	174.36E	41	2.3	0.2	15	9
9508	OCT 22	0740 53.7	41.34S	174.25E	42	2.3	0.1	9	6
9512	OCT 22	1425 5.2	40.85S	174.02E	62	2.3	0.2	11	8
9515	OCT 22	1436 25.2	40.67S	175.50E	28	2.3	0.3	11	9
9516	OCT 22	1530 22.4	41.02S	174.78E	30	2.0	0.1	13	9
9518	OCT 22	1544 19.8	41.65S	174.57E	25	2.1	0.1	12	9
9524	OCT 23	0015 11.1	41.50S	175.38E	20	2.4	0.2	18	11
9525	OCT 23	0046 44.5	41.60S	174.81E	29	3.0	0.2	18	12
9529	OCT 23	0235 6.3	40.50S	174.27E	76	2.7	0.3	12	7
9532	OCT 23	0512 1.2	40.60S	173.94E	91	2.5	0.3	9	7
9535	OCT 23	0626 29.1	40.57S	174.19E	59	2.3	0.2	7	5
9536	OCT 23	0632 49.6	41.67S	174.59E	30	2.2	0.2	15	11
9547	OCT 23	1241 10.7	40.50S	174.15E	92	2.8	0.2	19	12
9565	OCT 24	0618 36.4	40.89S	173.77E	70	2.6	0.2	11	5
9572	OCT 24	1230 59.8	41.43S	173.61E	76	2.7	0.2	15	12
9573	OCT 24	1459 56.6	41.43S	174.67E	31	2.3	0.2	15	10
9578	OCT 24	1823 55.1	40.77S	174.42E	38	2.1	0.2	10	7
9593	OCT 25	1557 15.2	40.53S	175.20E	35	2.7	0.3	20	16
9597	OCT 25	1643 6.1	40.62S	175.48E	30	2.2	0.0	6	4
9612	OCT 26	0649 8.2	41.32S	174.53E	34	2.1	0.2	11	9

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
9616	OCT 26	0911 29.5	41.56S	174.37E	17	2.4	0.2	20	14
9634	OCT 26	1613 44.4	41.19S	175.78E	22	2.8	0.2	16	14
9646	OCT 26	2250 17.9	41.06S	173.94E	55	2.3	0.1	11	8
9653	OCT 27	0405 30.5	40.79S	173.95E	12R	2.3	0.3	7	5
9660	OCT 27	1124 50.4	41.32S	174.92E	22	2.0	0.1	11	8
9661	OCT 27	1142 16.8	41.37S	174.36E	34	2.8	0.2	16	14
9692	OCT 27	2322 15.8	40.74S	175.98E	21	2.3	0.3	8	5
9693	OCT 27	2326 20.2	40.69S	175.91E	30	2.6	0.2	13	8
9767	OCT 28	0238 3.0	40.81S	174.02E	65	2.3	0.1	9	5
9781	OCT 28	0304 28.7	41.51S	174.19E	43	3.4	0.3	25	17
9813	OCT 28	0558 38.9	40.86S	174.50E	69	2.3	0.1	10	8
9842	OCT 28	1503 57.5	41.00S	174.52E	61	2.9	0.1	15	12
9848	OCT 28	1606 31.3	40.83S	175.82E	27	2.2	0.2	8	7
9870	OCT 28	2149 4.4	41.45S	174.48E	23	2.3	0.1	11	8
9874	OCT 28	2337 55.3	40.86S	174.91E	52	2.7	0.1	10	7
9881	OCT 29	0353 54.3	40.59S	175.55E	33	2.3	0.3	10	6
9903	OCT 29	1643 36.8	41.17S	173.96E	58	2.7	0.2	18	12
9915	OCT 29	1914 27.0	41.56S	175.22E	20	2.6	0.2	17	12
9919	OCT 29	2019 21.9	41.43S	175.01E	28	3.7F	0.2	22	16
9921	OCT 29	2032 23.8	41.41S	175.01E	26	2.5	0.1	16	12
9922	OCT 29	2032 26.5	41.41S	175.01E	24	2.7	0.1	14	10
9923	OCT 29	2038 25.5	41.41S	175.00E	25	2.2	0.1	14	10
9925	OCT 29	2052 31.0	41.59S	175.25E	19	2.1	0.1	9	7
9956	OCT 30	0246 20.8	41.27S	174.98E	25	2.3	0.1	17	12
9993	OCT 30	1133 21.4	40.92S	174.49E	53	2.1	0.1	10	7
10003	OCT 30	1450 13.7	40.53S	174.23E	57	2.3	0.2	12	9
10011	OCT 30	1541 49.7	40.69S	173.65E	122	2.4	0.1	9	7
10014	OCT 30	1810 0.2	41.60S	175.23E	21	2.8	0.2	19	14
10017	OCT 30	1909 32.8	41.56S	175.21E	23	2.1	0.2	12	11
10018	OCT 30	1909 34.6	41.60S	175.23E	22	2.8	0.2	19	13
10024	OCT 30	2033 5.9	41.55S	175.21E	20	2.1	0.2	15	11
10031	OCT 30	2216 24.5	41.78S	174.54E	30	2.1	0.2	9	6
10069	OCT 31	0149 14.8	41.37S	175.13E	29	2.1	0.1	11	8
10109	OCT 31	1033 42.5	40.87S	175.48E	24	2.5	0.1	16	12
10111	OCT 31	1124 50.4	40.68S	174.95E	35	2.0	0.2	7	5
10123	OCT 31	1422 10.3	41.82S	173.98E	45	5.1F	0.2	25	19
10124	OCT 31	1432 17.6	41.79S	174.00E	41	2.5	0.2	18	14
10129	OCT 31	1517 38.0	41.80S	174.01E	40	2.8	0.3	18	15
10130	OCT 31	1518 32.3	41.79S	173.98E	43	2.0	0.3	10	6
10162	OCT 31	1807 37.6	41.79S	173.99E	40	2.6	0.2	18	13
10186	OCT 31	1922 25.8	41.04S	175.51E	8	2.7	0.2	15	12
10188	OCT 31	1932 28.3	41.20S	174.86E	59	3.4	0.2	28	19
10249	NOV 01	0234 38.8	41.69S	174.28E	12	3.1	0.3	20	17
10308	NOV 01	1648 5.4	40.97S	175.64E	29	2.8	0.1	18	12
10312	NOV 01	1749 30.1	40.74S	174.33E	56	3.0	0.2	22	14

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
10330	NOV 01	2019 17.6	41.71S	174.27E	5R	2.1	0.2	7	5
10349	NOV 02	0053 57.8	40.79S	175.06E	33	2.7	0.1	17	12
10365	NOV 02	0439 15.9	40.55S	175.24E	5R	2.0	0.1	11	9
10377	NOV 02	0848 29.0	41.59S	175.45E	24	2.2	0.2	11	7
10381	NOV 02	0948 21.1	41.62S	175.46E	23	2.3	0.2	11	8
10386	NOV 02	1103 53.3	41.62S	175.46E	24	2.5	0.2	13	9
10389	NOV 02	1147 57.5	41.63S	175.45E	22	2.1	0.2	9	7
10390	NOV 02	1148 45.8	41.64S	175.46E	16	2.1	0.2	10	8
10391	NOV 02	1157 35.0	41.62S	175.46E	23	2.6	0.2	15	11
10394	NOV 02	1243 20.6	41.61S	175.46E	23	2.4	0.2	14	10
10395	NOV 02	1243 41.5	41.65S	175.47E	16	2.3	0.1	13	9
10400	NOV 02	1440 33.6	40.62S	175.49E	31	2.2	0.1	7	5
10415	NOV 02	2216 32.0	40.63S	173.66E	101	2.9	0.3	19	11
10422	NOV 03	0019 19.4	40.93S	174.76E	47	2.6	0.2	13	9
10425	NOV 03	0339 19.5	41.63S	174.13E	24	2.0	0.1	6	4
10427	NOV 03	0359 49.7	40.61S	175.46E	31	2.2	0.1	7	5
10435	NOV 03	0619 45.1	41.67S	173.77E	65	2.6	0.1	9	5
10444	NOV 03	1017 49.6	41.85S	174.39E	24	2.6	0.1	15	9
10447	NOV 03	1054 28.1	40.99S	175.37E	20	2.0	0.1	6	4
10458	NOV 03	1352 47.8	41.05S	173.64E	92	3.6	0.2	34	20
10461	NOV 03	1731 56.7	41.41S	175.02E	26	2.5	0.1	15	10
10472	NOV 03	2216 8.8	41.33S	174.50E	32	2.4	0.1	12	9
10473	NOV 03	2231 51.2	40.99S	175.22E	23	2.2	0.1	10	7
10501	NOV 04	0548 22.5	41.59S	174.75E	25	2.4	0.0	10	8
10510	NOV 04	1020 2.7	40.94S	175.45E	25	2.3	0.1	10	7
10511	NOV 04	1029 37.0	40.97S	175.65E	26	2.7	0.1	11	8
10514	NOV 04	1152 14.1	41.36S	175.11E	27	2.2	0.1	9	6
10532	NOV 05	0010 35.0	41.06S	174.20E	60	2.6	0.1	9	6
10534	NOV 05	0132 25.1	40.95S	174.67E	49	2.2	0.1	8	6
10544	NOV 05	0909 30.2	40.70S	174.38E	51	2.1	0.1	11	7
10549	NOV 05	1326 16.7	40.85S	175.83E	28	2.0	0.1	10	6
10550	NOV 05	1341 17.0	40.84S	175.96E	30	2.0	0.1	7	6
10572	NOV 05	2016 42.0	41.42S	174.62E	31	3.0	0.2	24	16
10576	NOV 05	2155 31.6	41.03S	175.53E	14	2.0	0.1	12	8
10577	NOV 05	2203 37.2	41.60S	175.24E	22	2.9	0.2	16	12
10591	NOV 06	0618 21.3	41.49S	174.65E	55	2.2	0.1	11	9
10612	NOV 06	1848 35.0	41.62S	174.28E	3	3.3	0.3	24	18
10642	NOV 07	0253 43.5	40.53S	174.61E	31	2.0	0.2	9	5
10698	NOV 07	0934 52.8	41.22S	174.53E	37	2.1	0.1	11	9
10709	NOV 07	1218 18.2	40.95S	173.80E	63	2.0	0.1	8	5
10722	NOV 07	1541 3.9	40.60S	174.42E	47	2.3	0.2	14	9
10731	NOV 07	1647 51.7	40.60S	173.65E	97	3.7	0.2	30	22
10734	NOV 07	1833 56.2	41.11S	175.90E	32	2.9	0.1	16	11
10737	NOV 07	2006 54.3	41.29S	174.99E	11	2.0	0.3	12	10
10745	NOV 08	0047 19.1	41.46S	174.25E	64	2.3	0.1	13	10

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
10757	NOV 08	0234 43.1	40.93S	174.68E	66	2.6	0.1	13	9
10762	NOV 08	0331 29.1	40.63S	175.49E	30	2.1	0.2	9	7
10789	NOV 08	1213 38.5	40.72S	175.18E	31	2.9	0.2	22	16
10795	NOV 08	1357 52.8	41.16S	174.81E	28	2.1	0.1	10	8
10824	NOV 08	2053 23.2	41.22S	174.78E	50	2.6	0.1	16	12
10850	NOV 09	0810 4.3	40.60S	175.06E	33	2.0	0.2	7	5
10852	NOV 09	0913 28.4	41.53S	174.11E	34	2.3	0.1	12	9
10880	NOV 09	1829 54.2	41.24S	174.29E	34	2.3	0.2	9	7
10889	NOV 09	2205 31.1	40.98S	174.68E	37	2.0	0.1	8	6
10898	NOV 10	0153 25.0	40.63S	175.49E	31	2.0	0.1	6	4
10901	NOV 10	0320 18.4	40.72S	173.82E	109	2.5	0.1	8	6
10906	NOV 10	0628 32.6	40.91S	174.28E	78	2.2	0.1	7	5
10919	NOV 10	1217 12.0	41.08S	174.52E	41	2.6	0.2	16	12
10929	NOV 10	1450 31.9	40.61S	174.34E	12R	2.8	0.2	16	13
10942	NOV 11	0039 38.3	40.66S	175.90E	30	2.5	0.3	9	7
10955	NOV 11	0749 53.1	41.16S	174.54E	33	2.1	0.1	9	7
10956	NOV 11	0825 37.7	41.42S	173.59E	82	2.8	0.2	19	12
10965	NOV 11	1342 14.5	41.34S	173.95E	49	3.0	0.2	22	15
10966	NOV 11	1425 20.9	41.28S	173.60E	85	2.8	0.2	15	10
10970	NOV 11	1511 42.0	40.62S	174.38E	2	2.4	0.3	13	9
10973	NOV 11	1801 53.8	40.63S	174.38E	6	2.1	0.3	11	7
10974	NOV 11	1820 23.9	40.58S	175.68E	26	3.0	0.3	17	13
10975	NOV 11	1916 2.5	41.13S	174.47E	39	2.7	0.2	16	11
10981	NOV 12	0020 25.4	41.54S	174.07E	33	2.1	0.2	6	4
10982	NOV 12	0105 31.2	41.02S	173.61E	128	2.9	0.2	12	10
11033	NOV 12	1339 2.2	40.88S	175.47E	23	2.4	0.2	14	10
11034	NOV 12	1351 5.4	41.36S	174.15E	42	2.5	0.1	7	5
11036	NOV 12	1401 2.8	41.58S	174.35E	25	3.0	0.2	24	15
11037	NOV 12	1403 8.3	41.04S	174.51E	54	3.9F	0.2	30	23
11051	NOV 12	2059 14.8	40.96S	175.45E	20	2.2	0.0	6	4
11053	NOV 12	2110 25.3	40.91S	174.56E	106	2.3	0.5	8	7
11058	NOV 12	2251 20.3	41.94S	174.16E	24	2.4	0.1	6	4
11089	NOV 13	1433 30.6	41.56S	175.54E	15	2.1	0.2	11	8
11090	NOV 13	1448 31.7	41.28S	175.24E	28	2.0	0.1	12	9
11092	NOV 13	1526 25.8	40.90S	175.09E	29	2.0	0.1	10	8
11094	NOV 13	1639 45.2	40.84S	174.54E	26	2.4	0.2	14	9
11096	NOV 13	1729 32.9	40.85S	175.29E	48	2.2	0.1	8	5
11097	NOV 13	1733 13.3	40.85S	174.74E	16	2.9	0.2	18	12
11104	NOV 13	2233 42.7	40.97S	175.37E	6	2.3	0.2	14	10
11105	NOV 13	2313 47.0	40.74S	173.94E	102	2.9	0.2	11	8
11107	NOV 14	0047 8.4	41.29S	174.87E	17	2.0	0.1	10	7
11109	NOV 14	0304 51.3	41.01S	174.68E	33	2.5	0.1	17	12
11113	NOV 14	0428 41.0	40.60S	174.00E	88	2.8	0.2	20	14
11115	NOV 14	0805 2.8	41.85S	174.33E	12R	2.4	0.3	11	10
11127	NOV 14	1544 30.6	40.65S	174.12E	82	3.5	0.2	32	23

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
11144	NOV 15	0527 39.3	40.91S	175.00E	60	2.4	0.1	13	10
11147	NOV 15	0646 29.8	40.50S	174.68E	74	2.1	0.1	10	6
11149	NOV 15	1024 45.2	41.40S	174.63E	21	2.2	0.2	13	11
11150	NOV 15	1138 9.5	40.88S	174.79E	65	2.8	0.1	9	8
11151	NOV 15	1138 14.7	40.90S	175.52E	5	3.3	0.2	22	19
11154	NOV 15	1325 39.0	40.99S	175.63E	28	2.3	0.1	15	10
11169	NOV 15	1530 4.5	40.81S	175.74E	26	2.8	0.3	17	12
11194	NOV 16	0604 6.4	40.76S	174.51E	25	2.2	0.2	13	8
11200	NOV 16	0813 2.3	41.55S	174.35E	3	2.0	0.3	12	9
11214	NOV 16	1831 13.7	41.84S	174.25E	28	2.6	0.1	16	10
11221	NOV 16	2223 32.9	41.03S	174.21E	53	2.2	0.1	8	5
11225	NOV 17	0351 51.2	41.51S	173.54E	66	2.5	0.1	5	4
11226	NOV 17	0422 1.4	41.63S	173.88E	47	3.0	0.3	28	19
11228	NOV 17	0644 56.6	41.38S	175.04E	27	2.0	0.1	14	10
11231	NOV 17	0811 42.7	40.50S	174.55E	80	2.2	0.1	6	5
11233	NOV 17	0956 47.5	40.67S	175.88E	23	3.1	0.4	23	19
11238	NOV 17	1540 25.4	41.44S	173.58E	84	2.5	0.3	19	11
11252	NOV 18	0458 18.4	41.17S	174.02E	47	2.0	0.2	11	7
11254	NOV 18	0632 23.9	41.67S	174.65E	30	2.2	0.2	16	13
11274	NOV 18	1921 11.4	41.44S	175.52E	22	2.2	0.3	12	8
11275	NOV 18	1943 3.4	41.47S	175.52E	21	2.3	0.2	12	9
11276	NOV 18	2020 54.8	41.32S	174.36E	60	2.7	0.1	15	10
11277	NOV 18	2037 40.5	40.50S	174.28E	74	2.8	0.3	26	13
11289	NOV 19	0351 53.9	40.50S	174.32E	82	2.5	0.1	13	8
11303	NOV 19	1612 25.8	41.69S	174.20E	5R	2.4	0.3	13	11
11304	NOV 19	1808 45.0	40.88S	175.46E	23	2.1	0.2	12	9
11312	NOV 20	0342 29.1	40.58S	174.93E	29	2.1	0.1	9	6
11323	NOV 21	0041 2.3	41.45S	174.30E	63	2.7	0.1	13	11
11324	NOV 21	0130 51.7	41.69S	174.26E	15	2.5	0.1	12	9
11327	NOV 21	0451 10.4	41.59S	173.60E	59	2.6	0.2	16	13
11335	NOV 21	1120 17.3	40.71S	173.79E	91	3.0	0.2	19	13
11338	NOV 21	1749 21.2	41.29S	174.49E	56	2.7	0.1	17	12
11349	NOV 22	1003 5.0	41.17S	173.52E	92	3.2	0.2	26	14
11351	NOV 22	1027 3.5	41.74S	174.03E	36	2.5	0.3	15	12
11361	NOV 22	1627 52.5	40.54S	174.32E	66	2.4	0.1	7	5
11365	NOV 22	2156 42.7	41.12S	175.35E	26	2.1	0.1	11	8
11374	NOV 23	1359 32.4	41.31S	173.59E	63	2.3	0.2	8	5
11381	NOV 23	2129 31.5	41.43S	175.86E	14	2.5	0.1	8	7
11386	NOV 24	0322 26.3	41.63S	174.25E	22	2.3	0.3	11	7
11395	NOV 24	1149 42.0	41.12S	175.08E	7	2.1	0.2	15	10
11401	NOV 24	1430 44.4	41.15S	173.70E	75	2.9	0.1	17	9
11403	NOV 24	1510 18.1	41.58S	174.69E	30	2.3	0.2	13	10
11406	NOV 24	1957 34.4	40.76S	174.83E	24	2.1	0.3	10	7
11409	NOV 24	2226 36.5	41.46S	174.33E	18	2.2	0.1	8	6
11419	NOV 25	0325 36.8	40.75S	174.42E	5R	2.0	0.3	7	6

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
11424	NOV 25	1002 38.0	41.73S	174.63E	27	2.4	0.2	13	10
11432	NOV 25	1556 12.8	41.28S	175.00E	26	2.5	0.1	18	12
11436	NOV 25	1853 44.8	40.61S	175.51E	31	2.4	0.2	10	6
11444	NOV 26	0148 28.6	40.91S	175.14E	36	2.4	0.1	10	7
11453	NOV 26	0744 54.9	41.23S	175.06E	19	2.1	0.1	11	8
11455	NOV 26	0906 43.6	41.59S	175.54E	17	2.1	0.2	15	10
11459	NOV 26	1133 59.1	41.10S	175.33E	26	2.0	0.1	9	7
11462	NOV 26	1510 15.7	41.57S	173.97E	12	2.0	0.2	10	8
11463	NOV 26	1514 29.9	41.06S	174.75E	31	2.6	0.1	15	12
11467	NOV 26	1856 59.4	41.45S	175.00E	21	2.0	0.1	11	10
11470	NOV 26	2130 4.7	41.09S	174.28E	49	2.0	0.1	8	5
11478	NOV 27	0034 37.4	40.97S	175.98E	31	2.2	0.2	9	8
11494	NOV 27	1122 40.1	41.22S	174.16E	39	2.4	0.2	12	10
11495	NOV 27	1134 18.2	40.70S	175.73E	30	2.5	0.2	11	10
11500	NOV 27	1727 32.4	40.82S	174.72E	65	2.3	0.1	9	7
11502	NOV 27	1928 49.5	40.57S	174.23E	64	2.9	0.3	17	13
11506	NOV 28	0136 35.1	40.65S	175.25E	31	2.0	0.3	8	6
11512	NOV 28	0514 19.4	41.82S	173.97E	13	2.4	0.2	10	9
11517	NOV 28	0737 35.0	40.95S	175.52E	26	3.0F	0.2	18	13
11519	NOV 28	0937 18.0	41.11S	174.08E	52	2.7	0.2	11	7
11524	NOV 28	1332 37.7	40.84S	174.73E	11	2.2	0.1	10	7
11525	NOV 28	1417 26.1	40.80S	175.25E	36	2.1	0.1	9	8
11526	NOV 28	1427 59.1	41.39S	174.93E	16	2.1	0.1	11	9
11528	NOV 28	1544 8.8	41.43S	173.91E	43	3.5	0.2	21	18
11536	NOV 29	0122 27.1	41.10S	175.05E	25	2.0	0.1	10	7
11541	NOV 29	0544 5.6	41.16S	174.02E	52	2.6	0.2	13	10
11542	NOV 29	0603 12.5	40.56S	174.30E	75	2.5	0.2	8	6
11551	NOV 29	1550 22.2	40.50S	174.43E	70	3.2	0.3	14	8
11581	NOV 30	0212 45.8	41.46S	173.74E	56	3.4	0.2	24	17
11608	NOV 30	2109 24.9	41.64S	173.98E	12R	2.4	0.2	11	8
11609	DEC 01	0001 35.8	40.89S	175.10E	33	2.0	0.1	7	6
11611	DEC 01	0607 7.8	41.64S	174.17E	58	2.1	0.2	8	5
11612	DEC 01	0617 37.6	41.75S	174.33E	10	2.4	0.2	12	9
11614	DEC 01	0622 27.6	40.98S	174.93E	56	2.4	0.1	9	7
11615	DEC 01	0727 6.7	40.72S	174.87E	15	2.1	0.1	11	6
11634	DEC 02	0751 38.7	40.71S	174.71E	69	2.6	0.1	12	11
11636	DEC 02	1043 41.0	40.88S	174.67E	64	2.5	0.1	10	8
11648	DEC 03	0018 26.0	40.91S	175.50E	25	2.5	0.1	15	11
11654	DEC 03	0441 5.7	40.84S	175.77E	31	2.2	0.1	8	6
11655	DEC 03	0540 50.8	41.22S	175.22E	23	2.3	0.2	15	10
11658	DEC 03	0943 7.3	41.08S	174.48E	36	3.4	0.2	22	17
11660	DEC 03	1329 8.7	40.57S	174.52E	32	2.1	0.1	11	6
11662	DEC 03	1647 13.7	41.08S	174.95E	30	2.4	0.1	14	11
11673	DEC 04	0628 7.1	40.72S	175.86E	30	2.1	0.2	9	6
11680	DEC 04	1401 6.8	41.65S	174.33E	5R	2.7	0.3	18	15

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
11681	DEC 04	1507 12.3	41.65S	174.32E	5R	2.7	0.4	17	14
11689	DEC 04	1902 56.9	41.36S	174.48E	32	2.3	0.1	13	10
11702	DEC 05	1253 8.8	41.55S	174.71E	29	2.0	0.2	11	9
11704	DEC 05	1429 46.8	41.40S	174.09E	41	2.7	0.2	16	12
11710	DEC 05	1602 8.3	41.62S	175.47E	15	2.1	0.1	11	8
11711	DEC 05	1604 15.8	41.26S	175.32E	27	2.1	0.1	11	8
11729	DEC 06	0922 26.4	40.83S	175.15E	31	2.6	0.2	15	11
11731	DEC 06	1140 48.7	41.05S	174.84E	49	2.1	0.1	6	5
11734	DEC 06	1219 18.1	40.92S	174.66E	13	2.6	0.2	20	13
11736	DEC 06	1257 45.9	41.57S	175.09E	26	2.0	0.0	10	7
11743	DEC 06	2216 26.1	40.84S	174.72E	16	2.1	0.2	11	6
11756	DEC 07	0336 10.7	41.42S	173.57E	77	2.5	0.2	11	7
11760	DEC 07	0906 4.2	40.83S	174.70E	44	2.0	0.2	11	9
11765	DEC 07	1015 0.3	40.98S	174.58E	55	2.1	0.1	9	7
11768	DEC 07	1226 18.3	40.72S	174.18E	62	2.5	0.1	12	7
11770	DEC 07	1332 54.7	40.89S	175.71E	29	2.0	0.2	13	9
11775	DEC 07	2112 25.1	41.45S	174.08E	34	2.3	0.2	12	8
11784	DEC 08	0423 29.7	41.25S	175.35E	31	4.4F	0.1	27	22
11785	DEC 08	0426 24.9	41.24S	175.34E	27	2.7	0.1	15	10
11786	DEC 08	0427 34.0	41.24S	175.34E	28	3.2	0.2	21	14
11787	DEC 08	0428 28.5	41.24S	175.34E	28	2.1	0.1	14	9
11788	DEC 08	0428 31.3	41.29S	175.36E	37	2.2	0.2	12	7
11789	DEC 08	0430 37.2	41.24S	175.31E	20	2.0	0.1	11	9
11790	DEC 08	0431 16.5	41.24S	175.34E	27	2.1	0.1	10	8
11791	DEC 08	0432 11.1	41.25S	175.33E	28	3.0	0.1	17	12
11792	DEC 08	0434 23.5	41.24S	175.34E	26	2.0	0.1	11	8
11793	DEC 08	0437 16.7	41.23S	175.33E	28	2.7	0.2	16	11
11794	DEC 08	0437 32.7	41.24S	175.33E	28	2.2	0.2	14	9
11796	DEC 08	0438 54.0	41.23S	175.33E	27	2.1	0.2	14	9
11797	DEC 08	0439 36.5	41.23S	175.34E	27	2.0	0.2	14	9
11798	DEC 08	0440 21.3	41.24S	175.33E	28	2.6	0.2	16	11
11799	DEC 08	0447 31.0	41.24S	175.33E	27	2.3	0.2	16	11
11803	DEC 08	0455 45.8	41.24S	175.34E	28	2.1	0.1	10	8
11805	DEC 08	0457 51.4	41.23S	175.35E	26	2.0	0.1	7	6
11806	DEC 08	0502 21.9	41.24S	175.33E	27	2.1	0.1	12	9
11809	DEC 08	0515 47.1	41.24S	175.34E	28	2.6	0.1	14	9
11810	DEC 08	0520 15.2	41.25S	175.33E	27	2.0	0.1	10	8
11811	DEC 08	0525 27.3	41.25S	175.34E	28	2.3	0.1	15	10
11813	DEC 08	0615 37.4	41.24S	175.35E	30	3.9F	0.3	27	20
11815	DEC 08	0619 43.4	41.25S	175.34E	28	2.9	0.1	17	12
11816	DEC 08	0620 46.5	41.24S	175.34E	27	2.3	0.1	14	9
11818	DEC 08	0629 50.1	41.25S	175.33E	26	2.1	0.2	12	9
11820	DEC 08	0648 44.4	41.68S	173.80E	43	2.8	0.3	21	15
11822	DEC 08	0649 50.2	41.24S	175.35E	26	2.1	0.1	14	9
11825	DEC 08	0724 54.6	41.57S	174.06E	24	2.1	0.1	10	7

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
11826	DEC 08	0727 29.9	41.24S	175.34E	28	2.5	0.1	16	11
11833	DEC 08	0950 29.4	41.24S	175.33E	28	2.6	0.2	18	12
11834	DEC 08	1006 35.1	41.25S	175.33E	26	2.1	0.1	11	8
11835	DEC 08	1007 24.4	41.25S	175.34E	29	3.2	0.2	23	16
11836	DEC 08	1010 42.8	41.24S	175.34E	27	2.8	0.2	20	13
11841	DEC 08	1141 16.1	40.56S	173.55E	138	3.5	0.2	30	18
11849	DEC 08	1340 18.8	41.25S	175.33E	26	2.3	0.2	13	10
11853	DEC 08	1407 46.1	41.59S	174.11E	18	2.5	0.4	14	11
11855	DEC 08	1446 2.3	41.24S	175.33E	28	2.1	0.2	15	10
11860	DEC 08	1544 10.5	41.24S	175.33E	27	2.2	0.2	15	10
11861	DEC 08	1556 20.7	41.24S	175.32E	23	2.0	0.1	12	8
11864	DEC 08	1937 17.0	41.24S	175.34E	27	2.1	0.1	10	7
11866	DEC 08	1952 16.1	41.24S	175.35E	28	2.0	0.2	14	9
11878	DEC 09	0210 21.7	41.23S	175.34E	28	2.4	0.2	15	10
11881	DEC 09	0516 34.3	41.30S	175.30E	29	2.3	0.1	14	9
11886	DEC 09	0923 2.6	40.82S	175.10E	34	2.2	0.2	9	7
11888	DEC 09	0938 11.5	41.19S	174.01E	60	2.4	0.2	14	9
11890	DEC 09	1031 12.5	41.26S	175.33E	28	2.0	0.1	11	8
11892	DEC 09	1134 31.2	41.24S	175.34E	28	2.0	0.2	12	9
11897	DEC 09	1357 43.2	41.37S	174.36E	31	2.6	0.3	16	12
11901	DEC 09	1517 4.2	40.58S	175.19E	33	2.2	0.2	12	8
11903	DEC 09	1706 1.7	41.23S	175.34E	27	2.0	0.2	15	10
11904	DEC 09	1715 57.1	40.88S	175.51E	23	2.4	0.1	14	10
11906	DEC 09	2102 49.7	41.80S	173.58E	45	3.1	0.2	32	20
11909	DEC 10	0152 35.4	41.27S	174.98E	27	2.5	0.1	18	12
11912	DEC 10	0626 55.2	41.08S	174.63E	31	2.9	0.2	20	15
11916	DEC 10	0928 19.0	41.01S	174.54E	57	2.0	0.1	9	6
11930	DEC 10	2045 21.4	41.25S	175.32E	28	2.4	0.1	14	10
11948	DEC 11	0816 56.9	40.97S	175.49E	22	2.6	0.2	16	11
11956	DEC 11	1344 53.2	41.36S	173.62E	75	3.7	0.3	21	17
11964	DEC 11	1829 35.8	41.25S	174.60E	29	2.1	0.1	16	10
11968	DEC 11	2119 48.6	41.26S	175.33E	28	2.0	0.1	13	10
11970	DEC 11	2339 15.5	40.64S	174.39E	43	2.0	0.2	10	6
11973	DEC 12	0327 2.3	41.40S	174.69E	53	2.0	0.2	9	7
11976	DEC 12	0458 5.6	40.98S	175.49E	18	2.8	0.2	20	15
11977	DEC 12	0547 38.4	41.57S	174.33E	24	2.7	0.2	24	17
11980	DEC 12	0909 0.4	41.11S	174.81E	60	2.0	0.1	8	6
11985	DEC 12	1255 45.8	40.99S	175.45E	28	2.2	0.1	13	9
11986	DEC 12	1323 55.7	40.96S	175.47E	13	2.0	0.1	14	10
11987	DEC 12	1411 57.0	41.23S	175.34E	27	3.1	0.2	19	13
11989	DEC 12	1515 4.7	41.25S	175.33E	28	2.4	0.1	15	10
11994	DEC 12	1712 5.6	40.50S	174.37E	79	2.1	0.1	8	6
11998	DEC 12	2248 32.4	41.63S	174.39E	12	2.2	0.2	10	8
11999	DEC 13	0147 37.5	41.68S	174.32E	20	2.4	0.2	16	11
12007	DEC 13	0531 41.0	41.04S	174.48E	65	2.6	0.1	19	12

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12016	DEC 13	1336 38.4	41.49S	173.92E	45	2.4	0.3	20	14
12034	DEC 14	0014 33.7	41.08S	173.80E	56	2.5	0.2	14	8
12038	DEC 14	0142 0.6	41.72S	174.48E	31	2.0	0.1	8	5
12039	DEC 14	0501 28.0	40.92S	174.50E	51	3.1	0.1	23	18
12043	DEC 14	1038 30.8	41.26S	175.01E	29	2.0	0.1	12	9
12046	DEC 14	1210 14.1	41.50S	174.45E	25	2.4	0.1	20	13
12048	DEC 14	1337 13.6	40.91S	175.53E	24	2.3	0.1	14	10
12052	DEC 14	1607 57.5	40.62S	175.48E	31	2.0	0.1	9	6
12053	DEC 14	1629 27.9	40.53S	174.34E	47	2.7	0.2	20	12
12055	DEC 14	1735 47.0	41.24S	175.34E	27	2.3	0.2	15	10
12062	DEC 15	0708 58.4	41.05S	174.71E	31	2.1	0.1	11	7
12066	DEC 15	1357 21.3	40.89S	175.84E	32	2.2	0.1	7	5
12069	DEC 15	1840 26.5	41.24S	175.34E	26	2.1	0.1	9	6
12084	DEC 16	0446 28.4	41.26S	173.89E	65	3.9F	0.3	24	21
12089	DEC 16	1027 56.1	41.99S	174.37E	31	2.7	0.1	20	12
12100	DEC 17	0243 2.4	40.83S	174.37E	50	2.8	0.2	11	8
12109	DEC 17	1122 57.0	41.74S	174.59E	34	2.4	0.1	9	7
12132	DEC 17	1420 54.6	41.52S	174.16E	36	2.1	0.2	13	10
12133	DEC 17	1431 6.9	41.01S	174.48E	56	2.3	0.1	8	6
12134	DEC 17	1537 18.4	41.07S	174.70E	31	2.2	0.1	17	11
12135	DEC 17	1620 26.0	40.74S	174.50E	70	2.1	0.1	9	7
12138	DEC 17	1741 42.7	41.16S	173.80E	69	2.6	0.2	17	11
12141	DEC 17	2001 5.1	41.30S	174.37E	62	2.5	0.1	13	9
12144	DEC 17	2358 8.0	40.97S	175.44E	22	2.7	0.1	11	9
12146	DEC 18	0001 39.7	40.96S	175.44E	21	2.2	0.1	11	8
12156	DEC 18	0818 10.0	40.68S	175.48E	10	4.0F	0.2	31	29
12171	DEC 18	0842 10.1	41.70S	174.50E	27	2.4	0.1	14	10
12173	DEC 18	0943 45.5	40.69S	174.46E	51	2.0	0.2	11	7
12176	DEC 18	1225 31.3	40.67S	175.81E	28	2.3	0.2	9	7
12185	DEC 18	1917 40.2	41.79S	174.53E	30	2.5	0.2	21	13
12186	DEC 18	1930 16.8	41.73S	174.34E	10	2.4	0.2	21	15
12189	DEC 18	2050 19.9	40.68S	175.47E	27	2.4	0.1	14	10
12192	DEC 18	2130 32.1	40.84S	174.69E	54	2.1	0.2	7	5
12193	DEC 18	2149 42.4	41.03S	175.71E	5R	2.1	0.2	7	3
12200	DEC 19	0259 58.7	41.30S	174.49E	58	2.3	0.1	8	5
12210	DEC 19	1015 4.7	41.42S	173.74E	59	2.7	0.2	18	14
12224	DEC 20	0152 10.8	40.74S	175.24E	31	2.0	0.1	6	4
12225	DEC 20	0206 8.6	41.41S	175.00E	25	2.3	0.1	14	10
12233	DEC 20	1018 4.0	41.66S	174.99E	31	2.2	0.1	7	5
12234	DEC 20	1052 47.3	40.68S	175.41E	31	3.4	0.2	26	19
12240	DEC 20	1625 37.7	40.93S	174.65E	14	2.1	0.1	10	7
12242	DEC 20	1809 6.8	40.95S	175.31E	21	2.4	0.2	14	11
12244	DEC 20	2111 14.4	41.45S	174.19E	34	2.7	0.2	13	11
12247	DEC 21	0015 31.0	40.55S	174.37E	5R	2.7	0.2	12	9
12252	DEC 21	0646 46.2	41.23S	174.84E	29	2.2	0.1	14	10

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
12254	DEC 21	0944 38.5	40.51S	174.44E	84	2.6	0.1	9	6
12263	DEC 21	1454 4.7	41.14S	174.49E	51	2.2	0.1	8	6
12268	DEC 21	1750 42.6	40.84S	174.62E	52	2.3	0.0	8	7
12272	DEC 21	2345 22.5	41.25S	175.33E	27	2.1	0.1	13	9
12279	DEC 22	0820 9.1	41.63S	174.10E	43	3.2	0.2	24	18
12283	DEC 22	1054 19.0	40.72S	174.28E	47	2.3	0.1	8	6
12284	DEC 22	1219 57.2	41.33S	175.00E	24	2.1	0.1	10	7
12286	DEC 22	1335 24.4	41.04S	174.24E	53	2.9	0.2	17	12
12305	DEC 23	1230 59.2	40.77S	174.88E	40	2.4	0.1	11	8
12314	DEC 23	2002 23.1	41.24S	175.33E	27	2.1	0.2	12	9
12319	DEC 23	2203 41.2	41.57S	175.05E	32	2.0	0.1	10	8
12320	DEC 23	2243 58.4	40.97S	174.94E	25	2.0	0.2	16	11
12328	DEC 24	0447 16.8	41.11S	174.04E	55	2.6	0.2	17	12
12331	DEC 24	0632 50.2	41.27S	175.19E	24	2.5	0.2	18	13
12340	DEC 24	1459 17.5	40.82S	174.77E	15	2.0	0.3	15	10
12368	DEC 25	0041 10.1	41.26S	175.62E	27	2.3	0.1	16	10
12384	DEC 25	1302 38.2	41.10S	174.00E	57	2.1	0.1	11	8
12387	DEC 25	1402 57.6	40.62S	174.90E	34	2.0	0.1	13	9
12393	DEC 25	1908 0.5	41.34S	173.79E	54	2.5	0.2	15	11
12394	DEC 25	1938 47.7	41.11S	175.35E	26	2.0	0.1	11	8
12401	DEC 26	0114 15.5	41.08S	174.04E	57	2.3	0.2	10	7
12402	DEC 26	0117 12.3	40.99S	175.31E	19	2.4	0.2	16	12
12404	DEC 26	0515 1.4	40.84S	175.75E	29	2.1	0.1	12	8
12405	DEC 26	0516 35.2	40.84S	175.74E	29	2.0	0.1	10	6
12406	DEC 26	0650 16.0	41.05S	174.77E	32	2.5	0.0	18	12
12423	DEC 26	1811 55.5	41.60S	173.50E	65	3.0	0.3	22	17
12428	DEC 26	2254 49.7	40.51S	174.69E	27	2.2	0.3	10	8
12434	DEC 27	0253 19.7	40.64S	174.01E	68	2.3	0.2	9	5
12435	DEC 27	0332 15.1	40.70S	174.38E	47	2.5	0.1	11	7
12437	DEC 27	0455 22.3	41.80S	175.03E	34	2.3	0.1	11	8
12441	DEC 27	0748 4.1	40.81S	175.29E	25	3.3	0.3	23	19
12469	DEC 28	0640 34.1	40.75S	173.71E	113	3.3	0.2	31	19
12470	DEC 28	0850 43.0	41.19S	174.17E	43	2.3	0.1	10	8
12474	DEC 28	1144 4.7	41.25S	175.33E	28	2.3	0.1	13	10
12482	DEC 28	1533 47.1	40.90S	175.81E	29	2.8	0.2	21	14
12485	DEC 28	1659 54.5	41.25S	175.32E	28	2.3	0.1	12	9
12490	DEC 28	2245 7.3	40.56S	175.44E	31	2.1	0.1	8	6
12495	DEC 29	0204 43.3	41.52S	174.58E	20	2.2	0.0	7	5
12498	DEC 29	0506 29.9	40.63S	175.48E	28	2.3	0.1	10	7
12509	DEC 29	1548 57.4	41.08S	174.91E	48	2.2	0.1	11	9
12513	DEC 29	1649 46.4	40.75S	174.55E	38	2.3	0.1	10	8
12517	DEC 29	2040 34.9	40.90S	174.31E	51	2.4	0.1	10	7
12520	DEC 30	0057 36.1	41.25S	175.33E	28	2.7	0.1	14	10
12522	DEC 30	0203 12.8	40.90S	173.62E	86	2.8	0.2	13	7
12525	DEC 30	0345 24.4	41.25S	175.33E	28	2.9	0.1	14	11

NUM	DATE	TIME	LAT	LONG	DEP	MAG	Rsd	NP	NS
12526	DEC 30	0345 59.1	40.86S	175.73E	27	2.1	0.2	10	7
12533	DEC 30	0831 50.6	40.73S	175.36E	30	2.2	0.1	9	7
12538	DEC 30	1232 30.5	40.75S	175.31E	29	2.1	0.2	10	9
12542	DEC 30	1525 51.7	41.61S	173.50E	63	2.8	0.3	19	13
12550	DEC 31	0001 24.9	41.77S	174.47E	27	2.3	0.2	13	10
12553	DEC 31	0205 26.9	40.90S	174.57E	61	2.7	0.1	13	11
12556	DEC 31	0405 3.1	41.02S	173.94E	60	2.3	0.1	9	6
12559	DEC 31	0459 28.2	41.25S	174.87E	28	3.1	0.1	18	14
12560	DEC 31	0502 11.7	41.24S	174.86E	28	2.1	0.1	13	9
12564	DEC 31	1019 14.3	41.63S	174.30E	5R	2.7	0.3	21	17
12566	DEC 31	1028 59.5	41.50S	174.50E	20	3.1	0.2	27	18
12567	DEC 31	1119 58.9	40.60S	174.47E	5R	2.3	0.2	8	5
12573	DEC 31	1509 3.2	41.66S	174.57E	33	2.3	0.3	11	9
12577	DEC 31	1814 35.1	40.85S	175.60E	30	2.4	0.3	11	8

TUAMOTU ARCHIPELAGO NUCLEAR EXPLOSIONS

Nuclear explosions at the French nuclear test sites in the Tuamotu Archipelago are often recorded at Rarotonga (RAR). The P-wave is usually not recorded but the T-waves have a rather distinctive signature with a very emergent onset, followed after a few seconds by a more prominent burst of energy which reaches its maximum and decays before the arrival of a smaller "echo" trailing the main energy by some 110 seconds. Although other teleseismic readings from the New Zealand instrumental networks are published by the International Seismological Centre, these T-wave observations are not.

Because the emergent first arrival cannot always be seen clearly when the explosions are relatively small, the instant of arrival is not recorded here. Instead, an inferred origin time is listed, based on the estimated travel time from the test site to Rarotonga, and indications that it is common practice to detonate tests exactly on the minute.

A means of estimating the magnitudes of these explosions has been devised, based on a comparison of maximum amplitudes of T-waves recorded at Rarotonga with magnitude estimates from the United States National Earthquake Information Service. (W.D. Smith, 1987: Underground nuclear explosions recorded at Rarotonga: estimation of m_b from T-phase amplitude. Geophys. J. R. Astr. Soc. 90: 35-42). These magnitudes are given, together with the N.E.I.S. and I.S.C. estimates where these are available. The maximum recorded trace amplitude at Rarotonga (in millimetres) is also listed. An 'F ' after the time of a test indicates that it is believed to have been sited at Fangataufa, while all others are thought to have been on Mururoa. 'S' denotes a very small event, not visible on Raratonga WWSSN. M_b was assessed from digital records.

DATE	TIME h m		AMPLITUDE millimetres	m_b (T-wave)	m_b (N.E.I.S.)
May 7	17 00		0.6	4.3	-
May 18	17 15		5.5	5.2	5.1
May 29	19 00	F	26.0	5.9	5.5
Jun 14	18 00		8.5	5.4	5.2
Jul 5	18 00	S	-	3.8	-
Jul 15	18 10		10.0	5.5	5.3

NON-INSTRUMENTAL DATA

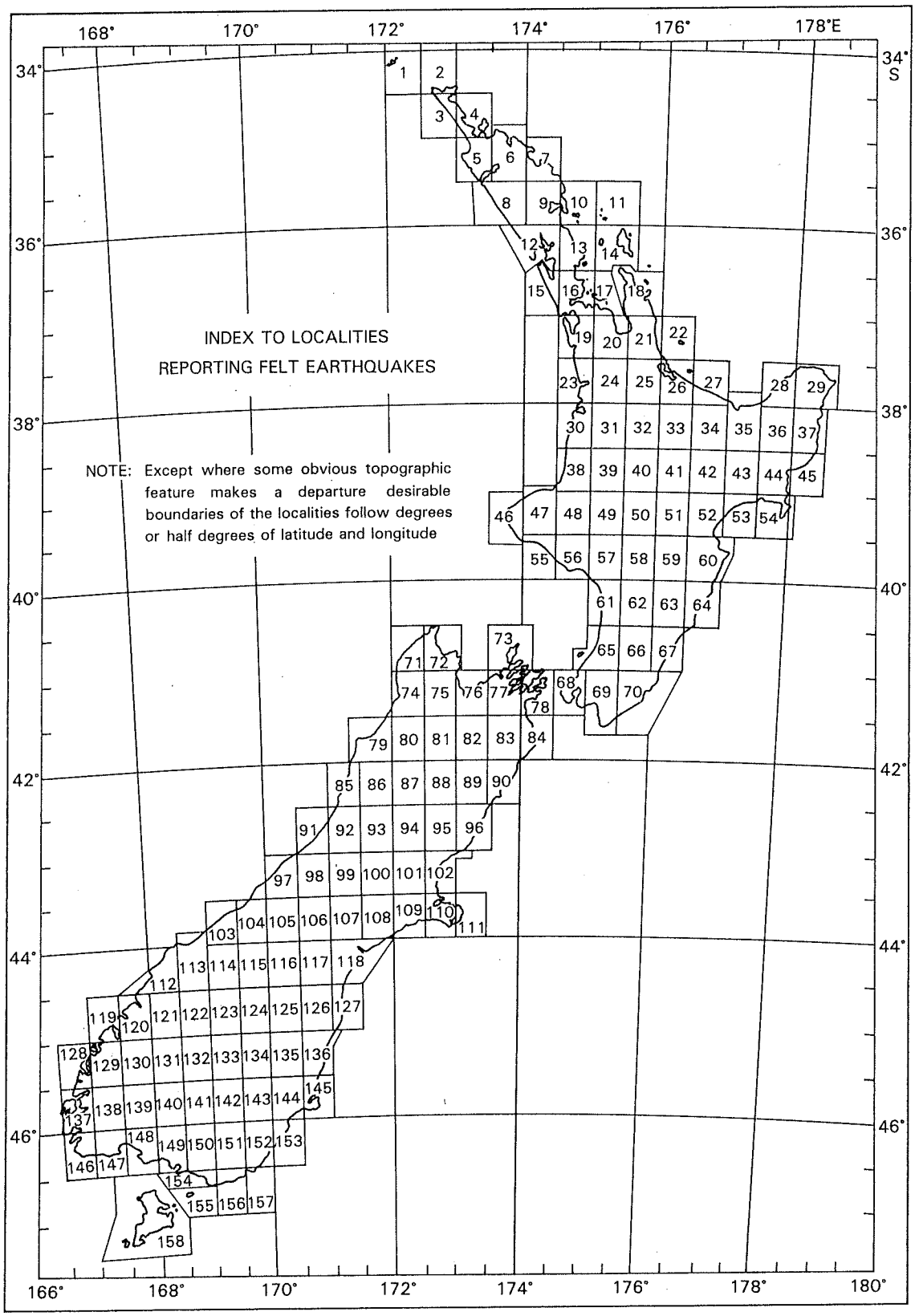
THE FELT REPORTING SYSTEM

The Observatory has recruited a network of about 600 voluntary 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		

EARTHQUAKES FELT IN STANDARD LOCALITIES

Localities within which earthquakes were felt are listed in alphabetical order, each preceded by its number on the reference map. The figure following the name of the locality is the number of the epicentre followed by the maximum intensity (in brackets) reported within the district covered by the locality name. An asterisk (*) indicates that the particular intensity was not evaluated from the standard questionnaire. The location of the earthquake, the instrumental magnitude and the actual places at which it was reported felt may be found from the table Summary of Origins and Magnitudes.

133	Alexandra	734 (4), 3990 (3), 6168 (4), 10883 (4), 11561 (4).
93	Arthur's Pass	776 (4), 977 (3), 1679 (4), 2556 (4), 3478 (4), 8115 (4), 11517 (4).
108	Ashburton	7491 (4*).
16	Auckland	6029 (4), 77 (4*).
77	Blenheim	776 (4), 977 (4*), 6029 (4), 47 (4*), 6607 (4*), 7253 (4*), 8340 (4), 62 (4*), 10117 (4), 10123 (4*).
104	Bruce Bay	776 (4), 977 (3), 10883 (4*).
61	Bulls	2226 (3), 2300 (4), 3016 (4*), 5040 (3), 6029 (4), 6148 (4), 7211 (3), 8340 (5), 8449 (4), 11625 (4), 11784 (3), 12156 (2).
84	Cape Campbell	3306 (3*).
46	Cape Egmont	10733 (4).
67	Castlepoint	8340 (4).
96	Cheviot	9174 (4*), 9176 (4*).
110	Christchurch	206 (4*), 65 (4*), 977 (4*), 1653 (4*), 6893 (4*), 8115 (4*), 62 (4*), 10123 (4*).
18	Coromandel	77 (4*).
63	Dannevirke	268 (4), 3580 (4), 6652 (4*), 8652 (4*), 11457 (4*).
145	Dunedin	8229 (4*), 8940 (4*).
29	East Cape	10088 (5), 10096 (4).
69	Featherston	658 (4*), 47 (4*), 8340 (4), 8449 (4*), 8984 (4*), 9019 (4*), 9136 (4*), 11784 (4*), 11813 (4*), 12156 (4*).
97	Franz Josef	776 (4), 977 (4), 10883 (4).
45	Gisborne	453 (4), 6893 (4*), 8340 (4), 10088 (4), 10096 (4), 10099 (4), 11314 (4).
81	Glenhope	977 (4*).

121	Glenorchy	6168	(4),	10883	(4).								
85	Greymouth	65	(4*),	977	(4*),	2556	(4),	4905	(4*),	6029	(4),	47	(4*),
		7195	(4*),	8340	(4).								
103	Haast	10883	(4*).										
98	Hari Hari	65	(4*),	977	(4*).								
60	Hastings	4504	(4),	6893	(4),	8132	(4*),	8340	(5),	8420	(4),	11187	(4),
		11357	(4).										
55	Hawera	6148	(4*),	6893	(4*).								
91	Hokitika	776	(5),	65	(4*),	977	(4*).						
149	Invercargill	3990	(4),	8940	(3).								
113	Jackson's Bay	5088	(4),	6178	(4),	7850	(4),	9227	(4),	9242	(3),	10883	(4).
90	Kaikoura	7253	(4*),	8340	(4),	9945	(4*),	10123	(4*).				
132	Kingston	6168	(4),	122	(4*),	8940	(4),	10883	(4*),	11561	(4*).		
92	Kumara	776	(5),	977	(5),	2556	(4),	2668	(4),	3088	(4).		
94	Lake Sumner	8115	(4).										
114	Makarora	5285	(4),	11561	(4),	12056	(4).						
70	Martinborough	2300	(4),	8340	(4).								
87	Maruia	776	(4),	977	(4),	2556	(4),	3088	(3),	6029	(4),	8340	(4).
66	Masterton	2300	(4*),	5040	(4*),	47	(4*),	6893	(4*),	7256	(4*),	8431	(3),
		8449	(4),	11784	(4*).								
38	Mokau	977	(4),	2300	(4),	3351	(3),	6029	(4),	6148	(3),	6893	(5),
		8340	(4),	10733	(4).								
139	Monowai	6168	(3),	11561	(4).								
75	Motueka	977	(4*),	2556	(3),	47	(4*),	8340	(4).				
71	Mount Stevens	776	(4),	977	(5),	2556	(5),	6029	(4).				
80	Murchison	47	(4*),	7253	(4),	10420	(4).						
34	Murupara	12529	(4*).										
52	Napier	4504	(3),	6893	(4),	8132	(4),	8340	(4),	8707	(4),	9550	(4*),
		11187	(4),	11357	(4).								
76	Nelson	776	(4),	65	(4*),	977	(4),	2556	(4),	6029	(4),	47	(4*),
		6893	(4*),	7253	(4*),	8340	(3),	10123	(4).				

47	New Plymouth	977	(4*),	2300	(4*),	3351	(3),	6029	(5),	6893	(3),	8340	(5),
		40	(4),	10733	(4).								
49	Ohakune	3016	(3),	6029	(3),	6148	(3),	6893	(4),	8156	(3),	8340	(4),
		9984	(4),	40	(4*),	10023	(4),	40	(4*).				
35	Opotiki	488	(4),	3078	(4),	5361	(3),	6893	(4),	8158	(4),	8340	(4),
		8707	(4),	9550	(4),	9604	(4),	11187	(4),	11314	(5).		
65	Otaki	268	(4),	321	(4*),	322	(4*),	658	(4*),	977	(4),	2226	(4),
		2300	(4),	5040	(4),	6029	(4),	47	(4*),	6232	(4*),	6893	(4),
		8340	(5),	77	(5*),	8431	(4),	8449	(4),	10123	(4),	11187	(4),
		11314	(4*),	11784	(4),	12156	(4).						
144	Outram	2989	(3),	9494	(4).								
62	Palmerston North	268	(3),	977	(4),	2226	(4*),	3351	(4*),	3580	(4),	5040	(4),
		6029	(4),	47	(4*),	6148	(3),	6893	(4),	8340	(4),	8449	(4),
		9301	(4*),	11187	(4),	12156	(4).						
78	Picton	977	(4),	6029	(4),	6607	(4),	8340	(4),	10117	(4),	12084	(4*).
64	Porangahau	5805	(3),	6029	(4).								
116	Pukaki	65	(4*),	977	(3).								
23	Raglan	6029	(4*).										
102	Rangiora	206	(4),	776	(4),	977	(4).						
86	Reefton	977	(4*),	3088	(4*).								
33	Rotorua	3853	(4),	5942	(4),	6598	(4),	7858	(4),	8160	(4),	9442	(3),
		11714	(4*),	12127	(4),	12136	(4*),	12162	(4).				
58	Taihape	2300	(4),	3580	(4),	6029	(4),	6893	(4),	8156	(4),	8340	(4),
		8600	(4),	8707	(4).								
72	Takaka	977	(4*),	6893	(4).								
39	Taumarunui	2300	(4),	6029	(4),	8156	(3),	8340	(4).				
41	Taupo	6893	(4*),	9346	(4),	40	(4),	11269	(4).				
26	Tauranga	11314	(4*).										
130	Te Anau	6168	(4),	8229	(4),	10883	(4),	11616	(4*).				
28	Te Kaha	11314	(4).										
106	Tekapo	5859	(4),	7491	(4),	11447	(4).						
21	Thames	11314	(6).										
40	Tokaanu	4090	(4),	6029	(3),	6893	(3),	8340	(4),	77	(5*),	9346	(5).
148	Tuatapere	8229	(4*),	8940	(3).								

53	Wairoa	7960 (4*).
123	Wanaka	10883 (4*).
57	Wanganui	776 (4), 977 (4), 2226 (3), 2300 (4), 3016 (4), 4877 (3), 5040 (4), 5105 (4), 5729 (4), 6029 (4), 47 (4*), 6148 (4), 6893 (4), 7211 (3), 8156 (4*), 8324 (4*), 8340 (7), 77 (5*), 8449 (5), 9592 (4), 40 (4), 10585 (4), 11314 (4), 11457 (4*), 11548 (4*).
68	Wellington	146 (4), 207 (4), 776 (3), 65 (4*), 977 (3), 2226 (4*), 2300 (4), 2348 (4*), 2556 (3), 3076 (3), 3685 (4), 4075 (3), 5805 (4), 6029 (4), 47 (4*), 6148 (4), 6232 (4), 6893 (4), 8340 (5), 8431 (3), 8449 (3), 9019 (4), 9136 (4*), 9550 (4), 9604 (4), 9919 (4*), 10123 (4), 11037 (4), 11187 (3), 11314 (3), 11457 (3), 11784 (4), 11813 (4), 12156 (4*).
79	Westport	776 (7), 65 (4*), 792 (3*), 838 (4*), 848 (4*), 855 (5), 857 (3*), 892 (3*), 924 (3*), 977 (6), 983 (3*), 1019 (3*), 1046 (3*), 1113 (4*), 1126 (3*), 1237 (5), 1542 (4), 85 (4*), 1601 (4), 1790 (3), 2130 (4), 2361 (3), 2556 (5), 2570 (5), 2582 (4), 2649 (4), 2650 (4), 2659 (4*), 2660 (4*), 2667 (4*), 2668 (4*), 2669 (4*), 2672 (4), 2673 (4*), 2693 (4*), 2882 (4), 3088 (5), 3089 (4*), 3101 (4), 3226 (4), 4602 (4), 4805 (3), 4905 (4), 6029 (4), 47 (4*), 6852 (4), 7030 (4), 7103 (3), 8340 (4), 8977 (4).
44	Whakapunaki	8340 (4), 10088 (3).
27	Whakatane	7840 (4*), 11187 (4*), 11314 (4*).
99	Whitcombe Pass	2556 (3).

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 02	08h 14m	'felt'	Raoul Island
Jan 03	17h 27m	'strong'	Raoul Island
Jan 06	10h 56m	'strong'	Raoul Island
Jan 26	21h 23m	'strong'	Raoul Island
Mar 06	15h 59m	'felt'	Raoul Island
Mar 06	21h 55m	'felt'	Raoul Island
Mar 06	23h 57m	'felt'	Raoul Island
Apr 09	21h 03m	'felt'	Raoul Island
Apr 25	01h 05m	'strong'	Raoul Island
May 02	17h 56m	'felt'	Campbell Island
May 02	18h 08m	'felt'	Campbell Island
Jun 09	08h 02m	'MM 4'	Raoul Island
Jun 09	08h 20m	'MM 4'	Raoul Island
Nov 01	16h 23m	'felt'	Raoul Island
Nov 01	16h 33m	'felt'	Raoul Island

PUBLICATIONS BY STAFF MEMBERS

The following papers by members of the Seismological Observatory staff were published in 1991.

S-328 Reyners, M.; Gledhill, K.; Waters, D.: Tearing of the subducted Australian plate during the Te Anau, New Zealand earthquake of 1988 June 3. Geophys. J. Int. 104(1): 105-115.

The M_L = 6.1 earthquake of 1988 June 3 was widely felt in the South Island of New Zealand, and caused landslides in Fiordland National Park. It occurred at a depth of 57 km near 45.10°S 167.17°E, in a region where the Australian plate is subducting beneath the Pacific plate. Immediately after the event, portable seismographs were installed in the Te Anau area. Data from a well-recorded subset of aftershocks have been used to invert for the seismic velocities of the lower crust and upper mantle of the region, and for station terms. The large range in station terms obtained (3.3 s for P-waves) emphasises the structural complexity of the Fiordland region. The aftershocks, as relocated with the new velocity model, occur in a cigar-shaped zone which extends from about 40 to 70 km in depth, and dips southeast at approximately 65°. The orientation of the aftershock zone in relation to the focal mechanism of the mainshock suggests that the earthquake involved down-dip tearing of the crust of the subducted Australian plate, with the NE part of the plate having moved up and to the east-southeast relative to the SW part.

Down-dip tearing of the crust of the Australian plate is also inferred for an earthquake of M_L = 5.9 which occurred on 1988 July 19. This was located directly down the dip of the subducted plate from the June 3 event, at a depth of 122 km. Taken together with other seismological data, these two events suggest the existence of a major tear in the subducted plate, and that the shallow part of the plate to the north of this tear is resisting subduction. This resistance may result from subduction of a region of relatively thick crust. This would provide an explanation for the uneven distribution of both shallow and intermediate-depth seismicity in Fiordland, the differing dips of the subducted plate along the margin, fault-plane solutions, and spatial variations in the b value of intermediate-depth events. Subduction of a region of relatively thick crust also provides a mechanism for tilting up the western part of the Fiordland block.

S-331 Haines, A.J.: Research in Seismology and the Physics of the Earth's Interior in New Zealand 1987-1990: The Report of the N.Z. Natl Comm. for Geodesy and Geophysics to IASPEI. 23 p.

The International Association of Seismology and Physics of the Earth's Interior (IASPEI) is one of seven international associations forming the International Union of Geodesy and Geophysics (IUGG). New Zealand communicates with the IUGG through the Royal Society of New Zealand and its National Committee for Geodesy and Geophysics. The committee appoints National Correspondents to deal with the seven associations and it is in this capacity that Dr Haines has compiled this report. This report covers research in New Zealand or by New Zealanders in the four years, 1987 to 1990 inclusive, since the last such report (Smith, 1987).

S-333 Gledhill, K.R.: Evidence for shallow and pervasive seismic anisotrophy in the Wellington Region, New Zealand. J.G.R. 96(B13): 21,503-21,516.

The shear waves of local earthquakes were recorded during a 5-month deployment of seven three-component digital seismographs on the Wellington Peninsula, New Zealand. The seismographs were spaced an average of less than 5 km apart, and over 300 local earthquakes were recorded with phase arrivals within the shear wave window. A significant number ($\simeq$37%) of the earthquakes recorded showed clear evidence of shear wave splitting: identifiable fast and slow shear wave arrivals with similar pulse shapes. Consistent polarization directions at particular stations were also observed, even when poor signal-to-noise ratio or scattering meant that no slow shear wave arrival could be identified. However, there were large station-to-station differences in the polarization directions. Correcting for the observed shear wave splitting improved the fit between the measured shear wave polarizations and those calculated assuming a double-couple focal mechanism. The cause of the observed shear wave splitting is therefore most likely to be seismic anisotrophy. Large station-to-station differences in the polarization alignments, ranging from 61° ± 24° to 137° ± 18°, suggest that most anisotrophy is confined to the top 2-3 km of the crust. However, there is evidence from one station for a small amount of pervasive anisotrophy; if such a trend existed on the other stations, it could not be identified because

of the large scatter in the data points. The measured delay times between split shear waves vary from 0.02 to 0.22s, with a mean value of 0.1 ± 0.06s. This translates to a near-surface shear wave velocity anisotrophy of about 10%, with up to 2% pervasive anisotrophy possible throughout the crust. This data set indicates that extensive dilatancy anisotrophy cannot be the sole cause of crustal seismic anisotrophy and that foliations in the rock fabric and the fracture zones of the active faults may also be important. There is no evidence for temporal change in the shear wave splitting parameters during the period of the experiment.

----- Anderson, H.J.: Focal mechanisms of some recent large New Zealand earthquakes. N.Z. J. Geol. Geophys. 34(1): 103-109.

The focal mechanisms of six recent New Zealand region earthquakes are presented. Two of these (1988 Jun 3, 1989 May 31) occurred in the Fiordland region within the Benioff zone. The Macquarie Ridge earthquake (1989 May 23, M_W 8.2) was the largest earthquake globally since 1977. It occurred about 800 km south of New Zealand but was felt in the southern part of the South Island. Its strike-slip focal mechanism is consistent with the predicted plate motion direction. The focal mechanism of the Lake Tennyson earthquake (1990 Feb 10) is ambiguous but it is most likely a strike-slip mechanism parallel to the local fault trends, although no fault break was observed. The first Weber earthquake (1990 Feb 19) appears to be a complex event and its focal mechanism probably indicates down-dip tension in the subducting Pacific plate. The second Weber event (1990 May 13) had a thrust mechanism consistent with the plate convergence direction.

----- Anderson, H.J.; Zhang, J.: Long-Period Seismic Radiation From the May 23, 1989, Macquarie Ridge Earthquake: Evidence for Coseismic Slip in the Mantle? J.G.R. 96(B12): 19,853-19,863.

Long-period seismic source parameters of the 23 May 1989, Macquarie Ridge earthquake are determined using a surface wave inversion procedure that incorporates detailed source-time functions obtained from shorter period body waves. The seismic source model obtained using this method is consistent with observations of both body waves and long-period Rayleigh waves from the earthquake. The Macquarie Ridge earthquake rupture has a centroid time (28 s) and a right-lateral strike-slip fault mechanism with a rake of 175° on a vertical fault plane striking N38°E. This mechanism is consistent with P wave first motions of the event. Inversions performed for various earth models demonstrate that the choice of surface wave attenuation model, in particular, affects the estimates of centroid depth and seismic moment significantly. Allowing for uncertainty in attenuation, the long-period Rayleigh waves (periods from 150 to 300 s) indicate that the Macquarie Ridge earthquake had a seismic moment of 1.9 ± 0.2 x 1021 N m and a corresponding centroid depth of 21 ± 6 km. The static stress drop calculated using the depth and seismic moment is 0.7 ± 0.5 x 107 Pa (70 ± 50 bars). The centroid depth, combined with the lack of resolvable directivity of the earthquake rupture, suggests that significant slip occurred beneath the Moho, which has a maximum depth of about 16 km in the epicentral region. The mantle slip component may have preferentially radiated long-period seismic energy given the shallow centroid depths and low moments determined for the event from the shorter-period body wave observations.

----- Gledhill, K.R.: EARSS users' manual. Geophys. Div., DSIR, Technical Report 109.

The name EARSS is an acronym formed from Equipment for the Automatic Recording of Seismic Signals. EARSS is a low-power data acquisition system which has been developed by DSIR Geology and Geophysics, Department of Scientific and Industrial Research, New Zealand, for seismological applications. It has three input channels, and when combined with a three-component seismometer, it becomes a three-component digital seismograph which detects earthquakes, and records them on magnetic tape.

----- Gledhill, K.R.: Shear-wave splitting and seismic anisotropy in the Wellington Region, New Zealand. PhD Thesis, Victoria University of Wellington, New Zealand.

The phenomenon of shear-wave splitting is investigated using the shear-waves from local earthquakes recorded on the Wellington Peninsula, New Zealand. Three separate deployments of three-component digital seismographs resulted in the recording of perhaps the best data set for the study of shear-wave splitting currently available. Clear evidence of shear-wave splitting is demonstrated, and the most likely cause of the phenomenon is shown to be seismic anisotropy in the Earth's crust. The results of modelling the observed polarizations indicate that the Wellington Peninsula has a complex anisotropic structure.

----- Gledhill, K.R.; Randall, M.J.; Chadwick, M.P.: The EARSS digital seismograph: system description and field trials. Bull. Seis. Soc. Am. 81(4): 1380-1390.

An earthquake detection and recording system known as EARSS has been developed for permanent seismograph stations and temporary field installations. It records three components of ground motion with a dynamic range of 120dB. A frequency-domain algorithm detects earthquakes and initiates the recording of data on magnetic tape. Alternatively, EARSS can record data continuously, for preselected periods of time, or recording can be triggered by a time-domain phase picker. Up to 1500 earthquakes (25.5 Mbytes) can be recorded on each magnetic tape cartridge. The field version of EARSS supplies power to the tape drive only when data is being written to tape, thus reducing the normal power consumption of 12 watts (at 12 volts) to 2.5 watts. A field trial using a network of eight EARSS seismographs resulted in 1020 successful station-days of operation from a possible total of 1098 station-days (3 years). Of the 78 lost days of operation, 23 were due to power supply problems external to EARSS, and 52 were caused by a low-temperature failure of the recording system, which has since been corrected. A total of 442 Mbytes of data were recorded, of which about 250 Mbytes were useful data.

----- Holt, W.E.; Ni, J.F.; Wallace, T.C.; Haines, A.J.: The Active Tectonics of the Eastern Himalayan Syntaxis and Surrounding Regions. J.G.R. 96(B9): 14,595-14,632.

Source parameters of 53 moderate-sized earthquakes, obtained from the joint inversion of regional and teleseismic distance long-period body waves, provide the data set for an analysis of the style of deformation and kinematics in the region of the Eastern Himalayan Syntaxis. Focal mechanisms of Eastern Himalayan events show oblique thrust, consistent with the N-NE directed movement of the Indian plate as it underthrusts a boundary that strikes at an oblique angle to the direction of convergence. Earthquakes near the Sagaing fault show strike-slip mechanisms with right-lateral slip. Earthquakes on its northern splays, however, indicate predominant thrusting, evidence that the dextral motion on the Sagaing fault, which accommodates a portion of the lateral motion between India and southeast Asia, terminates in a zone of thrust faulting at the Eastern Himalayan Syntaxis. Remaining motion between India and southeast Asia is accommodated in a zone of distributed shear in east Burma and Yunnan, manifested by strike-slip and oblique normal faulting, east-west extension, crustal thinning, and clockwise rotation of crustal blocks. We determined strain rates throughout the region with a moment tensor summation using 25 years (modern) and 85 years (modern and historic) of earthquake data. We matched the observed strains with a fifth-order polynomial function, and from this we determined both the velocity field and rotations with respect to a specified region. Velocities calculated relative to south China stationary show that the entire area, extending from 20°N-36°N, within deforming Asia (Yunnan, western Sichuan, and east Tibet), constitutes a distributed dextral shear zone with clockwise rotations up to 1.7°/m.y., maximum in the region of the Eastern Syntaxis proper. Integrated strains across this zone, relative to south China stationary, show 38 mm/yr ± 12 mm/yr of north-directed motion at the Himalaya. Remaining plate motion, relative to south China fixed, must be taken up by the underthrusting of India beneath the lesser Himalaya, strike-slip motion on the Sagaing fault, and intraplate NE directed shortening within NE India as well as NE directed shortening within the Eastern Syntaxis proper. 10 mm/yr ± 2 mm/yr of relative right-lateral motion between India and southeast Asia is absorbed in the region between the Sagaing and Red River faults (94°E-100°E). It is the clockwise vorticity (relative to south China) associated with the deformation in Yunnan, east Tibet, and western Sichuan that provides the relative north-directed motion of 38 ± 12 mm/yr at the Himalaya. Not all of the deformation is accommodated in right-lateral shear between India and south China and between east Tibet and south China; velocity gradients exist that are parallel to the trend of the shear zone. Relative to a point within western Sichuan (32°N, 100°E), the velocity field shows that the Yunnan crust is moving S-SE at rates of 8-10 mm/yr. Relative to south China, there is no eastward expulsion of crustal material beyond the eastern margin of the Tibetan plateau.

----- O'Connor, R.M.; Ravens, J.M.; Anderson, H.J.: Results of Onshore Crustal Seismic Reflection Data near Taranaki. Geophys. Div., DSIR, Research Report 230.

In 1988 Geophysics Division, DSIR entered into a cooperative project with New Zealand Oil and Gas to carry out the seismic processing on two crustal depth seismic reflection lines. The seismic lines were recorded with a total record length of 15 s two-way travel time. This is approximately 10 s longer than is common in oil exploration. The goal of

this extended recording was to image the base of the crust in the Taranaki region where Stern et al. (1987) have shown a marked crustal thinning to the north from gravity data. While no clear image of the base of the crust is present on these seismic lines, a sequence of discontinuous reflectivity is apparent from 10 to 12 s two-way travel time on the north-south trending line, along with a slight dip of this reflected sequence toward the north.

----- Robinson, R.: Neural networks offer an alternative to traditional regression. Geobyte. 6(1): 14-19.

When traditional regression produces unsatisfactory results, neural networks provide an alternative that, in some cases, represents significant improvement. This paper briefly discusses neural networks, the type suited to a regression problem, and some conditions that affect results produced by a network. Artificial data are used to give an example comparing results from a commercial statistics package with those of a network developed by the author.

Commercial neural networks are available for computer systems of all sizes, including PCs. The purpose of this note is to alert readers to a new and potentially useful technique, encourage experimentation with neural networks on various types of problems, and invite and promote communication among users.

----- Scott, B.J.; Sherburn, S.: The November 1987 earthquake sequence at Lake Tarawera. Geol. Survey Record. 43: 57-63.

A short but intense sequence of earthquakes lasting 3 hours occurred on 16 November 1987 beneath the southern arm of Lake Tarawera on the northward extension of the Paeroa Fault. The largest event, M_L 3.6, occurred in the middle of the sequence and was felt up to 20 km away. A geodetic survey of the Lake Rotomahana horizontal deformation pattern which is sited immediately south of the epicentral area, was completed about 20 minutes before the earthquake sequence commenced. Selected distances were remeasured 3 days later to ascertain if any coseismic deformation had occurred. Little significant deformation was detected, whereas a similar survey following an earthquake swarm in February 1986 detected several significant line length changes. A three station lake levelling network on Lake Tarawera just north of the epicentral area also detected no anomalous vertical ground movement resulting from either earthquake sequence.

----- Smith, W.D.: Principal New Zealand earthquakes in 1990. Bull. N. Z. Natl. Soc. Earthq. Eng., 24(1): 1.

A review of significant earthquakes of the year.

E-172 New Zealand Seismological Report 1988.

OBSERVATORY SERVICES

PUBLICATIONS

The Seismological Observatory issues the following series of publications:

1. E-bulletins. These consist of the 'New Zealand Seismological Reports' containing 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.

2. S-bulletins. These are mostly reprints of papers by members of the Observatory staff, but occasionally they have included other material not published elsewhere, such as the Eiby-Muir near-earthquake tables. Their automatic circulation is not now as widespread as it was in the past, but they are usually available from the Observatory on request.

Copies of this material may be purchased from the Observatory. In suitable cases the Observatory may be able to enter into agreements for a free exchange of publications on a continuing basis.

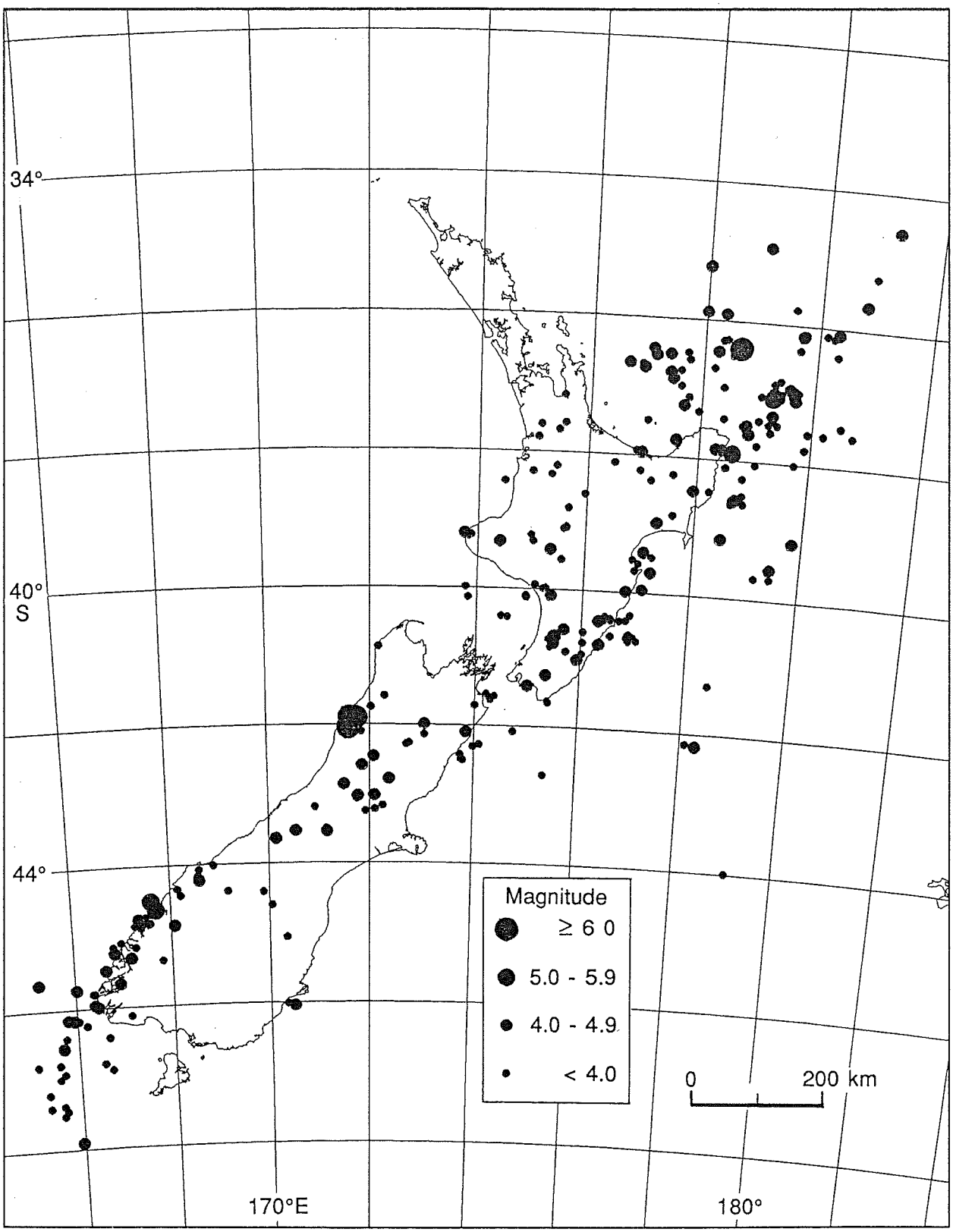
EARTHQUAKE CATALOGUE

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'; Bull. N.Z. Natl. Soc. Earthq. Eng., Vol. 9, No. 2, pp.136-7, or N.Z. J. Geol. Geophys., Vol. 19, No. 3, pp.393-4). 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 above a given minimum intensity 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.

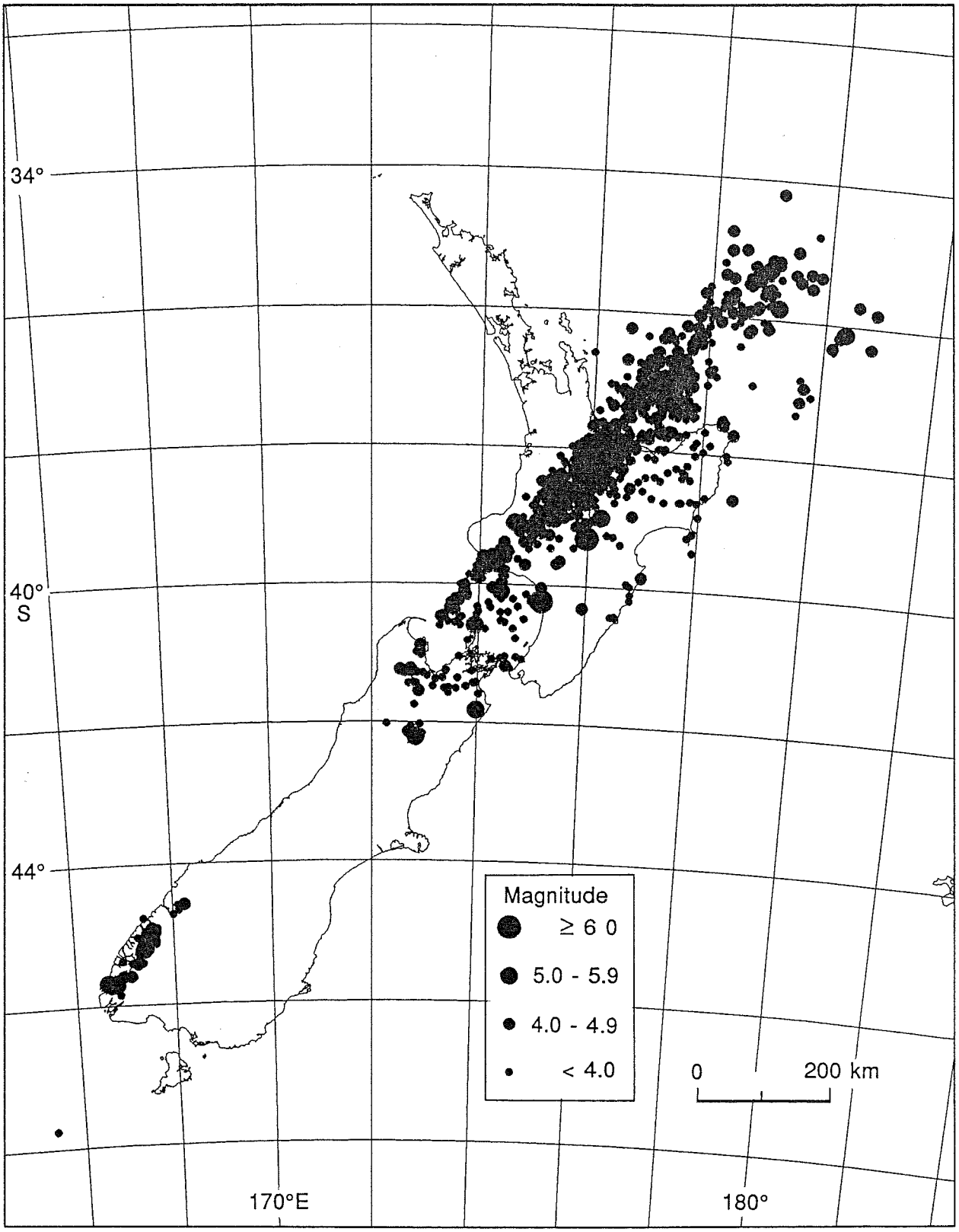
EPICENTRE MAPS 1991

REGIONAL SHALLOW EARTHQUAKES



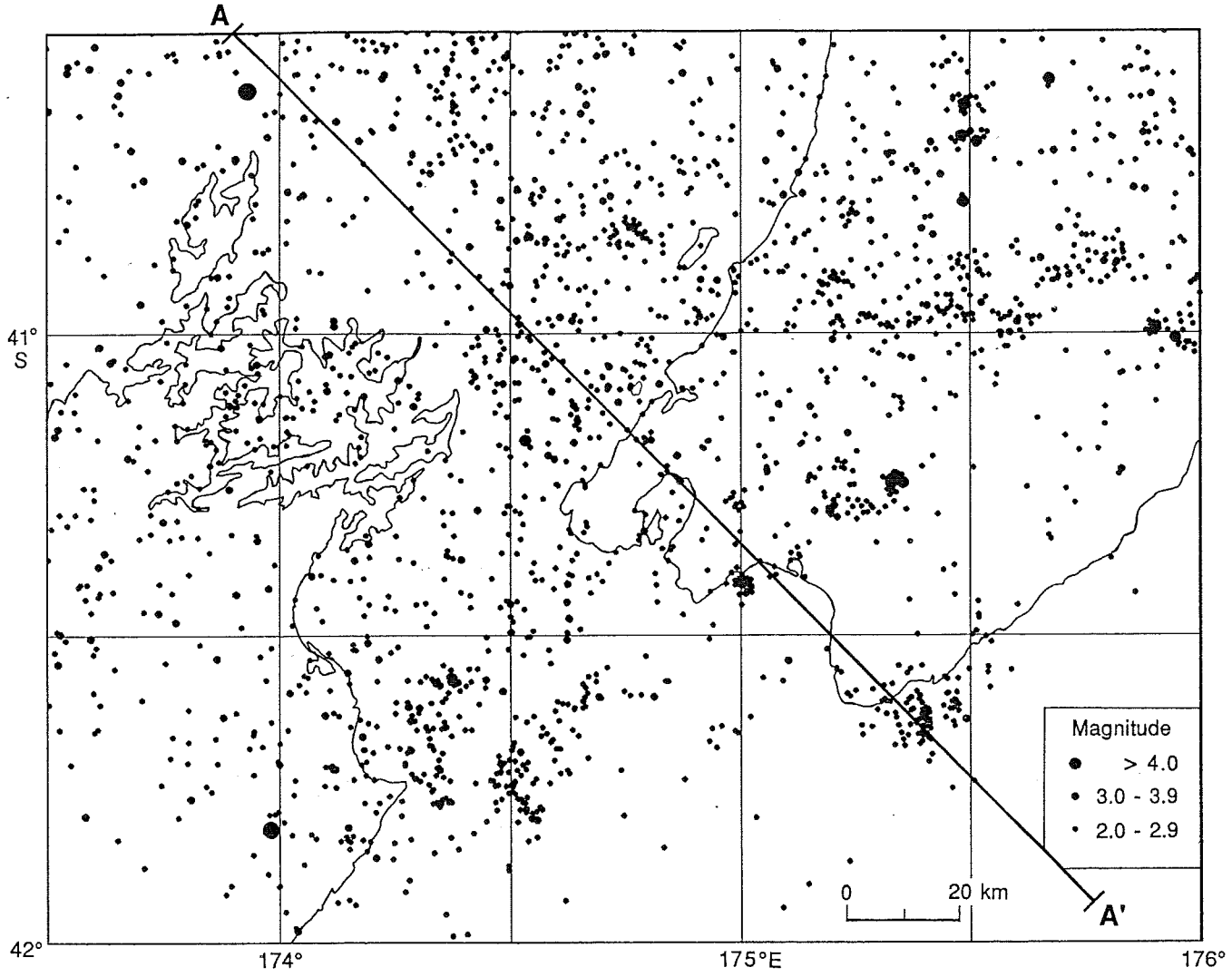
Epicentres of all earthquakes of $M_L \geq 3.5$ with focal depths less than 40 km. When several shocks have the same epicentre, the largest is shown.

REGIONAL DEEP EARTHQUAKES



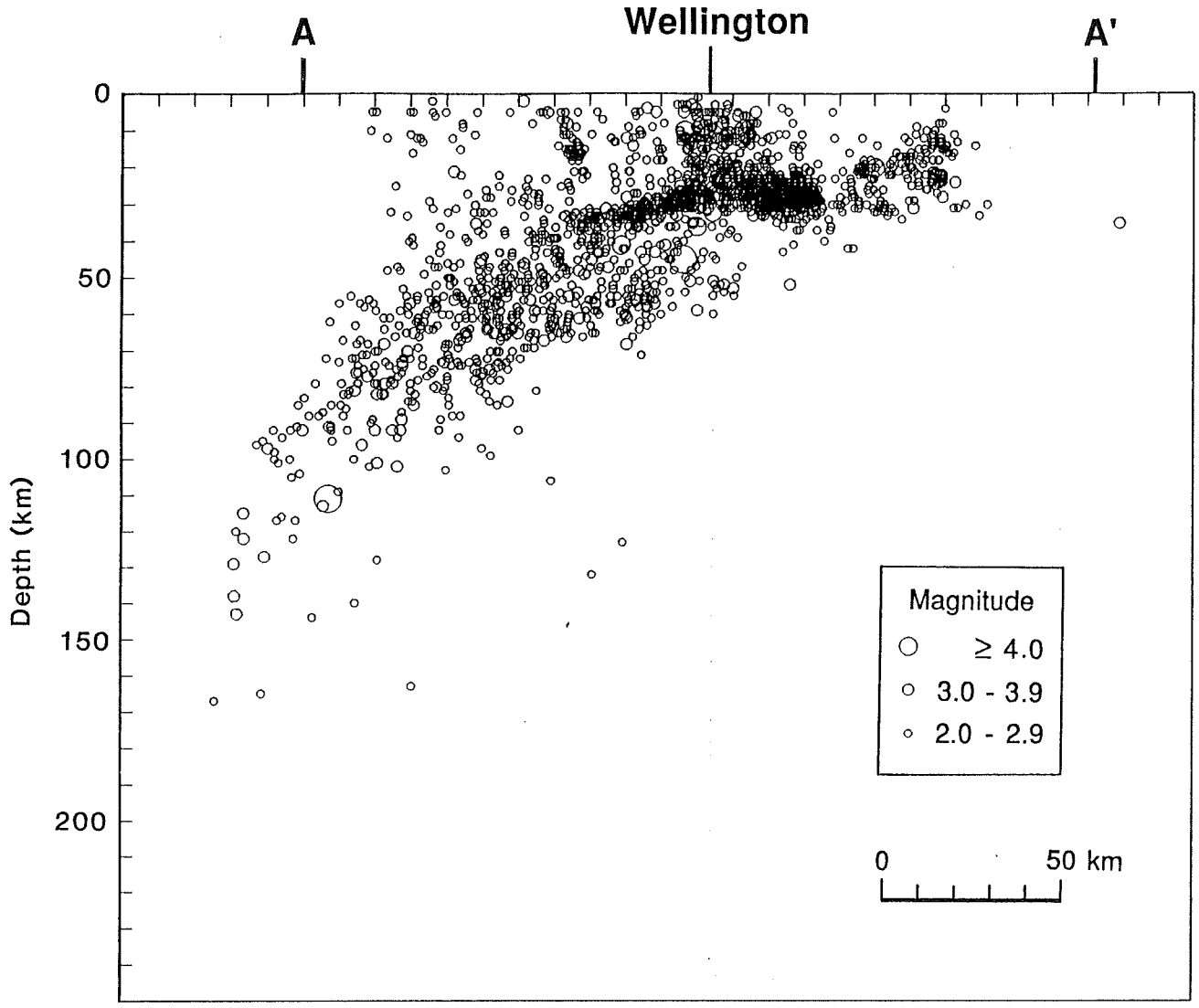
Epicentres of all earthquakes of $M_L \geq 3.5$ with focal depths of 40 km or more. When several shocks have the same epicentre, the largest is shown.

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.